

GLOBAL MACRO PRIMER

GRAHAM INSIGHT SERIES

In the alternative investment industry, few strategies capture the breadth and complexity of global markets quite like global macro investing. At its core, global macro is not merely a single investment approach but a comprehensive strategy that seeks to capitalize on broad economic trends and geopolitical developments across the globe. With a focus on understanding and predicting macroeconomic variables such as interest rates, fluctuations in currencies, commodities, credit and equities, along with geopolitical events, global macro managers aim to generate returns by strategically positioning their portfolios to profit from both anticipated and unforeseen shifts in the global landscape. Global macro has demonstrated its ability to perform independently from other asset classes and withstand shifting market dynamics, making it an integral component of a well-diversified portfolio. In this primer, we'll explore this strategy's fundamental principles, key performance and investment characteristics, and the role global macro can play in building more resilient investment portfolios.

GRAHAM CAPITAL MANAGEMENT

Graham Capital Management
40 Highland Avenue
Rowayton, CT 06853
1-203-899-3456
info@grahamcapital.com
www.grahamcapital.com

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Diversify and Conquer
Trend-Following Primer
The Whole is Greater than the Sum of the Parts

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WHAT IS GLOBAL MACRO?

Global macro is an alternative investment strategy that seeks to profit from fundamental analysis of a range of macroeconomic variables and their potential impact on global markets. Trading is dynamic, with trading themes typically ranging from days to weeks, and positions adjusting as the macro environment changes. Macro offers the potential to provide meaningful diversification and profit opportunities due to its ability to go long or short a diverse market universe and flexibility in trading. The broad spectrum of markets traded have historically resulted in low overall correlation to traditional assets such as stocks and bonds.

Macro Trading Drivers



Diverse Market Universe

Global macro strategies are broadly diversified by geography and sector. Many macro portfolio managers trade across global currency, fixed income, equity, commodity, and credit markets, with some focused on specific sectors. Common specialties include fixed income relative value, emerging market, or commodity trading. Although macro portfolios tend to trade liquid instruments, they also have the flexibility to trade individual securities and a range of derivatives. This flexibility allows the implementation of more nuanced investment ideas than what may be seen with other strategies.

Markets traded typically include, but are not limited to:

CURRENCIES

- G10
- Developing/ Emerging Markets
- USD Index

FIXED INCOME

- U.S. Treasury Bonds
- Sovereign Debt
- Emerging Market Debt
- Global Interest Rates
- Government Credit
- Corporate Credit
- Mortgage Backed Securities

EQUITIES

Global Indices:

- North America
- Europe/UK
- Asia/Pacific

Sector Specific Indices and ETFs

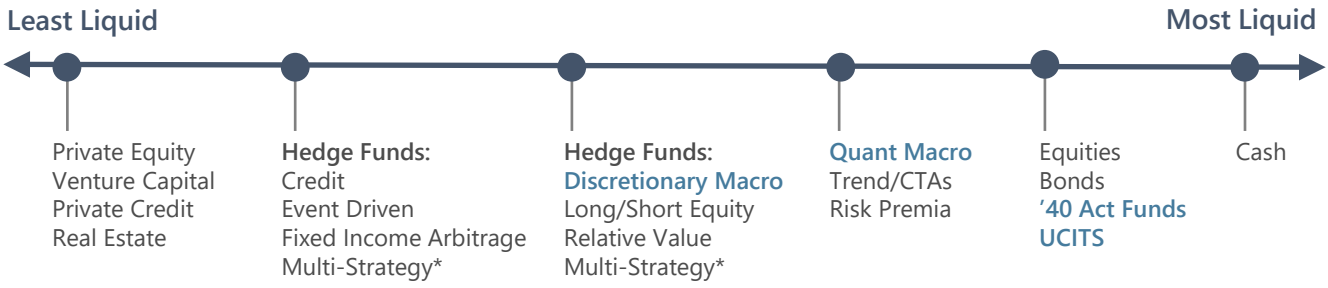
Single Name Securities

COMMODITIES

- Energy
- Precious Metals
- Agricultural/Softs/Livestock
- Base Metals

Investor Liquidity

Given the generally liquid nature of the underlying markets and instruments traded, global macro strategies typically do not borrow money or rely on external funding, which is a form of leverage often employed by other hedge fund styles. Leverage for global macro funds tends to be limited to the margin required to trade derivatives. Consequently, global macro funds often have more favorable redemption terms than other alternatives employing less liquid strategies. It's not uncommon for global macro funds to offer quarterly redemption liquidity or better, with no lock-ups or gates, depending on the specific implementation used (e.g., discretionary versus quantitative or private fund versus '40 Act or UCITS).



**In recent years, multi-strategy funds have increasingly adopted longer redemption terms, gates, hard/soft lock-up periods, or other mechanisms, which vary significantly among managers and lack standardization, thus falling into the two categories outlined above.*

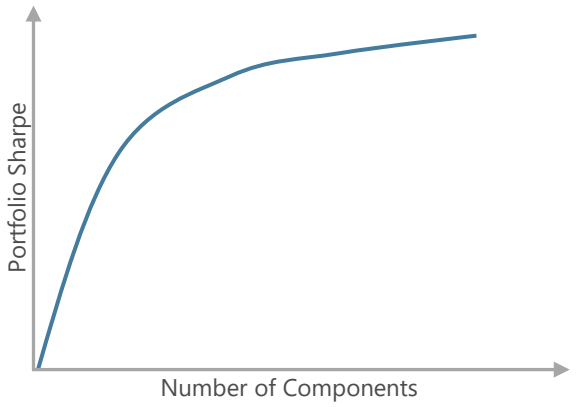
TRADING APPROACHES

Due to their broad investment mandate, the global macro peer group demonstrates significant heterogeneity in both trading approaches and the returns produced by managers.

Single and Multi-Portfolio Manager Funds

Macro managers may adopt either a single- or multi-portfolio manager ("PM") macro approach. Single-PM approaches carry concentrated risk and potential for higher returns but increase vulnerability to individual PM views and market disruptions. Multi-PM macro funds diversify risk across multiple strategies, leveraging diverse expertise to reduce downside risk and improve portfolio Sharpe ratio. Success in multi-PM funds often relies on effective portfolio construction techniques, such as position overlap analysis, correlation matrices, and robust risk management rather than outsized returns of individual components. For instance, a hypothetical portfolio of 10 uncorrelated strategies, each with a standalone Sharpe ratio of 0.5, would yield a portfolio-level Sharpe ratio of 1.6, all else being equal (as outlined in Graham's Insight Series, Diversify and Conquer). Multi-PM macro platforms aim for consistent performance by spreading risk among multiple managers and strategies.

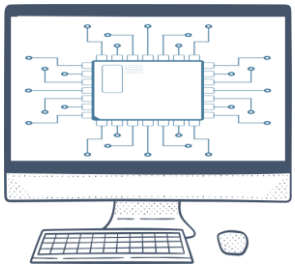
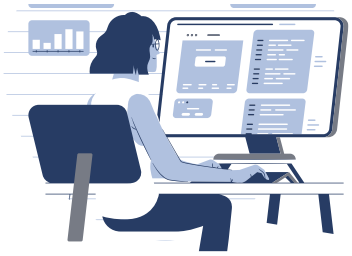
Hypothetical Relationship between Number of Components and Sharpe Ratio



As components are added, the Portfolio Sharpe ratio increases as it can benefit from uncorrelated return sources. However, there is a limit where additional components may not improve performance as correlations increase and the diversification benefit to the portfolio deteriorates.

Quantitative and Discretionary

Two prominent global macro trading styles are quantitative (systematic) and discretionary. Both analyze fundamental macroeconomic indicators to forecast shifts in market prices; however, they do so in different ways and each offers its own advantages. Quantitative approaches employ algorithms to analyze data and generate position signals, while discretionary approaches rely on human insight and subjective decision-making. Quantitative macro can excel in handling vast datasets within stable and transparent markets, while discretionary macro can adeptly navigate unprecedented or specialized themes, particularly in scenarios where data is more fragile or elusive. Over time these two styles have had low correlation to each other.

QUANTITATIVE MACRO	DISCRETIONARY MACRO
	DEEP MARKET KNOWLEDGE When markets are volatile and impacted by unprecedented or idiosyncratic events, data can be fragile and elusive, and low-data decisions become more important.
 **HIGH DATA PROCESSING** When markets are stable and transparent, more data often leads to better decisions, something quant algorithms handle well.	 **PORTFOLIO MANAGERS** Portfolio managers leverage deep market knowledge and experienced decision-making to trade themes that are either macro-oriented or niche – via either a single-PM or multi-PM platform approach.
QUANTITATIVE ALGORITHMS Advanced alpha signals take a data-driven approach to forecasting markets, applying methodologies such as machine learning.	
KEY CHARACTERISTICS • Unbiased, repeatable framework • Diversified set of market inputs • Advantages of scale to optimize big data	**KEY CHARACTERISTICS** • Human insight • Deep market expertise to capitalize on idiosyncratic trading themes • Ability to adapt to unique events that are not easily quantified

Graham Capital Management, L.P.

GENERIC TRADE EXAMPLE

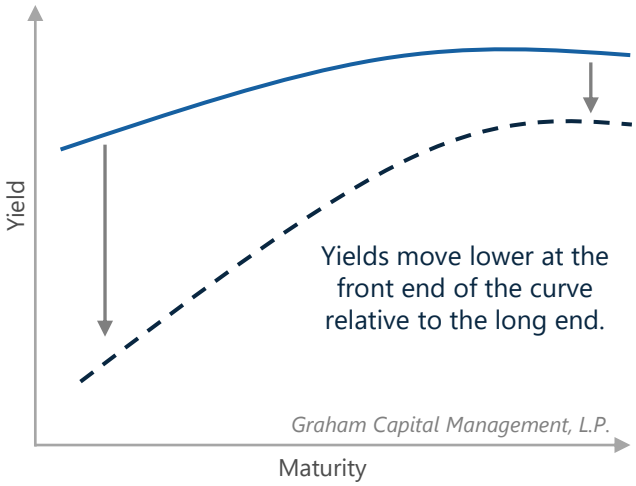
Global macro trading can capitalize on a variety of macroeconomic themes across a broad market universe. A classic example often revolves around yield curve dynamics, where managers may exploit changes in the yield curve's shape by capitalizing on the spread between short- and long-term rates.

Trading the Yield Curve Spread

Yield Curve Spread	Trading Strategy	Shorter-Term Bonds	Longer-Term Bonds
Steepener	"Long the Curve"	Long	Short
Flattener	"Short the Curve"	Short	Long

Bull Steepener

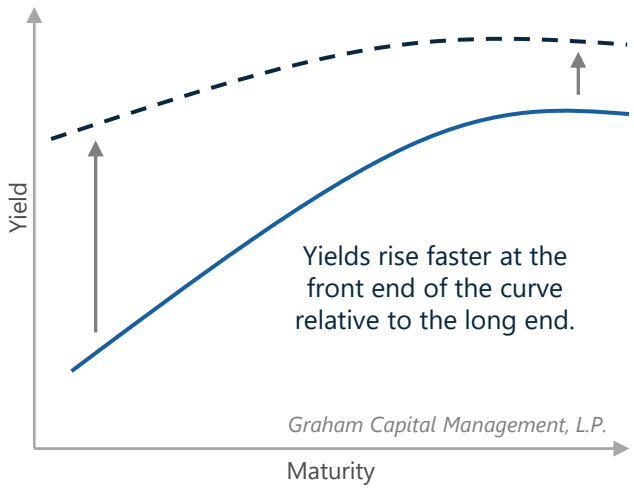
→ Common trade during periods of **monetary easing**.



The yield curve steepens either from long-term rates rising faster than short-term rates (**bear steepener**) or from short-term rates falling faster than long-term rates (**bull steepener**). When traders expect the yield curve to steepen they will go long short-term bonds and short long-term bonds. As the difference between rates widens, the trader should earn more on the short-term bonds they bought than they lose on the long-term bonds they sold.

Bear Flattener

→ Common trade during periods of **monetary tightening**.



The yield curve flattens either from long-term rates falling faster than short-term rates (**bull flattener**) or from short-term rates rising faster than long-term rates (**bear flattener**). When traders expect a flattener, they will sell short-term bonds and buy long-term bonds. As the difference between rates narrows, the trader should earn more from the short-term bonds they sold short, than they lose on the long-term bonds they bought.

DIVERSIFICATION BENEFITS OF MACRO

The "Go Anywhere" Strategy

At its core, global macro is a dynamic and tactical strategy that can adapt to a variety of market conditions. The strategy is not reliant on any one market regime, but rather may benefit from economic growth or contraction, inflationary or deflationary environments, or bullish or bearish equity. The strategy is expected to continue to add value to a diversified investment portfolio over the long run whether or not any of these scenarios emerge. The strategy's ability to navigate diverse market conditions underscores its role as a diversifier within an investment portfolio.

Performance in Rising/Falling Equity Markets

Jan-90 to Dec-23

Performance when MSCI World 12-Month Return is:	MSCI World Index	HFRI Hedge Fund Indices: Macro Index	Trend Following	Relative Value	Emerging Markets	Event Driven	Credit	Equity Hedge	Hedge Fund Composite
Equities Up — 30% or higher	39%	15%	8%	17%	36%	27%	23%	28%	23%
20% to 30%	24%	14%	3%	12%	21%	17%	9%	21%	16%
10% to 20%	15%	9%	1%	10%	15%	13%	8%	15%	12%
0% to 10%	5%	9%	3%	7%	8%	7%	3%	9%	8%
0% to -10%	-4%	7%	1%	5%	1%	2%	-1%	2%	3%
-10% to -20%	-15%	7%	8%	5%	-2%	0%	-3%	-3%	0%
Equities Down — -20% to -30%	-24%	6%	3%	4%	-7%	1%	-6%	-7%	-3%
-30% or lower	-41%	2%	5%	-14%	-33%	-19%	-16%	-24%	-17%

Data Source: eVestment, HFR, Inc; Chart by Graham Capital Management, L.P.

Both Macro and Trend-Following are well-known diversifiers within a portfolio, as demonstrated above, but they achieve this diversification in different ways and have different – albeit complementary – return profiles, as shown within the ensuing "Summary Statistics" table. While these details fall beyond the scope of this paper, please refer to Graham's Trend Following Primer for additional information.

Nevertheless, certain market contexts have proven to be more favorable for global macro than others. Macro returns strongly correspond to sustained directional moves in markets. Macro performs well during periods of strong market directionality (often when there is a clear catalyst for market shifts). Shorter-term market volatility that often results in choppy, range-bound markets may be more challenging for the strategy.

For example, market events or significant policy changes often provide ample opportunities for global macro funds, as these macroeconomic factors drive market volatility, as seen during events like the burst of the technology bubble in the early 2000s, the Global Financial Crisis of 2008, and the inflation surge in 2022. In periods of stable interest rates and limited macroeconomic volatility, macroeconomic factors may have less impact on market movements, which can reduce trading opportunities and result in more muted returns. Macro strategies are also not immune to unexpected market disruptions, as shown by events like the "Taper Tantrum" of May 2013 and the Silicon Valley Bank collapse in March 2023.

Hedge Fund styles are based on net performance of each respective HFRI Index from HFRI Macro index Inception in January 1990 to present, with the exception of the HFRI Trend Following Index and the HFRI Credit Index, which commence in January 2008.

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Low Correlation to Stocks and Bonds

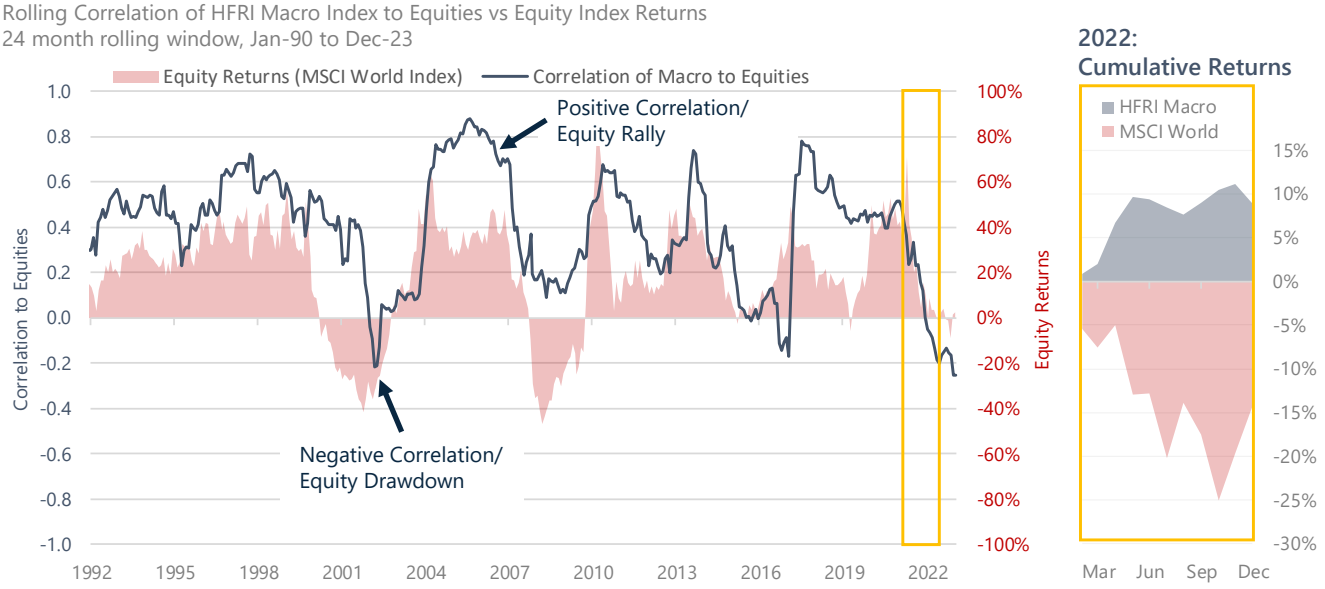
Macro is an uncorrelated, diversifying strategy. The strategy has no persistent long or short bias toward any market and low overall correlation to equities and bonds. Macro can exhibit low to negative correlation to equity and bond indices during periods when the index performs poorly, and low to positive correlation during periods when the index performs well. As a result, macro can perform well during both bull and bear markets.

Correlation to HFRI Macro Index Jan-90 to Dec-23	Correlation
MSCI World Index	0.30
S&P 500	0.29
Bloomberg Global Aggregate Index	0.20
Bloomberg US Aggregate Index	0.21

Data Source: eVestment, HFR, Inc.

Dynamic Diversification: Conditional Correlation to Equities

Rolling Correlation of HFRI Macro Index to Equities vs Equity Index Returns
24 month rolling window, Jan-90 to Dec-23



Data Source: eVestment, HFR, Inc.; Chart by Graham Capital Management, L.P.

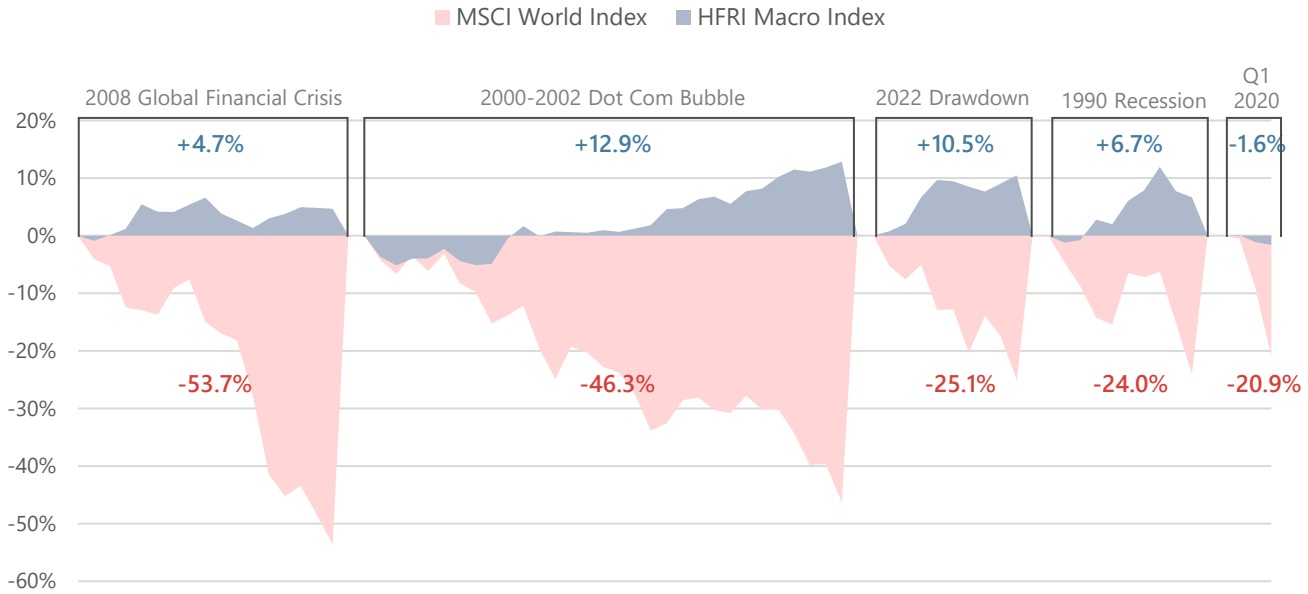
Potential to Mitigate Equity Risk

Global macro has the potential to flourish at times of big dislocations and has historically performed well, on average, during equity sell-offs. For example, as mentioned previously, macro managers were broadly successful during longer-term market declines such as the burst of the technology bubble in the early 2000s, the 2008 Global Financial Crisis, and the 2022 inflationary market environment, as they were able to capitalize on strong market directionality and fundamental catalysts. However, positive performance during equity downturns is not guaranteed and macro should not be thought of exclusively as a portfolio hedge, but rather as a low correlation, diversifying asset over the long-term. For example, sharp reversals and short-term declines can be challenging, as seen in Q1 2020.

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Performance during Largest 5 Equity Drawdowns (Peak to Trough)

Since HFRI Macro Index Inception (Jan-90 to Dec-23)



Data Source: eVestment, HFR, Inc.; Chart by Graham Capital Management, L.P.

2022 Case Study

Many investors seek diversification through alternative strategies. However, diversification benefits vary significantly across styles, and many strategies have positive correlation during equity down markets. In 2022, markets experienced a trifecta of a selloff in equity and bond markets, elevated inflation, and increased market volatility, making it a difficult year for many investors. Amid the resultant dispersion in alternative investment styles, global macro and trend-following strategies emerged as notable winners in 2022.

Investor Challenge	2022 Market Moves	
Depressed Returns	Equity Performance MSCI World	↓ -17.7%
Erosion of Stock / Bond Diversification	Bond Performance Bbg Global Aggregate	↓ -16.3%
Increased Volatility	Equity Volatility VIX Index	↑ +4.5
	Bond Volatility MOVE Index	↑ +44.5
Inflation	Inflation US CPI, Dec-22	↑ +6.5%

Hedge Fund Returns (HFRI Indices)	2022 Return
Trend-Following	10.27%
Macro	8.98%
Relative Value	-0.68%
Credit	-2.62%
Hedge Fund Composite	-4.14%
Event Driven	-4.83%
Equity Hedge	-10.13%
Emerging Markets	-13.05%

Data Source: eVestment, HFR, Inc.;
Chart by Graham Capital Management, L.P.

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PERFORMANCE CHARACTERISTICS OF MACRO

The dynamic diversification features inherent in global macro strategies offer the potential for substantial alpha generation, especially during equity market downturns when diversification and returns uncorrelated to market beta are most crucial. This makes it an attractive complement to a traditional portfolio.

Summary Statistics: Significant Alpha Relative to other Alternatives

Since HFRI Macro Index Inception (Jan-90 to Dec-23)

		Index	Alpha*	Beta*	Correlation*	Correlation - Down Markets*	Ann. Returns	Ann. Volatility
Alternatives	Macro	HFRI Macro	7.6%	0.22	0.33	0.03	9.0%	6.8%
	Relative Value	HFRI Relative Value	6.6%	0.24	0.56	0.55	8.3%	4.4%
	Event-Driven	HFRI Event-Driven	6.3%	0.47	0.69	0.64	9.5%	6.9%
	Equity Hedge	HFRI Equity Hedge	5.9%	0.66	0.75	0.61	10.5%	9.0%
	Hedge Funds	HFRI Fund Weighted Composite	5.6%	0.49	0.74	0.63	9.0%	6.7%
	Emerging Marke	HFRI Emerging Markets	4.0%	0.85	0.67	0.59	9.4%	12.9%
	Credit	HFRI Credit Index	2.8%	0.35	0.71	0.69	4.7%	5.6%
	Trend-Following	HFRI Trend Following Directional	2.7%	0.04	0.07	-0.30	2.7%	6.1%
Traditional Beta	Bonds	Bloomberg Global Aggregate	2.6%	0.31	0.55	0.36	4.7%	5.7%
	US Stocks	S&P 500	1.7%	1.31	0.89	0.82	10.2%	14.9%
	60/40	60% MSCI World, 40% Bbg Global Aggregate	0.0%	1.00	1.00	1.00	6.7%	10.2%
	Global Stocks	MSCI World	-1.7%	1.46	0.98	0.94	7.6%	15.3%

*versus 60/40 Portfolio

Data Source: eVestment, HFR, Inc.

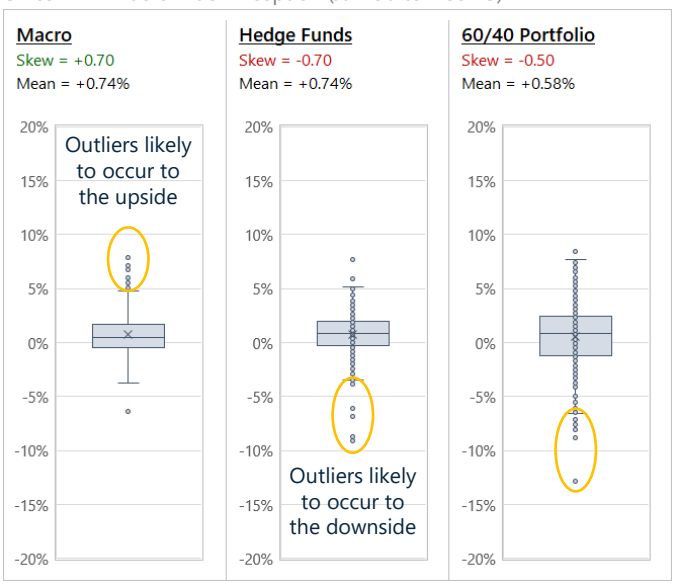
Chart by Graham Capital Management, L.P.

Positive Skew

Macro tends to exhibit a positively skewed performance distribution. Positive skew is desirable because the strategy tends to exhibit more positive extremes than negative, with potentially many instances of smaller return periods in between. These positive extremes often occur when there are clear catalysts for directional market moves (which can be either bullish or bearish) and offer the potential to offset drawdowns elsewhere in a portfolio. In other words, macro can be a big contributor when the portfolio is under stress, and may not be a big drag during periods when the portfolio is performing well. This is true dynamic diversification.

Distribution of Monthly Returns

Since HFRI Macro Index Inception (Jan-90 to Dec-23)



Hedge Fund styles are based on net performance of each respective HFRI Index from HFRI Macro index Inception in January 1990 to present, with the exception of the HFRI Trend Following Index and the HFRI Credit Index, which commence in January 2008.

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ROLE WITHIN AN INVESTMENT PORTFOLIO

Allocating to global macro as a long-term, strategic allocation within a diversified investment portfolio offers the potential for significant benefits and can be a valuable portfolio construction tool. Global macro offers the potential to lower the volatility and soften the drawdowns of a broader investment portfolio while adding to returns over the long run. Importantly, the strategy is meant to complement – rather than compete with – traditional investments.

Potential Impact of Allocating to Macro

Enhance Returns

Positive long-term return and low correlation characteristics, offering the potential to enhance the risk-adjusted returns of a broader investment portfolio

Reduce Volatility

Active risk management approaches can help navigate market volatility and changing market dynamics

Improve Drawdowns

Diversification properties result in the potential to reduce the severity of overall portfolio drawdowns

Increase Diversification

Low correlation to equities and bonds, with the ability to profit in both rising and falling markets with no inherent bias and the potential to provide equity crisis returns

IMPACT OF ALLOCATING TO GLOBAL MACRO Since HFRI Macro Index Inception (Jan-90 to Dec-23)	Improved Overall Returns	Lowered Overall Volatility	Increased Risk-Adjusted Returns	Reduced Drawdowns	Reduced Beta to Equities
	Annualized Return	Annualized Volatility	Information Ratio	Worst Drawdown	Beta to MSCI World
Global 60/40 Portfolio	6.7%	10.2%	0.65	-36.1%	0.65
Global 60/40 Portfolio with 10% HFRI Macro Index	7.0%	9.4%	0.74	-32.7%	0.60
Global 60/40 Portfolio with 20% HFRI Macro Index	7.2%	8.7%	0.83	-29.2%	0.55
HFRI Macro Index	9.0%	6.8%	1.32	-10.7%	0.14

Global 60/40 Portfolio, Global 60/40 Portfolio with 10% HFRI Macro, and Global 60/40 Portfolio with 20% HFRI Macro are a hypothetical composite portfolios that are not investable. Please refer to important disclosures at the end of this document for details on how these portfolios were constructed and for important information regarding hypothetical performance.
Data Source: eVestment, HFR, Inc.
Chart by Graham Capital Management, L.P.

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About GRAHAM CAPITAL MANAGEMENT

Graham Capital Management ("Graham") is a $20 billion alternative asset management firm founded in 1994. Graham focuses on innovative quantitative and discretionary investment solutions and invests in a wide range of global markets.

As of 4/1/2024

WHY GRAHAM?

30 Years Experience
Macro specialist with a long track record of positive returns across various market cycles and expertise in quantitative and discretionary macro trading.

$20 Billion AUM
Substantial resources and investment in technology and operational infrastructure.

Customization Expertise
Graham works with clients to deliver innovative solutions designed to meet individual investment objectives.

Daily Risk Committee Meetings
Disciplined risk management framework, including real-time risk monitoring and daily Risk Committee meetings.

Strong Alignment of Interests
Significant proprietary capital invested alongside client capital.

Institutional Framework
Diversified client base and extensive experience with the trading, operational, and compliance requirements of various trading structures.

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@GrahamCapitalLP

CONTACT US

40 Highland Ave, Rowayton, CT 06853

1-203-899-3456

info@grahamcapital.com

www.grahamcapital.com

IMPORTANT DISCLOSURE

Source of data: Graham Capital Management ("Graham"), unless otherwise stated

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BLOOMBERG GLOBAL AGGREGATE INDEX: The Bloomberg Global Aggregate Index is a broad-based market capitalization weighted measure of the global investment grade fixed-rate debt markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. There are four regional aggregate benchmarks that largely comprise the Global Aggregate Index: The US Aggregate, the Pan-European Aggregate, the Asian-Pacific Aggregate and the Canadian Aggregate Indices. The Global Aggregate Index also includes Eurodollar, Euro-Yen, and 144A Index-eligible securities, and debt from five local currency markets not tracked by the regional aggregate benchmarks (CLP, MXN, ZAR, ILS and TRY).

HFRI MACRO INDEX: The HFRI Macro Index is a sub-index of the HFRI Fund Weighted Composite Index and is composite index of over 900 Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

HFRI TREND FOLLOWING DIRECTIONAL INDEX: The HFRI Trend Following Directional Index is a global, equal-weighted index of single-manager funds that report to the HFR Database. The HFRI Trend Following Directional Index is comprised of funds that employ trend following strategies such as Macro: Currency – Systematic, Macro: Systematic Diversified, certain Macro: Multi-Strategy funds and other Macro funds that utilize, to some degree, trend following.

HFRI RELATIVE VALUE INDEX: Investment Managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

HFRI EMERGING MARKETS INDEX: Emerging Markets funds invest, primarily long, in securities of companies or the sovereign debt of developing or 'emerging' countries. Emerging Markets regions include Africa, Asia ex-Japan, Latin America, the Middle East and Russia/Eastern Europe. Emerging Markets - Global funds will shift their weightings among these regions according to market conditions and manager perspectives.

HFRI EVENT DRIVEN INDEX: Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

HFRI CREDIT INDEX: HFRI Credit Index is a composite index of strategies trading primarily in credit markets. It is an aggregation of following 7 HFRI substrategy indices. HFRI ED: Credit Arbitrage Index, HFRI ED: Distressed/Restructuring Index, HFRI ED: Multi-Strategy Index, HFRI RV: Fixed Income-Asset Backed Index, HFRI RV: Fixed Income-Convertible Arbitrage Index, HFRI RV: Fixed Income-Corporate Index, and HFRI RV: Multi-Strategy Index.

HFRI EQUITY HEDGE INDEX: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

INDEX DISCLOSURE

HFRI HEDGE FUND COMPOSITE INDEX: The HFRI Fund Weighted Composite Index is a global, equal-weighted index of single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of $50 Million under management or $10 Million under management and a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

MSCI WORLD INDEX: A market cap weighted stock market index of 1,652 global stocks and is used as a common benchmark for 'world' or 'global' stock funds. The index includes a collection of stocks of all the developed markets in the world, as defined by MSCI. The index includes securities from 23 countries but excludes stocks from emerging and frontier economies.

S&P 500 TOTAL RETURN INDEX: An unmanaged, market value-weighted index measuring the performance of 500 U.S. stocks chosen for market size, liquidity, and industry group representation. Includes the reinvestment of dividends. The S&P 500 index components and their weightings are determined by S&P Dow Jones Indices.

60/40 PORTFOLIO or GLOBAL 60/40 PORTFOLIO: Reflects a hypothetical portfolio with a 60% allocation to equities and a 40% allocation to bonds as represented by the MSCI World Index and the Bloomberg Global Aggregate Index, rebalanced monthly. Performance of the underlying stock and bond indices is calculated on a gross basis. This is a hypothetical composite portfolio that is not investable. Please refer to important disclosures at the end of this document regarding hypothetical performance.

GLOBAL 60/40 PORTFOLIO WITH 10% HFRI MACRO: Reflects a hypothetical portfolio with a 54% allocation to equities as represented by the MSCI World Index, a 36% allocation to bonds as represented by the Bloomberg Global Aggregate Index, and a 10% allocation to Macro as represented by the HFRI Macro Index, rebalanced monthly. Performance of the underlying stock and bond indices is calculated on a gross basis. This is a hypothetical composite portfolio that is not investable. Please refer to important disclosures at the end of this document regarding hypothetical performance.

GLOBAL 60/40 PORTFOLIO WITH 20% HFRI MACRO: Reflects a hypothetical portfolio with a 48% allocation to equities as represented by the MSCI World Index, a 32% allocation to bonds as represented by the Bloomberg Global Aggregate Index, and a 20% allocation to Macro as represented by the HFRI Macro Index, rebalanced monthly. Performance of the underlying stock and bond indices is calculated on a gross basis. This is a hypothetical composite portfolio that is not investable. Please refer to important disclosures at the end of this document regarding hypothetical performance.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

Stocks and bonds are represented by the MSCI World Index and the Bloomberg Global Aggregate Index, respectively, unless otherwise noted.

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