

# Integrating Liquid Alternatives into Traditional Portfolios using LAI's Portfolio Builder™

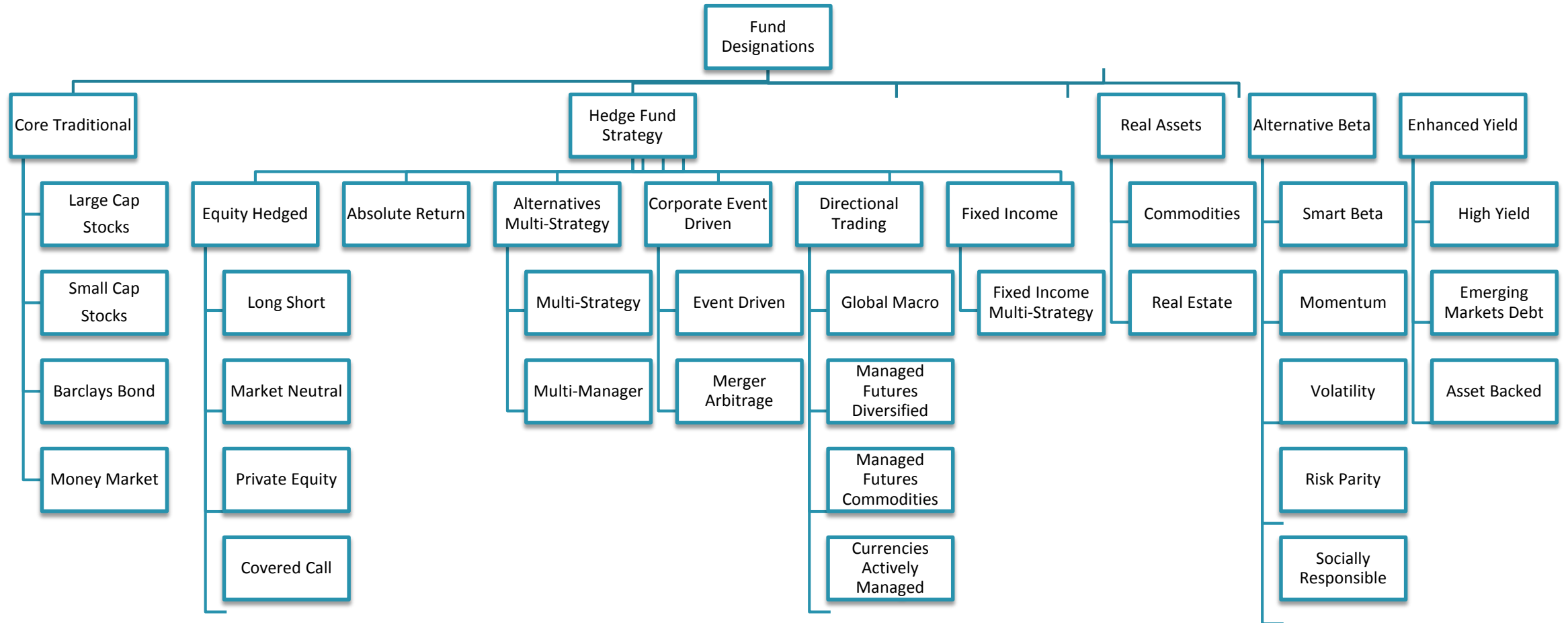
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# LAI's Core-Satellite Approach

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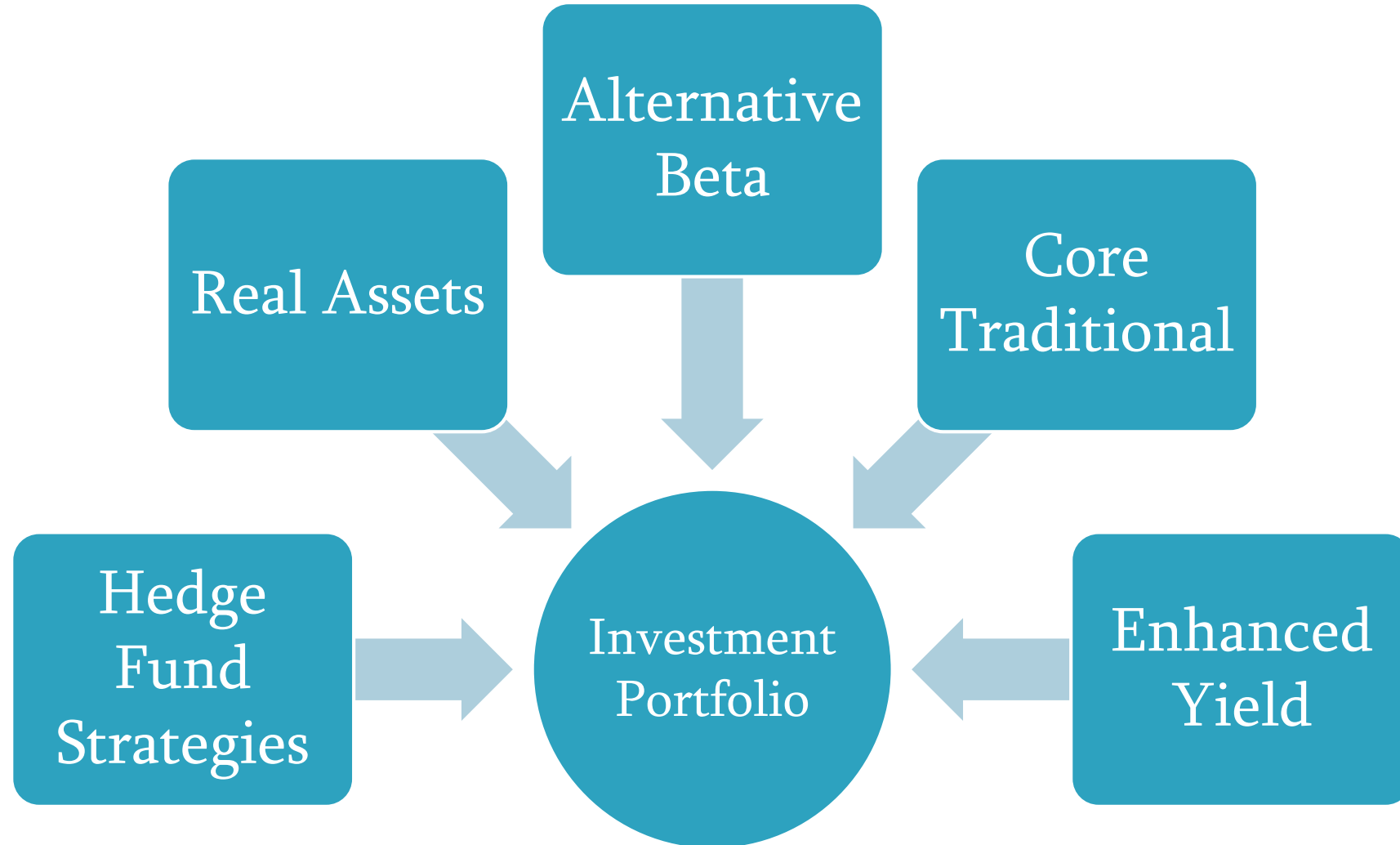
- ▶ The LAI Portfolio Builder allows users to construct and back-test portfolios that combine traditional assets with hedge fund strategies and other alternative funds
- ▶ Definition of Alternative Investments has changed over time. Current definition is an investment that has relatively low correlation with those of a “core traditional” portfolio
- ▶ LAI has segregated the funds in our database into five Satellites which are used by Portfolio Builder to develop a diversified portfolio. These are:
  - ▶ Core Traditional
  - ▶ Hedge Fund Strategies
  - ▶ Alternative Beta
  - ▶ Real Assets
  - ▶ Enhanced Yield

# Alternative Investment Satellites and Strategies



# Portfolio Construction Building Blocks

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# The Portfolio Building Process

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- ▶ Portfolio Builder portfolios are constructed in two distinct stages
  - ▶ Stage I: Building the Satellites with Funds and Passive Indices
    - ▶ Users construct each of the 5 satellites drawing on the 1,400+ funds and passive indices included in the LAI database
    - ▶ Users can assign weights to specific funds to meet their requirements and constraints
  - ▶ Stage II: Building the Aggregate Portfolios
    - ▶ Stage II allows users to build up to three aggregate portfolios at a time using the five satellites as building blocks
    - ▶ Users can assign any weight to each of the five satellites to tilt the aggregate portfolio to their specifications
- ▶ Portfolio Report
  - ▶ Users can save and generate extensive quantitative reports on each of the each of the Aggregate Portfolios. (See Next Slide)

# The Aggregate Portfolio Report

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- ▶ The Aggregate Portfolio Report presents an array of analytics and metrics of the performance of the simulated portfolios, including:
  - ▶ Cumulative Performance Chart
  - ▶ Performance Statistics, including Sharpe and Sortino ratios, standard deviation and annualized returns and distribution of monthly returns
  - ▶ Portfolio Drawdowns
  - ▶ Factor Analysis measuring sensitivity to an array of economic and market factors
  - ▶ Correlations between the satellites and to different benchmarks and market factors

# Satellite Construction Using Funds and Indices

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# Fund Selection – Two Methods

## 1. Utilize the funds saved through the Fund Selector™ application

2. Hedge Fund Strategies Satellite

N° [-]	Fund (You can search by name)	Weight
1 [-]	Dow 30 Premium & Dividend Inc	70%
2 [-]	Camelot Premium Return A	30%
[ add another fund ]		100%

**Fund Weights**

You have saved funds that belong to this category. [Click here to hide them.](#)

add	Fund Name	Inception Date	Fund Assets (\$ Mil.)	1 Year Annualized Return	3 Year Annualized Return	5 Year Annualized Return	Expense Ratio
[+]	Camelot Premium Return A	12/27/2010	\$38.00	20.46%	9.15%	0.00%	1.75%
[+]	Dow 30 Premium & Dividend Inc Common	04/26/2005	\$201.00	17.85%	11.74%	11.61%	1.01%
[+]	Horizons S&P 500 Covered Call ETF	06/24/2013	\$27.00	0.00%	0.00%	0.00%	0.00%

## 2. Search for individual funds by name or key term

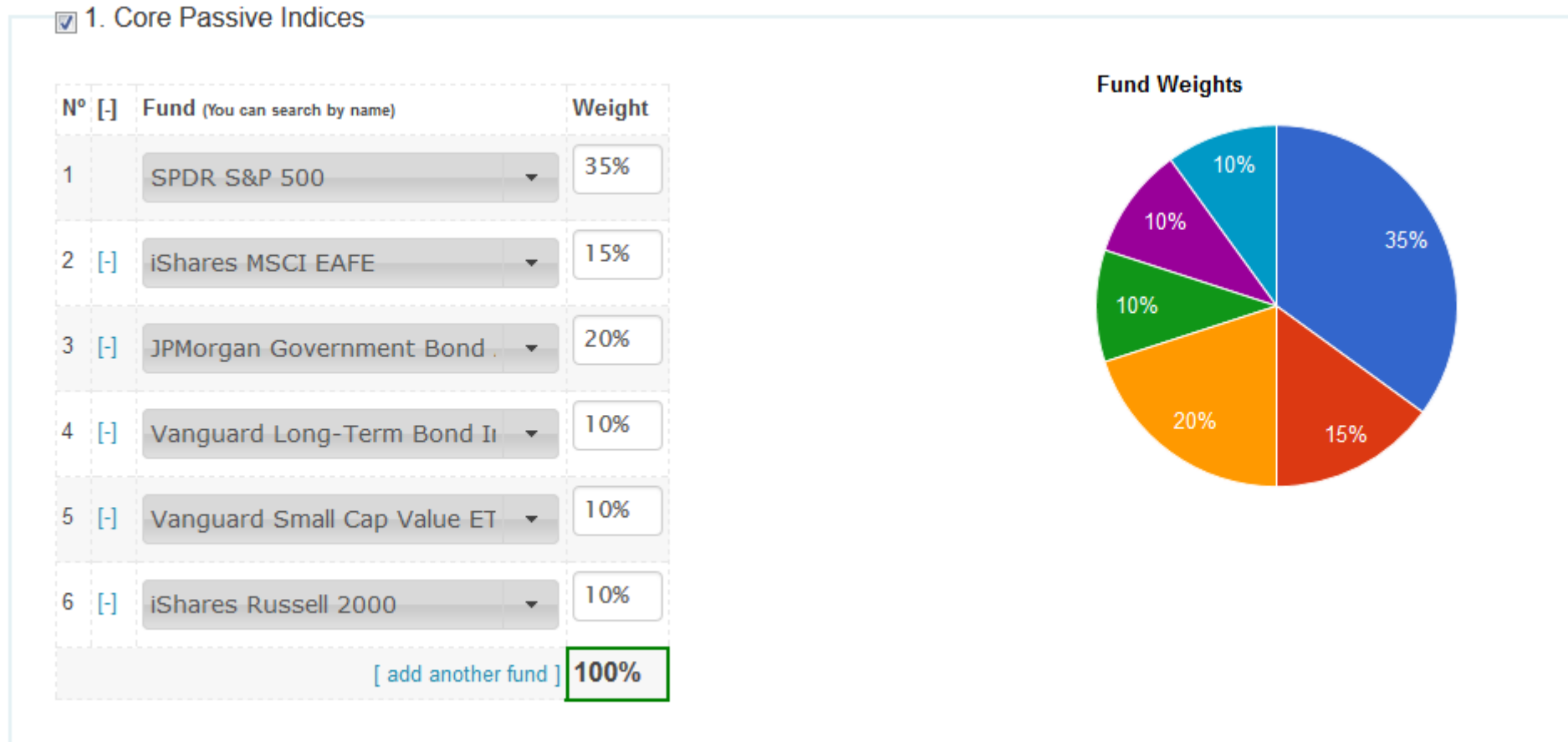
4. Real Assets Satellite

N° [-]	Fund (You can search by name)	Weight
1 [-]	precious metals	100%

- PowerShares DB Precious Metals
- iPath Pure Beta Precious Metals ETN
- RBS Rogers Enhanced Precious Metals ETN
- Rydex Precious Metals A

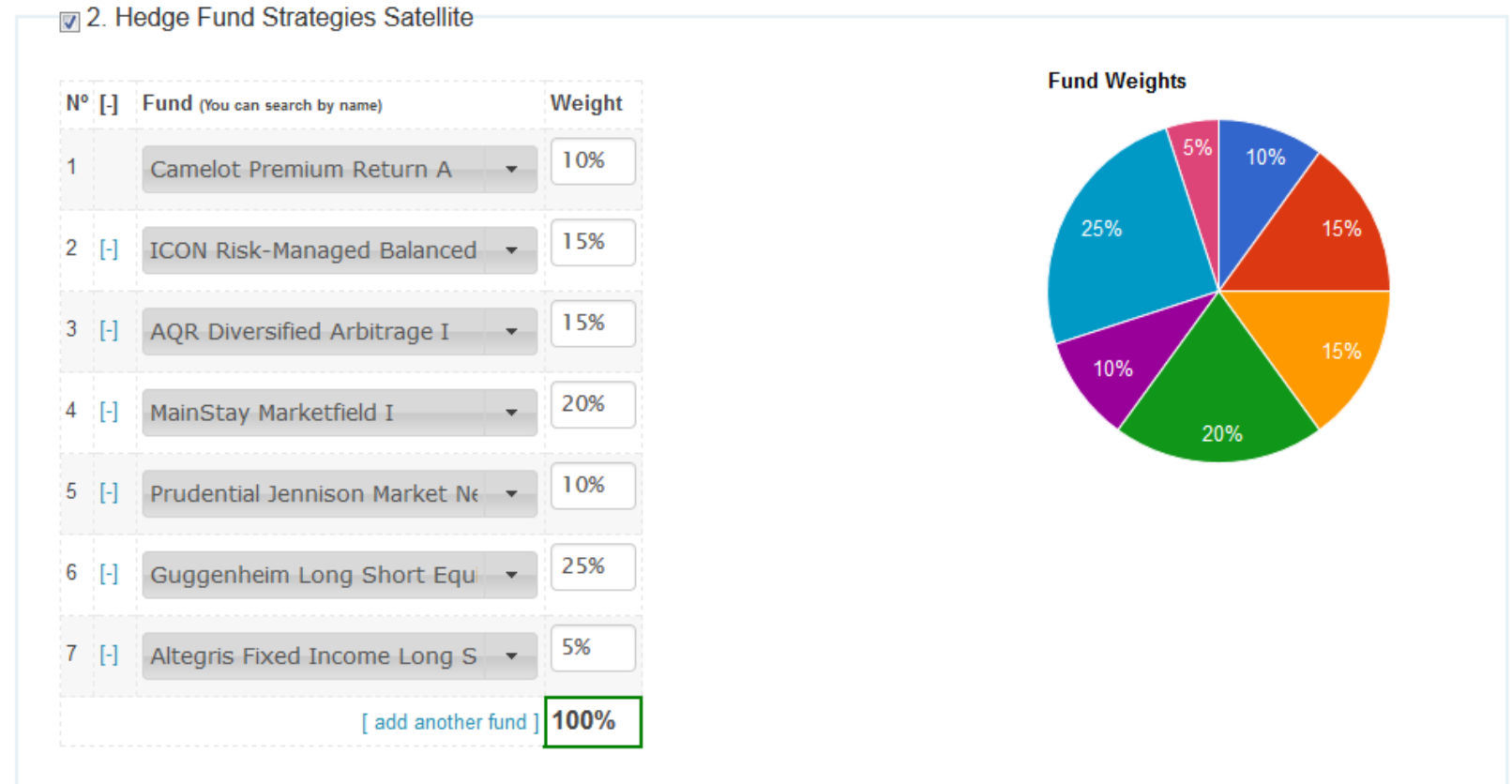


# Case Study – Building the Traditional/Core Assets Satellite



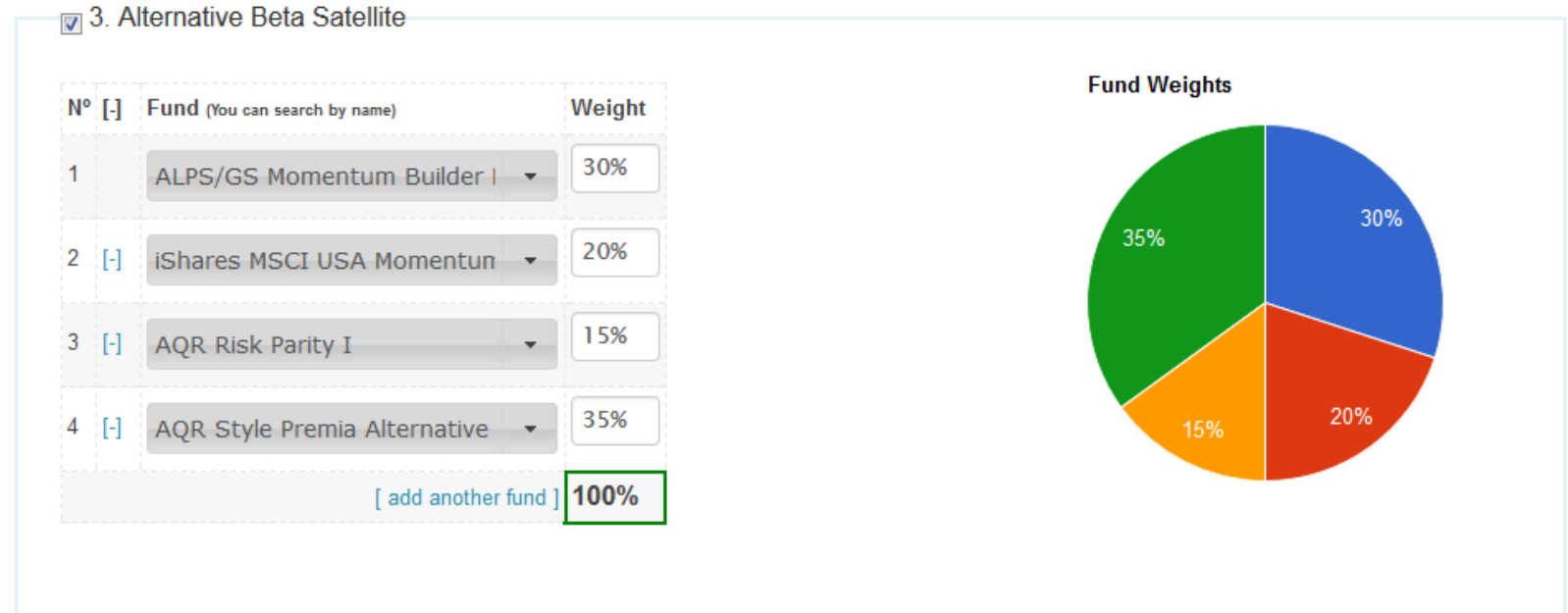
# Case Study – Hedge Fund Strategies Satellite

- The “hedge fund” designation is applied only to liquid alternatives that pursue markets and/or strategies that are associated with private hedge funds
- Hedge fund strategies include Absolute Return, Alternatives Multi-Strategy, Corporate Event Driven, Directional Trading, Equity Hedged, Fixed Income
- A mix of various hedge fund strategies has been added to the portfolio



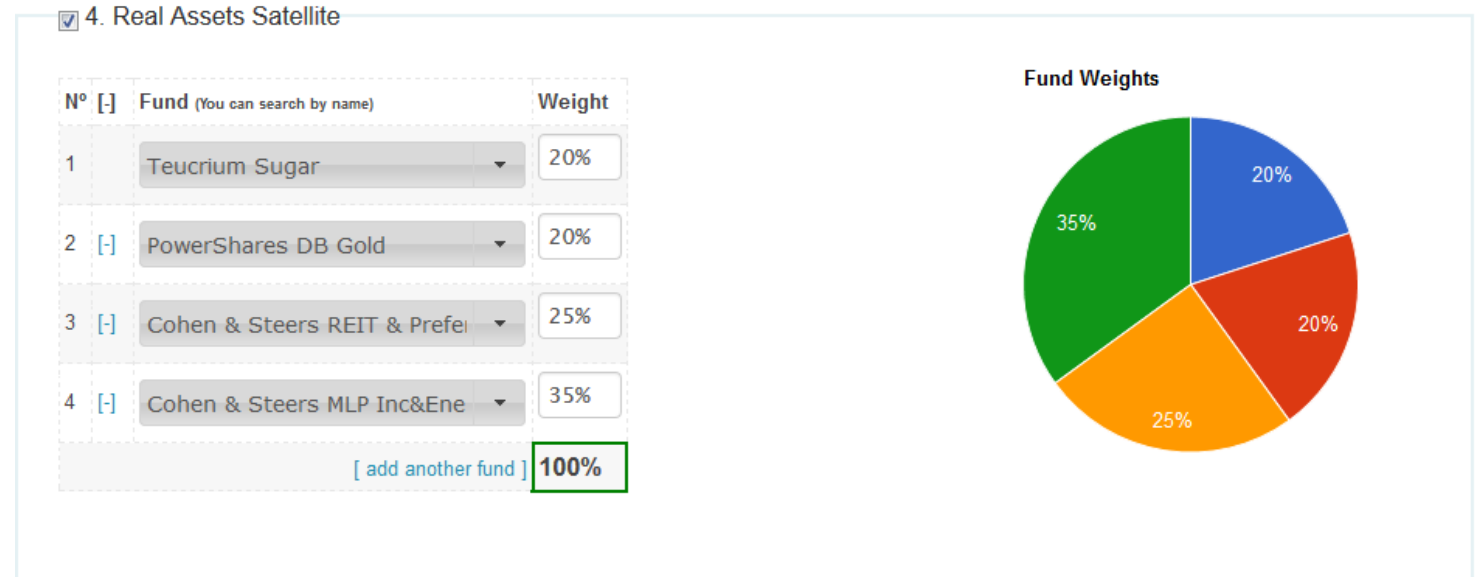
# Case Study – Alternative Beta

- ▶ Liquid alternative investment strategies are often grouped under the “Smart Beta” umbrella and include risk parity, low volatility, momentum and inverse and leveraged.
- ▶ While they do not pursue hedge fund strategies and may more properly be seen as adaptations of core and traditional investments, their growing importance warrant their inclusion as a separate satellite alongside real assets enhanced yield and hedge funds
- ▶ An emphasis in this example is on momentum and risk parity funds



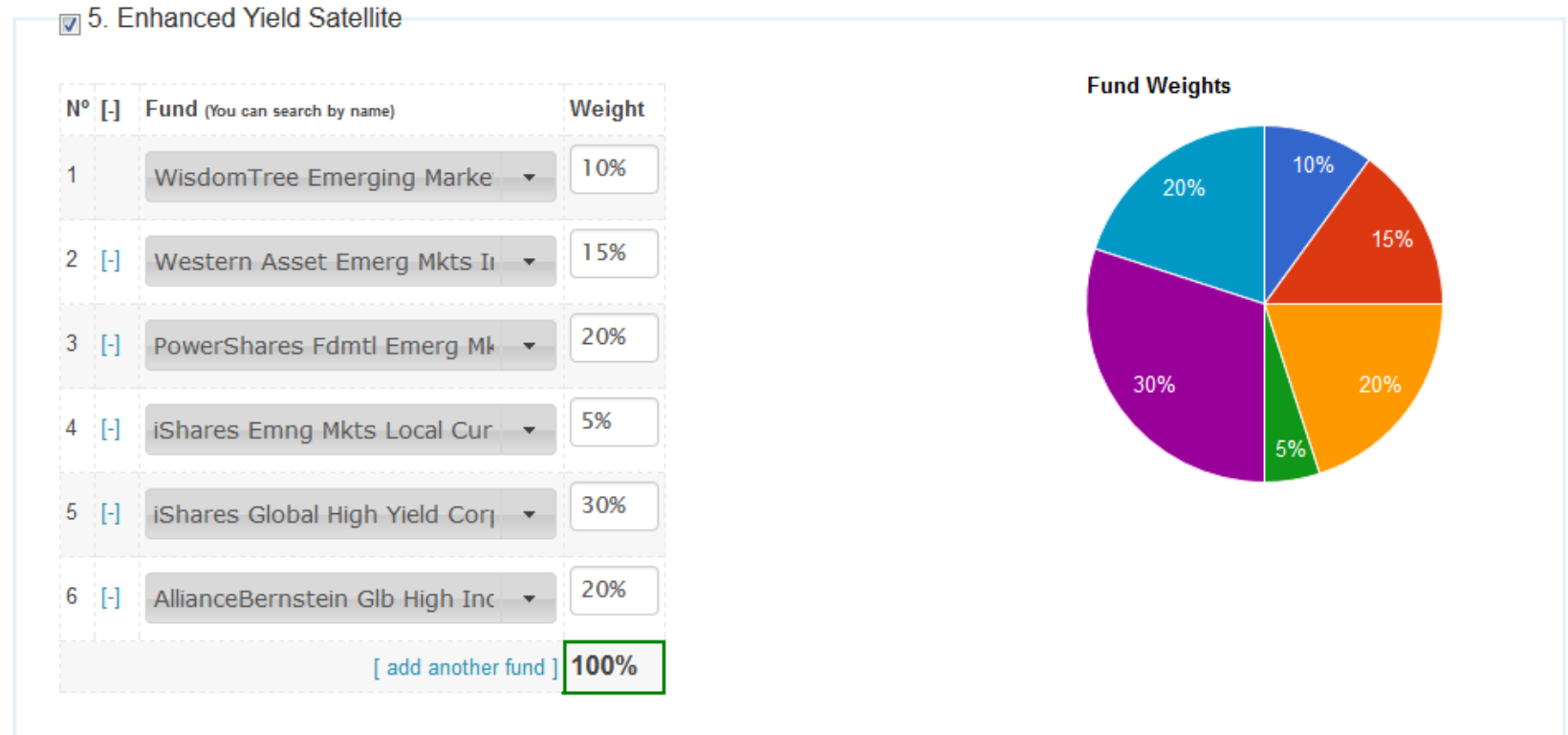
# Case Study – Real Assets

- ▶ Real Assets include Infrastructure, Real Estate Funds, Commodities Funds Active, Commodities Funds Passive and Real Return
- ▶ These assets may offer inflation protection and diversification benefits
- ▶ A mix of different real asset funds has been added to the portfolio



# Case Study – Enhanced Yield

- Enhanced Yield includes High Yield Debt, Asset Backed and Emerging Markets Debt funds
- These investments are intended to provide portfolio diversification as the possibility of relatively higher yields
- This Satellite Portfolio is weighted towards emerging markets debt funds



# Case Study – Fund Characteristics

- The Fund Characteristics table presents a number of qualitative and quantitative metrics for the funds included in the portfolio, segregated by satellite

## Portfolio Constituents

### HEDGE FUND STRATEGIES SATELLITE

Fund Name	Inception Date	Fund Assets (\$ Mil.)	1 Year Annualized Return	3 Year Annualized Return	5 Year Annualized Return	Expense Ratio
Camelot Premium Return A	12/27/2010	\$38.00	20.46%	9.15%	0.00%	1.75%
ICON Risk-Managed Balanced C	11/21/2002	\$79.00	8.72%	6.37%	8.29%	2.22%
AQR Diversified Arbitrage I	01/15/2009	\$2,791.00	2.04%	2.15%	3.28%	1.20%
MainStay Marketfield I	07/31/2007	\$20,117.00	4.15%	8.48%	14.20%	1.52%
Guggenheim Long Short Equity H	03/22/2002	\$53.00	9.14%	2.84%	8.98%	1.65%
Prudential Jennison Market Neutral A	04/23/2010	\$46.00	-0.65%	-2.15%	0.00%	3.84%
Altegris Fixed Income Long Short I	02/28/2013	\$103.00	11.18%	0.00%	0.00%	2.06%

### ALTERNATIVE BETA SATELLITE

Fund Name	Inception Date	Fund Assets (\$ Mil.)	1 Year Annualized Return	3 Year Annualized Return	5 Year Annualized Return	Expense Ratio
ALPS/GS Momentum Builder Multi-Asset ETF	12/19/2012	\$3.00	12.00%	0.00%	0.00%	0.68%
iShares MSCI USA Momentum Factor	04/16/2013	\$267.00	24.79%	0.00%	0.00%	0.15%
AQR Risk Parity I	09/30/2010	\$811.00	17.45%	8.18%	0.00%	0.88%
AQR Style Premia Alternative I	10/30/2013	\$653.00	0.00%	0.00%	0.00%	1.50%

### REAL ASSETS SATELLITE

Fund Name	Inception Date	Fund Assets (\$ Mil.)	1 Year Annualized Return	3 Year Annualized Return	5 Year Annualized Return	Expense Ratio
Teucrium Sugar	09/16/2011	\$3.00	3.96%	0.00%	0.00%	1.52%
PowerShares DB Gold	01/5/2007	\$133.00	8.84%	-5.97%	5.40%	0.76%



# Aggregate Portfolio Allocation

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# Portfolio Allocations

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- ▶ Portfolio Builder allows users to combine the five satellites in various combinations and assign varying weights to each
- ▶ Users can create three different simulated portfolios at a time to evaluate the historical impact of different Satellite allocations
- ▶ Weights will reflect the investment objectives and constraints of the composites in which the portfolios will be utilized
- ▶ The Aggregate Portfolios can be saved for future use
- ▶ An Aggregate Portfolio Report can be generated for each portfolio



# Case Study - Portfolio Allocation

## Portfolio selection

This step allows you to allocate fund assets between the core and each of the satellite portfolios and create three simulated portfolios with different weights assigned to the core and satellite portfolios

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Core/Satellite Portfolio Weights		Simulated portfolio 2		Simulated portfolio 3	
Simulated portfolio 1		Simulated portfolio 2		Simulated portfolio 3	
Name	Balanced Alternatives	Name	Hedge Fund Tilt	Name	Real Assets Tilt
Sub-portfolio	Weight	Sub-portfolio	Weight	Sub-portfolio	Weight
Core Passive Indices	40%	Core Passive Indices	30%	Core Passive Indices	20%
Hedge Fund Strategies Satellite	15%	Hedge Fund Strategies Satellite	40%	Hedge Fund Strategies Satellite	15%
Alternative Beta Satellite	15%	Alternative Beta Satellite	10%	Alternative Beta Satellite	15%
Real Assets Satellite	15%	Real Assets Satellite	10%	Real Assets Satellite	35%
Enhanced Yield Satellite	15%	Enhanced Yield Satellite	10%	Enhanced Yield Satellite	15%
<b>100%</b>		<b>100%</b>		<b>100%</b>	



# Portfolio Reports and Analyses

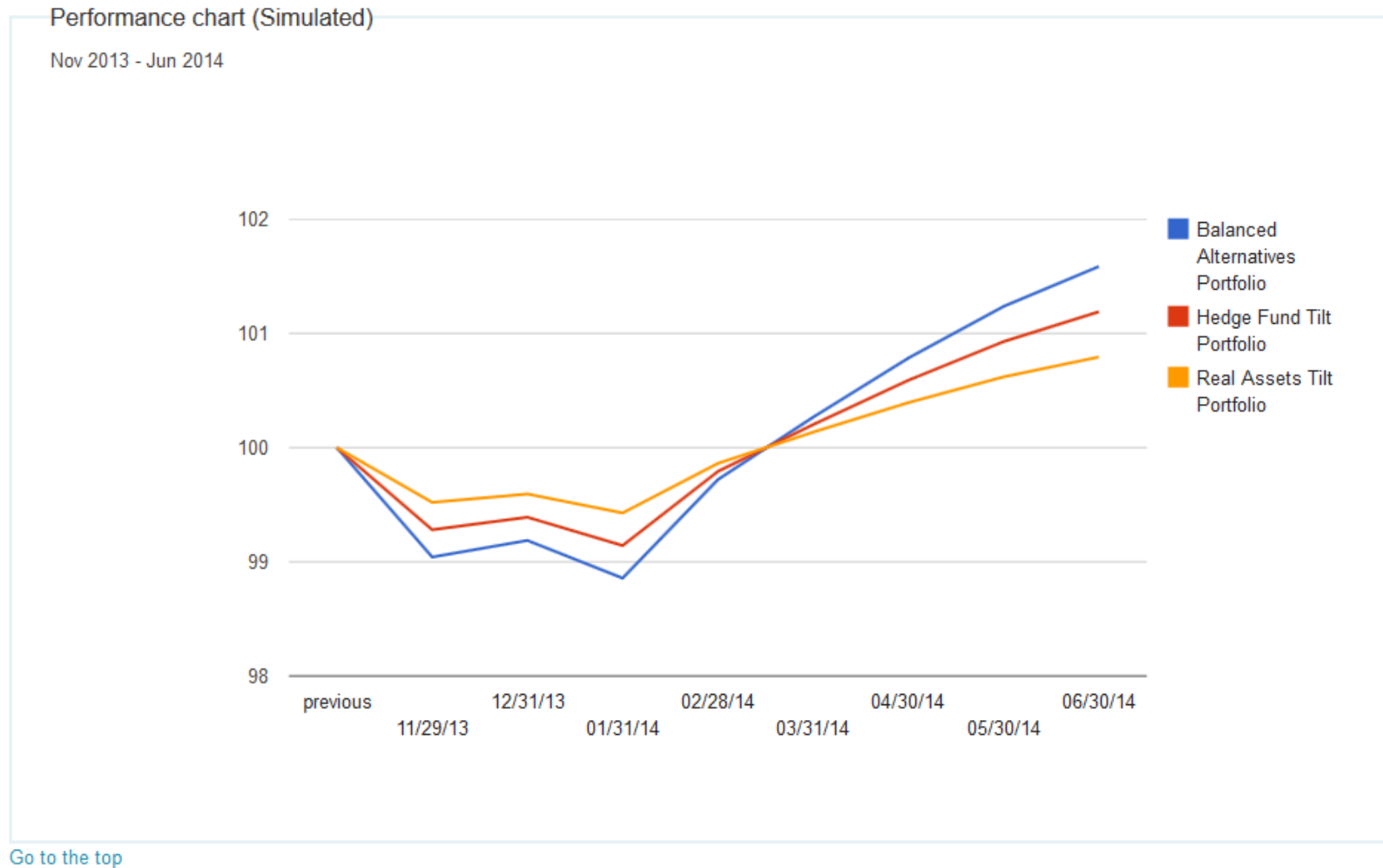
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# Portfolio Performance Statistics

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- ▶ Performance statistics are presented for each portfolio allocation to assess the back-tested risk and return profile over the period. Metrics include:
  - ▶ Return: The geometric return
  - ▶ Volatility: The annualized standard deviation
  - ▶ Sharpe Ratio: A measure of risk-adjusted performance that incorporates the volatility of the returns
  - ▶ Maximum Drawdown: A measure of the potential downside risk of the portfolio
  - ▶ Downside Deviation: A variant of the standard deviation that only takes into account negative returns
  - ▶ Sortino Ratio: A measure of risk-adjusted performance that incorporates the downside deviation of the returns
  - ▶ Average Monthly Gain: A measure of the average gain of the portfolio
  - ▶ Average Monthly Loss: Can be used in conjunction with the average monthly gain to get a sense of skew

# Case Study – Performance Chart



# Case Study – Performance Statistics

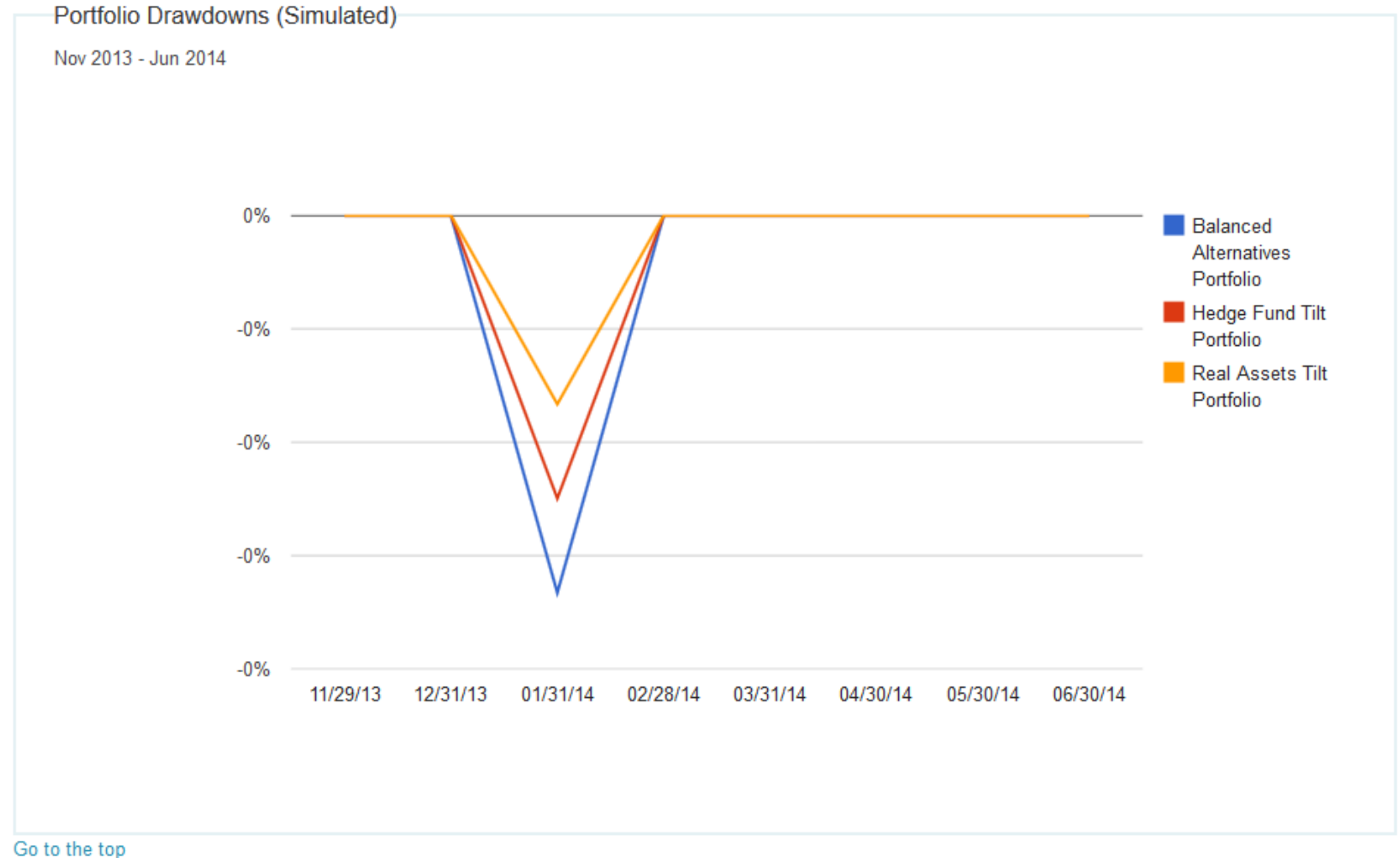
Performance Statistics (Simulated)

	Balanced Alternatives	Hedge Fund Tilt	Real Assets Tilt
Return	2.39%	1.79%	1.19%
Standard Deviation	2.02%	1.52%	1.01%
Sharpe Ratio	0.19	-0.14	-0.80
Maximum Drawdown	0.33%	0.25%	0.17%
Downside Deviation	1.53%	1.15%	0.77%
Sortino Ratio	0.25	-0.19	-1.06
% Positive Months	75.00%	75.00%	75.00%
% Negative Months	25.00%	25.00%	25.00%
Average Monthly Gain	0.48%	0.36%	0.24%
Average Monthly Loss	-0.65%	-0.48%	-0.32%

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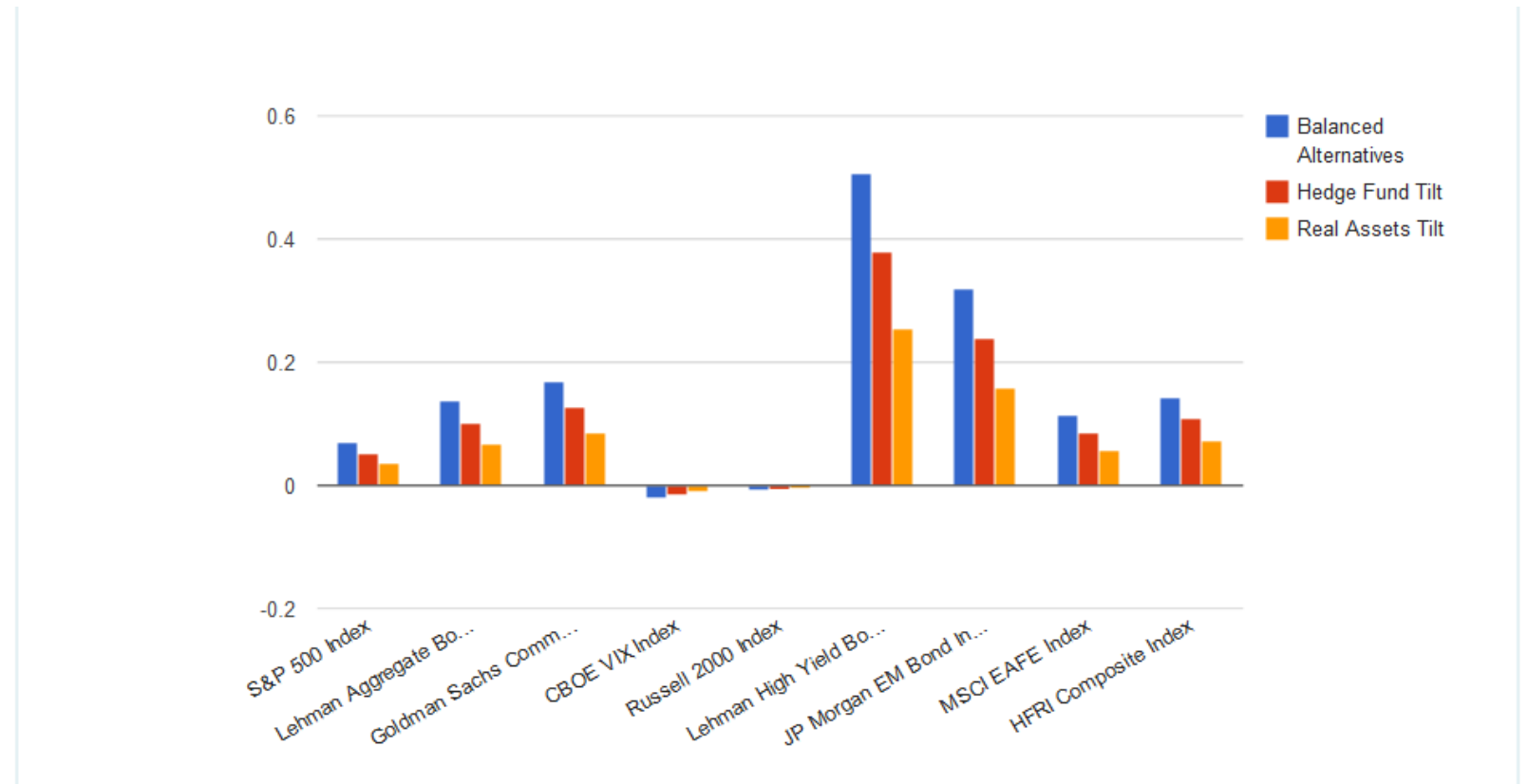
# Case Study – Portfolio Drawdowns

- Graphically depicts the drawdowns of the portfolio over time
- Presents the magnitude of back-tested portfolio drawdowns and provides a sense of the downside risk associated with the portfolio



# Case Study – Factor Analysis

- Measures the sensitivity of the portfolio to various economic and market factors including broad market and equity style indices and bond indices



# Case Study – Correlations

- Measures the correlations between the sub-portfolios and between the sub-portfolios and different economic and market factors

Satellite Correlations (Simulated)

	Core Passive Indices	Hedge Fund Strategies	Alternative Beta Satellite	Real Assets Satellite	Enhanced Yield Satellite	S&P 500 Index	Lehman Aggregate Bond Index	Goldman Sachs Commodities Index	CBOE VIX Index	Russell 2000 Index	Lehman High Yield Bond Index	JP Morgan EM Bond Index	MSCI EAFE Index	HFRI Composite Index
Core Passive Indices	1.00	0.13	0.48	0.62	0.78	0.78	-0.41	0.51	-0.85	0.37	0.15	0.50	0.76	0.54
Hedge Fund Strategies		1.00	0.81	0.47	-0.11	0.22	0.34	0.30	-0.21	0.12	0.47	0.07	0.45	0.44
Alternative Beta Satellite			1.00	0.68	0.26	0.71	0.05	0.67	-0.68	0.52	0.74	0.35	0.87	0.83
Real Assets Satellite				1.00	0.72	0.51	0.37	0.40	-0.75	0.25	0.63	0.54	0.74	0.54
Enhanced Yield Satellite					1.00	0.52	-0.03	0.47	-0.78	0.11	0.33	0.79	0.62	0.28
S&P 500 Index						1.00	-0.53	0.71	-0.90	0.74	0.47	0.36	0.91	0.85
Lehman Aggregate Bond Index							1.00	-0.34	0.22	-0.53	0.29	0.14	-0.20	-0.31
Goldman Sachs Commodities Index								1.00	-0.63	0.63	0.72	0.63	0.80	0.78
CBOE VIX Index									1.00	-0.47	-0.52	-0.62	-0.93	-0.70
Russell 2000 Index										1.00	0.48	-0.06	0.61	0.88
Lehman High Yield Bond Index											1.00	0.56	0.71	0.71