APOLLON

INTRODUCTION TO HEDGE FUNDS

INTRODUCTION TO HEDGE FUNDS

What is a Hedge Fund?

While technical definitions vary across borders, hedge funds can be broadly defined as actively managed pools of capital following unconstrained investment strategies. These are typically unregistered investment vehicles intended for sophisticated institutional investors and high net worth individuals. In the truest sense, “hedge funds” is not an asset class, but rather a legal structure facilitating an amalgam of strategies invested across various asset classes.

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What are hedge funds?
Semi-illiquid investment vehicles
Invest in both public and private securities
Typically trade equity, credit and derivative instruments
Marked to market daily and/or monthly
Ability to short securities and deploy leverage

Hedge fund strategy buckets
Equity Hedge
Event Driven
Macro
Relative Value
Multi-Strategy

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Hedge fund structure
• The fund management company is considered the General Partner (“GP”). • GP creates an investment vehicle that is a limited partnership • Investors are considered Limited Partners (“LP”). • LPs provide capital to the GPs who, in turn, invest on behalf of the fund. • LPs pay fees to the GP for fund management and investment performance.

Key hedge fund terms	
Performance Fees (“Carry”)	The GP charges performance-based fees on investment gains.
Gates	A Fund may place redemption limits, or gates, limiting the amount of redemptions that can occur during a redemption window.
Lock-ups	The lock-up period varies but usually ranges from one to three years.
High-water marks	Ensure that a hedge fund manager cannot collect a performance fee until investors recoup previous losses.

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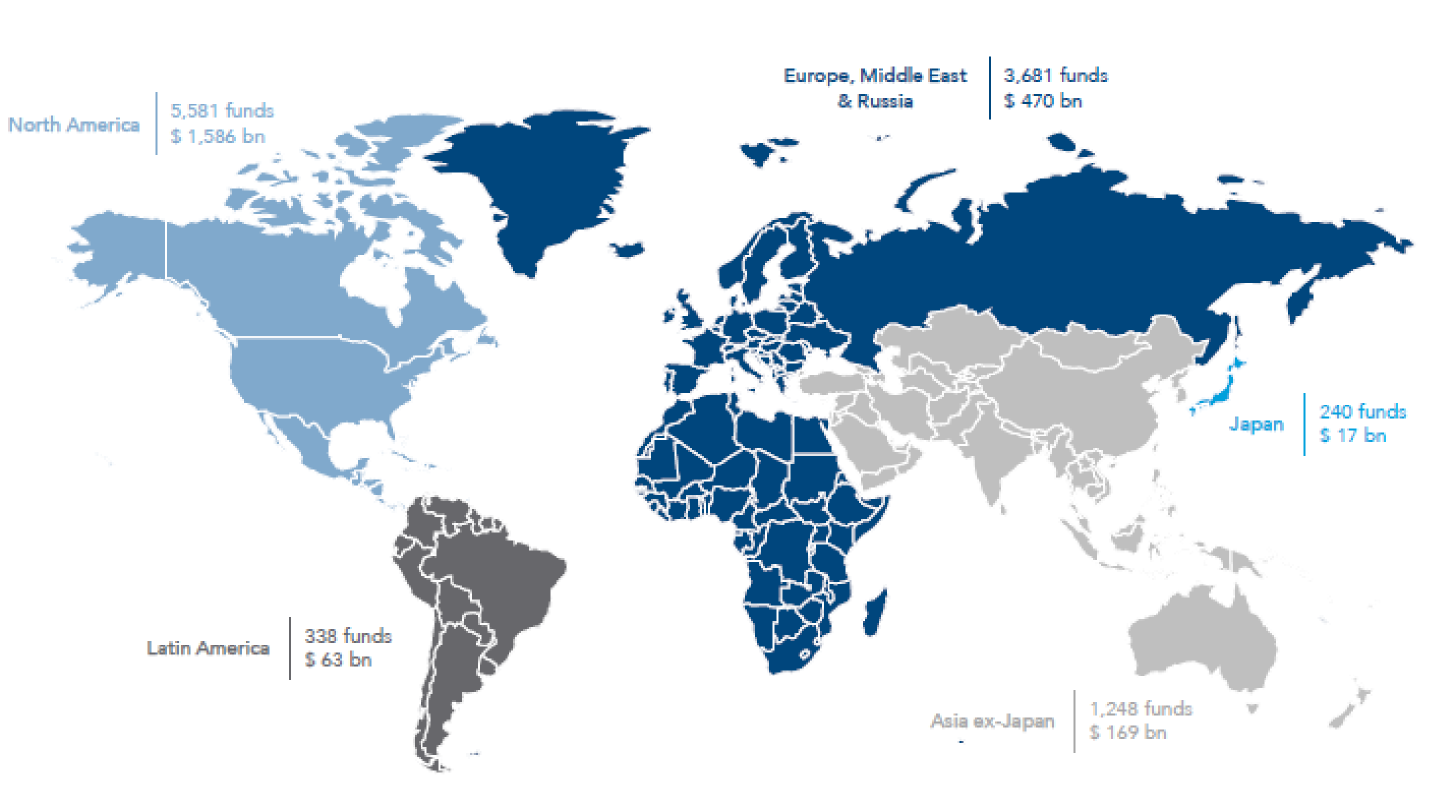
GLOBAL HEDGE FUND INDUSTRY MAP



Source: Eurekahedge, Global Hedge Fund Report, March 2020

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HEDGE FUND STRATEGY DEFINITIONS

Characteristics	Direct Hedge Funds
Equity Hedge	Equity hedge managers maintain long and short positions primarily in equity and derivative securities. Portfolio selection can be driven by either quantitative or fundamental analysis. Strategies can be broad (generalist) or narrow (sector specific) and fund profiles vary greatly depending on net exposure, leverage, holding periods and portfolio construction.
Event Driven	Event driven managers take positions in companies involved in corporate transactions such as mergers, restructurings, tender offers, shareholder buybacks, debt exchanges, management or board changes, security issuance or other capital structure events. Security types can include equity, debt and derivatives. The investment theses are typically fundamentally driven and range from hard catalyst situations to soft catalyst situations.
Macro	Macro managers take a top-down, economic world view. They engage in strategies where economic and political change impacts equity, fixed income, currency and commodities markets.
Relative Value	Relative Value managers seek to exploit pricing discrepancies between securities. They employ a variety of fundamental and quantitative techniques to develop investment theses. They trade equities, fixed income, convertible bonds and derivatives.
Multi-Strategy	Multi-strategy funds allocate capital opportunistically among various hedge fund categories, strategies and styles. Multi-strategy managers typically lever the whole portfolio. Total portfolio assets back the obligations of each specific underlying leveraged position. There is an important difference between single multi-strategy manager and multi-strategy fund of funds. A multi-strategy fund of hedge funds allocates capital to several hedge fund firms so this cross collateralization does not occur.

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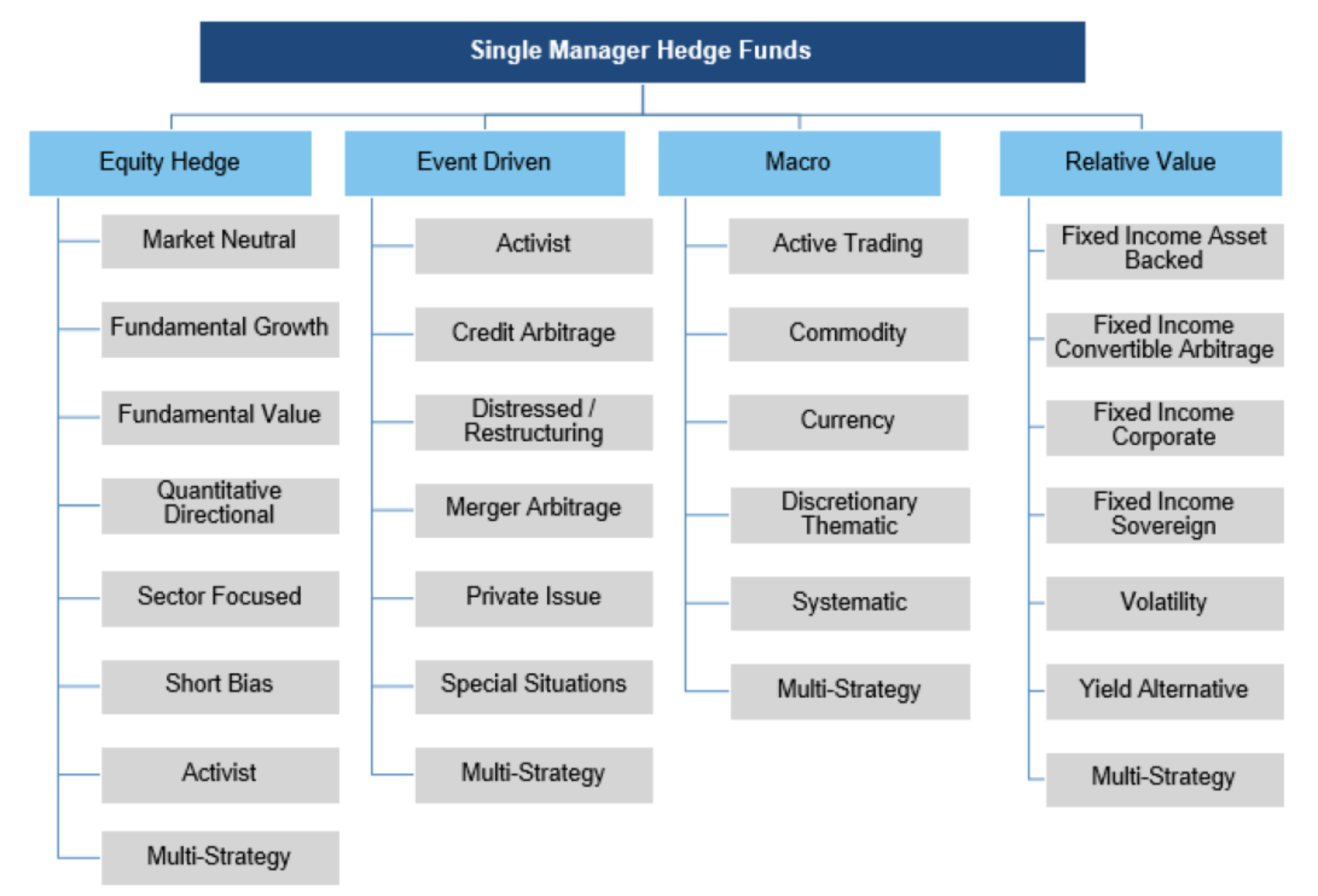
HEDGE FUND SUB-STRATEGIES



Source: HFR Global Industry Report – Year End 2010

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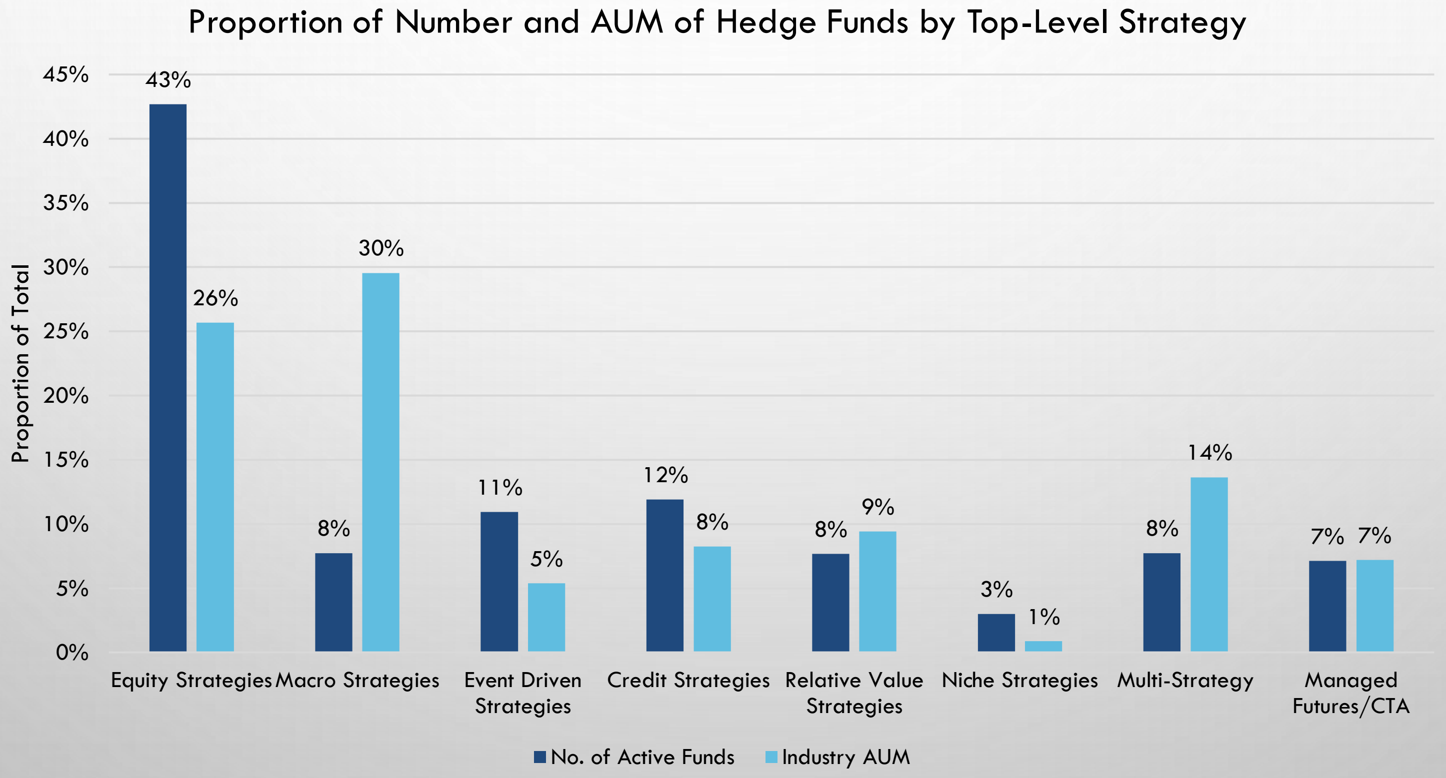
INDUSTRY BREAKOUT BY STRATEGY TYPE



Source: Preqin Pro. Data as of November 2019

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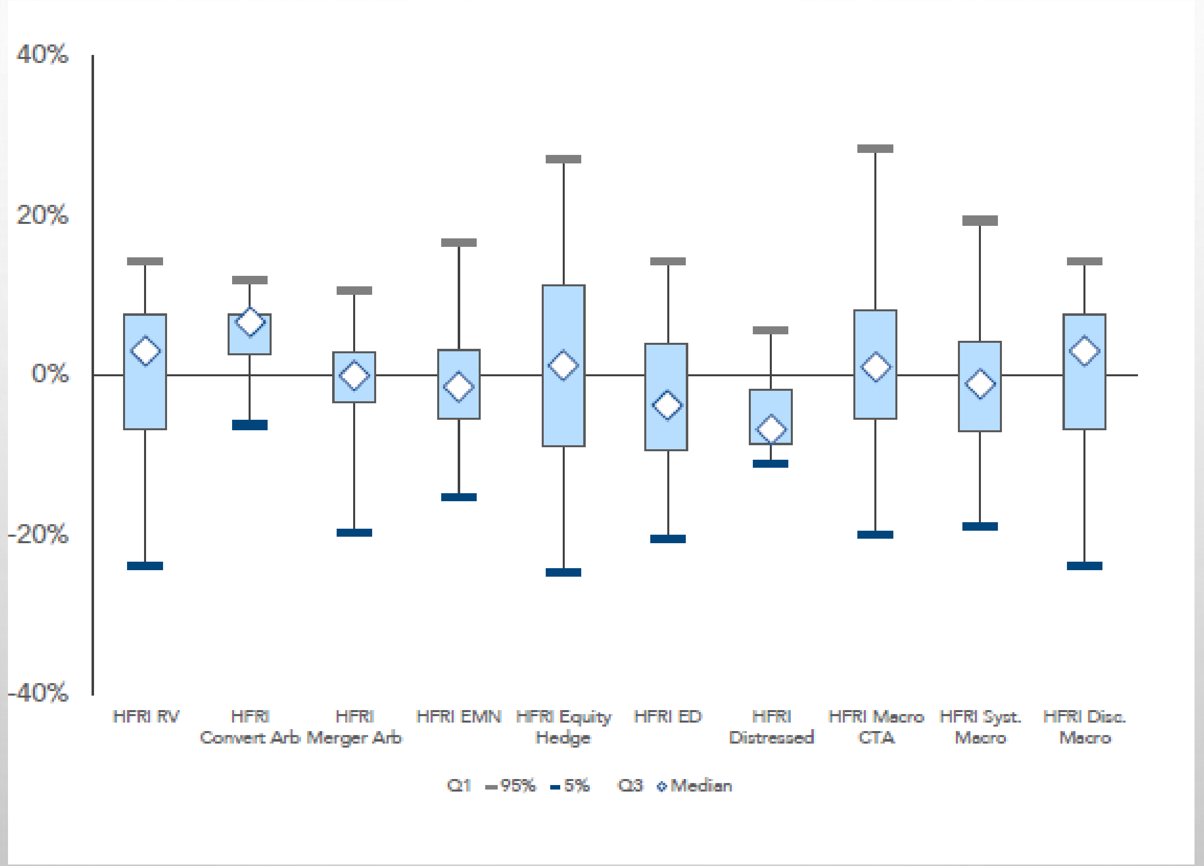
12 MONTH ROLLING RETURN DISPERSION ACROSS STRATEGIES



Source: HFRI, May 31, 2020. Past performance does not indicate future performance and there is a possibility of a loss.

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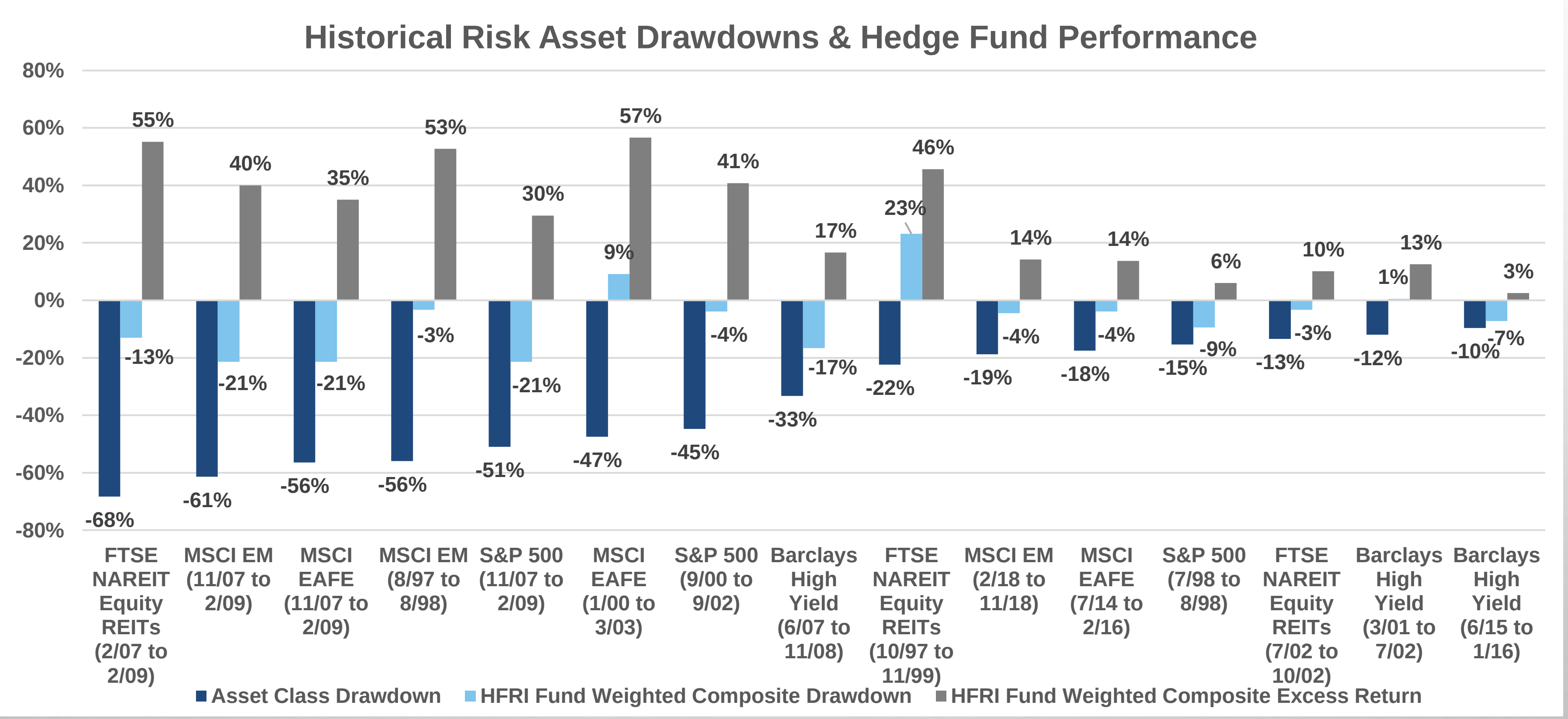
Hedge Funds Have Produced Excess Returns In Each of the 15 Largest Drawdowns Across Global Equities, High Yield and Real Estate



Source: PARIS, past performance does not indicate future performance and there is a possibility of a loss.

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JANUARY 1988 TO MARCH 2019 PERFORMANCE METRICS

	Hedge Funds	Cash	TIPS	U.S. Bonds	Foreign Developed Bonds	High Yield Bonds	U.S. Equity All-Cap	International Developed Equity	Emerging Market Equity	Real Estate	MLPs
Annualized Returns	**10.2%**	3.1%	6.3%	6.2%	5.7%	8.2%	10.6%	5.6%	10.7%	9.0%	13.4%
Annualized Standard Deviation	**7.0%**	0.7%	5.2%	3.7%	5.1%	8.4%	14.3%	16.7%	22.5%	18.8%	15.8%
Maximum Calendar Year Return	**32.2%**	8.6%	18.5%	18.5%	18.7%	58.2%	36.8%	39.2%	79.0%	37.1%	76.4%
Minimum Caendar Year Return	**-19.0%**	0.0%	-8.6%	-2.9%	-2.0%	-26.2%	-37.3%	-43.1%	-53.2%	-39.8%	-36.9%
Maximum Drawdown	**-21.4%**	0.0%	-12.2%	-5.1%	-6.8%	-33.3%	-51.2%	-56.4%	-61.4%	-70.9%	-48.5%
Drawdown Start Date	**Oct-07**	N.A.	Feb-08	Jan-94	Jul-16	May-07	Oct-07	Oct-07	Oct-07	Jan-07	Aug-14
Drawdown End Date	**Feb-09**	N.A.	Oct-08	Jun-94	Dec-16	Nov-09	Feb-09	Feb-09	Feb-09	Feb-09	Feb-16
Duration of Drawdown (Years)	**1.4**	N.A.	0.8	0.5	0.5	1.6	1.4	1.4	1.4	2.2	1.6

Source: PARIS, past performance does not indicate future performance and there is a possibility of a loss.

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ALPHA-BETA FRAMEWORK AND HEDGE FUND FEES

HEDGE FUNDS HAVE SIGNIFICANTLY HIGHER FEES THAN PASSIVE INVESTING VEHICLES AND TRADITIONAL ACTIVE LONG-ONLY MONEY MANAGERS. IT IS BEST TO APPROACH THESE FEE'S USING AN ALPHA-BETA FRAMEWORK WHEN ASSESSING THE APPROPRIATENESS OF THE FEES CHARGED BY A HEDGE FUND MANAGER. THE BETA COMPONENT OF TOTAL RETURN IS A COMMODITY THAT CAN BE GENERATED PASSIVELY AND INEXPENSIVELY WHILE ALPHA IS THE ONLY COMPONENT OF RETURN THAT WARRANTS A PRICING PREMIUM.

Metrics	Manager A Long-Only Mutual Fund	Manager B Long/Short Hedge Fund
Manager Fee	0.75%	2% Base + 20% on Performance
Manager Beta to S&P 500 Index	1.00	0.40
Gross Manager Return (Before Fees)	9.00%	7.30%
Positive Alpha Hurdle Adjusted for Beta	8.00%	3.20%
Total Management Fee	0.75%	3.06%
Manager Return Net of Fees	8.25%	4.24%
Alpha Net of Fees	0.25%	1.04%
Alpha Net of Fees / Total Return	3.00%	24.50%
Total Fee / Alpha Net of Fees	3.00	2.94

S&P 500 Index Return	8.00%
Treasury Bill Return	0.00%

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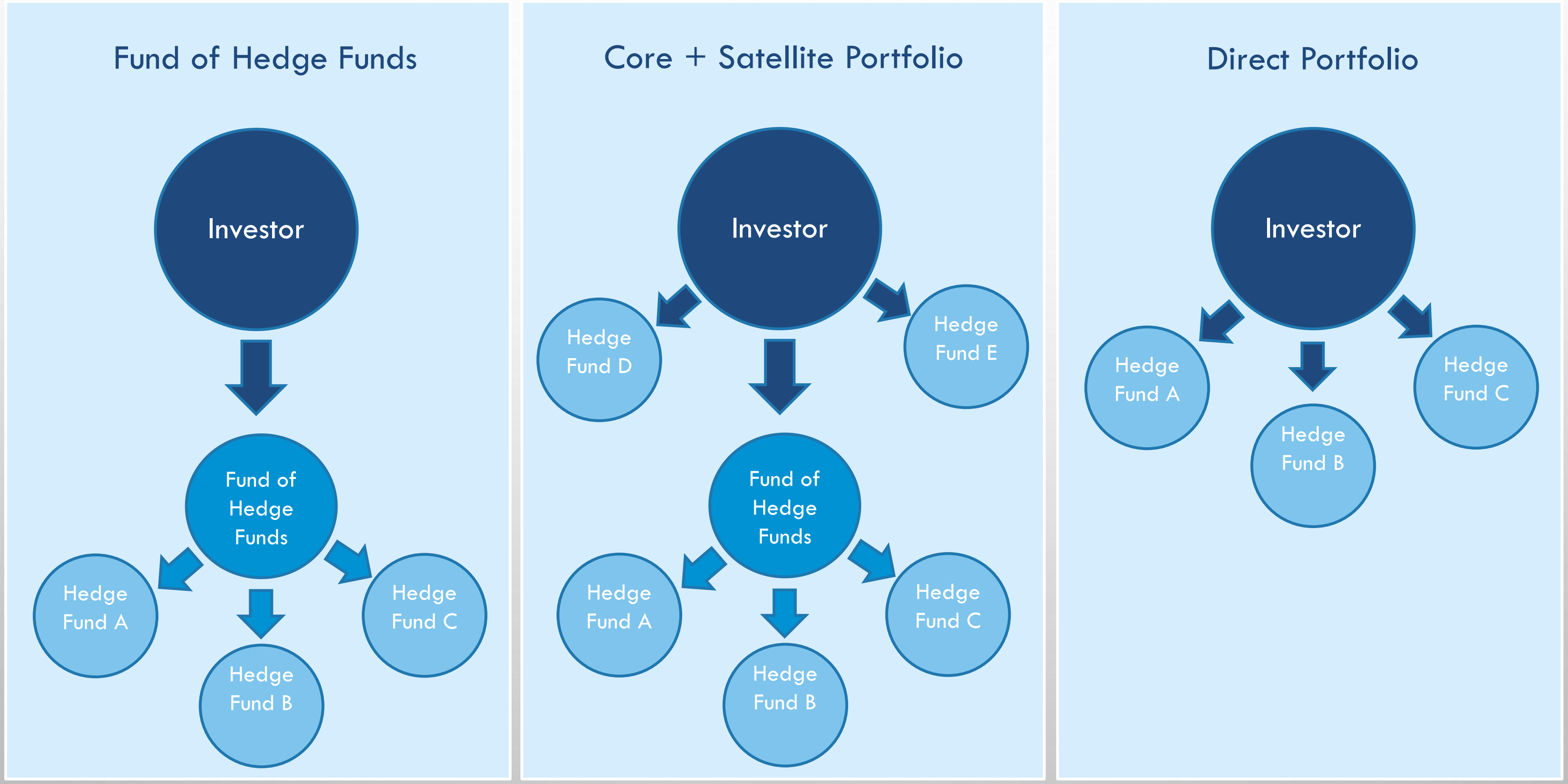
THREE PRIMARY WAYS TO INVEST IN HEDGE FUNDS



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HEDGE FUND PORTFOLIO IMPLEMENTATION OPTIONS & FACTORS

Implementation	Approach	Underlying Allocations	Pros	Cons
Fund of Hedge Funds ("FOHF")	• Commitments to established FOHF managers	• 1 FOHF Manager	• Operational benefits (consolidated investment and tax reporting) • Maintain fewer manager relationships • Lower investment minimums	• Second layer of fees • Potential to over-diversify and generate hedge fund market beta
Core + Satellite Portfolio	• Core commitment to an established, diversified FOHF manager • Satellite commitments to specialized direct and/or FoF managers (e.g., Macro, Event Driven)	• 1 core FOHF • 2-5 satellite, direct hedge funds	• FOHF core holdings provide diversification with limited volatility • Satellite exposure provides access to differentiated managers and strategies to improve alpha generation	• Number of fund commitments increases operational complexity • FOHF commitments have second layer of fees • Higher investment minimums • While diversified, manager concentration introduces additional idiosyncratic manager risks
Direct Portfolio	• Multiple investments in direct hedge funds with a focus on low beta managers in order to maximize alpha	• 10-18 direct hedge funds	• Single layer of fees • A diversified portfolio across various strategy buckets and strategy types creates opportunity to maximize alpha	• Number of fund commitments increases operational complexity (reporting, liquidity management, etc) • Higher investment minimums, compounded by multiple commitments

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DIRECT HEDGE FUNDS VS. FUND OF HEDGE FUNDS

Characteristics	Direct Hedge Funds	Fund of Hedge Funds (FOHF)
Fees / Expenses	Single Layer	Double Layer
Manager Evaluation	Evaluation and due diligence required for all underlying managers	Evaluation required for one FOHF manager who performs underlying manager due diligence
Diversification	Investor must diversify among many managers and strategies	Single FOHF can diversify among many underlying managers and strategies
Liquidity Management	Managed by an investor	Managed by the FOHF
Portfolio Control	Investor builds and controls the hedge fund portfolio	FOHF manager controls overall investment strategy and investor has no control in building the portfolio
Investor Minimums	Requires higher asset levels to build a diversified portfolio	Can diversify with significantly lower asset levels
Customization	Bespoke portfolio to fit specific risk and return parameters	One size fits all approach

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INVESTING IN HEDGE FUNDS COMES WITH UNIQUE RISKS

- **Leverage**
  - While the appropriate use of leverage has the potential to result in higher returns for the fund's investors, it can be detrimental in times of stress by magnifying losses.
- **Lack of Transparency**
  - Managers may be reluctant to share position level information or may provide this information with a considerable lag
- **Speculative Investment**
  - Portfolio may be highly concentrated into a few investments
  - Investment strategies rely on fund manager assumptions when underwriting investments
- **Manager Selection**
  - Performance dispersions among managers are much wider than in public markets
- **Use of Complex Financial Instruments**
  - Trading complex financial instruments such as warrants and derivatives require knowledge and experience in the technical structure, financial risks, and contractual terms of legal agreements.
- **Regulatory Oversight**
  - Hedge funds avoid the bulk of federal regulations in part by making only private offerings to investors who meet the accredited investor, qualified client, and qualified purchaser restrictions.
- **Limited Liquidity**
  - Typically, hedge funds provide quarterly liquidity. However, some funds may have locks or gates in place that may limit the frequency or amount that can be redeemed during a redemption window.

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UNIQUE TAX IMPLICATIONS

- Hedge funds are structured into both onshore and offshore vehicles
- Tax-exempt and non U.S. investors should consider offshore vehicles to avoid unnecessary tax filings and UBIT
- U.S. taxable investors generally invest in onshore vehicles
- Capital gains generated by hedge funds are often short term in nature but are highly dependent upon the funds underlying investment strategy
- All gains, losses, income and expenses are passed through a hedge fund partnership to each individual investor
- Distribution and filing of Schedule K-1 statements creates administrative burden
- K-1s are usually unavailable by April 15 filing deadline

KEY RISK CONSIDERATIONS

The Nature of Hedge Funds Come With Potential Unique Risks

Unique Risks	Apollon Risk Mitigation Process
Complexity of Operations	Robust operational due diligence
Use of Leverage	Deep analysis of risk management systems and guidelines in addition to the review of counterparty financing agreement terms
Illiquidity	Compare "time to liquidate" analyses and liquidity terms across similar peers; avoid unusually illiquid portfolios
Concentration of Positions	Outsized attribution from a small number of positions can be problematic and should be investigated for repeatability
Lack of Transparency	Walk away if reasonable demands for transparency are not met
Asset Class Sentiment	Eyes-wide-open conversation about proper expectations and portfolio role

OPERATIONAL DUE DILIGENCE PROCESS

BUILDING YOUR PORTFOLIO

FINDING THE RIGHT IMPLEMENTATION SOLUTIONS TO MEET YOUR OPERATIONAL GOALS AND INVESTMENT OBJECTIVES

Portfolio Type	Portfolio Construction Approach	Targeted Return Range	Client Portfolio Goals
Directional	Larger portfolio exposure to Hedged Equity and Event Driven strategies	6% to 9%	• Liquidity comes primarily from a client's equity exposure • **Goal:** equity like returns with lower volatility
Diversified	Diversified across all hedge fund strategies	5% to 7%	• Liquidity comes from across both equity and fixed income • **Goal:** have between bond and equity performance with bond like volatility
Conservative	Larger portfolio exposure to Relative Value, Macro and Multi-Strategy managers	4% to 6%	• Liquidity comes primarily from a client's fixed income exposure • **Goal:** exceed bond portfolio performance with bond like volatility

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