An Outcomes-Oriented Approach to Alternatives

INTRODUCTION

Transformational forces are colliding in a way that necessitates a fresh approach to asset allocation guidance for alternative asset classes and strategies: the proliferation of lower-cost alternative investment formats; the normalization of interest rates; and the need to reintroduce alternatives to Financial Advisors and clients, many of whom in the past have been disillusioned by unfulfilled expectations, high fees, tax complexity and liquidity. In this new outcomes-based approach, we have a navigation framework that is intuitive and tests for suitability through alignment with basic portfolio goals. We also posit performance parameters that allow us to compare the trade-offs between alternative mutual funds/ETFs and private offerings and suggest benchmarks that provide clients with a way to measure success. ■

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Executive Summary

The Global Investment Committee (GIC) view has long been that properly selected alternative asset classes and investment strategies can add diversification, provide some measure of downside resilience and, thus, should be incorporated, when suitable, in investment portfolios. In this paper, we explore both lower-cost alternative investment formats and outline a fresh approach to asset allocation that incorporates them alongside traditional products.

The first principle of wealth management is to create and maintain portfolio diversification through effective asset allocation. The power of this principle lies in the role that compounding returns play in wealth accumulation and preservation. To that end, we manage risk in an effort to mitigate large portfolio drawdowns and minimize volatility. When we minimize volatility over the typical multiyear investment horizon, we increase the probability that we achieve our goals. Allocations of bonds and cash have been the primary risk-management tool in portfolios, but the end of a 30-year bull market for bonds — combined with the impending unwinding of historic central-bank intervention in markets and the likely rise in bond volatility — raises the question of how effective these traditional assets alone will be in managing risk during the next three to five years.

The GIC believes that, as investors navigate this historic period of interest rate normalization, alternatives will be an even more important tool for portfolio diversification. In the past, bringing alternative investments into portfolios was challenging, in large part because liquidity, tax efficiency, transparency and affordability resulted in complexity and, therefore, limited access. Now, through alternative mutual funds and alternative exchange-traded funds (ETFs), some of these barriers are falling.* The GIC believes that this development is transformative for asset allocation and portfolio construction. Specifically, this development enables the transition from a pure accessibility-driven framework to a more precise, risk-management and suitability-driven approach from which even the most conservative investor with a basic stock-and-bond mix could benefit.

Easier access alone is not sufficient to attract investors. Client skepticism around alternatives is high, in part resulting from disappointing performance during the financial crisis. In addition, there has been confusion about how and when to use alternatives, given that they range from all flavors of hedge funds to private equity, real estate and commodities. Alternatives' lack of clear benchmarks, naming conventions and performance standards has further hindered their use.

In our view, new products and new packaging are not going to create better outcomes for clients. What is needed is a more robust, refined and disciplined approach to asset allocation and portfolio construction — one that includes categorizing products and strategies by clearly defined investment characteristics, performance metrics and benchmarks. This new framework acknowledges that alternatives is not a singular asset class to be allocated to but a collection of diverse strategies and asset types that can be used specifically as tools to aid portfolio construction. Finally, investors require a structured approach to navigating the sea of choices in a framework that better links potential solutions to their long-run goals. This paper attempts to establish such a construct for Financial Advisors and clients. ■

*Please see Appendix 1 on page 14 for a discussion on the differences between alternative mutual funds/ETFs and private offerings. Also, please see Important Notice Regarding Complex Products on page 13.

Our New Framework for Utilizing Alternatives

The typical approach to alternatives sees them as a homogenous asset class that offers uncorrelated returns, which, when added to a portfolio, can help to amplify results and reduce volatility. Instead, our framework objectively and systematically organizes alternatives into unique asset categories based on their strategies and how they help to diversify specific portfolio risks. As part of our analysis, we emphasize not only volatility and correlation as measures of risk but also the sequence of return-related measures like probability of drawdown and maximum drawdown. We examine how correlations change during periods of market stress and how sources of risk, such as liquidity and the shape of the yield curve, can impact a strategy's success. We attempt to more precisely identify strategies as either return enhancers or risk reducers — not both — and determine in which economic regimes each strategy tends to play that role.

This more granular approach yields more differentiated portfolio-construction inputs for our asset allocation recommendations.

Exhibit 1: Our New Outcomes Framework for Alternatives

CLIENT PRIMARY GOALS	PRIMARY ROLE OF ALTERNATIVE INVESTMENT	NEW ALTERNATIVE ASSET CATEGORY	CLIENT PRIMARY BENCHMARK	INVESTMENT CHARACTERISTICS: ANNUAL VOLATILITY (%)	CORRELATION WITH GLOBAL EQUITIES	CORRELATION WITH US INV. GRADE BONDS	GIC STRATEGIC RETURN ESTIMATES†
Capital Preservation	**Inflation Protection**	**Real Assets**	**Real Return; CPI Plus**	**10–20**	**0.40–0.60**	**0.10–0.20**	**4 +**
		Commodities ex Precious Metals		15–20	0.30–0.45		5–6
		Precious Metals/Gold		15–20	0.10–0.20		7–8
		Master Limited Partnerships*		10–15	0.60–0.70		7–8
		Global REITs		10–15	0.60–0.70		4–5
Income	**Real Return Enhancement/ Preservation**	**Total Return Assets**	**LIBOR Plus; 3-Month US T-Bill Plus 300 bps**	**3–7**	**0.30–0.50**	**0.00–0.10**	**2–4**
		Equity Market Neutral		3–5	< 0.20	0.00–0.10	2–4
		Relative Value Strategies including Credit Long/Short		5–7	0.50–0.60	0.10	2–4
Balanced Growth	**Volatility Management**	**Equity Hedge Assets**	**Total Return; 60% Stocks/40% Bonds**	**6–8**	**< 0.50**	**0.20–0.30**	**3–5**
		Global Macro		8–10	0.20–0.30	0.20–0.30	4–6
		Managed Futures		10–15	± 0.10	0.20–0.30	2–4
		Hedge Fund of Funds; Multistrategy Alts.		5–7	0.40–0.60		2–3
Market Growth	**Equity Diversification**	**Equity Return Assets**	**500 Plus 200-400 bps**	**10–20**	**0.65–0.90**	**0.00–0.10**	**4–8**
		Equity Long/Short		10–15	0.70–0.90	0.00–0.10	4–6
		Event Driven		10–15	0.80–0.95	0.00–0.10	4–6
Opportunistic Growth	**Growth Amplification**	**Opportunistic Assets**	**Mandate Specific**	**NM****	**NM****	**NM****	**8 +**
		Private Equity		10–20	0.85–1.00		
		Private Direct Real Estate		10–15	0.65–0.85		
		Early Stage Venture, Distressed Lending, Direct Lending, Impact Investing, Timberland, Water, Collectibles					

The Global Investment Committee's Outcomes Framework for Alternatives is not provided as part of an investment advisory service offered by Morgan Stanley Wealth Management, is not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley Wealth Management investment advisory service. Estimates of returns are in US dollars. The Outcomes Framework for Alternatives does not reflect the investment or performance of actual portfolios. Estimates of returns are gross figures, and as such, do not take into account fees and other expenses, the deduction of which, when compounded over a period of years, would decrease returns. Returns for periods of longer than one year are annualized. Investment characteristics are derived from indexes published by Hedge Fund Research, Inc. See the glossary on page 17 for terms used in this exhibit. See the index definitions starting on page 18. Estimates of future performance are based on assumptions that may not be realized.

For more information about the risks to Master Limited Partnerships (MLPs) see Risk Considerations on page 21.

**NM = Not meaningful

†Corresponds to capital market assumptions as published in the GIC's *Strategic Asset Allocation Capital Markets Update*, March 8, 2013

Source: Hedge Fund Research Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

It also helps to more clearly array strategies by the actual performance attributes they are likely to deliver within the context of a typical, balanced equity and bond portfolio. Perhaps most important, our approach attempts to go beyond reducing volatility and improving diversification to tap into the behavioral aspects of managing risks. Essentially, we make the argument that the use of alternatives can improve the probability of, and confidence in, achieving client goals.

Our proposed framework results in a newly refined asset scheme for alternatives that classifies asset classes and strategies into one of five goal-centric/risk-management categories: (1) inflation protection/real assets; (2) real return enhancement and preservation/total return assets; (3) volatility management/equity hedge assets (4) equity diversification/equity return assets; and (5) growth amplification/opportunistic assets. In categorizing alternatives, this framework breaks apart the broad category heretofore known as hedge funds or hedged strategies and aligns substrategies to their different underlying drivers. "Relative value" strategies, for example, fall under income preservation/total return assets, while global macro strategies are volatility management assets and event-driven strategies are market growth assets. With this categorization, we also propose clear performance metrics and benchmarks that should create a framework for comparing alternative mutual funds/ETFs and private offerings (see Exhibit 1, page 3 and Appendix 1, page 14).

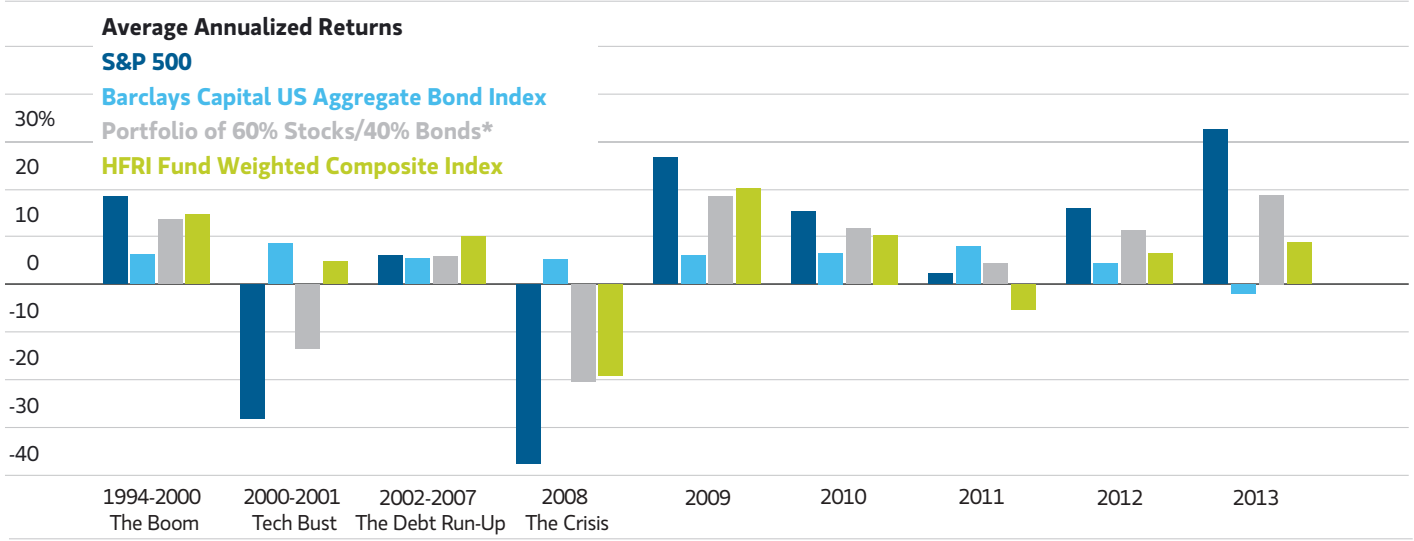
This same set of criteria helps to establish some discipline around universal definitions. For example, asset allocation mutual funds and unconstrained bond mutual funds are reclassified respectively—not as alternatives but as core portfolio substitutes or fixed income substitutes. By the nature of these new definitions, we suggest how clients and their Financial Advisors can use alternatives as part of their tactical portfolio management. This more refined approach to alternatives asset allocation is designed to increase investors' confidence that their alternatives investments are aligned with their goals, thus allowing for clear performance expectations and the potential to achieve better outcomes.

Seeding the Mythology and Misunderstanding

Modern Portfolio Theory (MPT) holds that, in the long run, there is an inherent trade-off between risk and return—especially when risk is measured as volatility. What's more, when uncorrelated assets are mixed in a portfolio, the volatility of the portfolio is reduced and diversification is typically increased, thus improving portfolio efficiency. With this view of asset allocation and portfolio construction as a backdrop, the rationale for using alternative asset classes and strategies in portfolios has evolved meaningfully during the past 30 years.

In their earliest days, alternative asset classes like commodities and real estate were lauded for their low correlations to stocks and bonds even though they had stock-like volatility. Their role was almost purely strategic diversification. At the same time, some hedge fund managers gained fame for the superior returns achieved with their unique strategies. These hedge fund pioneers created private offerings—often illiquid and unregulated—to give eligible investors access to their investing prowess, wrapping these vehicles with liquidity lock-ups and rich performance fees. Acknowledging that most liquid markets are highly efficient and can thus offer only modest excess returns above economic growth and the risk-free rate, hedge fund managers in the early days suggested that investment strategies delivering sustained superior returns exploit the extra risks that come from illiquidity, leverage, short-selling, arbitrage, the use of derivatives/options or some kind of particularly idiosyncratic manager skill, such as deal-structuring or access to the flow of ideas. Importantly, these early hedge fund pioneers focused almost exclusively on returns—and not risk management—because performance fees were based on returns in excess of a benchmark and not risk-adjusted returns.

Exhibit 2: 1994 to 2007 Was the Golden Age of Hedge Funds



*60% S&P 500 Index and 40% Barclays Capital US Aggregate Bond Index. See the index definitions on page 18 for descriptions of the indices used in this exhibit. See index definitions starting on page 18. Source: Hedge Fund Research, Barclays Capital, Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

Further enhancing the mystique and the focus on so-called "access to superior returns" that surrounded hedge funds in the late 1990s and early 2000s was the regulatory treatment of alternatives. This positioning implied that the risks exploited by hedge funds were best borne only by the most affluent clients, whose goals were already funded. Thus, the original asset allocation model for so-called alternatives was based largely on accessibility factors and wealth level; expectations for hedged strategies were unabashedly about superior returns with little mention of risk-mitigation properties while, on the other hand, expectations for real estate and commodities continued to be focused on portfolio diversification.

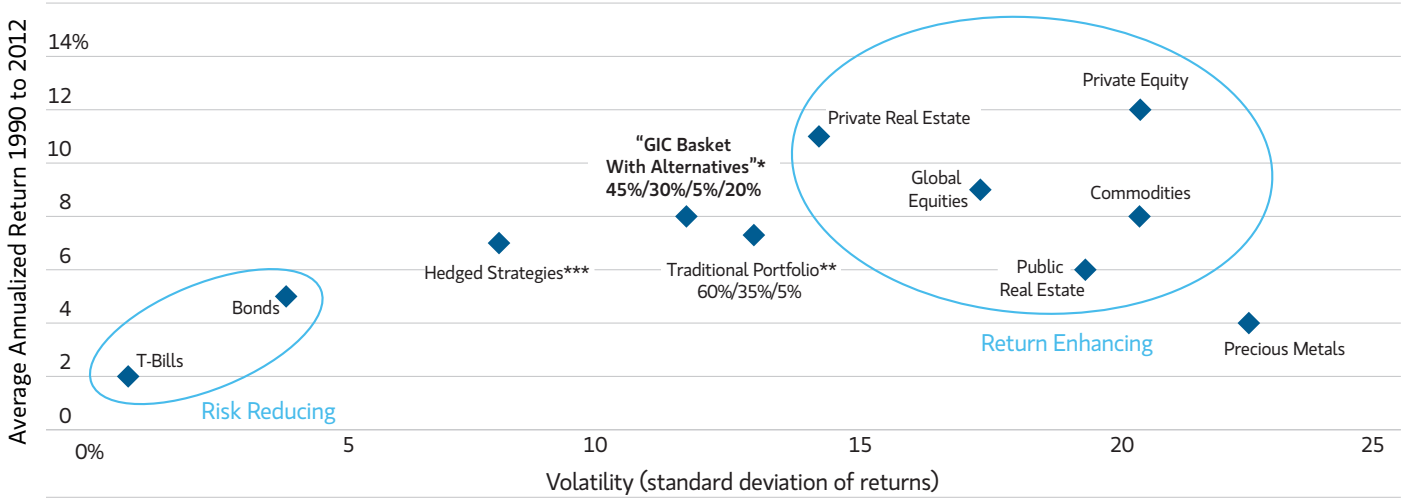
Still, bull markets, as they are wont to do, can cause investors to forget the fundamentals. Sometimes investors experience periods in which they seemingly get more return with less risk. Such was the case with US Treasury bonds from 2007 to 2012 and with a broad collection of equity-linked hedge funds between 1994 and 2007. Following the dot.com crash in 2001, which many hedge funds avoided, the bullish narrative around hedge funds bubbled up again as the relative outperformance of hedge funds versus the S&P 500 left investors believing that not only would they get higher returns but that they would also do so with less risk. During this phase of the alternatives industry's evolution (2002 through 2007), we began to see "peer" benchmarking appear because hedge funds were starting to be viewed as their own asset class. This version of the narrative, which focused on better risk and return, conveniently underemphasized the strategies' reliance on sophisticated tools like derivatives, shorting, leverage, options and dependence on interest rate spreads and market liquidity — thus sowing the seeds for what would be meaningful disappointment for investors during the financial crisis (see Exhibit 2, page 4).

As with any apparent "free lunch," rather than questioning if this trend was sustainable, many investors rushed headlong into alternatives in search of both outsized returns and lower volatility — with only passing consideration for the other risks. Rather than thinking in risk-adjusted terms or measuring the impact of alternatives versus the traditional portfolio of 60% stocks and 40% bonds, hedge fund managers insisted on being measured against the S&P 500. Under this scenario, allocating broadly to alternatives became the strategy du jour for clients looking to enhance overall portfolio performance. On the supply side, investor interest in the alternatives asset class exploded as the category became a catchall for almost any strategy that had delivered superior performance irrespective of how the returns were earned. Positioned as a portfolio cure-all, it is obvious why the 2008 financial crisis, during which many hedge funds behaved much like the markets, crushed investor expectations. Exacerbating the disappointing returns were lack of transparency and liquidity constraints imposed by the managers and the private-partnership structure.

In the aftermath of the crisis, investors understandably have questions about how to proceed. The case for utilizing uncorrelated strategies to build well diversified portfolios is analytically unquestionable and is routinely presented in industry literature.

Alternatives can improve long-term investment returns and lower the volatility of returns (see Exhibit 3). Suppose in 1990 you had added a 20% allocation of diversified alternative asset classes and strategies to a portfolio that was 60% stocks, 35% bonds and 5% cash. By the end of 2012, the portfolio with alternatives would have earned an 8.0% average annual return versus 7.3% for the traditional portfolio; annual volatility for the portfolio with alternatives was 11.5% versus 12.7% for the traditional portfolio. The uncorrelated returns of the alternatives serve as a buffer, muting the overall severity of drawdowns and creating outcomes that were still "equity like" but with a bit lower

Exhibit 3: Diversifying With Alternatives Improves Risk/Return Portfolio Characteristics



*45% S&P 500, 30% Barclays Capital US Aggregate Bond Index, 5% cash and 20% equal-weighted basket of GIC alternative asset categories
**60% S&P 500, 35% Barclays Capital Aggregate US Bond Index and 5% cash
***Hedged strategies consist of hedge funds and managed futures
Note: Please see Appendix 2 on page 15 for the indexes of each asset category. See the glossary on page 17 for terms used in this exhibit.
Source: Morgan Stanley Wealth Management GIC as of 2012

volatility. So, why did these strategies fail so many? In our view, expectations were not properly established and product selection was not sufficiently aligned with clients' long-term goals.

Why Utilize Alternatives Today?

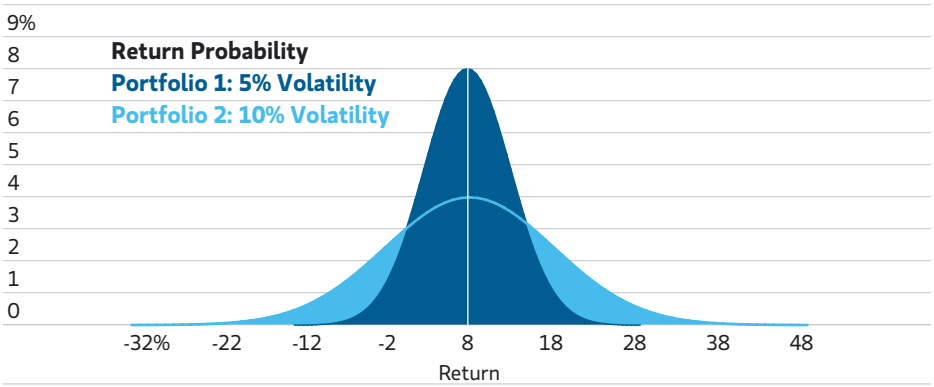
Today, we have come back to the future. Specifically, the financial crisis refocused everyone back on risk management and the basics of modern portfolio theory — managing risk through volatility reduction within the context of a balanced portfolio — which is particularly important for buy-and-hold investors whose long-run wealth accumulation and preservation are determined by avoiding large drawdowns and losses.

We believe that the most powerful reasons for clients to want to reduce volatility are behavioral. First, by mitigating the magnitude of maximum drawdowns during a market crisis, investors are more likely to have the emotional wherewithal to stick to their financial plan. Next, by reducing the volatility of returns, we increase the likelihood of achieving long-run goals.

Consider this: If a client has a financial plan that assumes a portfolio can earn an 8% average annual return with 10% annualized volatility, there is roughly a 46% probability that returns will average 6% or less, annually (see Exhibit 4). That means there is a significant chance of missing the investor's goal, which can affect withdrawals or lifestyle choices. If the client can have a portfolio that targets an 8% annual return but can reduce volatility to 5%, chances of returns falling to 6% or less are reduced to roughly 20%, thus increasing the probable success of the client's plan.

Although this overall logic for utilizing alternatives should be sufficient, the current challenges faced by investors make the case even more compelling. From 1990 through 2012, a standard portfolio of 60% stocks, as measured by the S&P 500, 35% bonds, as measured by the Barclays Capital Aggregate US Bond Index, and 5% cash produced returns of slightly more than 7%, annually, with a volatility of roughly 12.5% per year. The postcrisis period from 2008 to 2013 has been particularly unusual, with monetary-policy actions that led to a period of below-average volatility that we believe is now poised to unwind. In our view, this process of interest rate normalization is likely to produce above-average volatility in both stocks and bonds against a backdrop of still-muted, subpar growth. Our GIC seven-year strategic return assumptions for equities and bonds suggest a portfolio of 60% stocks, 35% bonds and 5% cash would have average returns of 3.9% and a volatility of 13.5% — that is a nearly 40% reduction in returns with a 30% increase in volatility from the past 25 years. (For a detailed discussion of the GIC's strategic assumptions, please see *Annual Update of Capital Market Assumptions*, March 8, 2013.) Thus, in our view, investors today need to improve returns and reduce volatility, and alternatives, including hedged strategies, are once again a possible solution. Unlike in previous periods, alternatives in the form of mutual funds and ETFs are

Exhibit 4: Lowering Portfolio Risk Increases Probability of Achieving Desired Outcomes



Source: Morgan Stanley Wealth Management GIC

Exhibit 5: New Alternatives Transform Potential for Asset Allocation Guidance

BUSINESS CONSIDERATION	PRIVATE PARTNERSHIP ALTERNATIVES	ALTERNATIVE MUTUAL FUNDS/ETFS
Target Client Segment	Institutions, Ultra High Net Worth; Accredited and Qualified Investors →	All
Asset Allocation Approach	Strategic →	Strategic and Tactical
Role in Portfolio	Opportunistic Growth; Volatility Mitigation →	Specific-Goals-Based Risk Management
Tax Considerations	Schedule K-1; Opaque and Delayed →	Annual 1099; Exchange-Traded Fund Cost-Basis Accounting
Fee Considerations	Potential for Layering →	Transparency
Portfolio Advice	Liquidity- and Accessibility-Driven →	Goal- and Suitability-Driven

Source: Morgan Stanley Wealth Management GIC

more accessible to an even broader group of investors.

Using Alternative Mutual Funds and ETFs to Transform Asset Allocation

The GIC believes the availability of more-liquid vehicles — alternative investment strategies in the form of mutual funds and exchange-traded funds — is transformative. Like stock and bond funds before them, these funds will likely democratize ownership of alternatives, making them mainstream offerings in both client-directed and fiduciary-managed platforms. Further, the utilization of mutual funds and ETFs to deliver alternative investment strategies helps to transcend transparency, tax and fee barriers. (See Appendix 1 on page 14 for summary of structural differences between private offerings and mutual funds/ETFs).

Equally important, alternative mutual funds and ETFs allow us to move from selecting investments based singularly on accessibility-driven factors to an approach that is clearly oriented to risk management (see Exhibit 5, page 6). Thus, rather than alternatives being an option for only affluent clients whose goals are fully funded, they can become a more mainstream solution for investors concerned about reducing volatility. Broader acceptance of liquid strategies will facilitate clearer industry definitions and benchmarks, likely institutionalizing them. There is potential for strategy replication through passive management, thus providing not only access to a strategy and at a lower cost. Finally, the evolution of alternative mutual funds and ETFs will allow Financial Advisors and management companies to create hybrid alternatives solutions in which illiquidity is concentrated in those asset classes and strategies where it is a source of incremental returns, such as private equity, private real estate, venture capital, infrastructure/project financing and direct lending. From a client's perspective, the availability of liquid alternatives creates two important and new capabilities for the GIC and Financial Advisors: Alternative investments can be aligned to the precise goals and objectives of the client; and our use of alternatives, and our advice around them, can be refined to both tactical and strategic portfolio roles.

To implement this, we believe clients require better education on alternative asset classes and strategies. This education needs to answer more than the basic question, "What are alternatives?" Proper client education should include:

- What role do alternatives play in my portfolio?
- How do these strategies behave in different economic regimes and cycles?
- How do I set expectations and measure performance?
- How can I compare a liquid alternatives strategy to a private version?
- What is the performance or risk-control price of liquidity?

Furthermore, we believe that clients will want advice that helps them remain unaffected by the market noise and clutter that comes with untested or unproven new products. The remainder of this paper attempts to answer these questions and set out a framework that hopes to unify the consideration and asset allocation decisions across both alternative mutual funds/ETFs and private alternatives.

Refining Our Approach to Asset Allocation

The starting point of our outcomes-based asset allocation approach is to acknowledge that "alternatives" is a label for asset

Exhibit 6: Hedge Strategies' Diversification Properties Are Not Homogeneous

	ANNUALIZED RETURN (%)				LONG-RUN CORRELATIONS			
STRATEGY	FIVE-YEAR	SINCE 1990	2013	VOLATILITY (%)*	S&P 500	BONDS**	SHARPE RATIO†	MAXIMUM DRAWDOWN (%)
Equity Long/Short	9.1	12.7	14.3	9.2	0.73	0.10	1.02	-30.6
Event Driven	10.6	11.6	12.5	6.8	0.70	0.10	1.21	-24.8
Hedge Fund of Funds Composite	4.8	7.3	8.7	5.2	0.62	0.13	1.21	-27.5
Relative Value	10.7	10.1	7.0	4.4	0.53	0.10	1.56	-18.0
Equity Market Neutral	2.3	6.8	6.6	3.2	0.32	0.10	2.10	-9.2
Convertible Arbitrage	15.1	8.6	8.0	6.6	0.50	0.20	1.31	-25.3
Global Macro	1.5	11.6	-0.5	7.5	0.33	0.30	1.12	-10.7
Distressed Credit	12.1	12.1	14.1	6.5	0.52	0.51	1.85	-27.4
Managed Futures	-0.8	6.7	0.8	11.6	-0.10	0.18	1.00	-16.2
S&P 500	15.1	9.5	32.4	14.9			0.39	-50.9
Barclays Capital US Aggregate Bond Index	4.4	6.5	-2.0	3.7			0.88	-5.1

*Average since 1990
**Barclays Capital US Aggregate Bond Index
†Average since 1990
See the glossary on page 17 for terms used in this exhibit. See the index definitions starting on page 18 for the explanation of the strategies.
Source: Hedge Fund Research, Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

classes and strategies that share the common property of having different investment characteristics than equities or bonds—but are individually quite heterogeneous. Portfolio-construction purposes require, for each asset class, a forecast of expected returns, a view of the drivers of those returns, measures of volatility patterns and an understanding of correlations to both stocks and bonds.

Among alternatives, private equity, real estate and commodities have typically been considered unique asset classes for asset allocation purposes. "Hedged strategies," which includes managed futures, has proven more challenging. Modeling hedge funds as an asset class presents challenges: There are few agreed-upon benchmarks as hedge fund strategies differ in their use of derivatives and in many cases are unconstrained in terms of the asset classes, geographies or capitalization spectrums in which they invest; and, because of the use of shorting and derivatives, hedge fund returns have been shown to be nonnormally distributed—that is, they have a pattern of returns unlike stock and bonds, which tend to have a bell-shaped normal distribution. In addition, performance is reported only monthly and commercial indexes are fraught with survivorship bias, as funds that lag or underperform often are simply shut down (see Appendix 3, page 16 for a discussion of performance and survivorship bias).

As such, Financial Advisors have often recommended funds of hedge funds, but funds of funds are not an asset class or a strategy from an asset allocation perspective. The difficulties in utilizing the fund-of-funds approach are evidenced by the large dispersion in both performance and risk-reduction properties. While due diligence and manager selection can help mitigate some of this risk, we think the fund of fund's inherent complexity, even in mutual fund form, may inhibit client adoption. Though funds of hedge funds have merit as a blunt attempt at gaining diversified exposure, we believe they forgo the opportunity to more precisely manage client-specific portfolios, expectations and risks when sizing asset allocation decisions based on expected returns and expected volatility.

So, how do we exercise appropriate asset allocation while anchoring our decisions regarding hedged strategies in precise drivers of returns and risk? Exhibit 6 (see page 7) arrays hedge fund investment strategies as characterized by Hedge Fund Research indexes and displays their associated performance attributes and characteristics. A careful analysis reveals several important points that suggest the merits of a more refined asset allocation approach. First, there is wide performance dispersion across the universe of hedged strategies. For example, the five-year performance of managed futures produced

Exhibit 7: Macro Risk Factor Correlations of Hedged Strategies Vary Widely

		RISK FACTOR CORRELATIONS						
STRATEGY	DESCRIPTION	EQUITY MARKET VOLATILITY	US DOLLAR FOREIGN EXCHANGE	OIL	MARKET LIQUIDITY	DEFAULT RISK	THREE-MONTH T-BILLS	YIELD CURVE SLOPE
Global Macro	Top-down unconstrained tactical asset allocation		+		+	–	–	+
Equity Market Neutral	Exploits pairs trading within sectors and geographies to achieve equity beta close to 0			–		–	–	–
Relative Value	Exploits relative mispricing through pairs trading across capital markets	–			–		–	+
Managed Futures	Exploits trading and momentum inefficiencies in commodity, currency and bond futures		–			+		
Event Driven	Exploits information asymmetry around exogenous corporate events	–		+	+			
Equity Long/Short	Tactically adjusts net long equity exposure based on quality/quantity of equity alpha ideas	–	–	+				
Distressed Credit	Exploits default risk premiums			+	–	–	–	+
Short Bias/ Volatility Hedging	Gains negative exposure to equity markets through shorting and buying vehicles that track the VIX	+	+	–				
S&P 500 Index		–	–				+	
Barclays Capital US Aggregate Bond Index		+			+	–	+	–

Note: Plus signs indicate strongly positive correlation; minus signs indicate strongly negative correlation; blank indicates neutral. See the glossary on page 17 for terms used in this exhibit. See the index definitions starting on page 18 for the explanation of the strategies.

Equity market volatility is measured by the VIX; US dollar foreign exchange is measured by the trade-weighted dollar; oil is measured by Brent crude oil prices; liquidity is measured by New York Stock Exchange daily volume; default risk is measured by the spread between the yield on Moody's Baa and Aaa bonds; yield curve slope is measured by the yield differential between three-month and 30-year US Treasury securities.
Source: EDHEC Risk and Asset Management Research Center as of February 2003

Exhibit 8: Hedge Fund Diversification Properties Are Not Stable

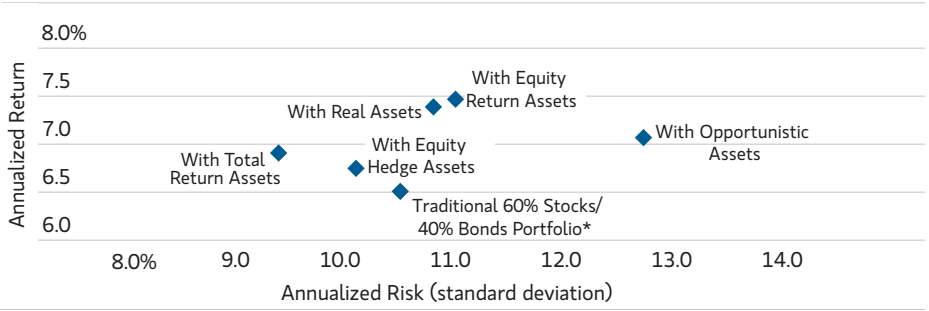
	CORRELATION WITH EQUITY MARKETS				DISPERSION BETWEEN RISING AND FALLING MARKETS
STRATEGY	OVERALL 1990 TO 2013	RISING MARKETS 2002 TO 2007	FALLING MARKETS 2001 TO 2002	FALLING MARKETS 2008 TO 2009	
Short Bias/Volatility Hedging	-0.7	-0.9	-0.9	-0.9	Same
Global Macro	0.3	0.2	-0.1	0.0	Better
Equity Market Neutral	0.3	0.2	-0.6	0.2	Better
Relative Value	0.5	0.4	0.4	0.3	Better
Multistrategy Arbitrage	0.5	0.4	0.5	**0.7**	**Worse**
Multistrategy Absolute Return	0.5	0.5	0.4	**0.7**	**Worse**
Distressed Credit	0.5	0.5	0.3	**0.7**	**Worse**
Event Driven	0.7	0.7	0.7	**0.8**	**Worse**
Equity Long/Short	0.7	0.7	0.9	**0.9**	**Worse**

Note: See the index definitions starting on page 18 for the explanation of the strategies.
Source: Hedge Fund Research, Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

negative returns over the past five years while event-driven strategies have delivered nearly 9% annualized returns during the same period. Correlations with equities are widely dispersed, too, from 0.73 for equity long/short strategies to 0.32 for market-neutral funds. Similarly, few strategies hedge equally well between stocks and bonds, as measured by correlation. For example, global-macro, market-neutral and relative-value strategies show low correlations to equities but higher correlations to bonds. Similarly, the volatility of individual strategies has ranged from nearly 3% per year for equity market neutral to between 7% and 9% for equity long/short and event-driven funds. Factor correlations such as interest rates, the shape of the yield curve and market volatility itself are also widely disparate (see Exhibit 7, page 8).

Finally, leveraging work from EDHEC (Ecole des Hautes Etudes Commerciales du Nord), these strategy correlations have not been stable over time and many strategies have behaved in the extreme when equity markets have moved sharply up or down (see Exhibit 8). Event driven, relative value and distressed credit have provided solid low and negative correlations to equity markets in benign environments, but correlations have tended to soar when stress emerges. Those movements are driven by the dynamics of their underlying instruments, some of which may be particularly dependent on factors like market liquidity. The point is that there are few "all weather" strategies and, instead, each strategy plays a particular risk-reduction role. The challenge for advisors and investors is to identify specific risks that exist in a portfolio and select strategies to explicitly hedge and manage them.

Exhibit 9: Which Alternatives You Add to the Portfolio Matters



*60% S&P 500/40% Barclays Capital US Aggregate Bond Index
Note: Annualized return and annualized risk are for the period 2000 through 2013. Alternatives mentioned above are drawn from the framework in Exhibit 1.
Source: Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

As a starting point for that exercise, we have attempted to refine our thinking on asset classification. We deconstructed each so-called alternatives category into its unique component parts — separating alternative asset classes from alternative strategies and further decomposing hedge funds into specific strategy types. Arraying the investments this way reveals that there are return-enhancing investments that add risk, such as private equity, private real estate, event-driven strategies and equity long-short strategies; pure diversifiers that are uncorrelated but with more modest volatility on average than equities, such as commodities, precious metals, managed futures and public real estate; and genuine risk reducers, such as global macro and relative value, which specifically target low volatility and/or total returns. To refine the framework further, we focused on primary risk drivers, reorganizing the entire alternatives universe into real assets, total return assets, volatility-management and hedge assets, market return assets and opportunistic-growth assets. In our analysis, each of these types of investments, when added to a standard stock/bond portfolio, would lower the aggregate correlation with equities, potentially reduce volatility, and produce portfolios that have markedly different performance characteristics

depending on the current economic climate (see Exhibit 9).

Incorporating the New Alternatives Framework in a Client's Portfolio

Connecting this categorization of asset categories to client goals is what ultimately makes the framework compelling, as it suggests more refined performance requirements, helps set client expectations and benchmarks and suggests how the alternatives investment should be funded. Exhibit 1 (see page 3) shows the framework in which we align client goals with alternative asset categories. At their core, all client goals can be generalized as capital preservation, income, balanced growth, market growth and legacy growth. Each goal comes with a primary risk-management driver that asset allocation must help address if the goal is to be achieved. We suggest, for example, that the key risk to be managed for capital preservation is inflation protection, as that will maintain purchasing power. For income goals, the risk-management mandate is preservation of total return or cash-flow levels. For market-growth goals, managing volatility is primary and, for those pursuing growth of capital, optimizing equity-like exposure is key. Finally, long-duration legacy goals are best satisfied through exposure to unique high-growth idiosyncratic ideas.

Each goal can be satisfied with traditional products, such as inflation-indexed securities for inflation protection or high yield debt for market-exposed volatility management, but we believe each risk-management approach could be further enhanced with alternatives allocations to the noted asset category. For example, the capital-preservation client who wants inflation protection might fulfill her alternatives allocation primarily with real assets — real estate investment trusts, master limited partnerships commodities and gold — while the market growth investor may fulfill the alternatives allocation with equity long/short and event-driven strategies. Alternatives asset allocation for a moderate market growth goal — the standard 65% stocks, 35% bonds and 5% cash investor — would mainly utilize risk-reducing, volatility-managing investments such as global macro, managed futures and multistrategy funds of funds.

Potentially even more important than establishing this goal-based framework is the need to set investment parameters and performance benchmarks for each asset category to make it easier to compare private offerings and alternative mutual funds/ETFs. We suggest that solutions for income preservation, for instance, should be benchmarked against a total return bogey such as the US Treasury bill rate plus 300 basis points. These same income preservation strategies should be expected to have bond-like volatility of 3% to 8%, annualized, and modest correlation to both equities and interest rate risk. Market growth goal seekers, on the other hand, should benchmark their alternative investments to market returns — establishing mandates to beat the S&P 500 by at least 200 to 400 basis points, for example, while having equity-like volatility in the 13%-to-20% range, high equity correlations and high beta. These category benchmarks, once established, can supplant self-reported peer-universe-benchmarking metrics.

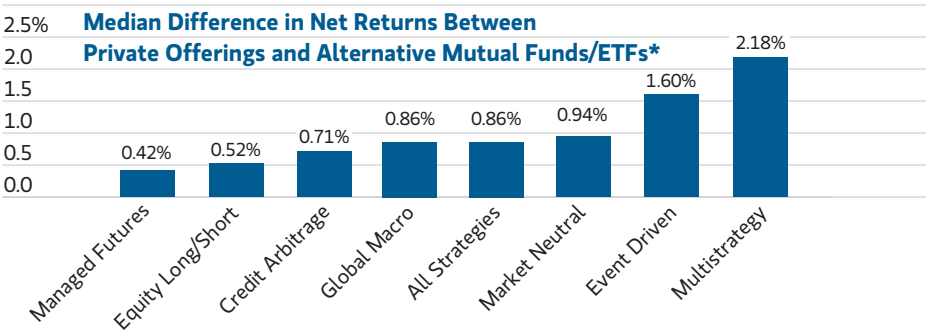
Importantly, when these category definitions and benchmarks are applied to the current universe of alternative mutual funds and ETFs, we see some discipline emerging. One example of liquid strategy types that fall out of our alternatives framework is the multiasset allocation funds (standard global tactical asset allocation), which are really core traditional investment substitutes, and unconstrained bond funds, which are really traditional fixed income substitutes in our GIC asset allocation.

Which Containers: Alternative Mutual Funds, ETFs or Private Offerings?

Once clients and Financial Advisors have established goals, determined what role alternatives should play in their portfolios and identified performance benchmarks, they can choose their investment package and then their managers. For clients with particular concerns about liquidity, transparency or tax treatment, mutual funds and ETFs may be the only choice.

For investors who can consider all options, we point out some other considerations. First, there is a performance and risk-control price for liquidity and the regulatory constraints imposed by alternative mutual funds and ETFs. Academic studies, including one recently published by industry consultants Cliffwater LLC, suggest that, on average, the price of liquidity is roughly 100 basis points per year (see Exhibit 10). The liquidity price differs widely by strategy type from a high of more than 200 basis points for multistrategy funds of funds to roughly 40 basis points per year for managed futures funds. In addition to the product structure's drag on performance there is an estimated

Exhibit 10: Investors Pay a Performance Price for Liquidity



*Based on Cliffwater study of managers who manage both private offerings and alternative mutual funds/ETFs, which examined 149 pairs in June 2013
Source: Cliffwater LLC as of June 2013

drag on risk control. Sharpe ratios of liquid formats of the same strategy have roughly 25% to 35% lower efficiency, or the amount of return earned for an amount of risk.

Liquidity premiums measured by comparing the results of the alternative mutual-fund-based Morningstar categories with Hedge Fund Research's private counterparts suggest the performance differentials are even more significant (see Exhibit 11).

Two final considerations around product structure are the actual role of illiquidity in driving returns and the dispersion in strategy performance as an indicator of potential selection bias. In the case of illiquidity premiums, we note that they are extremely low in strategies heavily linked to highly traded assets such as equities, options and commodities. This suggests that, for investors who want alternative mutual funds and ETFs, the liquidity penalties are less in strategies like equity long/short, managed futures and market neutral. At the same time, strategies such as event driven, relative value and global macro, which are more dependent on exploiting liquidity conditions, may be more compelling in private offerings. Equally, performance dispersion by category may be a proxy for the importance of manager skill and the role

Exhibit 11: Performance of Alternative Mutual Funds Trails Hedge Fund Indexes*

FUNDS INDEX	NUMBER OF FUNDS	ONE-YEAR RETURN (%)	DIFFERENCE (%)
Morningstar Long/Short Equity	193	14.20	
HFRI Equity Hedge	2,553	14.44	0.24
Morningstar Market Neutral	105	3.14	
HFRI Equity Market Neutral	293	6.65	3.51
HFRI Relative Value	1,087	6.98	3.84
HFRI Merger Arbitrage	66	4.82	1.68
Morningstar Multialternative	197	4.02	
HFRI Fund of Funds Composite	1,528	8.79	4.77
Morningstar Managed Futures	105	-1.70	
Barclay CTA	583	-1.49	0.21
Morningstar Multicurrency	59	-3.66	
HFRI Macro	1,361	-0.22	3.44
Morningstar Bear Market	68	-34.25	
HFRI Short Bias	1,361	-16.01	18.24

*Please see Appendix 3 on page 17. See the index definitions on page 18 for the explanation of the strategies.
Note: Morningstar performance numbers are simple averages of the reported fund returns.
Source: Pertac, Morningstar, Morgan Stanley Wealth Management GIC as of Dec. 31, 2013

Exhibit 12: Manager Skill and Illiquidity Should Inform Choice of Packaging

STRATEGY	MANAGER SKILL VERSUS UNIVERSE MEDIAN: TOP DECILE RETURN (%)	MANAGER SKILL VERSUS UNIVERSE MEDIAN: BOTTOM DECILE RETURN (%)	MANAGER SKILL VERSUS UNIVERSE MEDIAN: DISPERSION (PERCENTAGE POINTS)	ROLE OF THE ILLIQUIDITY PREMIUM
Relative Value	3.2	-3.6	6.8	Medium
Equity Market Neutral	1.5	-2.9	4.4	Low
Multistrategy Arbitrage	1.0	-4.3	5.3	Low
Global Macro	4.5	-12.6	17.1	Medium
Multistrategy Absolute Return	0.8	-2.1	2.9	Low
Event Driven	5.2	-2.3	7.5	Medium
Equity Long/Short	2.0	-2.8	4.8	Low
Managed Futures	1.1	-1.3	2.4	Low
Real Estate	7.2	-6.6	13.8	High
Private Equity	10.3	-12.3	22.6	High
Long-Only Equities*	1.3	-1.4	2.7	NA
Long-Only Bonds*	0.4	-0.3	0.7	NA

*Lipper Data Base of Hedge Fund Managers
Note: Data in table is based are for the period 2000 through 2013. See the index definitions starting on page 18 for the explanation of the strategies.
NM = Not meaningful NA=Not applicable
Source: Hedge Fund Research as of Dec. 31, 2012

that due diligence and manager selection may have in client outcomes. In categories such as global macro, which demands very high skill, the "most skilled" managers may be poorly represented in alternative mutual fund and ETF formats (see Exhibit 12).

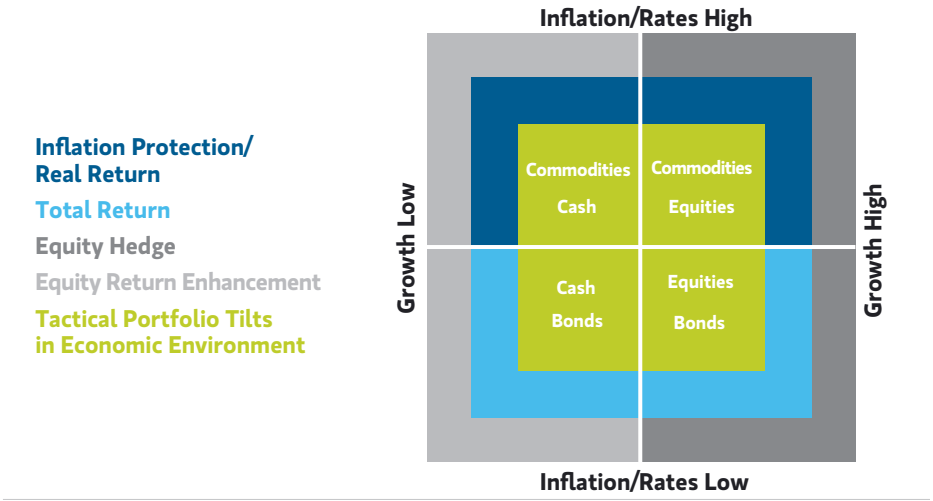
Tactical Asset Allocation With Alternatives

The availability of alternative mutual funds and ETFs allows more tactical and dynamic advice to a greater number of clients. In addition, they by their very nature allow more tactical and dynamic advice for the asset class. Specifically, at the highest level, we set tactical asset allocation tilts based on a reading of the economic environment, typically represented simply by growth and inflation, using interest rates as a proxy. We know, for example, that low-growth and low-inflation/low-rate environments similar to today typically reward balanced portfolios of both stocks and bonds (see Exhibit 13). High-growth/high-inflation markets favor equities and commodities while punishing bond holders; stagflationary backdrops, when inflation is high and growth are poor, are best for real assets like commodities and real estate; and low-growth and low-rate/deflationary regimes best reward holders of bonds and cash. We believe that as alternative mutual funds and ETFs proliferate, we will be able to tactically employ them in this same framework — tactically using total return assets/strategies, for example, in low-rate/low-growth environments and using equity hedge assets when growth is higher and rates are rising, as may be the case in 2014 and 2015.

Conclusion

With bond markets likely to experience heightened volatility over the next three to five years and the availability of liquid alternative assets and strategies proliferating, the GIC believes that there is an urgent need for asset allocation advice that helps clients more precisely navigate their choices in pursuit of their goals. To that end, we have developed a more refined framework for the classification of alternative assets and strategies that attempts to create clear alignment with client goals. In addition, it attempts to develop some performance parameters and category benchmarks that can help set client expectations and create a navigation map for comparing liquid and private offerings. Our approach goes beyond using alternatives as a blunt instrument to help reduce portfolio volatility and improve diversification. Instead, we endeavor to tap into the behavioral aspects of risk management. We believe that having clients understand not only what alternatives are, but also when, why and how to use them in investment portfolios will drive their adoption. In our view, the optimized use of alternatives, through a well crafted and disciplined framework, could significantly improve the probability of, and confidence in, achieving client goals. ■

Exhibit 13: Economic Environment Can Determine Tactical Use of Liquid Alternatives



Source: Morgan Stanley Wealth Management GIC

Important Notice Regarding Complex Products

The type of mutual funds and ETFs discussed in this paper utilize nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets:

- Commodities (e.g., agricultural, energy and metals), Currency, Precious Metals
- Managed Futures
- Leveraged, Inverse or Inverse Leveraged
- Bear Market, Hedging, Long-Short Equity, Market Neutral
- Real Estate
- Volatility (seeking exposure to the CBOE VIX Index)

You should keep in mind that while mutual funds and ETFs may at times utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage." ■

Appendix 1

Comparing Alternative Mutual Funds, ETFs and Private Offerings

		ALTERNATIVE MUTUAL FUNDS AND ETFS	PRIVATE OFFERINGS
Investment	Style	Varies by Strategy	Varies by Strategy
	Flexibility	Limited Investment Flexibility	Greater Investment Flexibility
	Derivatives	Limited Use of Derivatives	Greater Ability to Use Derivatives
	Leverage	Limited Use of Leverage	Greater Ability to Use Leverage
	Transparency	High	Generally Low
	Correlation	Generally Higher to Traditional Investments	Generally Lower to Traditional Investments
Operations	Minimums	Low Minimums	High/Private Investor Qualifications
	Fees	Typically Asset-Based Management Fees	Typically Management and Performance Fees
	Tax Reporting	IRS Form 1099	Typically IRS Form K-1
	Redemptions	Generally Daily (ETFs trade on an exchange)	Limited Opportunity to Redeem
Regulatory	Oversight	1940 Act Restrictions	Limited SEC Oversight
	Diversification Requirements	Position Sizes, Sector Exposure, etc.	None — Diversification Varies Widely

Source: Morgan Stanley Wealth Management CG IAR as of April 29, 2013

Both alternative mutual funds and private offerings seek investment returns that have lower correlation to traditional markets in an attempt to increase diversification in an overall portfolio.

- Unlike private offerings, alternative mutual funds do not require investor pre-qualifications, enable efficient tax reporting, are subject to lower investment minimums and lower fees, provide portfolio transparency, daily liquidity, and are required to provide daily NAV pricing.
- Alternative mutual funds generally must utilize a more limited investment universe and, therefore, will have relatively higher correlation with traditional market returns. They are statutorily limited in their use of leverage, short sales and the use of derivative instruments.
- Private offerings typically charge an asset-based fee and a performance fee. Potential benefits to private offerings include greater flexibility in terms of seeking enhanced returns through the use of leverage, exposure to less liquid investments, and the more flexible use of complex instruments such as derivatives.
- As a result of these differences, performance for an alternative mutual fund may vary from private offerings that are seeking a similar investment objective. ■

Appendix 2

Addendum to Exhibit 3

ASSET CLASS	INDEX
Bonds	Barclays Capital US Aggregate Bond Index
Commodities	Dow Jones-UBS Commodity Total Return Index
Global Equities	MSCI All Country World Index
Hedged Strategies	HFRI Funds of Funds Composite
Precious Metals	Dow Jones-UBS Precious Metals Total Return Index
Private Equity	Thomson Reuters Private Equity Perfomance Index
Public Real Estate	FTSE EPRA NAREIT Global Total Return
Private Real Estate	NCREIF Property Index
GIC ALTERNATIVE INVESTMENT CATEGORIES	
Commodities (ex Precious Metals)	Dow Jones-UBS Commodities ex Precious Metals Total Return Index
Precious Metals	Dow Jones-UBS Precious Metals Total Return Index
Hedged Strategies	HFRI Funds of Funds Composite Index
Managed Futures	Barclay BTOP 50 Index
Private Equity	Thomson Reuters Private Equity Perfomance Index
Private Real Estate	NCREIF Property Index
Real Estate	FTSE EPRA NAREIT Global Total Return

Source: Morgan Stanley Wealth Management GIC

Appendix 3

Hedge Fund Index Performance and Survivorship Bias

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias. ■

Glossary

CORRELATION This is statistical measure of how two securities move in relation to each other. This measure is often converted into what is known as correlation coefficient, which ranges between -1 and +1.Perfect positive correlation (a correlation coefficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the security that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the securities are said to have no correlation; they are completely random. A correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 is generally described as weak.

DRAWDOWN This term refers to the largest cumulative percentage decline in net asset value or the percentage decline from the highest value or net asset value (peak) to the lowest value net asset value (trough) after the peak.

EXCESS RETURN This term represents the average quarterly total return of the portfolio relative to its benchmark. A portfolio with a positive excess return has on average outperformed its benchmark on a quarterly basis. This statistic is obtained by subtracting the benchmark return from the portfolio's return.

RISK FREE RATE This is the theoretical rate of return of an investment with zero risk. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

SHARPE RATIO This statistic measures a portfolio's rate of return based on the risk it assumed and is often referred to as its risk-adjusted performance. Using standard deviation and returns in excess of the returns of T-bills, it determines reward per unit of risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing risk.

STANDARD DEVIATION This statistical quantifies the volatility associated with a portfolio's returns by measuring the variation in returns around the mean return. Unlike beta, which measures volatility relative to the aggregate market, standard deviation measures the absolute volatility of a portfolio's return.

VOLATILITY This is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

Index Definitions

BARCLAYS CAPITAL US AGGREGATE BOND INDEX This index represents securities that are SEC-registered, taxable, and dollar-denominated. The index covers the US investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

BARCLAY BTOP 50 INDEX This index seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The BTOP50 employs a top-down approach in selecting its constituents. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the BTOP50. In each calendar year the selected trading advisors represent, in aggregate, no less than 50% of the investable assets of the Barclay CTA Universe. To be included in the BTOP50, the following criteria must be met: program must be open for investment, manager must be willing to provide us daily returns, program must have at least two years of trading activity, program's advisor must have at least three years of operating history, the BTOP50's portfolio will be equally weighted among the selected programs at the beginning of each calendar year and will be rebalanced annually.

BARCLAY CTA INDEX This index is a leading industry benchmark of representative performance of commodity trading advisors. There are currently 582 programs included in the calculation of the Barclay CTA Index for the year 2013, which is unweighted and rebalanced at the beginning of each year.

DOW JONES-UBS COMMODITY TOTAL RETURN INDEX This index comprises futures contracts on physical commodities. These include energy, base metals, precious metals and agricultural commodities.

DOW JONES-UBS COMMODITY EX-PRECIOUS METALS TOTAL RETURN INDEX This index comprises futures contracts on physical commodities. These include energy, base metals and agricultural commodities.

DOW JONES-UBS PRECIOUS METALS TOTAL RETURN INDEX This index comprises futures contracts on precious metals.

FTSE EPRA/NAREIT GLOBAL REAL ESTATE INDEX This is index is designed to represent general trends in eligible real estate equities worldwide. Relevant real estate activities are defined as the ownership, disposure and development of income-producing real estate.

HFRI CONVERTIBLE ARBITRAGE INDEX Convertible arbitrage includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between the price of a convertible security and the price of a non-convertible security, typically of the same issuer. Convertible arbitrage positions maintain characteristic sensitivities to credit quality the issuer, implied and realized volatility of the underlying instruments, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities.

HFRI DISTRESSED CREDIT INDEX Strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists.

HFRI EQUITY HEDGE INDEX This index tracks 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. Equity hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

HFRI EQUITY MARKET NEUTRAL INDEX Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. These can include both factor-based and statistical arbitrage/trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical arbitrage/trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely or accurately discounted into current security prices. Equity market neutral strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

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 FUND OF FUNDS COMPOSITE INDEX This index tracks investment managers who 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. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ relative value techniques, macro strategies are distinct from relative value strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to equity hedge, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI FUND WEIGHTED COMPOSITE INDEX This is a global, equal-weighted index of more than 2,000 single-manager funds. Constituent funds report monthly net of all fees performance in US dollars and have a minimum of $50 million under management or a 12-month track record of active performance. This index does not include funds of hedge funds.

HFRI MACRO INDEX This index tracks investment managers who 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. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ relative value techniques, macro strategies are distinct from relative value strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to equity hedge, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI MERGER ARBITRAGE INDEX This index tracks strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction. Merger arbitrage involves primarily announced transactions, typically with limited or no exposure to situations which pre-, post-date or situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross border, collared and international transactions which incorporate multiple geographic regulatory institutions, with typically involve minimal exposure to corporate credits. Merger arbitrage strategies typically have over 75% of positions in announced transactions over a given market cycle.

HFRI MULTICURRENCY INDEX The strategies in this index are reliant on the fundamental evaluation of market data, relationships and influences as they pertain primarily to currency markets including positions in global foreign exchange markets, both listed and unlisted, and as interpreted by an individual or group of individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top down analysis of macroeconomic variables. Portfolio positions typically are predicated on the evolution of investment themes the manager expect to materialize over a relevant period, which in many cases contain contrarian or volatility focused components. Managers also may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency; frequently employing spread trades to isolate a differential between instrument identified by the manager to be inconsistent with expected value.

HFRI MULTISTRATEGY ARBITRAGE INDEX Managers employ an investment thesis is predicated on realization of a spread between related yield instruments in which one or multiple components of the spread contains a fixed income, derivative, equity, real estate, MLP or combination of these or other instruments. 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. In many cases these strategies may exist as distinct strategies across which a vehicle which allocates directly, or may exist as related strategies over which a single individual or decision making process manages. Multistrategy is not intended to provide broadest-based mass market investors appeal, but are most frequently distinguished from others arbitrage strategies in that they expect to maintain >30% of portfolio exposure in two or more strategies meaningfully distinct from each other that are expected to respond to diverse market influences.

HFRI MULTISTRATEGY ABSOLUTE RETURN These funds use strategies which employ components of both discretionary and systematic macro strategies, but neither exclusively both. Strategies frequently contain proprietary trading influences. Strategies employ an investment process is predicated on a systematic, quantitative evaluation of macroeconomic variables in which the portfolio positioning is predicated on convergence of differentials between markets, not necessarily highly correlated with each other, but currently diverging from their historical levels of correlation. Strategies focus on fundamental relationships across geographic areas of focus both inter and intra-asset classes, and typical holding periods are longer than trend following or discretionary strategies.

HFRI RELATIVE VALUE INDEX This is an index of 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. Relative value positions may be involved in corporate transactions also, but as opposed to event driven 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 SHORT BIAS INDEX This index follows managers who employ analytical techniques in which the investment thesis is predicated on assessment of the valuation characteristics on the underlying companies with the goal of identifying overvalued companies. The strategies may vary the investment level or the level of short exposure over market cycles, but the primary distinguishing characteristic is that the manager maintains consistent short exposure and expects to outperform traditional equity managers in declining equity markets.

Investment theses may be fundamental or technical and nature and manager has a particular focus, above that of a market generalist, on identification of overvalued companies and would expect to maintain a net short equity position over various market cycles.

HFRX ABSOLUTE RETURN INDEX This index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage. As a component of the optimization process, the index selects constituents which characteristically exhibit lower volatilities and lower correlations to standard directional benchmarks of equity market and hedge fund industry performance.

MORNINGSTAR BEAR MARKET INDEX These funds in this index dedicate a majority of the fund's assets to equities. Most of the portfolio is dedicated to short stock positions in an attempt to take advantage of anticipated market or stock declines producing a net exposure to equities of less than or equal to negative 20%. Some managers invest the proceeds from their short positions in low-risk assets, while others dedicate a portion to long stock positions in order to hedge against broad market rallies. In the event of a broad market rally, these funds will lose money on their short positions but will experience a gain on their long positions. Short positions typically account for 60% to 85% of fund active exposure, although some funds may be 100% short after excluding regulatory collateral. These funds will typically have a beta of less than negative 0.3 to equity indexes such as the S&P 500.

MORNINGSTAR LONG/ SHORT EQUITY INDEX The funds in this index hold sizable stakes in both long and short positions in equities and related derivatives. Some funds that fall into this category will shift their exposure to long and short positions depending on their macro outlook or the opportunities they uncover through bottom-up research. Some funds may simply hedge long stock positions through exchange-traded funds or derivatives. At least 75% of the assets are in equity securities or derivatives.

MORNINGSTAR MANAGED FUTURES INDEX This index follows funds that primarily trade liquid global futures, options, swaps, and foreign exchange contracts, both listed and over-the-counter. A majority of these funds follow trend-following, price-momentum strategies. Other strategies included in this category are systematic mean-reversion, discretionary global macro strategies, commodity index tracking, and other futures strategies. More than 60% of the fund's exposure is invested through derivative securities. These funds obtain exposure primarily through derivatives; the holdings are largely cash instruments.

MORNINGSTAR MARKET NEUTRAL INDEX This index track funds that attempt to reduce systematic risk created by factors such as exposures to sectors, market-cap ranges, investment styles, currencies, and/ or countries. They try to achieve this by matching short positions within each area against long positions. These strategies are often managed as beta-neutral, dollar-neutral, or sector-neutral. A distinguishing feature of funds in this category is that they typically have low beta exposures (< 0.3 in absolute value) to market indexes. In attempting to reduce systematic risk, these funds put the emphasis on issue selection, with profits dependent on their ability to sell short and buy long the correct securities.

MORNINGSTAR MULTIALTERNATIVE INDEX These funds in this index offer investors exposure to several different alternative investment tactics. Funds in this category have a majority of their assets exposed to alternative strategies. An investor's exposure to different tactics may change slightly over time in response to market movements. Funds in this category include both funds with static allocations to alternative strategies and funds tactically allocating among alternative strategies and asset classes. The gross short exposure is greater than 20%.

MORNINGSTAR MULTICURRENCY This index tracks funds that invest in multiple currencies through the use of short-term money market instruments; derivative instruments including and not limited to forward currency contracts, index swaps, and options; and cash deposits.

MSCI ALL COUNTRY WORLD INDEX This free-float-adjusted, market-capitalization index measures equity market performance in the developed and the emerging markets.

NCREIF PROPERTY INDEX This index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

S&P 500 INDEX Regarded as the best single gauge of the US equities market, this capitalization-weighted index includes a representative sample of 500 leading companies in leading industries of the US economy.

THOMSON REUTERS US PRIVATE EQUITY PERFORMANCE INDEX This index is compiled using data from over 2,290 US private equity funds, including leveraged buyout, venture capital and mezzanine funds, with a total capitalization of $1.3 trillion.

VIX This is the tademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index, a popular measure of the implied volatility of S&P 500 index options. Often referred to as the fear index or the fear gauge, it represents one measure of the market's expectation of stock market volatility over the next 30-day period.

Risk Considerations

Please consider the investment objectives, risks, charges and expenses of exchange-traded funds and mutual funds carefully before investing. The prospectus contains this and other information about exchange-traded funds and mutual funds. To obtain a prospectus, contact your financial advisor. Please read the prospectus carefully before investing.

MLPs
Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk.

The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value.

MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV; and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Alternative investments including private equity funds, real estate funds, hedge funds, managed futures funds, and funds of hedge funds, are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification, absence and/or delay of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and risks associated with the operations, personnel and processes of the advisor.

Managed futures investments are speculative, involve a high degree of risk, use significant leverage, have limited liquidity and/or may be generally illiquid, may incur substantial charges, may subject investors to conflicts of interest, and are usually suitable only for the risk capital portion of an investor's portfolio. Before investing in any partnership and in order to make an informed decision, investors should read the applicable prospectus and/or offering documents carefully for additional information, including charges, expenses, and risks. Managed futures investments are not intended to replace equities or fixed income securities but rather may act as a complement to these asset categories in a diversified portfolio.

Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Physical precious metals are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. If sold in a declining market, the price you receive may be less than your original investment. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be suitable for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor. The Securities Investor Protection Corporation ("SIPC") provides certain protection for customers' cash and securities in the event of a brokerage firm's bankruptcy, other financial difficulties, or if customers' assets are missing. SIPC insurance does not apply to precious metals or other commodities.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market. Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. Investing in an international ETF also involves certain risks and considerations not typically associated with investing in an ETF that invests in the securities of U.S. issues, such as political, currency, economic and market risks. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics. For specifics and a greater explanation of possible risks with ETFs, along with the ETF's investment objectives, charges and expenses, please consult a copy of the ETF's prospectus. Investing in sectors may be more volatile than diversifying across many industries. The investment return and principal value of ETF investments will fluctuate, so an investor's ETF shares (Creation Units), if or when sold, may be worth more or less than the original cost. ETFs are redeemable only in Creation Unit size through an Authorized Participant and are not individually redeemable from an ETF.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

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 CS 7933280 Revised 06/14