

COUNTRY ROTATION PORTFOLIO



Innealta  
C A P I T A L

SUMMER 2016 EDITION

# INNEALTA CAPITAL

We are a quantitative asset manager specializing in risk-managed, global investment solutions implemented via exchange-traded funds. We aim to produce well diversified portfolios that exhibit high risk-adjusted returns in varying market environments.

**Experience:** For over a decade, Innealta Capital has advised and managed global investment portfolios of exchange-traded funds. Our multidisciplinary team possesses several advanced degrees, including PhD, MBA, and MS from top academic institutions. Our portfolio managers have an average of thirteen years of industry experience.

**Quantitative Framework:** Initiated in the mid-1990s, our proprietary rules-based framework parses and systematically analyzes hundreds of macroeconomic, corporate, and behavioral variables from over forty international markets to forecast asset returns and volatility.

**Process:** We use our quantitative framework to inform our process. This repeatable process merges proprietary forecasts with portfolio optimization, trade cost analysis, and risk monitoring. Our use of exchange-traded funds rather than baskets of individual stocks improves transparency, liquidity, and cost efficiency.

**Diversification:** Financial research has shown that diversification increases risk-adjusted returns. Our Country Rotation Portfolio utilizes an eligible universe of over forty international equity markets to improve diversification compared to a traditional market capitalization weighted portfolio.

**Downside Protection:** Innealta portfolios dynamically allocate across multiple equity and fixed income markets. This flexibility has historically provided improved capital protection.

## INVESTMENT TEAM

### CHIEF INVESTMENT OFFICER

Vito Sciaraffia, PhD // Chief Investment Officer

- PhD in Business, MS in Business, and MA in Mathematics from the University of California at Berkeley
- MBA and MF from the University of Chile and BS in Economics from the Catholic University of Chile
- Prior employers were Dimensional Fund Advisors, Citigroup, and JP Morgan
- Former Assistant Professor of Finance at the McCombs School of Business at The University of Texas at Austin

### PORTFOLIO MANAGERS

Joshua Kocher // Portfolio Manager

- MBA in Finance from Columbia University and BS in Chemical Engineering from the University of Virginia
- Prior employers were MKP Capital, Credit Suisse, and Susquehanna Investment Group
- Thirteen years of industry experience as proprietary trader, associate portfolio manager, and portfolio manager

Jason Clark, CFA // Portfolio Manager

- BS in Finance from the University of West Florida
- Prior employers were A.G. Edwards, Edward Jones, and the United States Navy
- Fifteen years of industry experience as equity research analyst, fixed income trader, and portfolio manager

### RESEARCH TEAM

Ray Chen // Quantitative Research Analyst

- MS in Statistics from Rice University and BS in Physics from Michigan State University
- Prior employer was Merrill Lynch

Aaron Steinman // Research Analyst

- MS in Finance and a BA in Economics from The University of Texas at Austin
- Prior employer was Durbin Bennett Peterson – Private Wealth Management

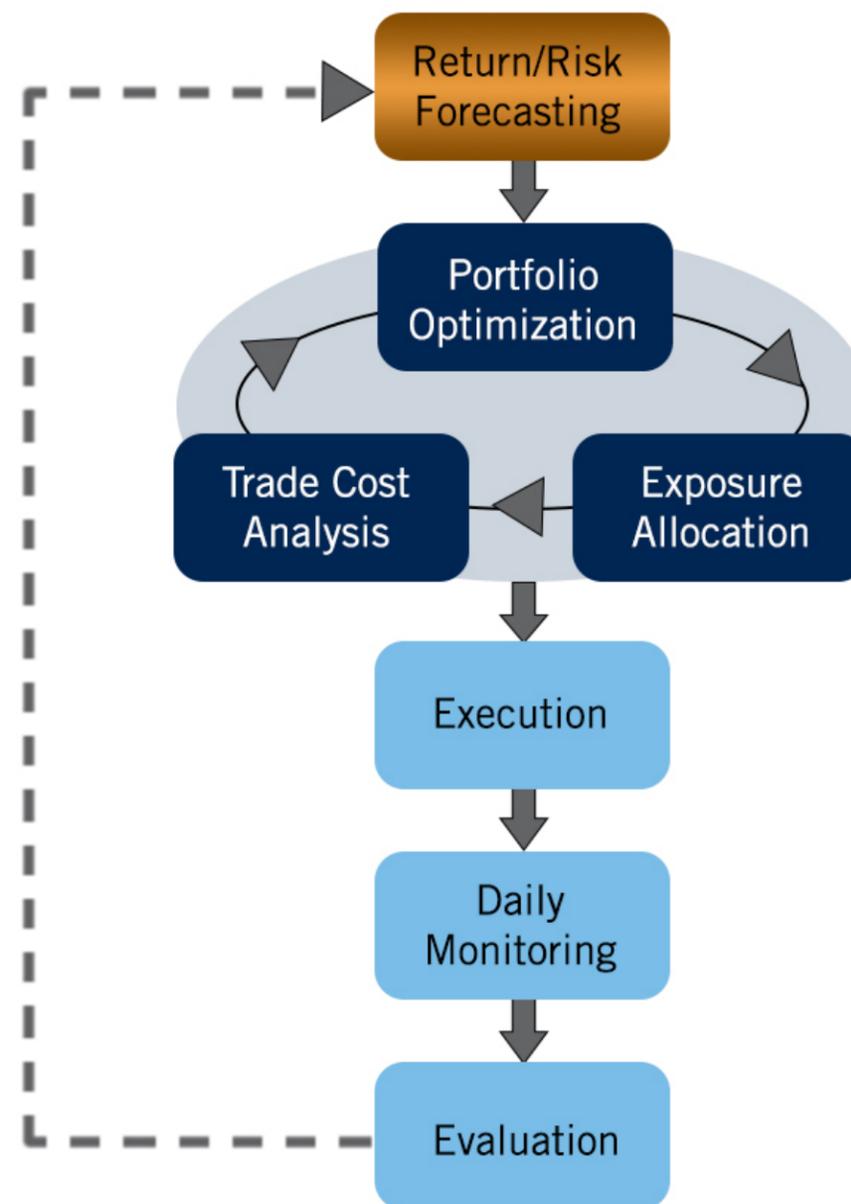
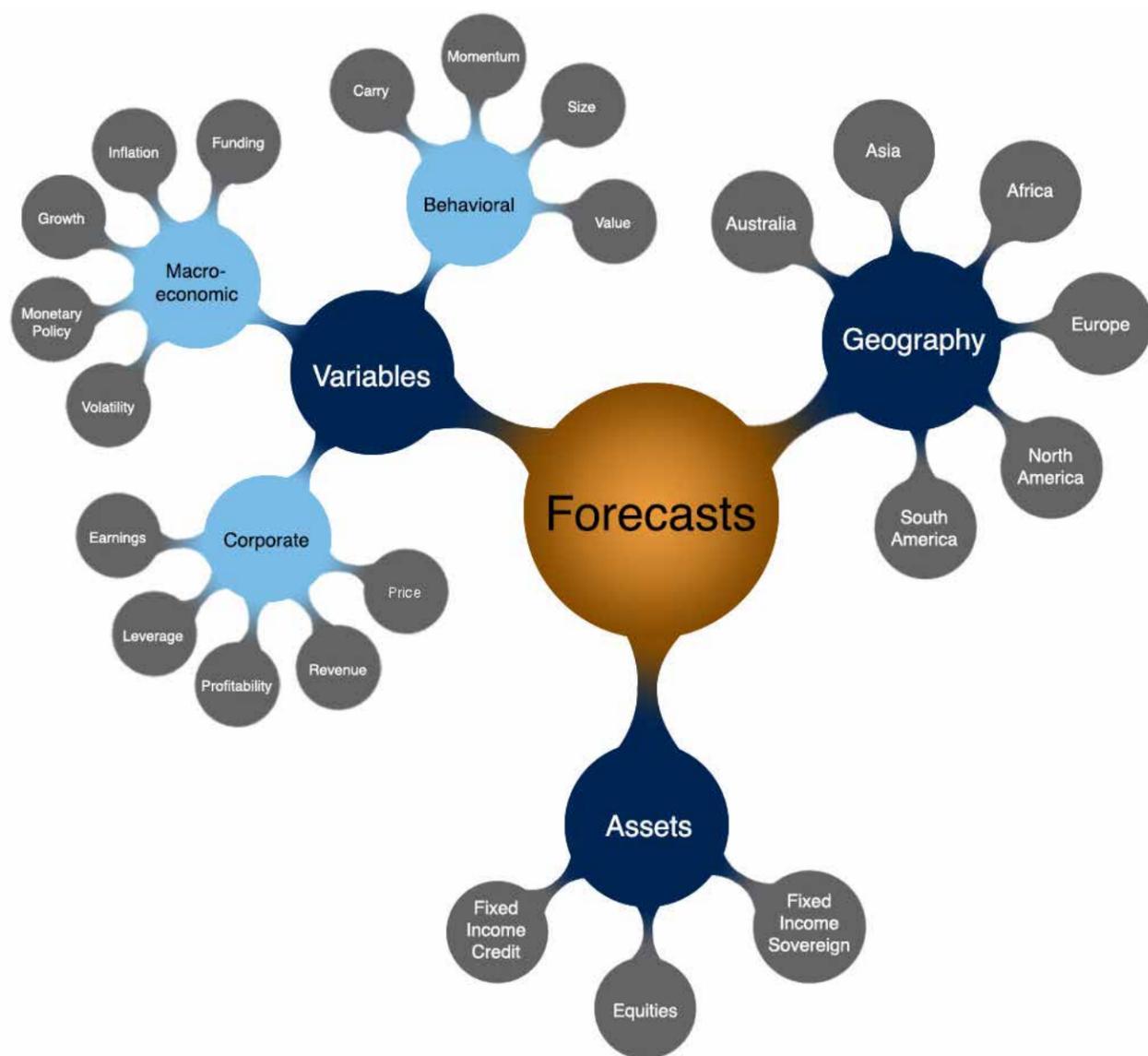
Chris Quigley // Research Analyst

- BA in Economics from the University of Southern California
- Seven years of industry experience with AFAM Capital



# QUANTITATIVE FRAMEWORK

Innealta Capital utilizes a quantitative framework, robust enough to handle hundreds of different variables, yet flexible enough to adapt to changing market conditions. The framework parses through hundreds of macroeconomic, corporate, and behavioral variables to forecast asset returns and volatility. All variables are based on economic intuition and backed by rigorous academic evidence. To evolve with changing market conditions, the investment team constantly researches the effectiveness of new variables and new methods. Additionally, the team periodically reviews academic and practitioners' advancements and when necessary, updates its models. Thus, as the framework revises its forecasts, the Innealta Capital investment team adjusts the portfolio accordingly.



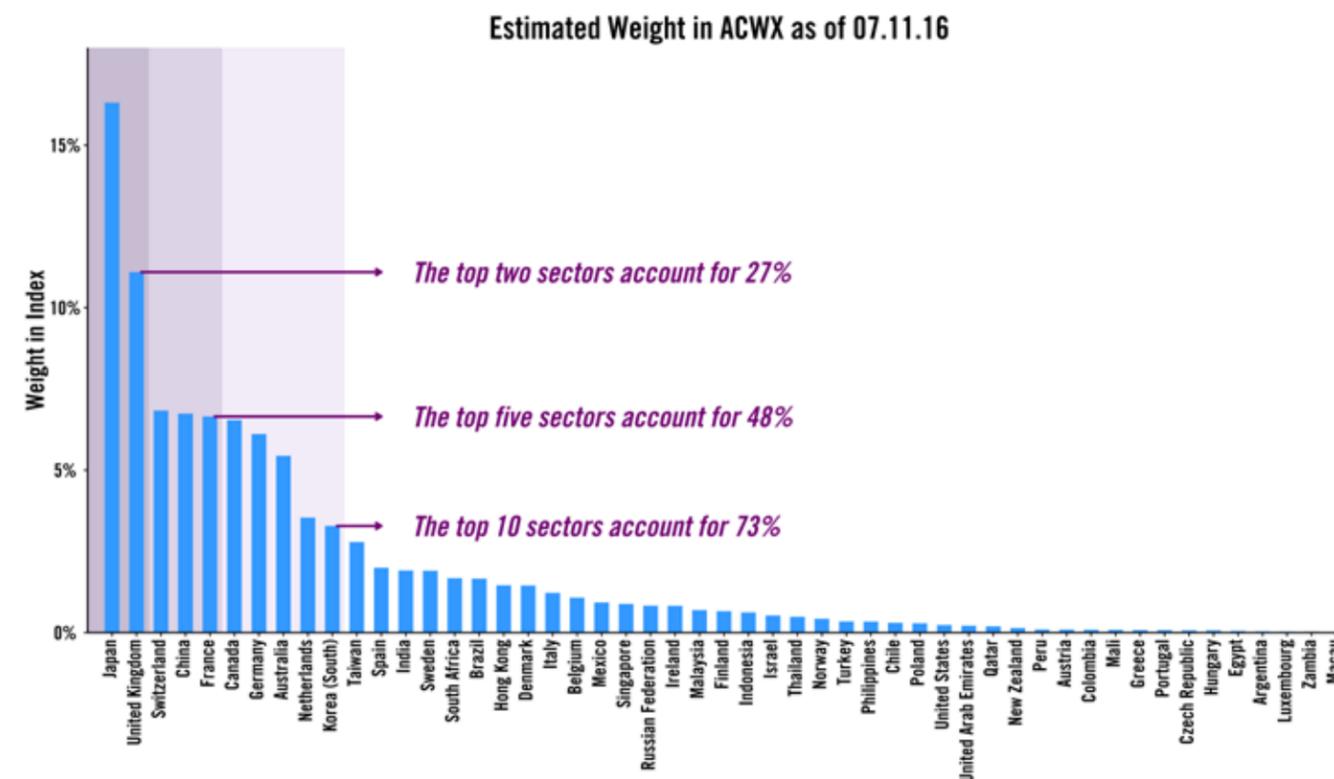
# INNEALTA PROCESS

We optimize the portfolio to account for revised forecasts, portfolio constraints, the evolving ETF universe, and trading costs. The firm then executes through numerous broker/dealers so as to minimize transaction costs and dependency on any one relationship. On a daily basis, the firm monitors the framework's forecasts, the universe of global asset performance, and the portfolio's performance. As markets evolve, we evaluate our experiences and the performance of our framework to refine our process.

# OVERLY CONCENTRATED BENCHMARK

Despite the proven benefits of diversification and a wide variety of international investment choices, U.S. investors tend not to achieve optimal equity diversification. For example, U.S. investors allocated only 26% of their equity assets internationally, yet international equities represent over 76% of the global equity market capitalization<sup>1,2</sup>. Passive international equity indices, such as the MSCI All Country World ex.-U.S. Index, follow a market-capitalization weighting scheme that results in concentrated portfolio holdings. The top two and the top ten index constituents represent a 27% and 73% weight respectively.

The median correlation of the top ten components to the S&P 500 is 80% while the median correlation of the remaining components to the S&P 500 is 68%. The Innealta Country Rotation strategy's unconstrained mandate allows investing into any, or all, of over forty individual international equity markets. Using the aforementioned framework and process, the Innealta Capital investment team optimizes the portfolio weights given the expected return covariance and the return potential of the available components of the international equity universe in order to achieve optimal portfolio risk-adjusted returns.



SOURCE: Innealta Capital using data from FactSet Research Systems  
 1. Morningstar Global Flow of Funds Report, 2013  
 2. World Bank

# INNEALTA EQUITY ETF UNIVERSE

## Country ETFs

Country	Annualized Return	Correlation to S&P 500	Country	Annualized Return	Correlation to S&P 500
Australia	4%	0.81	Brazil	1%	0.65
Austria	-10%	0.81	Chile	4%	0.56
Belgium	2%	0.82	China	7%	0.62
Canada	3%	0.80	Colombia	7%	0.52
Denmark	10%	0.75	Egypt	3%	0.51
Finland	0%	0.80	Greece	-28%	0.66
France	0%	0.86	India	6%	0.67
Germany	3%	0.87	Indonesia	11%	0.61
Hong Kong	8%	0.71	Malaysia	8%	0.62
Ireland	-7%	0.76	Mexico	5%	0.83
Israel	5%	0.59	Nigeria	-2%	0.28
Italy	-7%	0.79	Peru	11%	0.51
Japan	0%	0.71	Philippines	15%	0.60
Netherlands	4%	0.87	Poland	-3%	0.74
New Zealand	7%	0.72	Qatar	6%	0.49
Norway	-1%	0.76	Russia	-5%	0.66
Portugal	-7%	0.67	South Africa	5%	0.71
Singapore	6%	0.76	South Korea	3%	0.73
Spain	-1%	0.72	Taiwan	4%	0.70
Sweden	4%	0.83	Thailand	10%	0.59
Switzerland	5%	0.81	Turkey	3%	0.57
United Kingdom	1%	0.87	UAE	0%	0.52

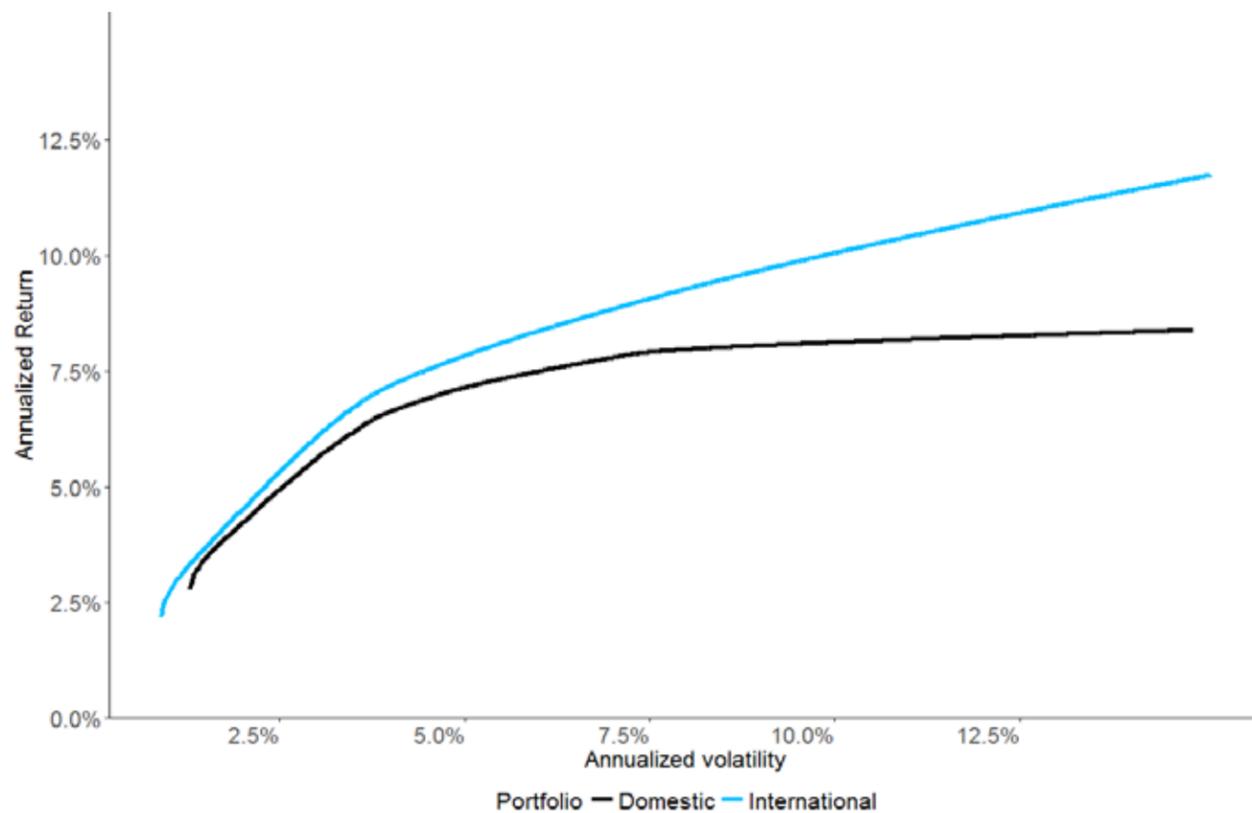
● DEVELOPED MARKET ● EMERGING MARKET

SOURCE: Innealta Capital using data from Bloomberg  
 Data from 06.30.06 to 06.30.16. Annualized return and correlation calculated using MSCI country indices denominated in USD for each respective country.



## WHY DIVERSIFICATION VIA COUNTRY ROTATION?

Compared to a single country portfolio, the Innealta Country Rotation strategy has higher potential return per unit of risk through the benefit of diversification. The illustration below, commonly known as the Markowitz efficient frontier, shows the resulting annualized return by optimizing the underlying assets within the portfolio for a fixed volatility. The “domestic portfolio” contains a basket of U.S. equity, fixed income sovereign, and fixed income credit indices. The “international portfolio” replaces the U.S. domestic equity portion with forty-four broad market international equity indices. At all points, the international portfolio delivers a higher return per unit of risk than the U.S. domestic portfolio.



SOURCE: Innealta Capital using data from Bloomberg

The above chart uses daily total return data denominated in USD from 06.30.06 to 06.30.16. Each point along the efficient frontier corresponds to an optimization that maximizes return for a given volatility by changing the asset weights. Short selling is prohibited in the analysis. Please refer to important notes for additional information about basket constituents.

## WHY INDIVIDUAL COUNTRY EQUITY MARKETS?

Investing directly in individual international equity markets creates an opportunity to capitalize on the significant return dispersion observed in global equity markets. Shown below are the top five and bottom five international equity performers for a given year. With complete hindsight, the return potential of buying the winners and avoiding the losers is large. In addition, the constituents of the top/bottom five performers change over time, implying that an international portfolio could benefit from proper active management. Innealta Capital’s quantitative framework parses the hundreds of variables necessary to continuously analyze each of these markets and then informs the investment team about potential opportunities.

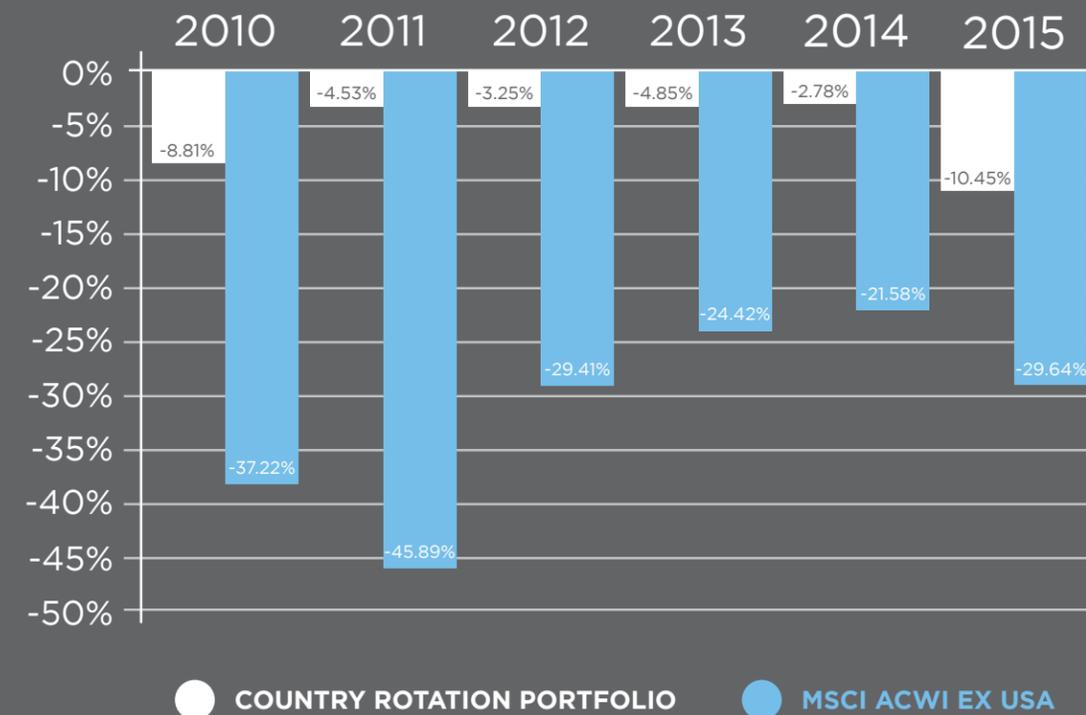


SOURCE: Innealta Capital using data from Bloomberg. Total return data denominated in USD from 12.31.05 to 12.31.15.

# PERFORMANCE ON DOWN MARKET DAYS

The chart below illustrates the cumulative performance of the twenty largest down market days per calendar year for the MSCI ACWI ex-U.S. and the relative cumulative performance of the Country Rotation Portfolio on those down market days.

In terms of cumulative performance on down market days, the Country Rotation Portfolio outperforms the MSCI ACWI ex-U.S. Index in every period since the portfolio's inception in 2010.



For the aggregate period from 12.31.09 to 12.31.15, losses over the twenty worst down market days for each year (120 days total) were -30.26% for the Country Rotation Portfolio compared to -90.00% for the MSCI ACWI ex-U.S. index (calculated as the cumulative geometric total return of the 20 worst days over each period).

Important note: Chart depicts select days in order to show an important aspect of the strategy goal: capital preservation. There is no guarantee this goal will be met. Past performance is no guarantee of future results. Performance is shown net of fees and expenses. The information above is not intended to be representative of performance versus the benchmark for this portfolio, a blend of 70% MSCI ACWI ex-U.S. TR USD Index/ 30% Barclays Global Aggregate TR USD Index. Fact sheets for the portfolio include this information and are available at our website and upon request.

## IMPORTANT NOTES

Innealta Capital is a division of AFAM Capital. AFAM Capital is a Registered Investment Advisor, is editor of The Prudent Speculator newsletter and is the Investment Advisor to certain proprietary mutual funds and individually managed client accounts. Registration of an investment adviser does not imply any certain level of skill or training.

The Innealta Tactical ETF Country Rotation strategy is based on a quantitatively driven, tactical asset allocation approach that apportions portfolio assets to specific country equity markets in the Country Rotation Portfolio based on the specific risk/reward characteristics of each. Dollars not allocated to equities are invested in an actively managed portfolio of ETFs representing fixed income and other asset classes.

There is no assurance that investment objectives will be met. The ETFs that are included in the portfolio change over time. The U.S. Dollar is the currency used to express performance. Performance is presented net of management fees and includes the effects of trading costs and reinvestment of all income. Net of fee performance was calculated using actual management fees charged to the client. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Actual investment management fees will vary, beginning at 1.5% per annum. Our full management fee schedule is described in more detail in Form ADV Part 2A.

PAST PERFORMANCE NOT INDICATIVE OF FUTURE RESULTS.

Any investment is subject to risk. ETFs are subject to risks similar to those of stocks, such as market risk, and investors who have their funds invested in accordance with the portfolios may experience losses. Additionally, fixed income (bond) ETFs are subject to interest rate risk, which is the risk that debt securities in a portfolio will decline in value because of increases in market interest rates. Real estate ETFs are subject to the risk that real estate stocks will decline because of adverse market conditions for the real estate industry or declines in real property values. For more information on the risks associated with an investment in ETFs, please refer to AFAM's Form ADV Part 2A.

The total return indices within the domestic portfolio are: Bank of America US treasury 2yr, Bank of America US Treasury 5yr, Bank of America US Treasury 10 yr, Bank of America US Treasury 30yr, Consumer Discretionary Select Sector, Consumer Staples Select Sector, Energy Select sector, Financials Select Sector, Healthcare Select Sector, IBOXX High Yield, IBOXX Investment Grade, Industrials Select sector, Materials select sector, Russell Microcap, Russell 1000, Russell 2000, Technology Select Sector, Utilities Select Sector. The total return indices within the international portfolio are: Bank of America US treasury 2yr, Bank of America US Treasury 5yr, Bank of America US Treasury 10 yr, Bank of America US Treasury 30yr, Bloomberg Bond Index German Govt 1-3 Yr, Bloomberg Bond Index German Govt 3-5 Yr, Bloomberg Bond Index German 5-7 Yr, Bloomberg Bond Index German 7-10 Yr, IBOXX European Investment grade, IBOXX High Yield, IBOXX Investment Grade, JP Morgan EMBI, MSCI Australia, MSCI Austria, MSCI Belgium, MSCI Brazil, MSCI Canada, MSCI Chile, MSCI China, MSCI Colombia, MSCI Denmark, MSCI Egypt, MSCI Finland, MSCI France, MSCI Germany, MSCI Greece, MSCI Hong Kong, MSCI India, MSCI Indonesia, MSCI Ireland, MSCI Israel, MSCI Italy, MSCI Japan, MSCI Korea, MSCI Malaysia, MSCI Mexico, MSCI Netherlands, MSCI New Zealand, MSCI Norway, MSCI Peru, MSCI Philippines, MSCI Poland, MSCI Qatar, MSCI Russia, MSCI Singapore, MSCI Spain, MSCI Sweden, MSCI Switzerland, MSCI Taiwan, MSCI Thailand, MSCI Turkey, MSCI UAE, and MSCI UK.

The MSCI All Country World Index Ex-U.S. is a market-capitalization-weighted index designed to provide a broad measure of stock performance throughout the world, with the exception of U.S.-based companies. It includes both developed and emerging markets. A person cannot invest directly in an index. The Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

The "Innealta Equity ETF Universe" and the "Why Individual Country Equity Markets" charts contain references to individual MSCI country indices. Each country index is designed to measure the performance of the large and mid cap segments of the country market indicated. More information can be found at <https://www.msci.com/end-of-day-data-search> under the "Country" tab.

It is not possible to invest directly in an index.

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