

# 401(k) Investment Lineup Summit

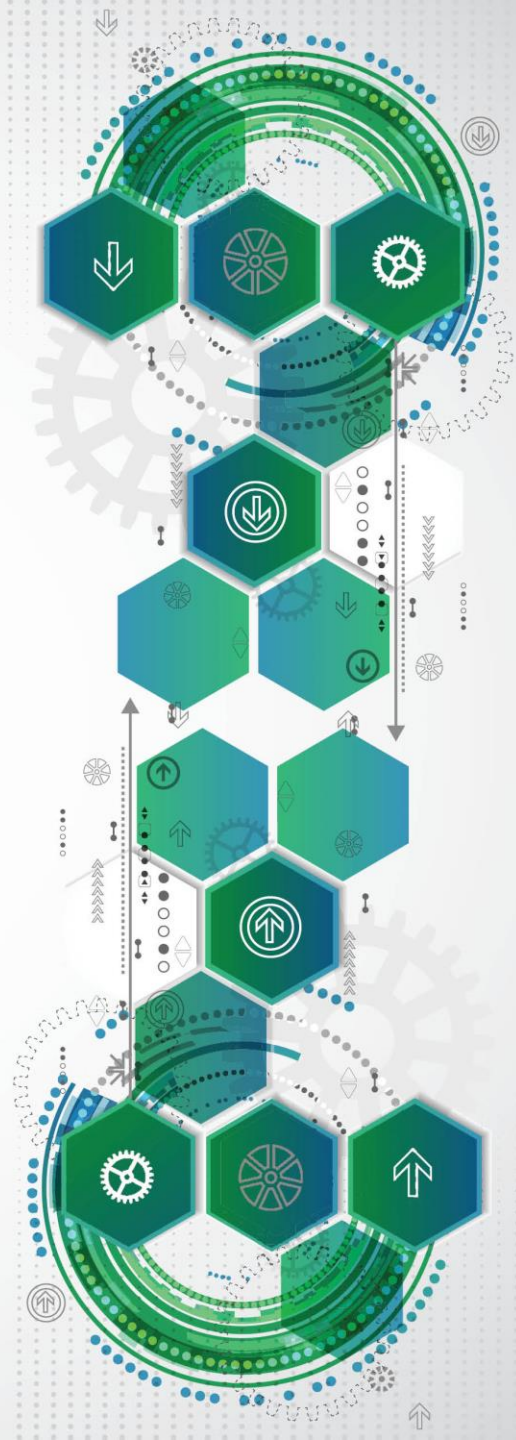
San Fran: Apr 7 | Dallas: Apr 9 | Chicago: Apr 14 | New York: Apr 16

## The New World of Retirement: *Alternative Thinking for DC*

Speakers:

Dan Basile, Director, BlackRock

Bryan White, CIO, BlackRock Alternative Advisors



## Discussion Outline

**When:** A Brief History of Hedge Funds

**What:** The Spectrum of Alternatives

**Why:** The Case for Hedge Funds

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**How:** Overcoming Implementation  
Challenges

*Open Discussion*

**When: A Brief History of Hedge Funds**

What: The Spectrum of Alternatives

Why: The Case for Hedge Funds

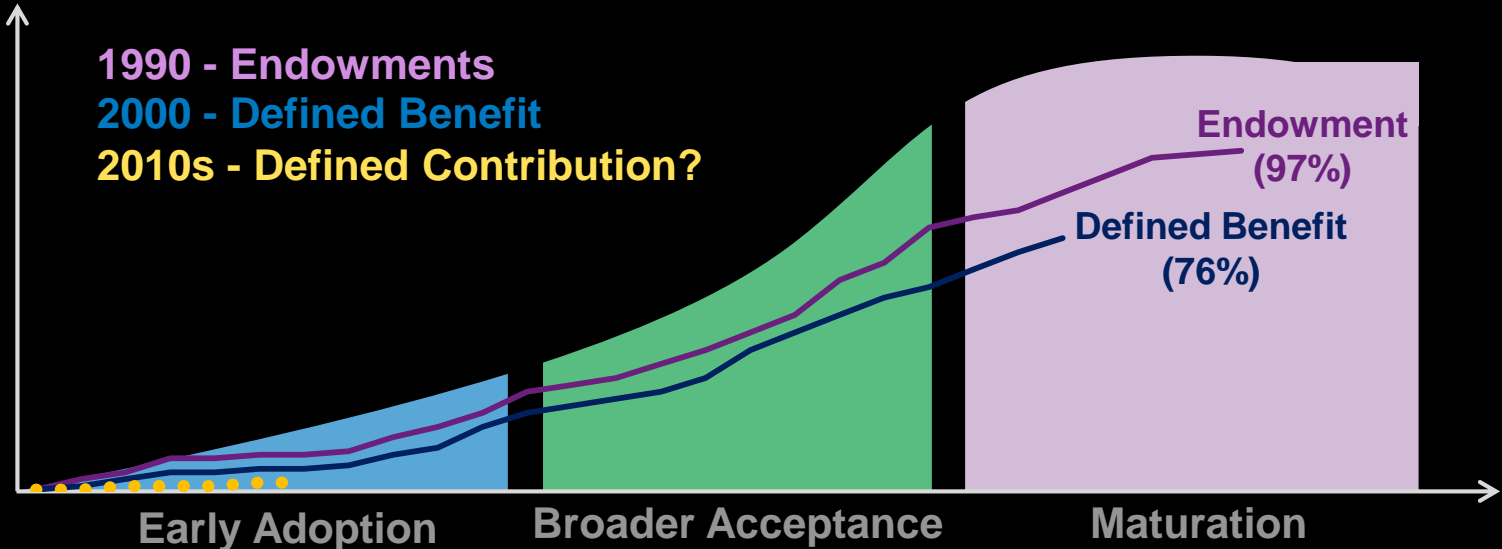
How: Overcoming Implementation  
Challenges

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## When were hedge fund strategies first implemented?

1. 600 BC: Thales' purchase of options on olive presses?
2. 1880s: Robber Baron's distressed investment in bankrupt railroads?
3. 1929: Ben Graham's launch of his long-short fund with incentive fees?
4. 1949: Alfred Wilfred Jones' launch of market neutral fund of funds?

# Institutional Adoption of Hedge Funds



## Early Adopters

### Endowments (1990s)

- Duke
- Harvard
- Yale

### Defined Benefit (2000s)

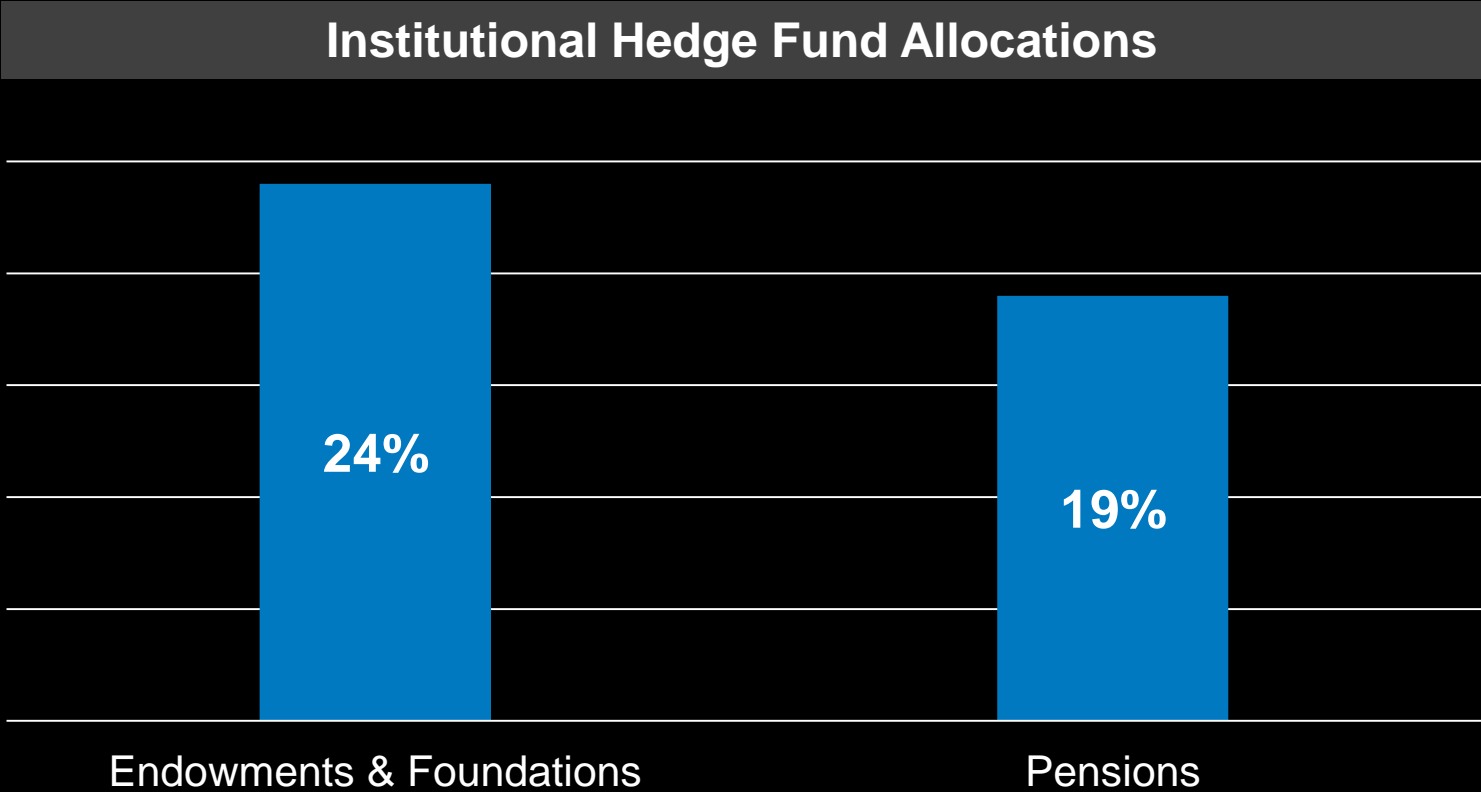
- Eli Lilly
- Eastman Kodak
- Weyerhaeuser

### Defined Contribution (2010s?)

- Goldman Sachs
- Intel
- McKinsey

Percentages represent the portion of each type of investor (endowments, pensions, and defined contribution plans) with some portion of assets allocated to hedge funds as of the labeled dates.  
Source: McKinsey, CitiGroup, Barclays, BlackRock, (as of 1 Mar 2015)

# Meaningful Hedge Fund Allocations Today



Percentages represent the average portfolio allocation to hedge funds for endowments & foundations and pension funds as of 12/31/2014.

Source: Barclays Capital Solutions, Preqin January 2015.

When: A Brief History of Hedge Funds

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# Not All Hedge Funds are Equal

## Liquid Alternatives *(Daily liquidity)*

### Daily Valued Hedge Fund Investments

- 1940 Act hedge funds
- 130/30 funds

### REITS

- Real Estate Investment Trust owns and often operates income producing real estate

### Commodities

- Long exposure to goods traded on commodity exchanges

## Marketable Alternatives *(Monthly to annual liquidity)*

### Bona fide Hedge Funds

- Investments in a wide variety of investment strategies focused on inefficient sectors of the capital markets
- Strategies include long/short equity and credit, risk arbitrage, statistical arbitrage, convertible arbitrage, global macro, direct lending, and distressed securities investments among others
- Significant universe of managers (active HFs >8,000)

## Illiquid Alternatives *(Multi-year liquidity profiles)*

### Private Equity

- Long equity and debt investments in private companies
- Strategies include venture capital and buy outs

### Private Real Estate

- Long exposure to residential and commercial real estate

### Infrastructure

- Investments in physical systems of a business or nation



# Liquid vs. Marketable Alternatives

**How does the size of the opportunity set of liquid alternatives compare to traditional hedge funds (for those funds with 5-year track records)?**

**1. About the same number**

**2. About  $\frac{1}{2}$**

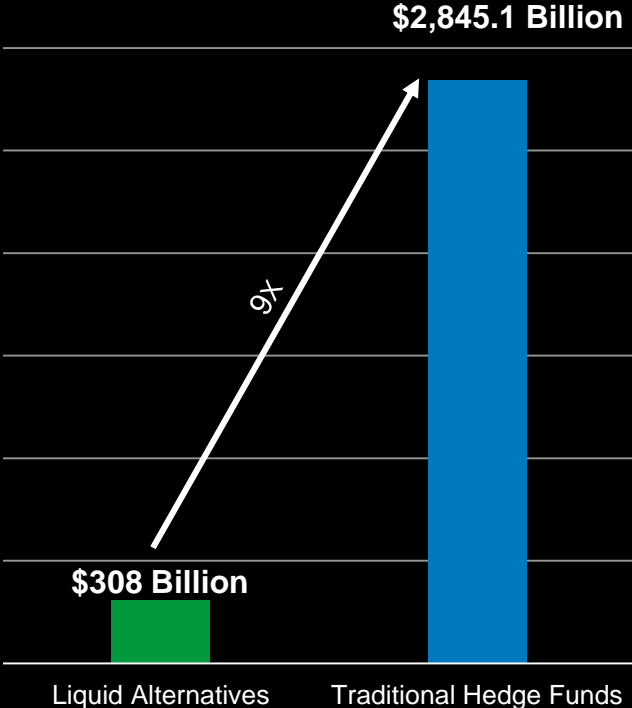
**3. About  $\frac{1}{10^{\text{th}}}$**

**4. About  $\frac{1}{75^{\text{th}}}$**

# An Important Distinction

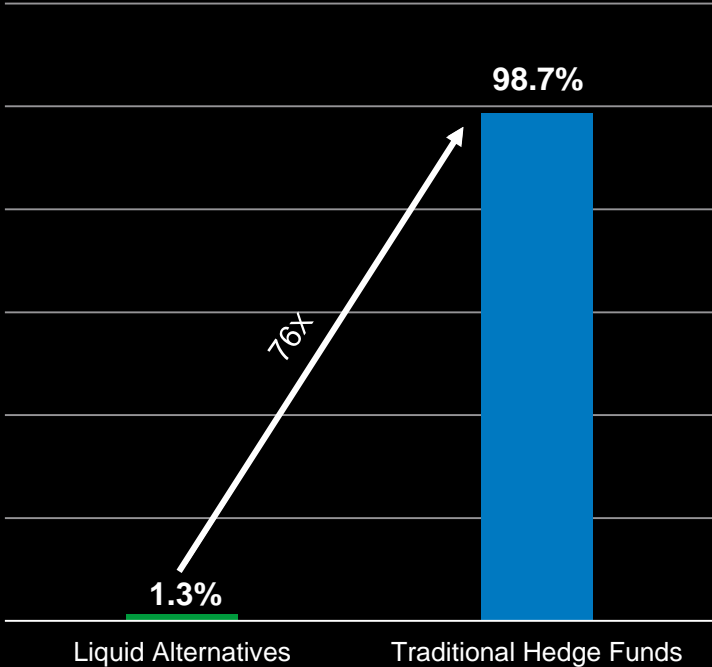
## Investment Universe

As of July 31, 2014



## Investment Universe with 5-year Track Record

As of July 31, 2014



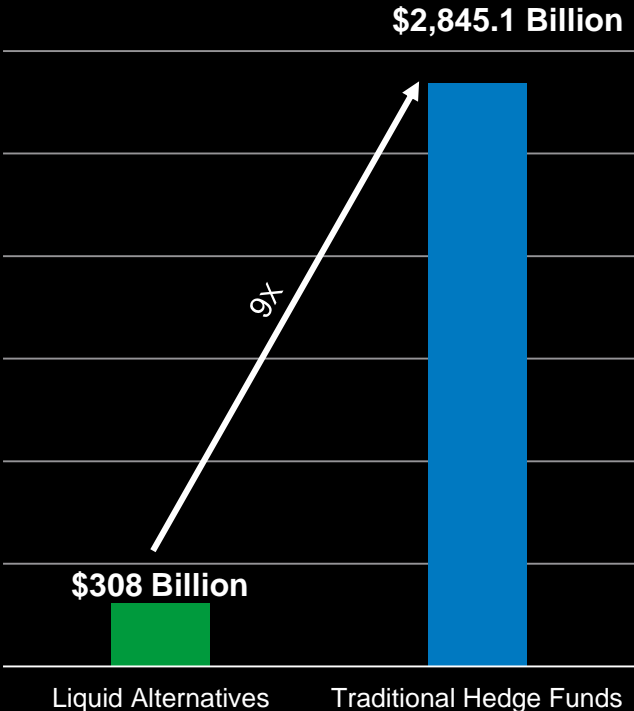
Source: Morningstar, BAA, HFR, Inc., Prequin Alternative Assets, SEC. As of July 2014. Alternative Beta Funds include "liquid" alternatives, Commodity Funds, Real Estate funds, TIPS, and Ultrashort Bond Funds and other Alternative Funds.

The Investment Universe (with 5-year track record) graphic shows the percentage of funds that were active in January 2014 and reporting historical performance under the intervals above.

# An Important Distinction

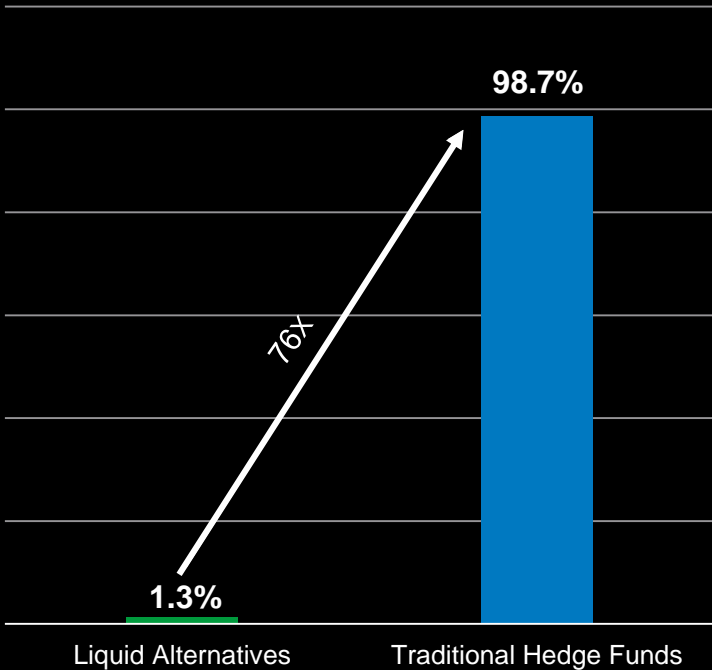
## Investment Universe

As of July 31, 2014



## Investment Universe with 5-year Track Record

As of July 31, 2014



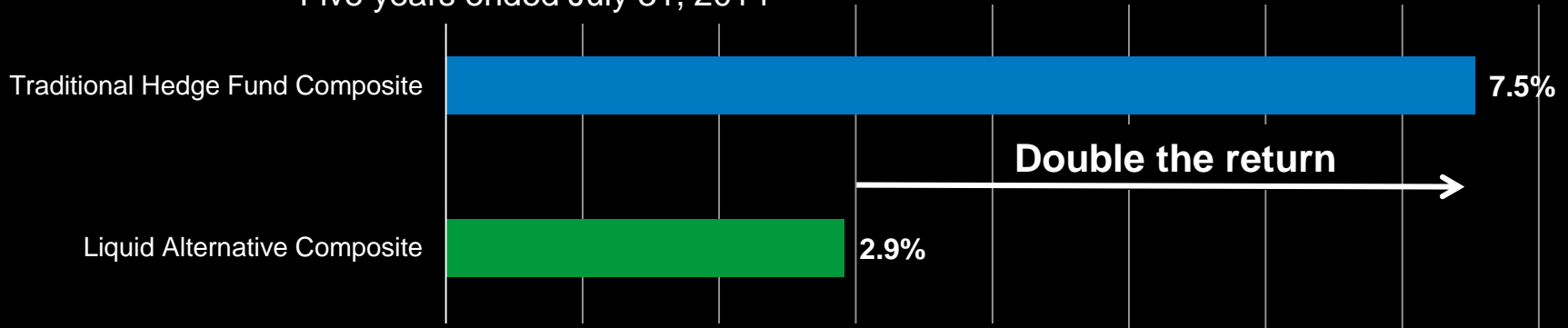
Source: Morningstar, BAA, HFR, Inc., Preqin Alternative Assets, SEC. As of July 2014. Alternative Beta Funds include "liquid" alternatives, Commodity Funds, Real Estate funds, TIPS, and Ultrashort Bond Funds and other Alternative Funds.

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# A Big Difference in Results

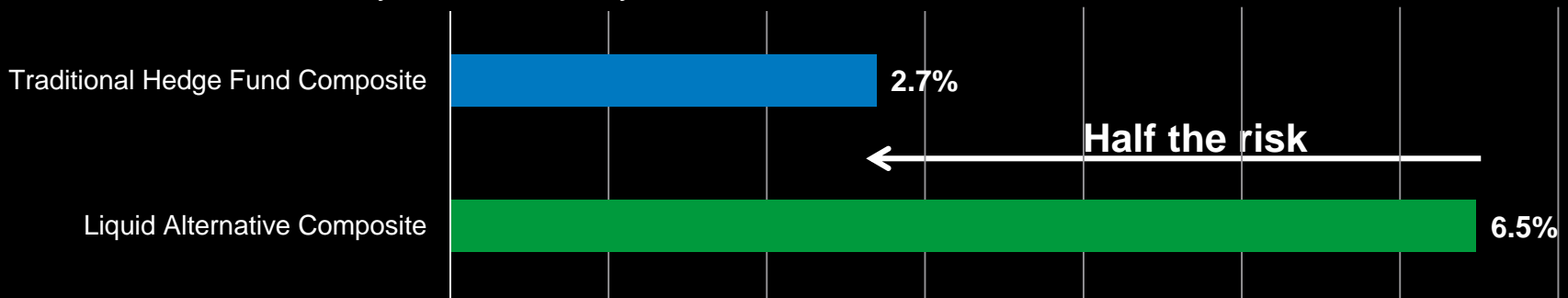
## Investment Returns

Five years ended July 31, 2014



## Investment Risk (Standard Deviation)

Five years ended July 31, 2014



■ Q-BLK Appreciation Composite

■ Morningstar US Open End Liquid Alternatives Equally-Weighted Aggregate<sup>1</sup>

Source: Morningstar, BlackRock, Wilshire. The Wilshire Liquid Alternative Index<sup>SM</sup> is unmanaged and used for illustrative purposes only and is not intended to be indicative of any fund's performance. It is not possible to invest directly in an index. Q-BLK Appreciation Composite is used as a proxy for Marketable Alternatives. See the definitions and disclosures appearing at the end of the document for source and other information related to the Dispersion of Hedge Fund Strategies. There are significant differences between the S&P 500 Index and QAC. The S&P 500 Index is unmanaged and represents a fixed group of equity securities. The figures for the index reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses. QAC does not invest in all or necessarily any of the securities that comprise the index. In addition, QAC may have different and higher levels of risk, including through the use of leverage and concentrated positions, and volatility. Reference to the index does not imply similarities in returns, volatility or other results between QAC and the index.<sup>1</sup> Morningstar US Open End "liquid" alternatives Equally-Weighted Aggregate is composed of the entire Morningstar US Open End Alternatives universes of managed futures, long/short equity, multialternative and market neutral disciplines. The returns are calculated as an equally-weighted average of the funds' returns during the monthly period. Funds that do not have at least 6 months of performance were not included. **Past performance is not an indication of future results.**

**When: A Brief History of Hedge Funds**

**What: The Spectrum of Alternatives**

**Why: The Case for Hedge Funds**

**How: Overcoming Implementation Challenges**

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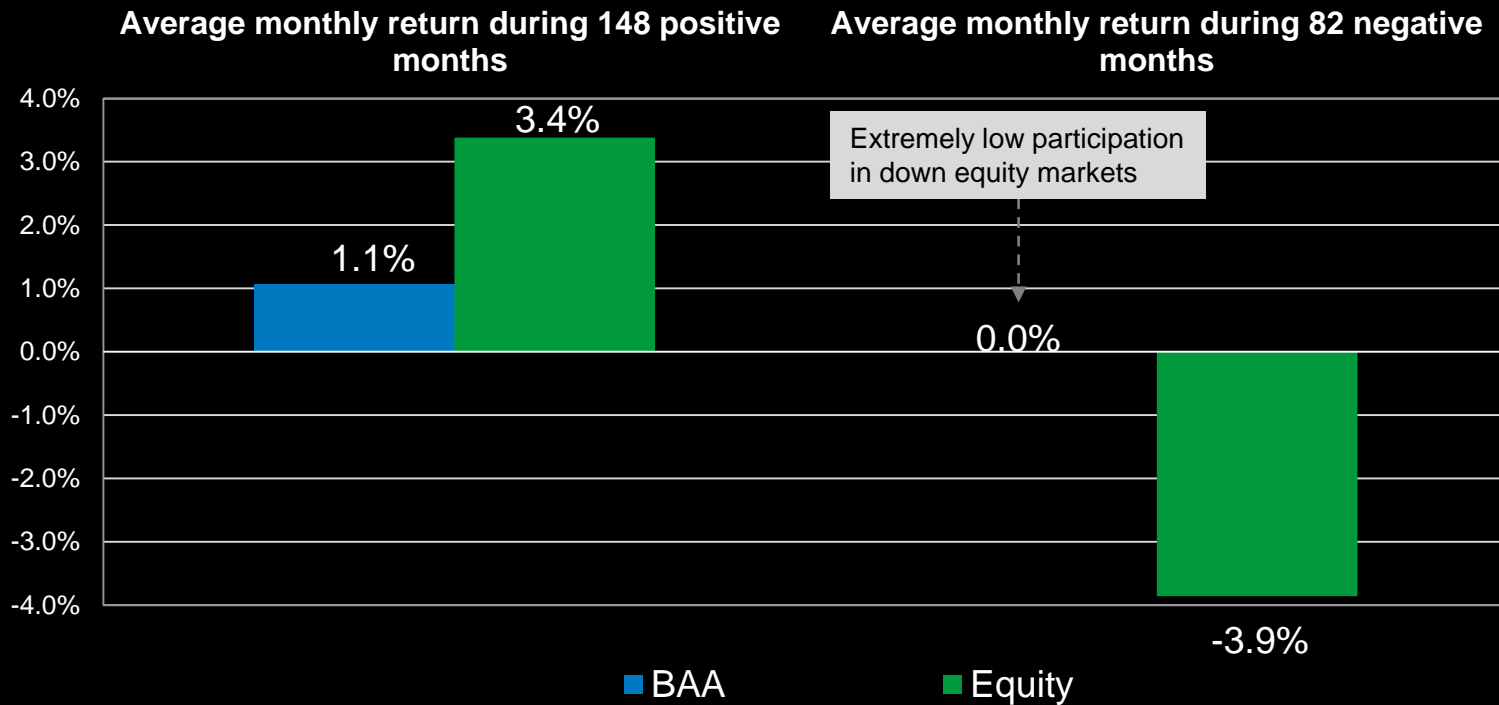
## How Risky are Hedge Funds?

A portfolio of hedge funds is approximately \_\_\_\_\_ of a portfolio of stocks.

1. Twice the risk
2. Equivalent the risk
3. Half the risk
4. One-third the risk

# Protecting in Down Markets Can Help Participants Stay the Course

## Portfolio of Hedge Funds vs. Equities<sup>1</sup>



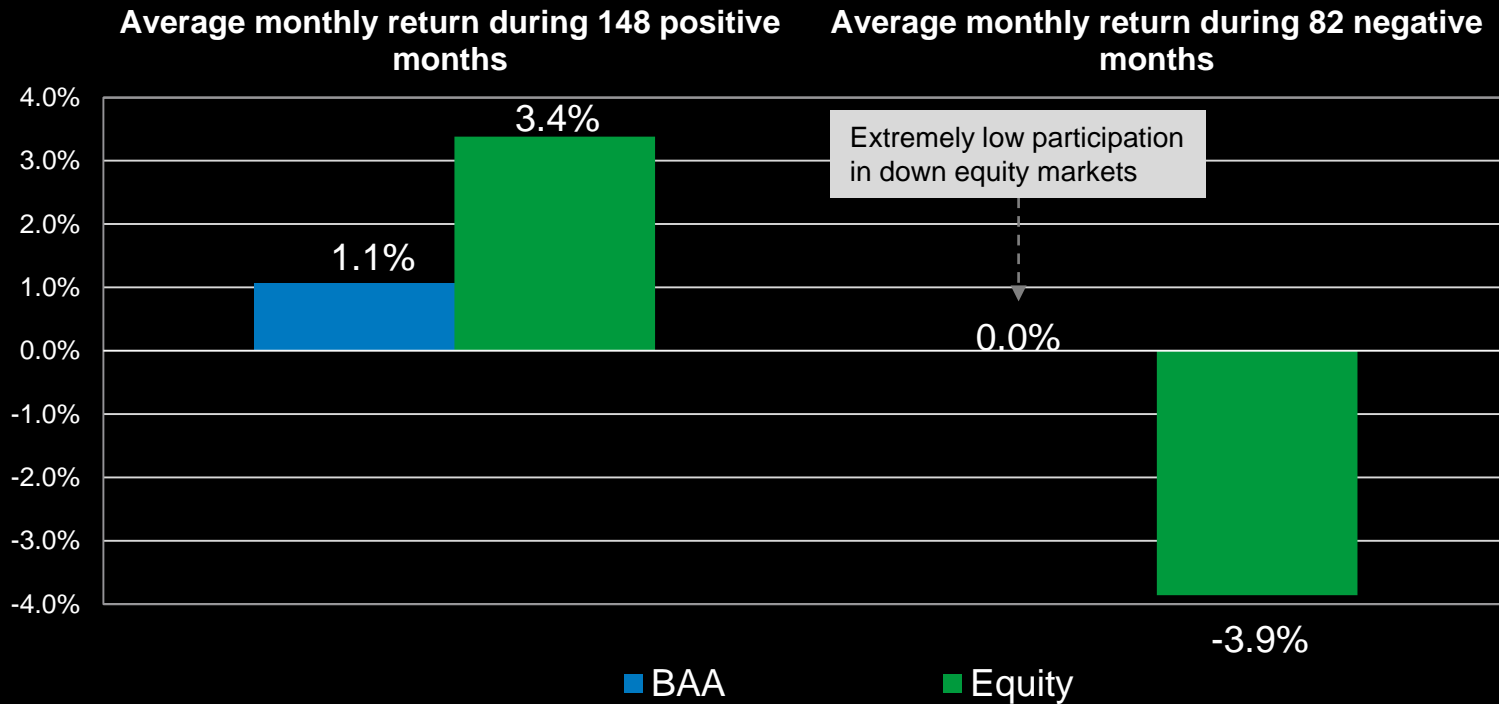
19 years ended December 31, 2014. As of 1/1/2015

<sup>1</sup> BAA refers to BAA's Q-BLK Appreciation Composite ("QAC") vs. S&P 500 Index and HFRI FoF Conservative Index. QAC is a proxy for BAA's record investing in hedge funds, the S&P 500 is a proxy for equity markets and the HFRI a proxy for FoFs. The underlying risks may differ substantially.

Past performance is not an indication of future results. The definitions and disclosures appearing at the end of this document are an integral part of this presentation and should be read in their entirety for a complete understanding of the information contained herein.

# Protecting in Down Markets Can Help Participants Stay the Course

## Portfolio of Hedge Funds vs. Equities<sup>1</sup>



19 years ended December 31, 2014. As of 1/1/2015

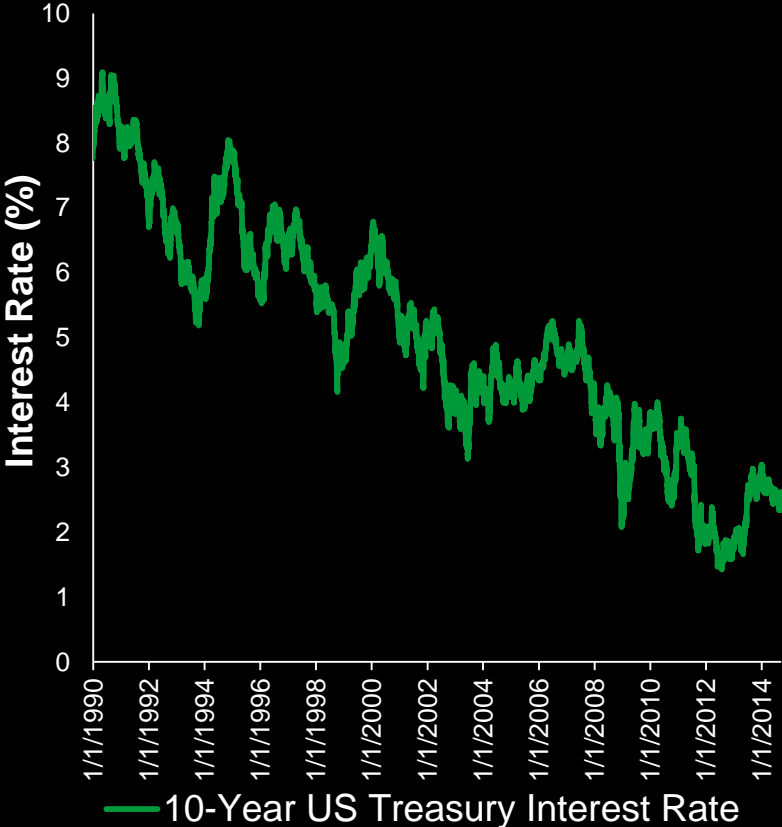
<sup>1</sup> BAA refers to BAA's Q-BLK Appreciation Composite ("QAC") vs. S&P 500 Index and HFRI FoF Conservative Index. QAC is a proxy for BAA's record investing in hedge funds, the S&P 500 is a proxy for equity markets and the HFRI a proxy for FoFs. The underlying risks may differ substantially.

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# Traditional Asset Classes Face Headwinds

### Fixed Income Interest Rates at Historic Low Levels



Source: FRED Database. As of February 2015

### Equity Markets Are at All Time Highs

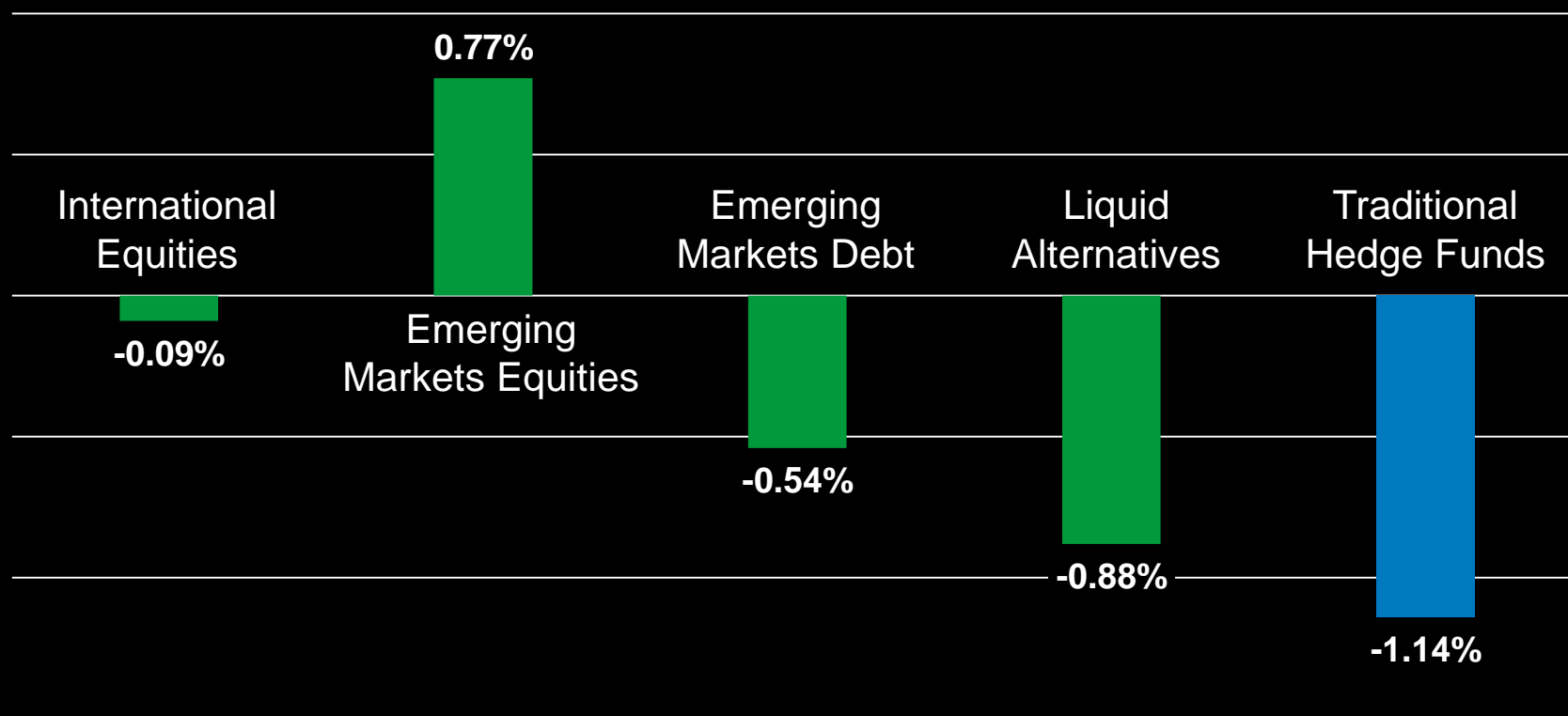


Source: Bloomberg. As of February 2015

# Increasingly Difficult to Diversify with Traditional Assets

## Greatest risk reduction by adding a 10% allocation to 60% Equity / 40% Fixed Income portfolio

Calculated by replacing 10% of traditional equity allocation over a 10-year period.



Percentages represent the difference in standard deviation between a 60% equity and 40% fixed income allocated portfolio with a portfolio comprised of 10% of the relevant index, 50% equities and 40% fixed income. The following indices were used: Traditional Equities: S&P 500 Index, US Fixed Income: Barclays U.S. Aggregate Index, International Equities: MSCI World Index (USD Hedged), Emerging Markets Equities: MSCI Emerging Markets Index, Emerging Markets Debt: JP Morgan Emerging Markets Bond Index Plus, Liquid Alternatives: Wilshire Liquid Alternative Index, Traditional Hedge Funds: HFRI Hedge Fund of Funds Conservative. Indexes are unmanaged and used for illustrative purposes only and are not intended to be indicative of any fund's performance. It is not possible to invest directly in an index.

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**What is the biggest challenge in adding hedge funds to a 401(k) plan?**

**1. Eligibility**

**2. Liquidity**

**3. Valuation**

**4. Fees**

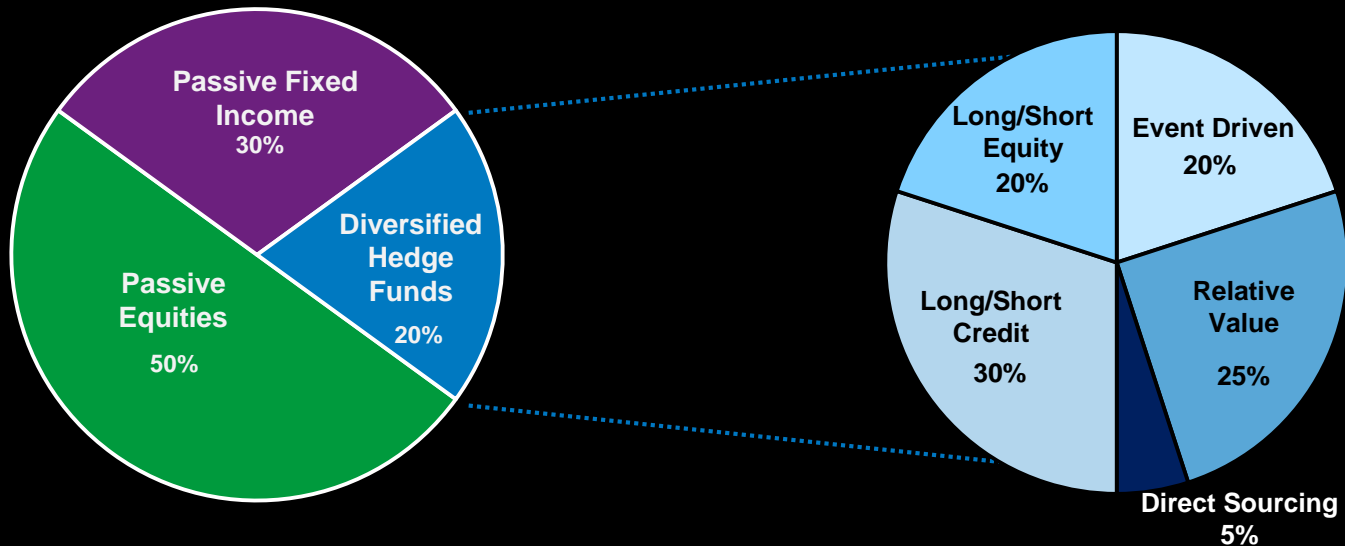
**5. Communication**

# Eligibility and “Private Fund” Restrictions

## Among other requirements

- Must reference “generic” investment strategy
- Cannot allocate more than 50% to a single underlying fund

### Custom Target Date Fund



The fund allocations are for illustrative purposes. The custom target date fund represents a target date fund with potential proposed allocations, including diversified hedge funds. The diversified hedge fund is a visualization representation of a hedge fund portfolio with diversified discipline allocations.

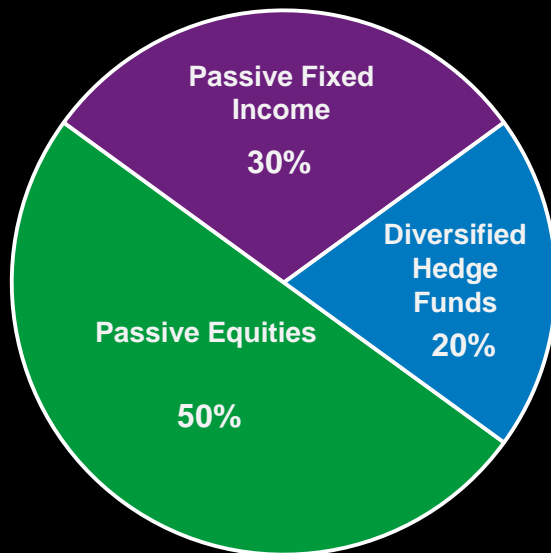
The above is not definitive for all requirements related to private fund restrictions and nothing herein is intended to be construed as legal advice.

# Addressing Liquidity

## Liquidity sourced from equity and fixed income sleeves daily

- Target Date Fund (“TDF”) rebalanced monthly

### Custom Target Date Fund



- Modestly increased tolerance bands
- Consistent with Defined Benefit, Endowments & Foundations and other institutional approaches

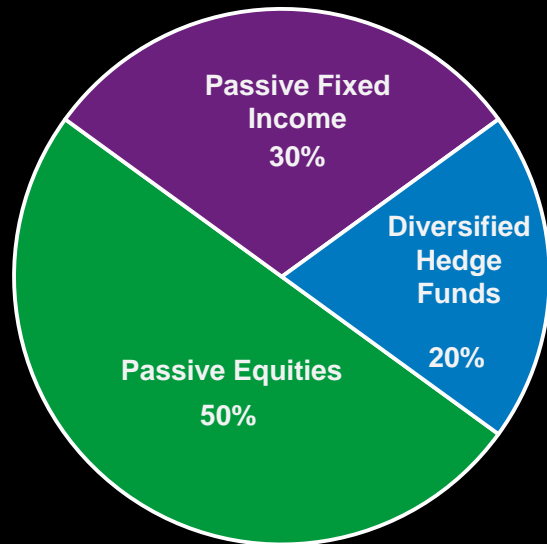
# Improving Valuation Methodologies

Method	Details	Estimation Error	Valuation on \$10.00 Unit-Priced Fund
<b>Historic Monthly Model</b>	<ul style="list-style-type: none"> <li>Previously month NAV</li> <li>Monthly data</li> <li>December 31, 2014</li> </ul>	72 basis points	
<b>Expert Monthly Model</b>	<ul style="list-style-type: none"> <li>3-factor model</li> <li>Monthly data</li> <li>December 31, 2014</li> </ul>	32 basis points	
<b>Expert Daily Model</b>	<ul style="list-style-type: none"> <li>3-factor model</li> <li>Daily data</li> <li>4-months ended February 28, 2014</li> </ul>	3 basis points	

The **Monthly Historic Model** calculates daily fund NAVs based on the prior month's NAV with a 45 day lag. The **Expert Monthly Model** calculates daily NAVs based on the hedge fund manager's monthly NAVs and a three-factor model that includes daily prices for the relevant HFRX index, the MSCI World Index and the Barclays US Corporate High Yield Index. The **Expert Daily Model** calculates daily fund NAVs based on the hedge fund manager's daily NAVs (or as frequently as obtainable) together with the previously described three-factor model. End-of-month estimation errors were calculated using an actual BAA managed fund over the five years ending December 31, 2014. Valuation differences are the standard estimation error for each model relative to a \$10.00 unit value fund.

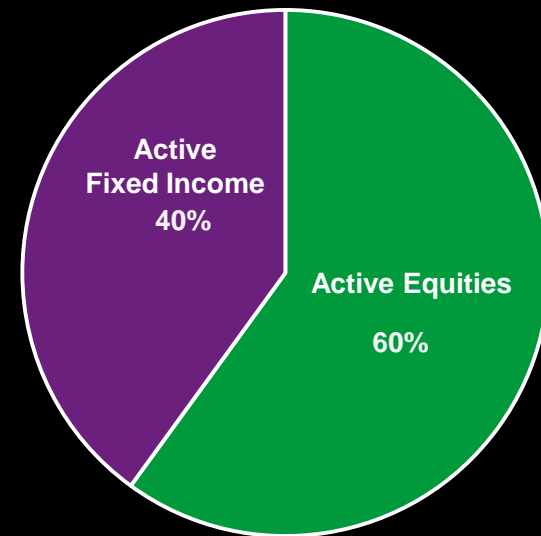
# Comparative Fees

## Representative Custom TDF



**Fees: 63 basis points**

## Average Active TDF



**Fees: 70 basis points**

Average active TDF fees represent the average expense ratio (fees paid) across active TDF funds as of 1 March 2015. Source: Morningstar. A fee calculation was conducted to estimate the custom target date funds fees. This does not represent a fund that is offered by BlackRock and does not guarantee a fee of any amount. The fee calculation is a blended calculation based on the proposed custom target date allocations. The passive equity is based on an investment in BlackRock S&P 500 Stock Fund Institutional Shares. The passive fixed income fee is based on an investment in BlackRock Bond Index Fund Institutional Shares. The diversified hedge fund fee is based on a representative composite of BlackRock Alternative Advisors' (BAA's) core appreciation strategy funds (weighted average of total fees paid across BAA's core appreciation strategy funds). The fees were combined based on the proposed allocations of 50% to passive equity, 30% to passive fixed income and 20% to diversified hedge funds.



Questions?

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**Over what time horizon would you consider further evaluating the merits of adding alternatives to your DC plan?**

- 1. Over the next 12 months**
- 2. In the next 1-2 years**
- 3. Not for the foreseeable future**

# Appendix

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# Appendix

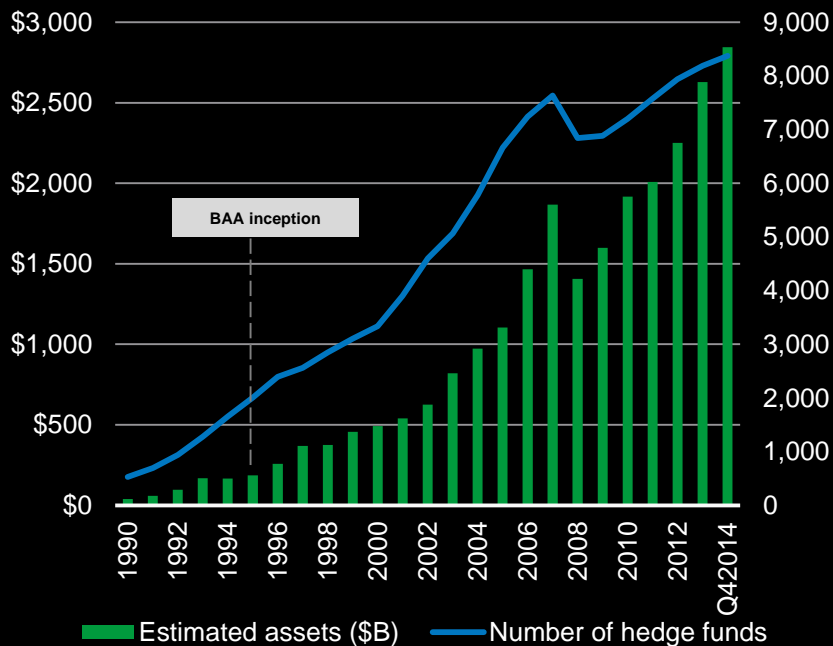
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# Hedge Fund Universe

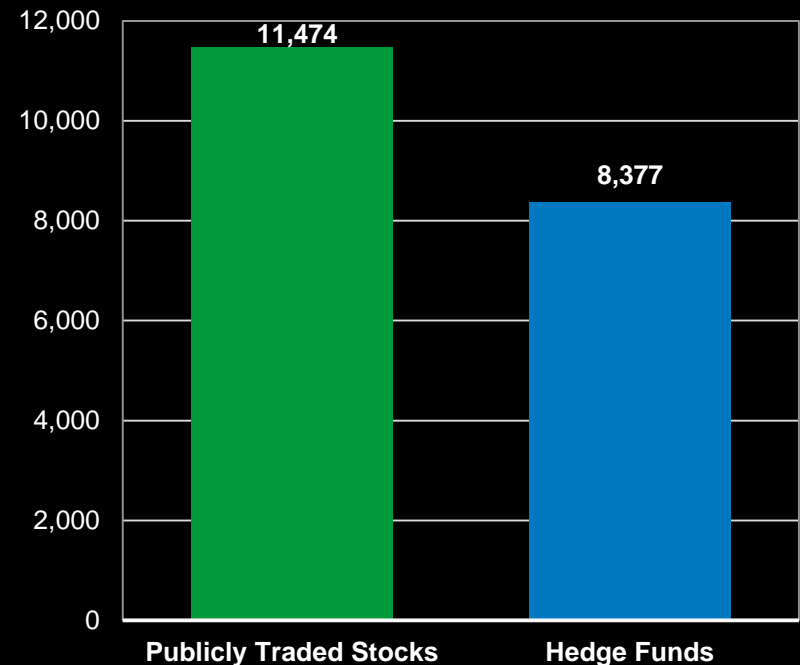
The hedge fund universe has increased more than sevenfold in the past twenty years

Given the proliferation of hedge funds, manager selection involves a high level of devoted resources

Growth of the hedge fund industry, 1990 – Q4 2014<sup>1</sup>



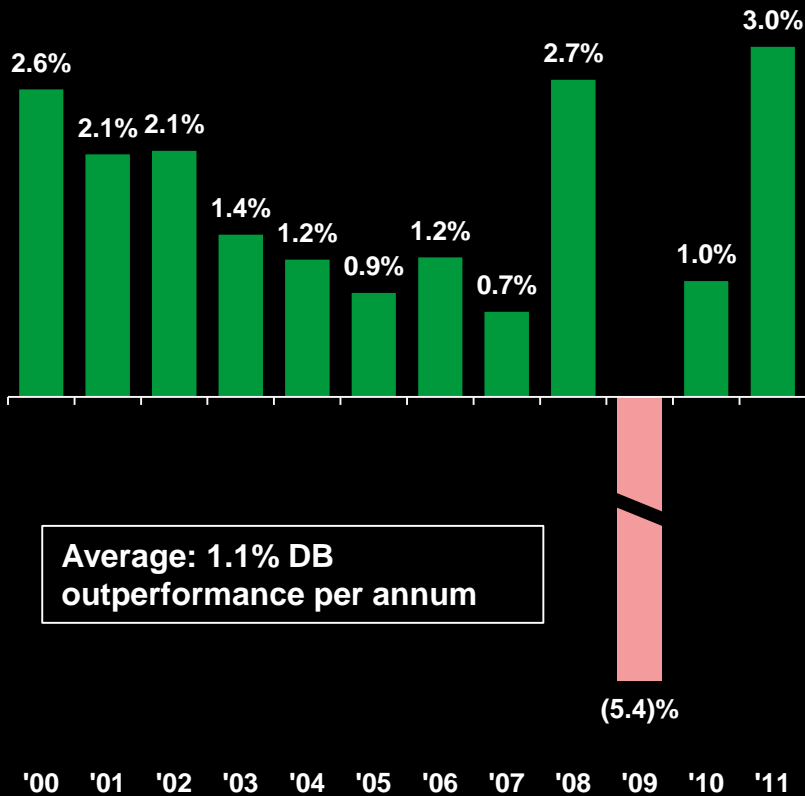
Comparison of market breadth<sup>1</sup>



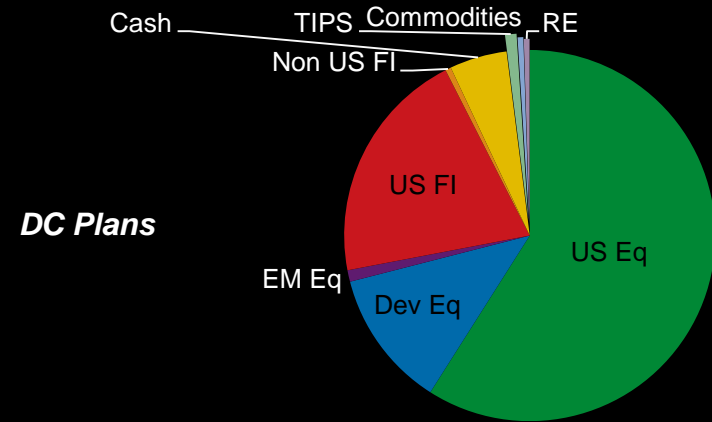
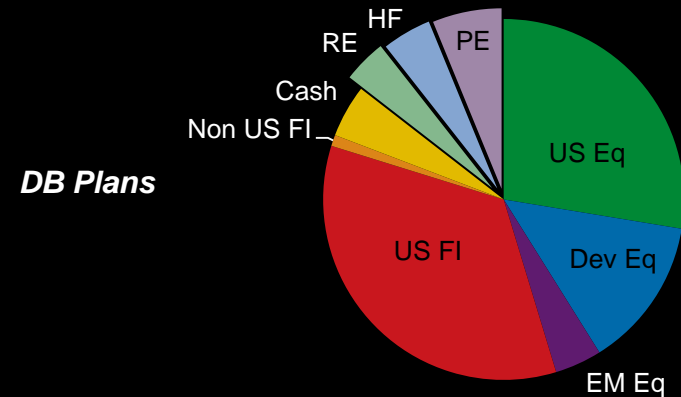
<sup>1</sup> Publicly Traded Stocks includes the S&P Global BMI (Broad Market Index), which is comprised of the S&P Developed BMI and the S&P Emerging BMI as of 12/31/2014. Hedge Funds includes Source: HFR Global Hedge Fund Industry Report as of 4Q14.

# Strong Rationale for Including Alternative Investments in DC Plans

Δ between DB and DC performance (DB less DC)



Difference in DB and DC asset allocation

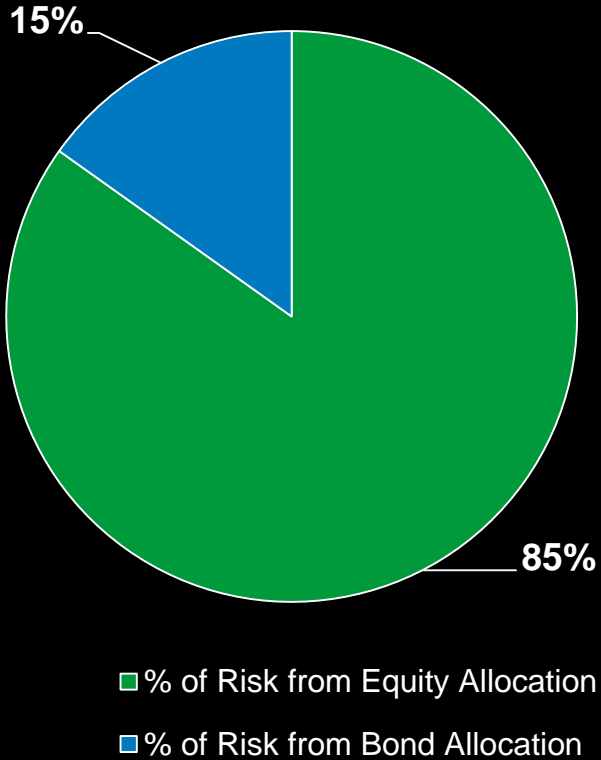


Source: Towers Watson. As of YE 2011

Source: BNY Mellon. As of YE 2011.

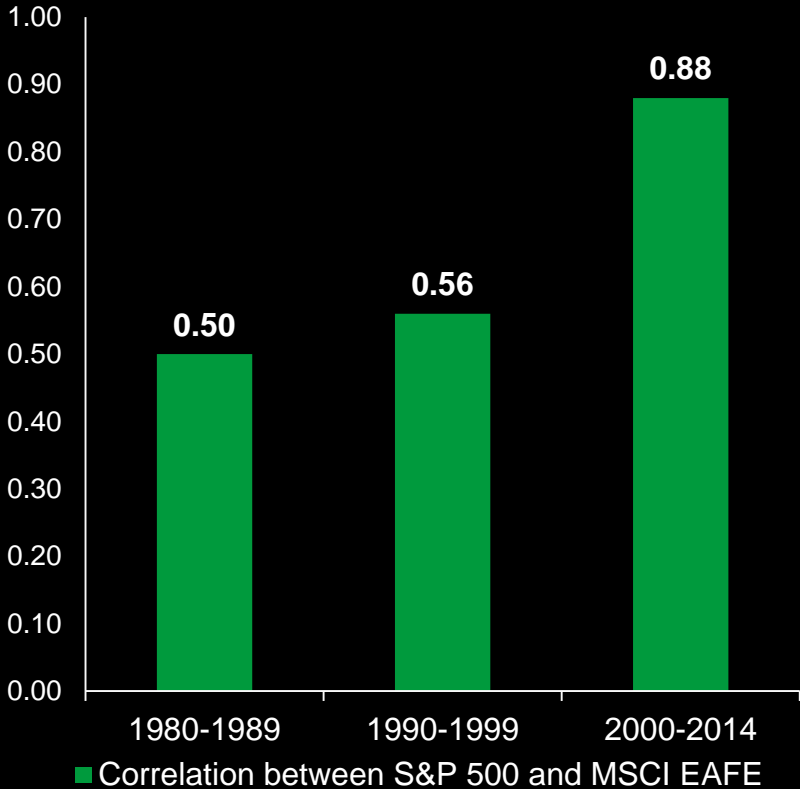
# Traditional Diversification Methods are Less Effective

In a traditional 60-40 portfolio, the vast majority of risk comes from equity



Source: Bloomberg, BAA. Time period is 1990-2014. Risk is defined as the percentage of overall portfolio standard deviation attributable to equity (60%) and bonds (40%). Equity = S&P 500, Bonds = Barclays Capital Bond Composite Global Index.

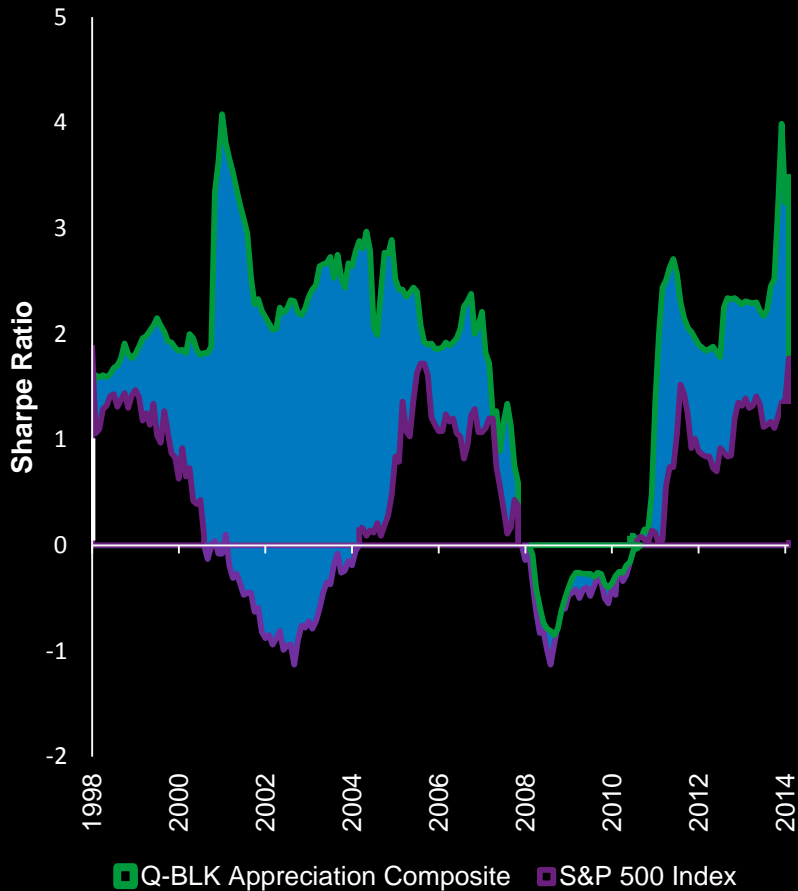
Equity correlations have risen dramatically, making it increasingly difficult to diversify equity risk



Source: Bloomberg, BAA. Time period is Jan 1980-August 2014. The illustration above shows the correlation between the S&P 500 Index and the MSCI EAFE Index based on monthly returns.

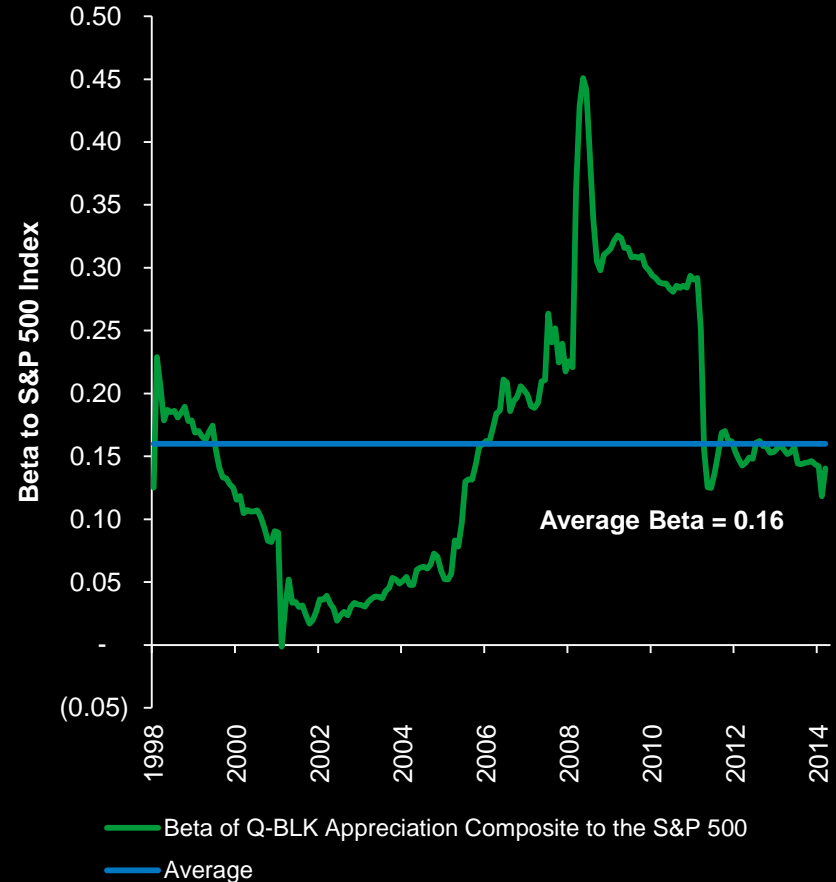
# Hedge Funds May Provide Superior Risk-adjusted Returns with Low Beta

## 3-year rolling risk-adjusted returns (Sharpe)



Source: Bloomberg, BAA. As of the period 9/1998– 10/2014. The blue area denotes the differential between the Sharpe ratio of Q-BLK Appreciation Composite and the S&P 500 Index.

## 3-year rolling beta to the S&P 500 Index



Source: Bloomberg, BAA. As of October 2014. Average denotes the average correlation of Q-BLK Appreciation Composite to the S&P 500 Index over the period 9/1998 – 10/2014.



## Important Information

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# Important Information

This confidential document is for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities described herein. Potential investors are urged to consult a professional advisor regarding the possible economic, tax, legal or other consequences of entering into any investments or transactions described herein. All investments risk the loss of capital and there is no guarantee or assurance that an investment in a fund will achieve its investment objective. An investment in a fund is speculative and should form only part of a complete investment program, and an investor must be able to bear the loss of its entire investment. This discussion has been prepared solely for the use of the intended recipient (the "Recipient") and is not to be distributed, except to the Recipient's professional experts for purposes of advising the Recipient, without the prior written consent of the BlackRock Alternative Advisors business unit of BlackRock, Inc. ("BAA"). No recipient is permitted to use this information in any way that would violate the securities-related laws, rules or regulations of any jurisdiction.

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## Performance Record

**QAC (net)** performance numbers are net of the fees actually paid by the relevant class, with the exception of classes for which actual fees are calculated in non-USD, in which case a 1% management fee and 10% performance fee is applied to the USD denominated gross performance (net of expenses) of the relevant class. QAC performance numbers are estimates calculated on an accrual basis during the accounting close process for funds in the Composite and are based on estimated returns provided by each underlying fund manager. These calculations are based on estimated returns rather than final reported information in order to provide timely performance return information to investors. As a result, the performance numbers shown may differ from performance numbers based on the final financial information for each underlying fund and adjustments are made prospectively unless the Investment Manager determines the difference was material. **Estimated performance numbers are particularly susceptible to inaccuracies during periods of market volatility or uncertainty, and additional information may become available subsequently that materially alters these estimates.** The Composite is denominated in US dollars and does not reflect currency hedging activities and related costs that would be applicable to non-USD denominated classes. Risk is computed as the annualized standard deviation of monthly returns. The Sharpe Ratio measures the return earned over T-bills per unit of risk taken.

This performance information is an estimate that is subject to change and based in part on estimates received from the underlying funds' administrator or investment advisor, in some cases using assumptions that may be complex and susceptible to significant uncertainty, and may prove incorrect. Estimated valuations are particularly susceptible to inaccuracies during periods of market volatility or uncertainty, and additional information may become available subsequently which materially alters assumptions or other inputs to the estimates. This may result in a material change to the Fund's estimated reported net asset value and performance estimate. Should the net asset value materially change, the Fund will retroactively revise all capital transactions of impacted investors as appropriate.

Minor variances in column, row and sectional totals are the result of rounding and have been allowed to maintain the integrity of the underlying financial data. Information relating to the Fund's performance and its underlying managers' qualifications, strategy exposure or portfolio composition was prepared by BAA based on information believed to be reliable; however, no assurance of its completeness or accuracy can be made. In some cases, the Fund's underlying managers may manage more than one investment program. The performance information presented herein relates only to the described investment program. BlackRock also advises other portfolios whose historical risk/return characteristics may be significantly different.

## Certain Risk Factors

**Past results are not necessarily indicative of future results.** Historically, funds of funds and hedge funds have produced gains and losses due to changes within the equity, interest rate, credit, currency, commodity and related derivative markets. Additionally, gains and losses are impacted to varying degrees by investment acumen, market volatility, corporate activity, securities selections, regulatory oversight, trading volume and money flows. These elements and/or their rate of change may not be present in the future, and thus future performance may be impacted. Any investment in a fund involves a high degree of risk. Investments in funds of funds and hedge funds can be highly illiquid.

The performance of funds of hedge funds will depend on the performance of the underlying fund investments. There can be no assurance that a multi-manager approach will be successful or diversified, or that the collective performance of underlying fund investments will be profitable. Underlying fund managers may be subject to limited regulation (or may not be registered with any regulatory body), may experience potential conflicts of interest with respect to their management of allocated fund assets and from time to time, vis-à-vis other underlying managers, may take opposing positions with respect to particular securities or investments. The funds within a Fund will rely on information provided to it by the underlying fund managers and there may be limited ability to confirm or verify such information.

Underlying fund managers may implement a variety of investment strategies and techniques, including short selling, leverage, hedging (such as derivatives, swaps, forwards, futures and options) and securities lending. Underlying fund managers may invest in a wide array of investments, including non-US investments, non-US currencies, distressed assets, illiquid investments (such as those subject to legal or regulatory restrictions on transfer), and commodities and futures, each of which may have diverse associated risks, including counterparty risk, credit risk and liquidity risk.

The secondary market for investments in the funds within a fund or its underlying fund investments is a recent development and as such may exhibit illiquidity, wide or non-existent bid-offer spreads, and brokerage charges. In addition, there may be restrictions on transferring fund investments. A fund may be leveraged, which may increase the risk of investment loss, and its performance may be volatile. Funds of funds and hedge funds may involve complex tax structures; therefore, there may be delays in distributing important tax information. Funds of funds and hedge funds are not subject to the same regulatory requirements as SEC registered funds or mutual funds and are not required to provide periodic pricing or valuation information to investors. The funds within a fund and its underlying fund investments may have significant fees and expenses that would reduce returns.

# Important Information

## Indices

Index performance is taken from Bloomberg Financial Markets or the index's proprietary website and is included for comparison only and, although useful for general observations, differences between the composition and construction of such indices and a fund's portfolio may limit their usefulness for direct comparisons. For example, it should be noted that hedge fund indices will vary, in some cases significantly, from the composition of a fund's portfolio in terms of the number of positions, types of hedge fund strategies included and distribution within such hedge fund strategies and other characteristics. Comparison of e's results to indices that represent asset classes other than hedge funds or funds of hedge funds are further limited by the significant inherent differences between such asset classes, for example in terms of risk/return, correlations and other characteristics. A fund may have higher levels of risk and volatility, including through the use of leverage and concentrated positions. Moreover, index information may or may not reflect the deduction of fees and expenses (refer to specific definitions), which could further limit the comparative value of such information relative to a fund. A fund might not invest in all or necessarily any of the securities that comprise any of the indices. Reference to the indices does not imply that a fund will achieve returns, volatility or other results similar to such indices.

Characteristics of securities included within the indices are subject to change between rebalancing periods. These characteristics are applicable when securities are evaluated at rebalancing points but may be higher or lower during interim periods. Additionally, index providers may have varying methodologies for measuring and implementing constituent changes and differing rebalancing periods.

**Morningstar US Open End "liquid" alternatives Equally-Weighted Aggregate** is composed of the entire Morningstar US Open End Alternatives universes of managed futures, long/short equity, multialternative and market neutral disciplines. The returns are calculated as an equally-weighted average of the funds' returns during the monthly period. Funds that do not have at least 6 months of performance were not included. **Past performance is not an indication of future results.**

**HFRI Fund Weighted Composite Index ("HFRI Fund Weighted Composite Index")** is an equal-weighted index representing investment funds focused on absolute return strategies. The index includes hedge funds tracked by Hedge Fund Research, Inc. and is revised several times each month to reflect updated fund return information. For performance presented as of any given month, estimated values of underlying funds are used to build the index until valuations are finalized (generally on a 5-month lag although the time period may vary). The index is a proxy for the performance of the universe of hedge funds focused on absolute return strategies. Returns are net of fees and are denominated in USD. Source: Hedge Fund Research, Inc., © HFR, Inc. 15 March 2014, [www.hedgefundresearch.com](http://www.hedgefundresearch.com).

**The Wilshire Liquid Alternative Index<sup>SM</sup>** is unmanaged and used for illustrative purposes only and is not intended to be indicative of any fund's performance. It is not possible to invest directly in an index. Q-BLK Appreciation Composite is used as a proxy for Marketable Alternatives. *See the definitions and disclosures appearing at the end of the document for source and other information related to the Dispersion of Hedge Fund Strategies. Past performance is not an indication of future results.*

**S&P 500 Total Return Index ("S&P 500 Index")** is a capital-weighted index that includes 500 stocks representing all major industries. Returns are denominated in USD and include dividends. The index is a proxy of the performance of the broad US economy through changes in aggregate market value.

**Barclays Global Aggregate Index ("Barclays Global Aggregate")** is a market value-weighted index comprised of all nonconvertible fixed income securities with a minimum investment-grade of Baa3, at least one year to maturity, and a minimum outstanding of USD 300 million. Mortgage-backed securities, asset-backed securities, and commercial mortgage-backed securities are included. Returns are denominated in USD. The index is a proxy for the performance of the broad global fixed income market.

**MSCI World Index (USD Hedged) ("MSCI World Index (USD Hedged)")** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. Returns are denominated in and hedged to USD and include dividends. Prior to June 2007, returns are the sum of the USD hedged price index and dividends. The index is a proxy for the performance of the world's developed equity markets.

**MSCI Emerging Markets Index ("MSCI Emerging Markets")** is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. Returns are denominated in USD and include dividends. The index is a proxy for global emerging markets.

**JP Morgan Global EMBI Index ("JP Morgan Global EMBI Index")** is market value-weighted index that includes Brady Bonds, loans, Eurobonds and traded external debt instruments in emerging markets that have a minimum face value of \$500 million. The index serves as a proxy for emerging market debt.