Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 21

MEETING DATE: **April 19, 2023**

SUBJECT: **Education: Absolute Return Trend-Following Strategies**

SUBMITTED FOR: ___ **Consent** ___ **Deliberation and Action** _X_ **Receive and File**

RECOMMENDATION

Receive and file the education presentation by Graham Capital Management.

PURPOSE

This item supports the upcoming 2023 Annual Investment Plan to provide investment education to Board members.

DISCUSSION

The objective of this presentation is to provide the Board with an overview on trend-following strategies, their investment objectives and process, how the strategies generate performance, and the role they play in SCERS' portfolio. The education is provided by Graham Capital Management, which is a highly experienced macro-oriented investment firm that runs a number of systematic and discretionary macro strategies. SCERS' first invested with Graham in February 2017, in their Tactical Trend Fund, and has approximately $46 million invested in the strategy as of March 2023. The Graham Tactical Trend Fund is part of SCERS' Absolute Return asset class, with the strategy classified under "Macro-Systematic" investments. Since SCERS' initial investment, the strategy has delivered +6.5% annualized returns[1], with the strategy up over 33% in calendar year 2022.

Firm Overview

Graham Capital Management (Graham) is a leading global macro investment management firm that manages approximately $18 billion in assets through several quantitative systematic and discretionary macro strategies.

Graham was founded by Kenneth Tropin in 1994 with $29 million in assets to run systematic macro trend following strategies. The firm offered its first dedicated discretionary macro strategy

[1] As of February 2023

in 2004. Graham is based in Rowayton, Connecticut, where the majority of the firm's employees work, including Graham's main trading operations. The firm has approximately 177 employees, including 71 people on the Quantitative Research and Technology team, which is dedicated to the systematic trading business. In addition to Mr. Tropin, the firm is led by a 10-person investment committee, which includes Chief Investment Officer Pablo Calderini, Chief Executive Officer Brian Douglas, and CIO of Quantitative Strategies Edward Tricker. The investment committee is responsible for oversight of Graham's portfolios and manages the process for vetting quantitative investment strategies.

The Graham Tactical Trend strategy is a dynamic, price-based trend model, comprised of multiple sub-models, which are designed to take advantage of directional, momentum-based market movements. Trend-following involves taking long directional exposure in markets that have been rising and shorting markets that have been declining, with the expectation that those trends will continue. Trend-following strategies utilize quantitative, data-driven models to generate buy and sell signals. The portfolio is highly diversified across a wide range of markets and investment products including global equities, fixed income, commodities, and currencies, and the strategy is implemented primarily using futures contracts. Portfolio exposure involves aggregating buy and sells based on a combination of price trends, correlation, volatility, and the duration of a trend (short-term; medium-term; and long-term). Since inception, the Graham Tactical Trend strategy has exhibited low correlation to traditional and alternative investment indices, providing diversification to an investment portfolio.

Presenting for Graham is Edward Tricker, Chief Investment Officer of Quantitative Strategies, and Laura Sheehy, Director Investor Relations. Dr. Tricker has worked at Graham for over 11 years and has a Ph.D. in Statistics from Imperial College in London and a B.S. in Mathematics from University of Oxford. Ms. Sheehy has over 12 years' experience including four years at Graham. Ms. Sheehy has a B.S. in Finance from Villanova University.

ATTACHMENTS

- Board Order
- Graham Capital Management Presentation

Prepared by:

/S/

Brian Miller
Senior Investment Officer

/S/

Steve Davis
Chief Investment Officer

Reviewed by:

/S/

Eric Stern
Chief Executive Officer

Retirement Board Order

Sacramento County Employees' Retirement System

Before the Board of Retirement
April 19, 2023

AGENDA ITEM:

Education: Absolute Return Trend-Following Strategies

THE BOARD OF RETIREMENT hereby approves Staff's recommendation to receive and file the education presentation by Graham Capital Management.

I HEREBY CERTIFY that the above order was passed and adopted on April 19, 2023 by the following vote of the Board of Retirement, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ALTERNATES:
(Present but not voting)

Keith DeVore Board President	Eric Stern Chief Executive Officer and Board Secretary

GRAHAM CAPITAL MANAGEMENT

GLOBAL ALTERNATIVE INVESTMENT STRATEGIES

40 HIGHLAND AVENUE | ROWAYTON, CT 06853
P: 203.899.3400 | F: 203.899.3577 | www.grahamcapital.com

Graham Tactical Trend Overview

Sacramento County Board Presentation | April 2023

Contents

GRAHAM CAPITAL MANAGEMENT

Table of Contents

Firm Highlights

GRAHAM CAPITAL MANAGEMENT

- For nearly three decades, Graham has specialized in providing compelling quantitative and discretionary alpha opportunities across a variety of market environments that seek low correlation to traditional investments.
- Graham is one of the longest running macro and trend-following managers, and the firm is committed to the innovative evolution of its strategies, supported by a well-established investment, technology, and operational infrastructure.

Substantial Resources and Experience

$17.7B
Total Firm Assets

1994
Year Founded

28
Years Trading Macro Markets

194
Employees Globally

$11.6B
Quantitative Assets Managed

70+ Quantitative Research and Technology Personnel

Established quantitative strategies infrastructure with dedicated research, operations and execution, data, systematic equities, and technology teams.

$6.1B
Discretionary Assets Managed

Multi-PM Discretionary Platform of 30+ Investment Professionals

Broad range of discretionary portfolio management teams.

Quantitative Trading at Graham

Overview of Quantitative Trading at GCM

GRAHAM CAPITAL MANAGEMENT

Significant Resources and Infrastructure

- More than 28 years of experience in quantitative trading
- $11.6B in quantitative assets managed, with significant investment of proprietary capital
- Experienced, multi-disciplined Quantitative Strategies team focused on research, data, operations, and execution

Performance and Diversification Benefits

- No long or short bias and the ability to profit in a variety of market conditions
- Low correlation to traditional asset classes with significant alpha potential

Dynamic Portfolio Construction

- Sophisticated portfolio construction actively manages market correlations / diversification
- Thorough risk monitoring, including daily Risk Committee meetings to review position-level information
- Smart order execution capabilities seek to reduce market impact and enhance overall performance

Quantitative Strategies Team

- Creates and manages the firm's quantitative strategies and serves as the firm's "think tank" for developing new sources of quantitative alpha.
- Comprised of personnel focused on data science, model design and development, and trading operations and execution. Supported by a robust team of technology professionals focused on software development, analytics, and operations.
- Quant Researchers have advanced degrees across many disciplines, including engineering, computer science, natural sciences, finance, mathematics, cryptology, signal processing, and statistics.

Pablo Calderini
President and CIO

Edward Tricker, PhD
Chief Investment Officer of Quantitative Strategies

Quant Data (5)
Curates and sources data

Quant Operations and Execution (14)
Implements models and oversees trading, ensuring efficacy, compliance, and efficiency

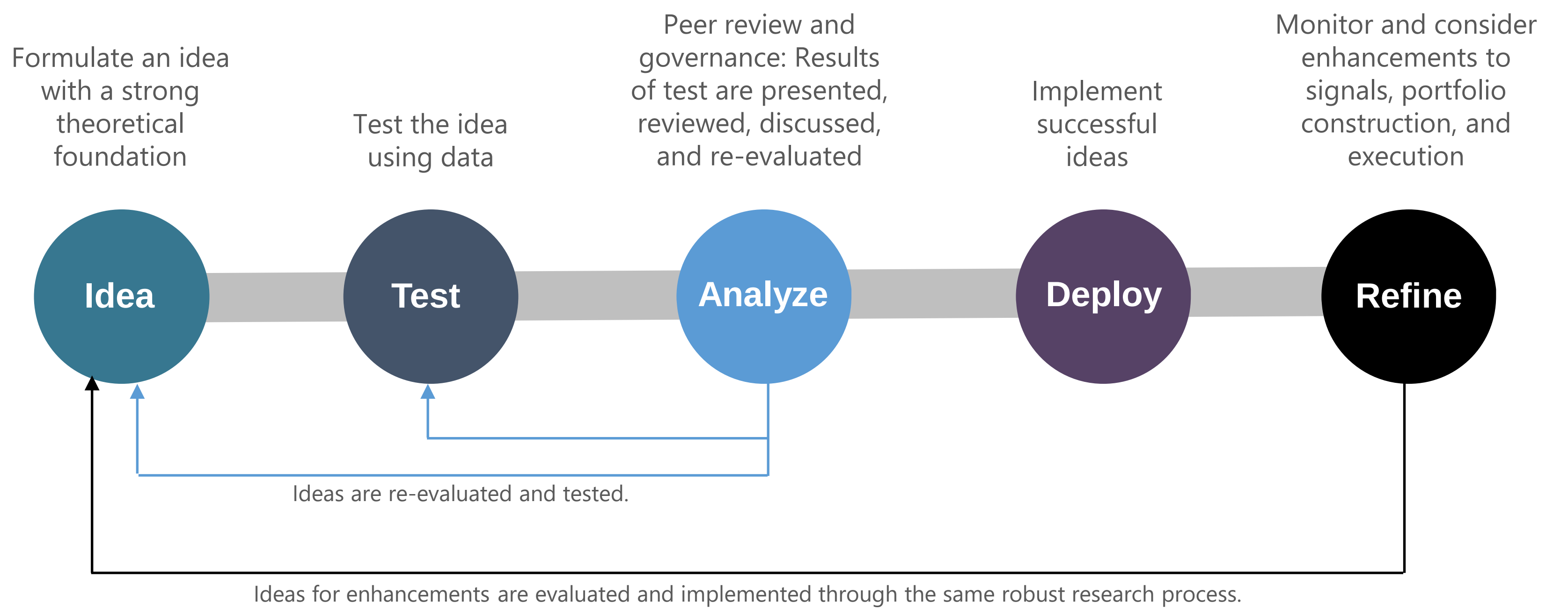
Quant Research (16)
Develops and tests new ideas and evaluates and enhances existing models

Systematic Equities (6)
Develops and implements the Systematic Equity Market Neutral Strategy

Quantitative Research Process

An iterative process rooted in a scientific approach

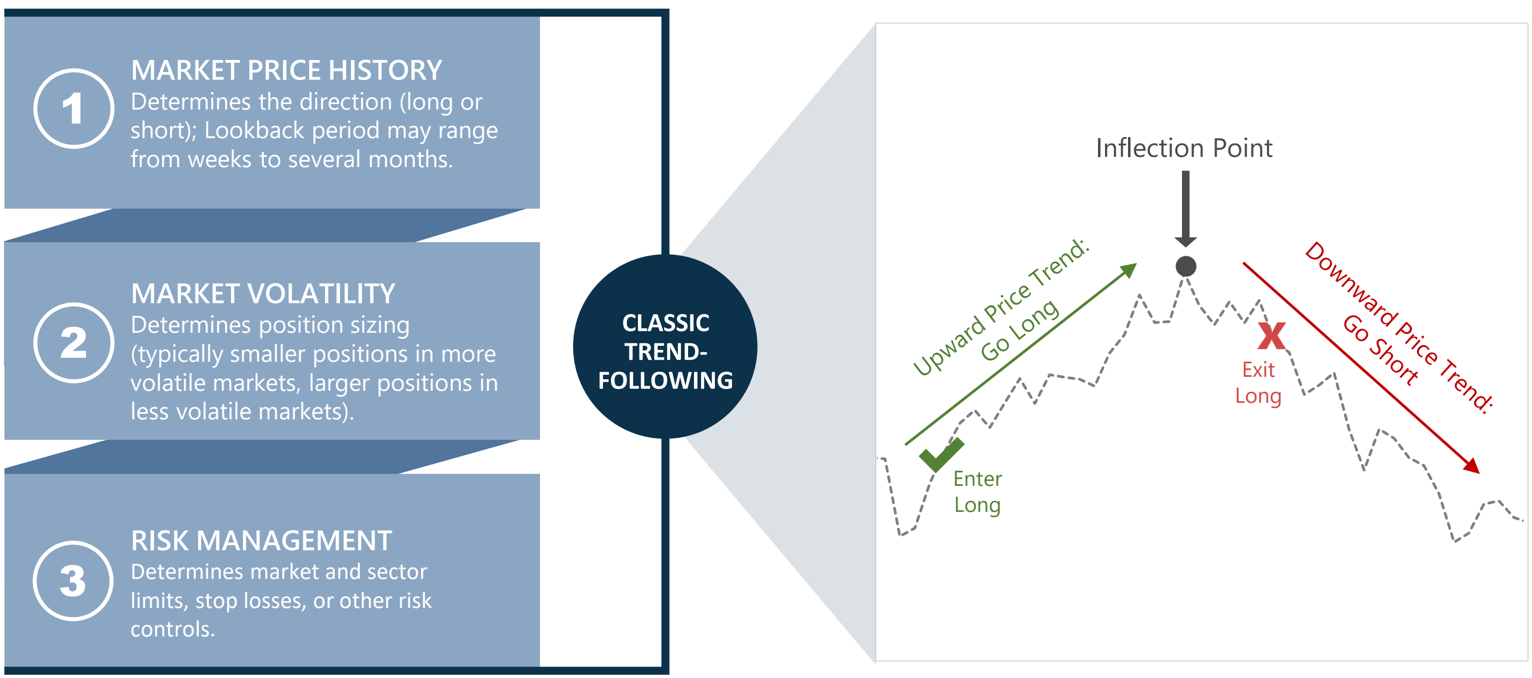
- GCM's Quantitative Strategies team takes a scientific, data-driven approach to forecasting markets and developing, implementing, and maintaining systematic strategies.
- The team works in a collaborative environment that emphasizes creative thinking and academic rigor in the development of new strategies as well as the enhancement of existing strategies.
- Ideas for trading models, portfolio construction, risk management, and execution are based on theoretical foundations. Ideas are analyzed and evolve through this process, during which groups collect and analyze data, form theories, test predictions, and continuously challenge their peers through iterative feedback.



Introduction to Trend-Following

What is Trend-Following?

- Trend-following strategies use a systematic process, whereby algorithmic models seek to identify price trends in markets, with the expectation that upward trending markets may continue to rally and downward trending markets may continue to decline.
- These strategies take long positions in positively trending markets and short positions in negatively trending markets, using indicators based on price and volatility of the underlying assets to identify trends of various lengths.
- Trend followers seek to run diverse portfolios, typically trading liquid, centrally-cleared futures and currency markets, with the number of markets potentially ranging from tens to hundreds.



Why do Markets Trend?

GRAHAM CAPITAL MANAGEMENT

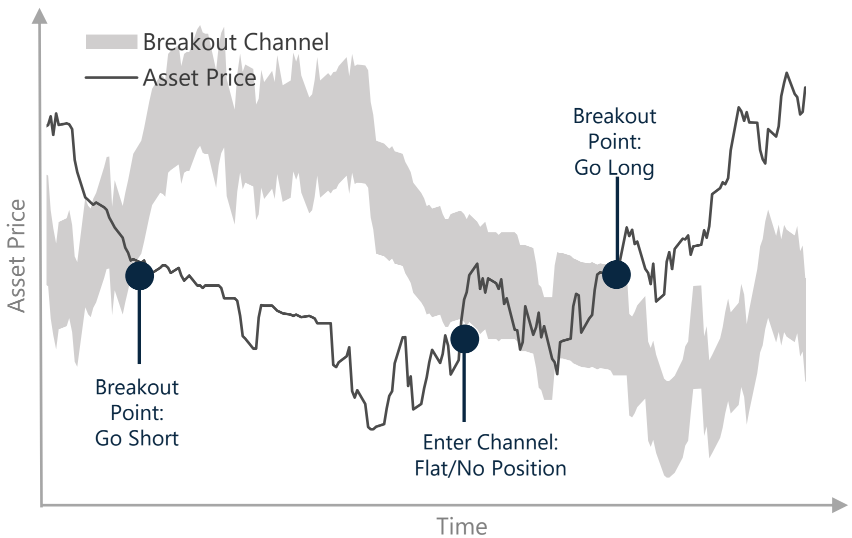
- Trend-following performance depends on the existence of trends, or sustained directional moves in markets.
- Trends may exist both in times of market duress such as the 2008 financial crisis, or during relatively "normal" market environments.
- The theoretical rationale surrounding the existence of trends includes:

Confirmation Bias	Recent price movements are seen as representative of the future, so investors may buy appreciating assets.
Risk Management	Some investors may be forced to sell assets as risk limits are exceeded, or to buy assets as risk limits are relaxed.
Economic and Geopolitical Regimes	Trends may develop as a result of the influence of government (via fiscal policy) and central banks (via monetary policy) as they attempt to control economic growth.
Markets Under/Over React	Initially, markets "under-react" to new information and prices may move slowly to fully reflect "fair value". Then, trends may perpetuate as markets "over-react."
Risk Premia	Market participants may demand varying levels of risk premia to hold assets. For instance, at times investors may be willing to pay higher P/E ratios to hold equities, sending prices higher, while at other times, earnings multiples may contract.

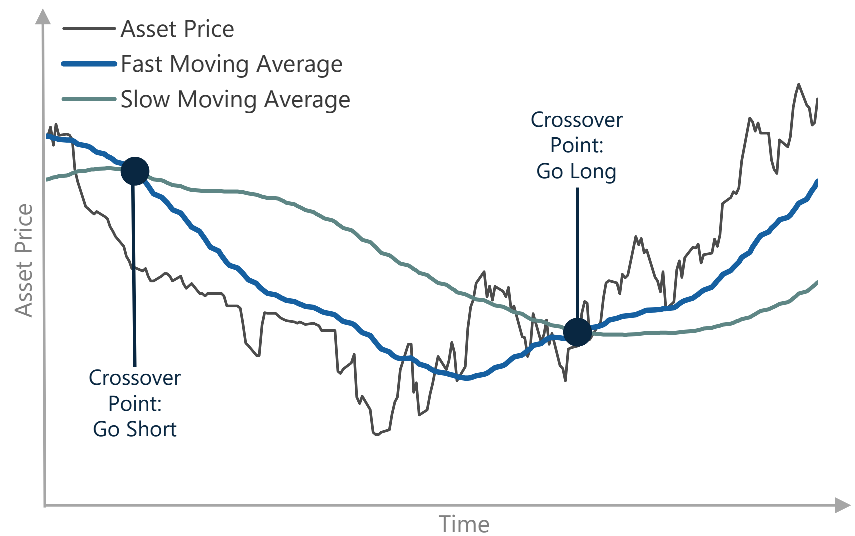
Types of Trend-Following Models

- Moving average and breakout models are two prominent strategies used by most trend-followers for initial signal generation. While these models may be parameterized differently, the raw signals generated are often highly correlated over time because of their common dependence on past prices.
- For example, while trend-following models may be parameterized at different speeds, no single speed is optimal over the long-term: if markets are more range-bound, then faster trend-followers tend to perform better as they are better able to capitalize on short-term oscillations in the price. By the opposite argument, in prolonged trends, slower trend-following is advantageous.
- Beyond signal generation and trend identification, position sizing and adjustment, risk management, and portfolio construction are important differentiators between trend-following managers.

EXAMPLES OF TRADITIONAL TREND-FOLLOWING MODELS



BREAKOUT MODELS compare the current price with a threshold to signal a long, short or no position. The threshold is determined by either a "price breakout" – a past maximum or minimum price – or a "channel breakout" – a past price at a given lookback and trading range.



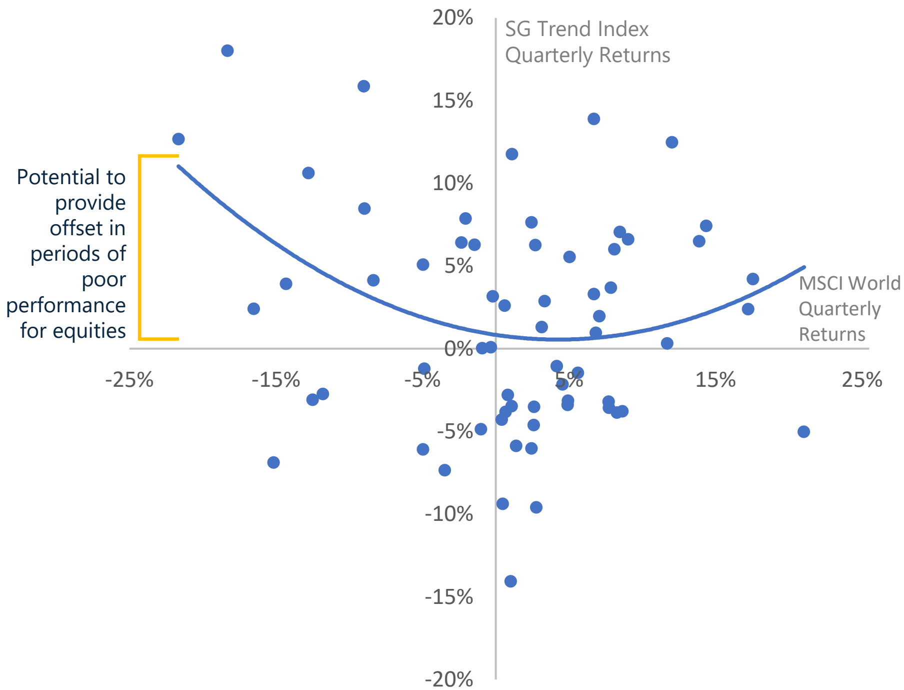
MOVING AVERAGE MODELS use moving averages of past prices to generate a trading signal. The difference between two moving averages, a "fast" and a "slow" one, determines a long or a short position. A crossover between the two will signal a trend reversal.

Why is Trend-Following Desirable? Convexity

GRAHAM CAPITAL MANAGEMENT

- Trend-following strategies can be profitable in both rising and falling markets and have a non-linear pay-off to their underlying market universe.
- This property is often referred to as convexity, which is a highly valued characteristic for investors seeking portfolio diversification.
- As shown below, trend-following exhibits strong positive convexity as it performs well during large directional moves (up or down), including equity stress periods.

POSITIVE CONVEXITY



PERFORMANCE IN UP/DOWN EQUITY MARKETS

Performance when MSCI World 12 Month Return is:	MSCI World Index	SG Trend Index	60/40 Portfolio	Bonds (Bloomberg Global Aggregate)	HFRI Hedge Fund Index
30% or higher	40%	7%	19%	8%	22%
20% to 30%	24%	5%	16%	4%	12%
10% to 20%	15%	2%	11%	4%	8%
0% to 10%	5%	7%	4%	3%	3%
0% to -10%	-4%	6%	-2%	4%	-1%
-10% to -20%	-15%	17%	-13%	3%	0%
-20% to -30%	-24%	24%	-14%	7%	-3%
-30% or lower	-41%	13%	-20%	-1%	-17%

Data above is based on performance since SG Trend Index inception in January 2000 through December 2022.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. PLEASE REFER TO IMPORTANT DISCLOSURES AT THE END OF THIS DOCUMENT.

Why is Trend-Following Desirable? Diversification

GRAHAM CAPITAL MANAGEMENT

- In 2022, simultaneous drawdowns for stocks and bonds underscored the need for strategies that offer both diversification to equities and bonds as well as positive returns. Meanwhile, rapidly changing market dynamics highlight the need for tactical trading and active risk management.
- Importantly, holding Tactical Trend as a strategic, long-term allocation is a potentially valuable portfolio construction tool that has the ability to enhance risk-adjusted returns, lower the volatility, and soften the drawdowns of an overall portfolio.

Impact of Adding Trend-Following to a Traditional Portfolio

	Increases Overall Returns	Improves Risk-Adjusted Returns	Lowers Overall Volatility	Reduces Drawdowns	Reduces Beta to Equities
	Annualized Return	Information Ratio	Annualized Volatility	Worst Drawdown	Beta to Equities
"Traditional" 60/40 Portfolio	4.64%	0.44	10.47%	-36.09%	0.65
Trend-Following (SG Trend Index)	6.06%	0.44	13.63%	-20.70%	-0.08
Traditional Portfolio with 10% Trend-Following	4.92%	0.52	9.45%	-31.56%	0.58

Data above is based on performance since SG Trend Index inception in January 2000 through December 2022.
Traditional 60/40 Portfolio: Reflects a hypothetical portfolio with a 60% allocation to the MSCI World Index and a 40% allocation to the Bloomberg Global Aggregate Index, rebalanced monthly and includes the investment of dividends. This hypothetical portfolio is not investable.
Traditional Portfolio with 10% Trend-Following: Reflects a hypothetical portfolio with a 54% allocation to the MSCI World Index, 36% allocation to the Bloomberg Global Aggregate Index, and 10% allocation to the SG Trend Index, rebalanced monthly and includes the investment of dividends. This hypothetical portfolio is not investable.
Please refer to the previous slide for additional performance disclosures.
PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. PERFORMANCE DISCLOSURES AT THE END OF THIS DOCUMENT ARE AN INTEGRAL PART OF THIS DOCUMENT.

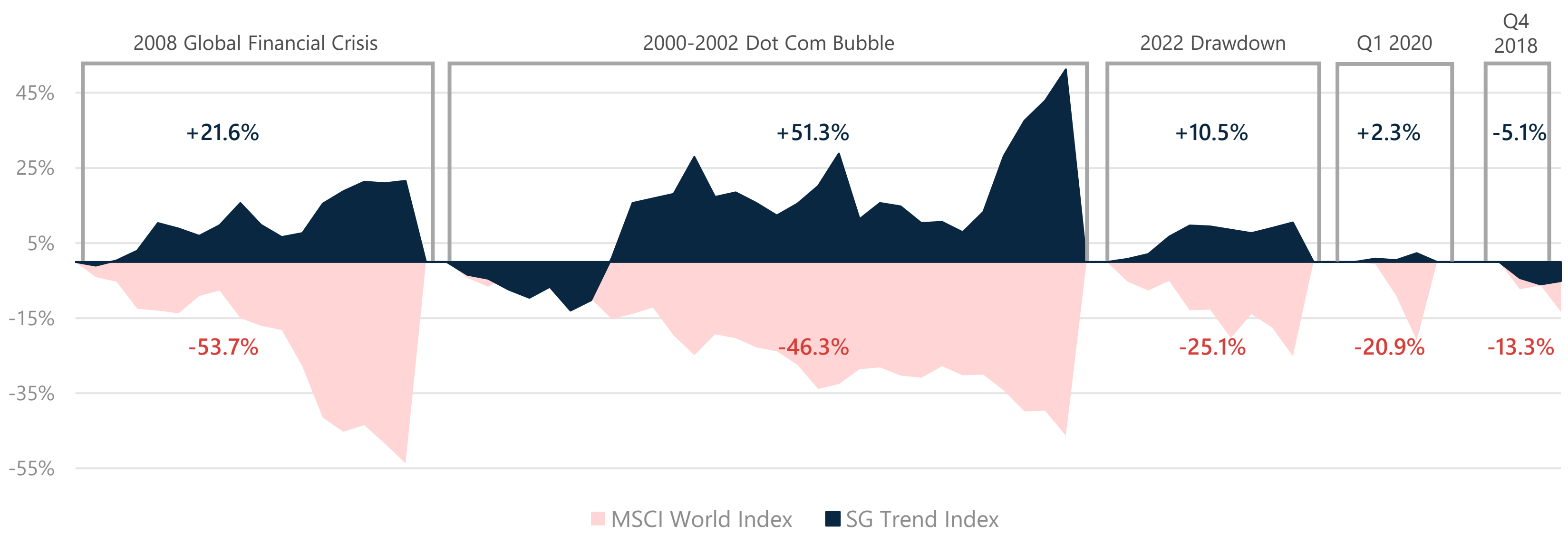
Challenges of Trend-Following: Consistency

- Investors often allocate to trend-following for the convexity and crisis return characteristics. However, there are several important performance considerations:

  1. **Challenging Market Environments for Trend:** Since trend-following is a directional strategy, it will generally perform better in periods of persistent directional market movements; range bound market environments or periods of sharp price reversals can be more challenging.

  2. **Equity Crisis Protection Not Guaranteed:** At any point in time, correlations may be positive or negative, including during crisis conditions. Trend-following has historically performed well, on average, during equity sell-offs, but positive performance during equity downturns is not guaranteed. For example, while the strategy was an important diversifier during longer-term market declines such as the burst of the technology bubble, the 2008 Global Financial Crisis, and the 2022 equity market drawdown, sharp reversals and short-term declines can be challenging, as seen in Q4 2018.

Performance during Largest 5 Equity Drawdowns



Data above is based on performance since SG Trend Index inception in January 2000 through December 2022.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. PLEASE REFER TO IMPORTANT DISCLOSURES AT THE END OF THIS DOCUMENT.

Graham Tactical Trend Strategy

Tactical Trend Overview

GRAHAM CAPITAL MANAGEMENT

STRATEGY SUMMARY

- Tactical Trend has been trading at Graham since October 2006 and was launched as a commingled fund in November 2013.
- Tactical Trend is a 100% systematic trend-following strategy comprised of multiple sub-models that trade based on an intermediate to long-term time horizon. The strategy seeks to identify price trends in markets, taking long positions in positively trending markets and short positions in negatively trending markets.
- Gradually buys and sells based on several factors, including price, volatility, and the duration of a trend.
- Trades a diverse market universe spanning 55 liquid global fixed income, equity, and commodity futures and currency forwards.
- Low correlation to traditional and alternative investment indices since inception, providing diversification to an investment portfolio over the long-term.

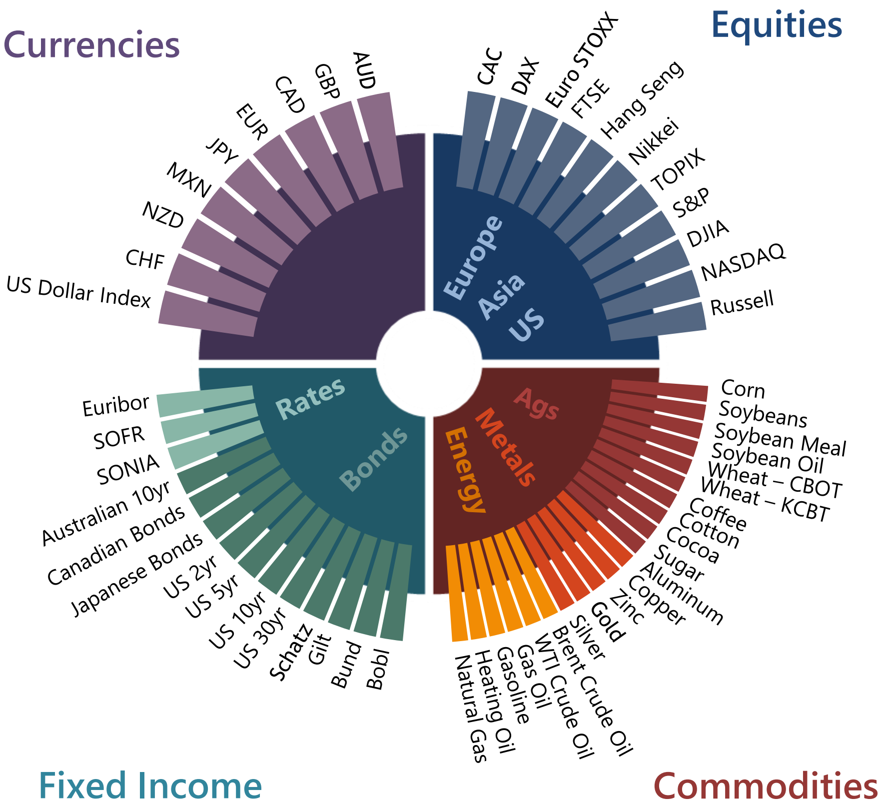
PORTFOLIO CONSTRUCTION PROCESS

Signal Generation: Establish Direction → **Signal Generation: Determine Magnitude** → **Signal Aggregation** → **Risk Overlay: Final Position Sizing**

Universe of Markets Traded

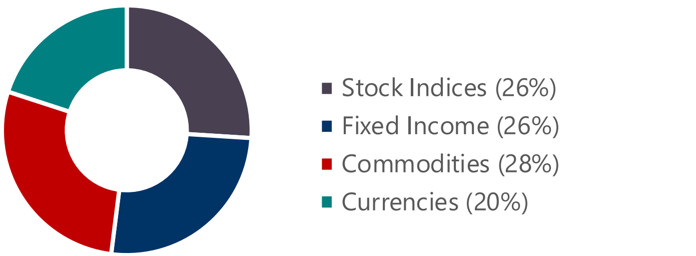
Tactical Trend trades liquid global futures and currency instruments that are diversified across markets and geographic regions. This diversification, coupled with the ability to go both long and short, results in a highly flexible strategy with opportunities to profit from both rising and falling markets.

Markets Traded

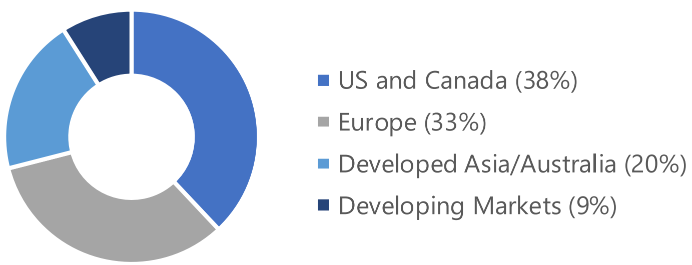


Average VaR Exposure*

By Sector



By Geography



*36 month look-back based on daily data from April 1, 2020 through March 31, 2023

Risk Management – Strategy Level

GRAHAM CAPITAL MANAGEMENT

- On a day-to-day basis, the strategy is managed by the firm's Quantitative Strategies Team, which is managed by Edward Tricker, Chief Investment Officer - Quantitative Strategies.
- While managed by the Quant Strategies team, risk management is inherent in the strategy's underlying models. The strategy utilizes a proprietary portfolio construction and risk management process to actively monitor and manage exposure across individual markets and sectors on a daily basis.
- The process incorporates the outputs of the underlying trading models with a sophisticated risk management process in an effort to enhance returns and maintain diversification and portfolio volatility targets.
- The portfolio targets a constant 12% annualized volatility and allocations are made based on the current alpha opportunities defined by the various sub-models.
- Benefits include:
    - Diversified risk across markets & sectors
    - More consistent daily volatility & VaR profile
    - Reduced execution costs by reducing excessive trading

Risk Management – Firm Level

GRAHAM CAPITAL MANAGEMENT

Daily Risk Committee Meeting

GCM's Risk Committee meets daily to review position-level information and related risks within the context of prevailing market conditions. The daily risk meeting ensures that members of the firm's senior management are fully informed of the risks to which the firm is exposed. If necessary, the Risk Committee may effect a reduction in risk within a particular strategy.

Risk Management Team

GCM's Chief Risk Officer, Chris McCann, oversees GCM's risk management team and the risk management process for all of the Firm's strategies. Mr. McCann and the risk management team continually monitor the strategy using both internal and industry-recognized standards to ensure compliance with firm-wide risk policies, as well as portfolio-level limits.

Members of the Risk Committee

Chris McCann (Committee Chairman) Chief Risk Officer
Ken Tropin Chairman and Founder
Pablo Calderini President and Chief Investment Officer
Brian Douglas Chief Executive Officer
Edward Tricker Chief Investment Officer of Quantitative Strategies
Kelly Tropin Whitridge Chief Economist and Senior Managing Director
Jennifer Ancker Whelen Chief Client Officer and Co-Head of Institutional Relations
Barry Fox Managing Director of Quantitative Operations and Execution
George Schrade Chief Financial Officer
Timothy Sperry Executive Director and Chief Compliance Officer
Jason Slutsky Chief Legal Officer

Analytics Reviewed by the Risk Committee on a Daily Basis

- Market Risk Indicators
- Position Concentration
- Correlation Analysis
- Prior Day Performance Analysis
- Value at Risk (VaR) Analysis
- Stress Tests (limits & tail risks)
- Delta/Vega/Gamma/Theta
- Liquidity Surveys
- Daily Volume Reports
- Daily Open Interest Reports
- Exchange Limit Monitoring
- Counterparty Exposures
- Cash Management Analytics
- Capital Usage Ratios
- Cross-Correlations

Review of Recent Performance and Market Environment

(Performance to be discussed)

Fixed Income Volatility: March 2023

- In the aftermath of the Silicon Valley Bank collapse and the Fed policy response, fixed income yields plummeted across the curve and bond prices (which move inversely to yields) soared.

2yr Treasury Volatility: 3 Day Change in Yields (bps)

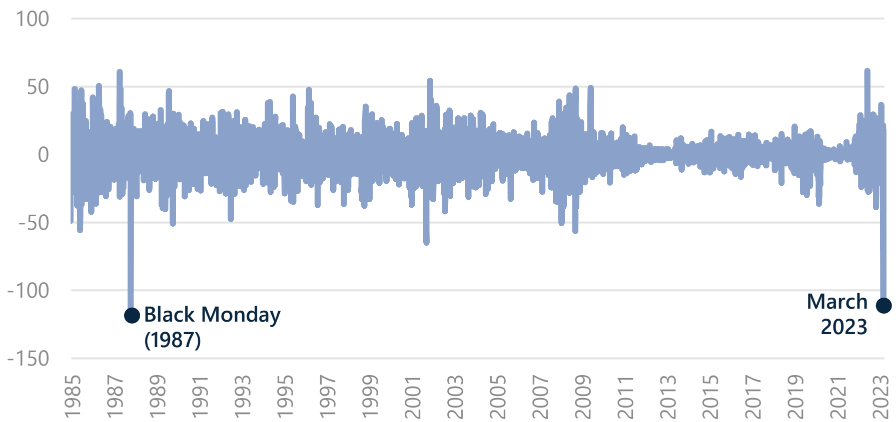


Figure 1: Bond Market Reversal The U.S. 2yr Treasury yield fell below 4% on March 13th, recording its largest decline since Black Monday in 1987 and falling more than 100bps in a matter of days. Yields across the curve, including 5yr, 10yr, 20yr, and 30yr maturities, also declined sharply.

2yr Treasury Volatility: 3-day Change in Yields / 10yr Trailing Vol

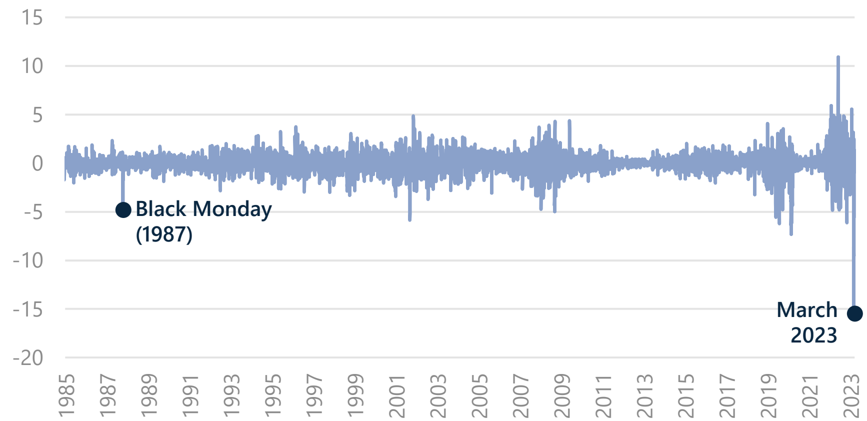
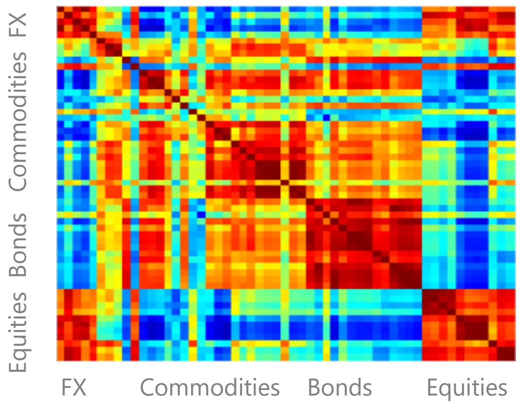


Figure 2: Bond Volatility In measuring the 3 day change in the U.S. 2yr yield, the last time a move of this size was seen was 1987. However, rates were higher and much more volatile in the 1980's. Adjusting for current levels of yield and volatility (right), the yield change in March 2023 represented a 15 standard deviation move, versus a 6 standard deviation move in 1987.

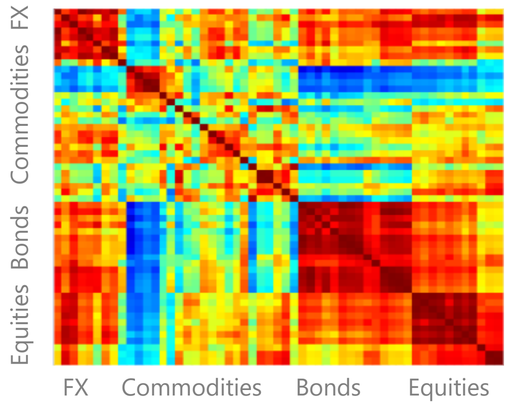
Market Correlations

- Markets correlations shifted meaningfully and were concentrated at times. Stock-bond correlations shifted from strongly positively correlated in 2022 to negatively correlated in March 2023.

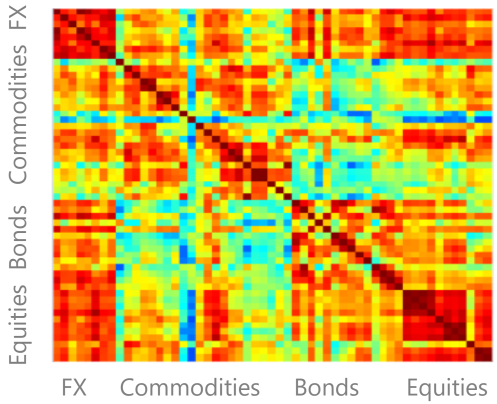
Q1 2022



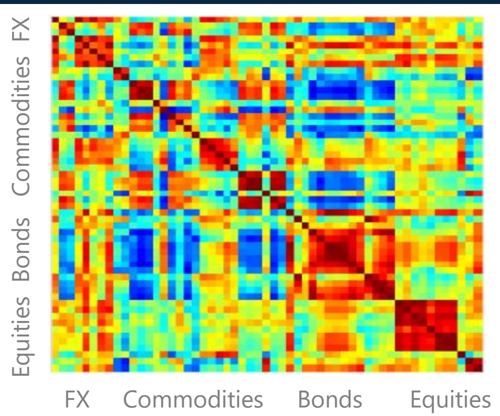
Q2 2022



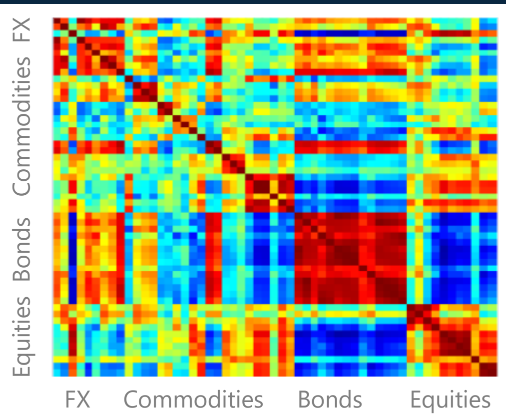
Q3 2022

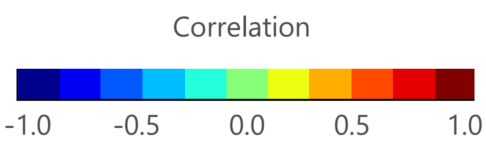


Q4 2022



Q1 2023





Correlations heat maps for 2022 reflect correlations as of each quarter-end. Correlation heat map for Q1 2023 reflects data through March 24, 2023, which is the latest available based on the time this presentation was finalized.

Disclosure

Certain Risk Considerations.

The fund(s) invest(s) in the following types of assets, which have unique investment risk characteristics.

Futures and options. Futures and options prices are highly volatile. Such volatility may lead to substantial risks and returns, generally much larger than in the case of equity or fixed-income investments.

Currencies. The Fund(s) will enter into forward currency contracts with banks, financial institutions or dealers acting as principal. Forward currency contracts may not be liquid in all circumstances, which can limit the ability of the Fund(s) to reduce currency positions on a timely basis or without incurring a sizeable loss. Currency trading is a principal market, traded through banks, which are not regulated by any U.S. governmental agency and will expose the Fund(s) to the risk of bank failure and the inability of, or refusal by, a bank to perform with respect to such contracts.

Swaps and Related Derivatives. The Fund(s) may enter into swap contracts and related derivatives agreements with various counterparties. Over-the-counter ("OTC") transactions may be subject to less or no requirements with respect to record keeping, financial responsibility or segregation of customer funds and positions. The default of a party with which the respective Fund has entered into a swap or other derivative may result in the loss of unrealized profits and force the Fund to cover its resale commitments, if any, at the then current market price. It may not be possible to dispose of or close out a swap or other derivative position without the consent of the counterparty, and the Fund may not be able to enter into an offsetting contract in order to be able to cover its risk.

The Fund's (Funds') Trading Is Highly Leveraged, Which May Result in Substantial Losses for the Fund(s). The Fund(s) trade(s) futures, options, swaps, currencies, equities and other instruments on a leveraged basis due to the low margin deposits normally required for such trading. As a result, a relatively small price movement in a contract or other instrument may result in immediate and substantial gains or losses for the Fund(s).

In Times of Market Stress, the Fund(s) May Not Be Able to Diversify Its Portfolio and Risk Management Systems May Not be Effective. Where the markets are subject to exceptional stress, trading strategies and programs may become less diversified and more highly correlated as the stress may cause diverse and otherwise unrelated markets all to act in a similar manner. The Advisor's risk management systems and procedures may not operate as anticipated or be effective to prevent losses in unusual or distressed market conditions. Efforts by the Advisor to diversify the Fund's (funds) trading strategies and investment exposure may not succeed in protecting the Fund(s) from significant losses in the event of severe market disruptions.

Index Disclosure

Graham's strategies do not have formal benchmarks. However, the below are widely used hedge fund, fixed income and equity market indices that have been selected for comparison purposes only. Indices are unmanaged, and one cannot invest directly in an index. Except for HFR indices, which do reflect fees and expenses, the indices do not reflect any fees, expenses or sales charges. Unlike most asset class indices, hedge fund indices included in this presentation have limitations, which should be considered in connection with their use in this presentation. These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds which could significantly affect the performance shown; these indices are based on information self-reported by hedge fund managers which may decide at any time whether or not they want to continue to provide information to the index). These indices may not be complete or accurate representations of the hedge fund universe, and may be affected by the biases described above.

INDEX DEFINITIONS

BARCLAY CTA INDEX: The Barclay CTA Index measures the composite performance of established commodity trading advisors. For purposes of this index, an established trading program is a trading program that has four years or more documented performance history. Once a trading program passes this four-year hurdle, its subsequent performance is included in this equally weighted and rebalanced at the beginning of each year index. The Barclay Index does not represent an actual portfolio, which could be invested in, and therefore the index performance results should be deemed to be hypothetical in nature and of comparative value only. There are currently 522 programs included in the calculation of the Barclay CTA Index for the year 2017. The Barclay CTA Index is only comprised of CTAs that submit performance data to BarclayHedge and is not necessarily indicative of the entire CTA community as a whole.

BLOOMBERG GLOBAL BOND INDEX: The Bloomberg Global Aggregate Bond 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).

BLOOMBERG U.S. AGGREGATE BOND INDEX: The Bloomberg US Aggregate Bond Index is a broad based market capitalization weighted index used to represent investment grade bonds being traded in United States. Most U.S. traded investment grade bonds are represented. Municipal bonds, and Treasury Inflation-Protected Securities are excluded, due to tax treatment issues. The index includes Treasury securities, Government agency bonds, Mortgage-backed bonds, Corporate bonds, and a small amount of foreign bonds traded in U.S.

HFRI HEDGE FUND INDEX: The HFRI Fund Weighted Composite Index is an equal-weighted index that includes over 2000 constituent funds which have at least $50M under management or have been actively traded for at least 12 months. There are no fund of funds included in this index. All funds are reported in USD and returns are reported net of all fees on a monthly basis. Individuals cannot invest directly into this index.

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.

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.

Disclosure

IMPORTANT INFORMATION

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

Date of data: All information is presented as of the date listed at the front of this document unless otherwise stated. A reference to "currently" means as of the date on the front of the document. The funds managed by Graham are only suitable for sophisticated investors who are aware of the risks of investing in hedge funds.

This document is neither an offer to sell nor a solicitation of any offer to buy shares in any fund managed by Graham and should not be relied on in making any investment decision. Any offering is made only pursuant to the relevant prospectus, together with the current financial statements of the relevant fund and the relevant subscription documents all of which must be read in their entirety. No offer to purchase shares will be made or accepted prior to receipt by the offeree of these documents and the completion of all appropriate documentation. The shares have not and will not be registered for sale, and there will be no public offering of the shares. No offer to sell (or solicitation of an offer to buy) will be made in any jurisdiction in which such offer or solicitation would be unlawful. No representation is given that any statements made in this document are correct or that objectives will be achieved. This document may contain opinions of Graham and such opinions are subject to change without notice. Information provided about positions, if any, and attributable performance is intended to provide a balanced commentary, with examples of both profitable and loss-making positions, however this cannot be guaranteed.

It should not be assumed that investments that are described herein will be profitable. Nothing described herein is intended to imply that an investment in the fund is safe, conservative, risk free or risk averse. An investment in funds managed by Graham entails substantial risks and a prospective investor should carefully consider the summary of risk factors included in the Private Offering Memorandum entitled "Risk Factors" in determining whether an investment in the Fund is suitable. This investment does not consider the specific investment objective, financial situation or particular needs of any investor and an investment in the funds managed by Graham is not suitable for all investors. Prospective investors should not rely upon this document for tax, accounting or legal advice. Prospective investors should consult their own tax, legal accounting or other advisors about the issues discussed herein. Investors are also reminded that past performance should not be seen as an indication of future performance and that they might not get back the amount that they originally invested. The price of shares of the funds managed by Graham can go down as well as up and be affected by changes in rates of exchange. No recommendation is made positive or otherwise regarding individual securities mentioned herein.

This presentation includes statements that may constitute forward-looking statements. These statements may be identified by words such as "expects," "looks forward to," "anticipates," "intends," "plans," "believes," "seeks," estimates," "will," "project" or words of similar meaning. In addition, our representatives may from time to time make oral forward-looking statements. Such statements are based on the current expectations and certain assumptions of GCM's management, and are, therefore, subject to certain risks and uncertainties. A variety of factors, many of which are beyond GCM's control, affect the operations, performance, business strategy and results of the accounts that it manages and could cause the actual results, performance or achievements of such accounts to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements or anticipated on the basis of historical trends.

This document has been prepared solely for information purposes and is not an offering memorandum nor any other kind of an offer to buy or sell or a solicitation of an offer to buy or sell any security, instrument or investment product or to participate in any particular trading strategy. It is not intended and should not be taken as any form of advertising, recommendation, investment advice or invitation to trade. This information is confidential and for the use of the intended recipients only. The distribution of this document in Canada is restricted to recipients in certain Canadian jurisdictions only who are qualified "permitted clients" for purposes of NI 31-103 and "accredited investors" for purposes of NI 45-106. It may not be reproduced, redistributed or copied in whole or in part for any purpose without prior written consent.

The information contained in this document is strictly confidential and is intended only for use of the individual to whom Graham has provided the document.

Tables, charts and commentary contained in this document have been prepared on a best efforts basis by Graham using sources it believes to be reliable although it does not guarantee the accuracy of the information on account of possible errors or omissions in the constituent data or calculations. No part of this document may be divulged to any other person, distributed, resold and/or reproduced without the prior written permission of Graham.