

Liquid Alternative Investments Company Benchmark Indices

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The LAIC Benchmark Indices

Satellite/Category Indices

The LAIC indices capture the current and historical performance of a broad range of liquid alternative investment strategies and asset classes, as well as those of “traditional” asset classes, which are used to determine correlations and the integration of alternatives with traditional portfolios. Funds implementing alternative strategies offer risk and return profiles that differ from traditional equities or bonds. The broadest indices are grouped in four Satellites or Categories which represent the range of alternative investment strategies: Hedge Fund Strategies; Real Assets; Enhanced Yield; and Alternative Beta. We consider these (together with a Core Traditional Satellite) as the building blocks for diversified portfolios.



The Strategy Indices

The next level of indices is by strategy, as shown below. Strategies and Strategy Indices reflect funds that track major strategy categories that are differentiated by the markets they trade, their trading strategies, instruments they utilize and correlation to other funds in our universe. The funds that comprise each strategy are those that show relatively little correlation with those of other strategies, while showing a relatively high correlation with those of their own strategy.

As shows in the chart below, the strategies that are part of each satellite/category are as follows:

	SATTELITE/CATEGORY				
	Core Traditional	Hedge Fund Strategies	Real Assets	Alternative Beta	Enhanced Yield
STRATEGIES	Large Cap Stocks	Equity Hedge	Commodities	Momentum	Emerging Market Debt
	Small Cap Stocks	Absolute Return	Real Estate	Volatility	Corporate High Yield Debt
	Investment Grade Bonds	Alternative Multi-Strategy		Smart Beta	
	Money Market	Directional Trading		Risk Parity	
		Alternative Fixed Income			

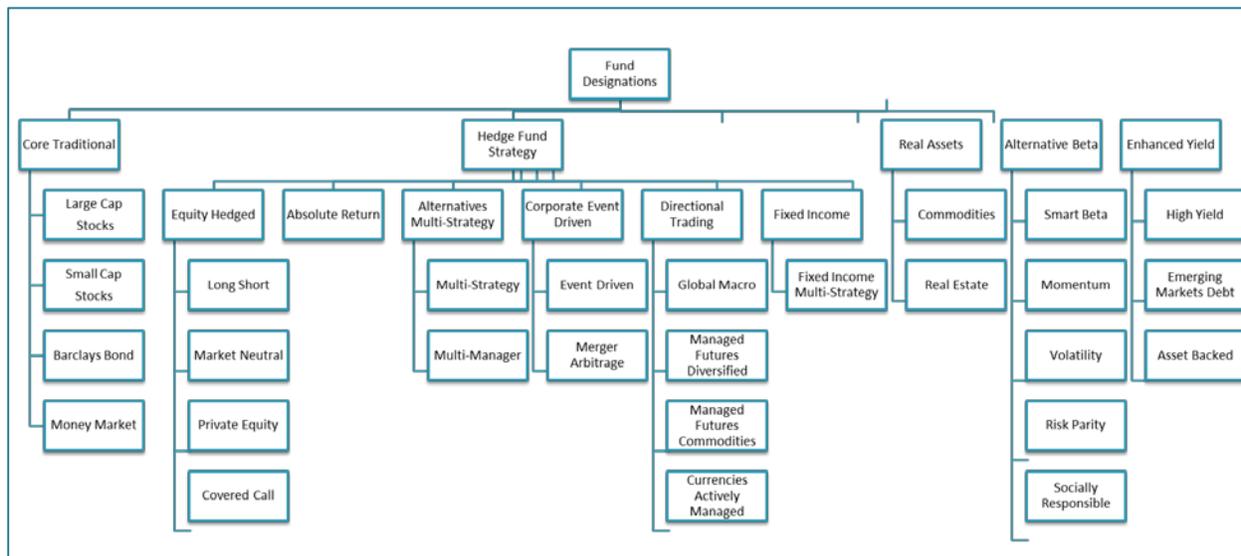
Examples here are Equity Hedged and Directional Trading (within the Hedge Fund Strategy Category [Satellite] and Commodities and Real Estate within the Real Assets Category [Satellite]).

Sub-Strategy Indices

Some Strategies also have sub-strategies such as Equity Market Neutral in Equity Hedged or Global Macro within Directional Trading. A sub-strategy is a group of funds whose markets

and/or risk/return characteristics generally warrant their inclusion in the strategy, but show sufficient differences to warrant a sub-strategy.

The following chart shows the Categories [Satellites], Strategies and Substrategies that comprise the universe for the Liquid Alternative Investment Company Indices:



Select Fund Indices

LAIC calculates a series of indices, called “Select Fund Indices,” that are formed by taking a subset of the aggregate fund database and selecting those funds that meet both of two criteria:

Criteria I: Funds that have performance records of at least 36 months

Criteria II: Funds that have at least \$50 million in assets under management at the time of the index calculation.

The rationale for presenting this information separately is based on the dual principals that at least 36 months of data is needed to make meaningful statistical comparisons between funds and that a minimum threshold of liquidity, as measured by assets under management, is needed to ensure that a fund meets the “liquid” criteria of liquid alternative investments.

Aggregate, Mutual Fund and ETF Indices

LAIC provides Indices that show performance and other statistical information separately for Mutual Funds and for Exchange Traded Funds (ETFs). These groups of funds are sufficiently different in terms of the types of alternatives they focus on and in terms of their characteristics as to make this distinction.

Therefore, LAIC offers three sets of indices representing the performance of different product structures.

The LAIC Index Series

Index Series	Applicable Funds
LAIC Aggregate Indices	Comprised of all funds in the LAIC database
LAIC Mutual Fund Indices	Comprised of all U.S. domiciled open- and closed-end funds in the LAIC database
LAIC ETF Indices	Comprised off all U.S. domiciled ETFs and ETNs

The LAIC Indices

Aggregate Indices	Mutual Fund Indices	ETF Indices
Alternative Beta	Alternative Beta	Alternative Beta
Hedge Fund Strategy	Hedge Fund Strategy	Hedge Fund Strategy
Enhanced Yield	Enhanced Yield	Enhanced Yield
Real Assets	Real Assets	Real Assets
Absolute Return	Absolute Return	Equity Hedged
Alternatives Multi-Strategy	Alternatives Multi-Strategy	Directional Trading
Corporate Event Driven	Corporate Event Driven	Emerging Markets Debt
Directional Trading	Directional Trading	Currencies Passive
Equity Hedged	Equity Hedged	Real Estate Funds
Fixed Income	Fixed Income	Commodities Funds Passive
Emerging Markets Debt	Emerging Markets Debt	Infrastructure
High Yield	High Yield	Volatility
Commodities Funds Active	Commodities Funds Active	
Commodities Funds Passive	Commodities Funds Passive	
Infrastructure	Infrastructure	
Real Estate Funds	Real Estate Funds	
Volatility	Multi-Manager Funds	
Multi-Manager Funds	Multi-Strategy Funds	
Multi-Strategy Funds	Global Macro Discretionary	
Global Macro Discretionary	Managed Futures	
Managed Futures	Commodities	
Commodities	Managed Futures Diversified	
Managed Futures Diversified	Equity Long Short	
Equity Long Short	Equity Market Neutral	
Equity Market Neutral		
Private Equity		
Fixed Income Multi-Strategy		
Alternative Strategies		
Hedge Fund Strategy		
High Yield/Currencies		

Criteria for Fund Inclusion

The LAIC indices draw on the extensive LAI database of liquid alternatives funds. Liquid fund products are structured to offer investors daily or near-daily redemptions or salability. Common liquid fund structures include open- or closed-end mutual funds and ETFs.

Liquid funds are then segmented into different category, strategy and sub-strategy groupings. Funds are assigned to category, strategy and (where applicable) a sub-strategy based on a quantitative and qualitative evaluation of the funds' historical returns stream and holdings. Quantitative metrics include factor loadings (or betas) to a host of economic and market factors, correlations to other liquid funds and asset classes, downside risk metrics such as maximum drawdowns and semi-standard deviations, and bear market returns. Qualitative measures include an analysis of fund holdings, the evolution of these holdings over time, manager and firm background and experience and a review of the fund offering documents and manager commentary.

The category and strategy groupings are the building blocks for the LAIC indices. Indices represent either composite of the underlying strategies or category, strategy or sub-strategy groupings.

Calculation Methodology

Calculation of the LAIC index returns varies between the index series. Weighting is either assessed on an equal-weighted basis or on an asset-weighted basis:

LAIC Index Series Weighting

Index Series:	Weighting:
LAIC Aggregate Indices	Equal-Weighted
LAIC Mutual Fund Indices	Equal-Weighted
LAIC ETF Indices	Equal-Weighted

All indices are rebalanced monthly to reflect changes in the number of funds in the index (due to the inclusion of newly launched funds or the removal of defunct funds) and changes in the net assets held by each fund (only applicable to the Asset-Weighted Indices)

Equal-Weighted Calculation

The equal weight assigned to each fund in the index is determined by taking the reciprocal (or inverse) of the number of constituent funds in the index.

Mathematically:

$$W_i = \frac{1}{n}$$

Where W_i is the weight of fund i in the index and n is the total number of funds in the index.

Total Return

All LAIC indices reflect the total return associated with the underlying constituent funds. The total return reflects three components: the price return (the change in either the net asset value or market price of the fund); the fund distributions (income or dividends distributed by the fund to investors); and the reinvestment income (income from the reinvestment of intermediate distributions into the fund).

Total return provides a more accurate sense of index performance because reinvested dividends can form a substantial portion of investor returns over longer periods. Furthermore, a large number of hedge fund trading strategies (such as Emerging Markets Debt) or alternative asset classes (such as Infrastructure MLPs) have significant yield components.

Index Return Calculation

Index returns are calculated on the last day of each month. The monthly index return is the sum of the weighted total returns of each of the index constituents.

Mathematically:

$$\text{Monthly Index Return} = \sum_{j=1}^n W_j \times TR_j$$

Where W_j represents the weight of fund j in the index, TR_j reflects fund j 's total return for the month and n represents the number of funds in the index.

The index return is calculated using the same formula for both the equal-weighted and asset-weighted indices.

Currency

- Total returns are computed in the funds reporting currency.
- For the asset-weighted index series, fund net asset values are converted to U.S. dollars at the prevailing month-end currency rate. The U.S. dollar denominated values are used to calculate the fund weights.

Index Value

Index values are computed by compounding the monthly index returns from a base value of 100 on the index's inception date.

The index's inception date is determined principally by the number of qualifying funds and the behavior of the underlying funds. The computation of historical performance can give additional

color on past performance during different market environments and during periods of market stress.

Index Maintenance

The LAIC Indices are reconstituted monthly to reflect the inclusion of fund launches. At times certain funds may experience style drift in which the fund’s holdings and risk-return profile changes since the time of inclusion. If the style drift is significant enough, the fund will be removed from the index.

Strategy Descriptions

The LAIC indices incorporate funds employing hedge fund strategies, other alternative trading strategies or investing in alternative assets. Some of these strategies are given their own indices (such as the LAIC Mutual Fund Equity Long Short Index) while others are incorporated into composite indices (such as the LAIC Equity Hedged Index). Abbreviated descriptions are below. (Full index descriptions for all LAIC index series and sub-indices are available to subscribers at www.liquidaltinvest.com. Subscribers can also gain access to detailed commentary and forecasts for selected strategies).

Strategy	Description
Corporate Event Driven	These funds take various stock, bond and/or derivative positions in corporations that are going through, or are likely to go through, “special situations:” specific transactions or events, including mergers and acquisitions, asset or subsidiary sales, restructurings, financial distress transactions, stock issuance or buybacks, and others.
Event Driven	These funds take various stock, bond and/or derivative positions in corporations that are going through, or are likely to go through, specific transactions or events, including mergers and acquisitions, asset or subsidiary sales, restructurings, financial distress transactions, stock issuance or buybacks, bond upgrades and others.
Equity Hedged	Strategies include Equity Long Short, Equity Market Neutral, Private Equity and Covered Calls. Equity Long Short entails portfolios that consist of both long and short positions in stocks with a view of hedging against downward movements in the stock market.
Short Biased/Inverse	Short-Biased, inverse or bear market funds gain from the decline in value of the stock market by either choosing stocks that they feel are overvalued in relation to their underlying valuation or by shorting an index such as the S&P500.
Equity Market Neutral	Equity Market Neutral strategies employ sophisticated quantitative econometric and factor based techniques to construct portfolios of (typically hundreds) of long and short positions in companies. The portfolios are designed to have low beta exposure to various markets including stock, interest rate, commodity and others.

Equity Long Short	This strategy entails portfolios that consist of both long and short positions in stocks with a view of hedging against downward movements in the stock market or benefiting from the decline of the market of specific stocks or sectors.
Private Equity	Private equity is an asset class consisting of investments in equity securities and debt in operating companies that are not publicly traded on a stock exchange. A private equity investment will generally be made by a private equity firm, a venture capital firm or an angel investor.
Covered Calls	These funds generate income by selling (writing) call options on stocks or indices that they own in their portfolio. The strategy results in a premium, but also limits the upside of owning stocks since the stock will be “called away” if it exceeds the “strike price” of the option.
Directional Trading	Directional trading strategies are designed to profit from correctly anticipating the direction and amount of the future movement of an instrument or market. Managers will place directional “bets” via physical holdings and shorting or the use of derivatives such as futures, options or stocks.
Global Macro Discretionary	These funds employ a wide range of strategies and instruments to implement views of the direction of global markets or the relationship between markets and instruments. Their views or theses are typically based on extensive top down analysis of market, economic and/or political analysis rather than bottom-up analysis of individual stocks and bonds.
Managed Futures Diversified	Managed futures strategy will often trade in the same markets as those used by Global Macro Discretionary: i.e., equities, fixed income, currency and commodity. However, these manager use proprietary statistical models that attempt to capture the price movement of these instruments either by identifying a trend or a reversion to the mean.
Managed Futures Commodities	These funds use similar methods to those of managed futures funds described above, but apply them to the commodity markets, including grains, minerals, metals, livestock, energy and others. They may take either long or short positions in any number of commodities markets either directly in physical assets.
Real Assets	These funds hold positions linked to the price of physical or tangible assets that have value, due to their utility. Real assets include precious metals, commodities, real estate, agricultural land and oil.
Real Estate Funds	These funds invest in Real Estate Investment Trusts (REITs), diversified funds that trade on exchanges and invest in commercial real estate either by directly owning real estate (equity REITs) or indirectly by owning mortgages on properties (mortgage REITs).
Commodities Funds Passive	These funds allocate their assets to some combination of commodities drawn from precious metals, agriculture, energy, industrial metals, energy and others. The funds may invest in the underlying physical commodity or in derivatives whose value is linked to a commodity.

Commodities Funds Active	These funds allocate their assets to some combination of commodities drawn from precious metals, agriculture, energy, industrial metals, energy and others. The funds may invest in the underlying physical commodity or in derivatives whose value is linked to a commodity.
Fixed Income	Fixed income portfolios utilize a range of strategies that involve taking positions in fixed income instruments such as bonds, notes and derivatives. With many thousands of bonds issued or outstanding worldwide by corporations, governments and other entities, these funds can follow a number of different models and strategies depending on the types of fixed income securities and markets they pursue.
Relative Value Arbitrage	Relative value arbitrage funds attempt to profit from a discrepancy in the valuation between multiple securities, assuming that this discrepancy is ameliorated over time. A classic example would include the interest rate spread between long and short term bonds in the U.
Asset Backed	The repayment of debt and interest for fixed income instruments may come from a number of sources including the earning power of a corporation or the taxing power of a nation or municipality. Investors in Asset Backed Securities expect to be paid interest on their investment and to be repaid the principal from cash flows generated by the assets that back the bond.
Emerging Markets Debt	A variation of the carry trade entails investing in emerging market debt, and attempting to hedge this debt with either derivatives or by shorting the debt of a lower interest rate instrument. The underlying debt may be in sovereign, quasi-sovereign and corporate debt of governments and corporations in emerging markets.
Multi-Strategy	Multi-strategy funds combine a number of fixed income strategies including relative value, asset backed, convertible, emerging markets, etc. They differ in the number of different strategies they pursue and also in whether they take positions directly in the markets or invest in other funds.
Alternative Beta	Alternative Beta are trading strategies that differ from traditional hedge fund strategies while still offering risk-return profiles that are distinct from and have lower correlations with traditional equities and bonds.
Risk Parity	A Risk Parity approach to asset allocation seeks to balance the allocation of risk in a portfolio across major sources of risk including equity risk, fixed income risk, inflation risk, and credit/currency risk.
Volatility	In recent years, volatility, often measured as the standard deviation of price movement of an instrument, has been traded as an asset in its own right. This strategy seeks to profit from predicting the mispricing or the “implied volatility” embedded in options, notably the VIX contract traded on the Chicago Mercantile Exchange, which is linked to the volatility of the S&P500.

Smart Beta	Smart Beta is a method of constructing an index that differs from the traditional capital weighted methodology that is used for most passive stock market indices.
Infrastructure	These funds invest in infrastructure projects such as power plants, energy pipelines and cellphone towers. Some infrastructure funds invest in publicly traded master limited partnerships, or MLPs, which own and operate a variety of infrastructure assets, such as oil and gas pipelines, or assets that store, gather and process natural-gas liquids or refined petroleum products.
Real Return	These funds seek to provide investors with protection against inflation by investing in assets that perform well during times of inflation, including commodities, infrastructure, floating rate notes and inflation linked bonds.
Alternatives Multi-Strategy	Strategies include Multi-Strategy and Multi-Manger Funds. Multi-Strategy funds seek to deliver exposure to diversified markets, instruments and strategies by entering directly into trading positions are included in this category.
Multi-Strategy Funds	These funds seek to deliver exposure to diversified markets, instruments and strategies and may include a mix of the strategies described above in equities, currencies, commodities and interest rates.
Multi-Manager Funds	Multi-manager funds pursue a similar strategy to multi-strategy funds. However, instead of taking direct market positions, these funds “farm out” or hire other managers to implement the various strategies. These funds are also known as “fund of funds,” and typically charge a fee on top of the fee charged by the retained managers.
Hedge Fund Replication	The premise behind replication is that a significant portion of hedge fund returns can be attributed to common factor and asset class exposures, or betas. Statistical techniques (commonly factor analysis or regression) are then used to identify the betas or “drivers” of returns for a given fund, strategy or hedge fund index.
High Yield	High yield corporate bonds are those that are rated below investment grade by Moody’s (below Baa) or S&P (below BBB). They are also known as non-investment-grade bond, speculative-grade bonds or junk bonds.

Subscriber Content

LAI offers premium content that complement our index offerings. We provide insights, analytics and information to thrive in the evolving world of liquid, near-liquid and hedge fund products. Drawing on 25 years hands-on experience in the industry, our liquid alternative product suite helps fund managers and investment advisors to position themselves in this rapidly expanding field.

Subscribers content includes:

- **The LAI Database:** The Liquid Alternatives Database provides comprehensive coverage of liquid alternatives funds. The database provides detailed information on the constituent funds that make up our indices.
- **Strategy Analysis:** Detailed analysis on the prospects of hedge fund trading strategies such as Global Macro Discretionary or Equity Long Short to help advisors position their client portfolios.
- **Fund Reviews:** Reports on constituent funds that include beta exposures to a host of economic factors and quantitative performance and downside risk metrics.
- **Model Portfolios:** Crafted portfolios that incorporate top-down forecasts for different asset classes and hedge fund trading strategies and bottom-up analysis on specific funds.
- **Analytics and Research:** Research on all aspects of liquid alternatives industry and the evolution and increasing convergence between liquid, near-liquid and hedge fund structures.

Glossary

- **Electronically Traded Product (ETP):** A type of security that trades throughout the day on a securities exchange. ETPs include Electronically Traded Funds (ETFs), Electronically Traded Notes (ETNs) and Electronically Traded Commodities (ETCs).
- **Factor Loadings:** Factor loadings (or betas) measure the sensitivity of a fund to economic or market factors such as the returns on the S&P 500 index. Factor loadings capture both the fund's correlation to the factor and the ratio of the fund and factor volatilities.
- **Semi-Standard Deviation:** A measure of downside risk that focuses only on the volatility of returns that fall below mean.
- **Style Drift:** When a fund's investment strategy and holdings deviate substantially from its stated or previous followed mandate.

Contact

Additional information on the indices can be found at www.liquidaltinvest.com