Innealta
CAPITAL

COMMENTARY: JUNE 1, 2015

AN OVERVIEW OF "THE MODEL"

As accessible as it is powerful, and as timely as it is enduring, the Innealta Tactical Asset Allocation (TAA) model, we believe, is tailor-made for the ongoing evolution of the asset management industry. The framework analyzes the spectrum of investment opportunities through equal-weighted potential risk and return filters. It is this lens that in our view qualifies the model—and the investment strategies and portfolio series that derive from it—a fine fit for those seeking both capital preservation and growth in a single, dynamic strategy. Even more, that the framework scales as quickly as has the range of the asset class exposures represented by the exchange-traded fund (ETF) industry suggests Innealta strategies should remain relevant well into the future.

Innealta's quantitative model assists the Investment Committee in controlling portfolio exposure to beta by opportunistically modulating portfolio allocations to individual equity markets. The tactical management is executed according to the current relative risk and return profiles of each equity asset class compared to U.S. fixed income securities.

This month's commentary provides extended insight into the development and construction of this framework.

GENESIS OF THE FRAMEWORK

Dr. Gerald ("Jeff") Buetow has developed the Innealta Tactical Asset Allocation Model (TAA) over many years of financial and econometric research. Designed to balance practical considerations (such as turnover, econometric stability, etc.) with academic rigor, Innealta's TAA amalgamates the breadth of relevant academic and practitioner literature and combines that work with a proprietary econometric approach to produce a robust investment framework.

To the best of our knowledge, no other TAA has created or combined metrics in the manner we do at Innealta to support our tactical investment decisions. From the selection of inputs, to the quantification of corresponding metrics, to the generation of a composite signal for the purposes of informing investment decisions, we believe that Innealta has created a uniquely comprehensive approach in the investment industry.

Sparking the model's genesis was our desire to produce a TAA that incorporates both return generation (alpha) and risk control, characteristics that we find to be the minimum requirements of any TAA. We have created a model that unambiguously includes both forces and aims to balance the trade-off between the two.

MODEL DISCIPLINE

Most modeling approaches include various opportunities to allow for significant data snooping or data mining. Often, researchers are tempted to let the data "tell them what the answer should be"; this approach violates the spirit of theoretically sound model development, in our opinion, compromising the integrity of the research process. If we abandon the model whenever, "the data tell us to," then our model is nothing more than straw in the wind. This point is extraordinarily important. We strive to evolve the framework but do so deliberately and carefully to ensure that the underlying conceptual reasoning is never compromised.

Many researchers and modeling approaches might refer to the tendency to regauge models upon inconsistently indicative new information "periodic model calibration." This approach is nothing more than data mining. On the contrary, our process begins with the intuitive determination of those variables that we believe have predictive capabilities in regard to aggregate equity returns. By using only variables and parameters that are theoretically justifiable, we believe that we add more legitimacy to our investment discipline. The present framework is the result of cautious consideration of a range of possible alternatives, under the constant "supervision" of Occam's razor to ensure parsimony and practicality over deliberate complexity.

Importantly, though the model involves sophisticated econometric modeling techniques, much care is taken to avoid over-fitting the data to preserve out-of-sample predictive power. Further, the framework enables the evaluation of the investment implications of each resulting metric, independent of the others, a feature integral to the framework's adaptability to evolving investment environments.

MODEL DETERMINANTS

The Investment Committee categorizes the individual metrics evaluated within the framework into four broad groups, including 1) Fundamental, 2) Distributional Characteristics / Risk, 3) Macroeconomic and 4) Behavioral / Technical. Additionally, the model incorporates a view on current monetary policy and its support for economic growth.

Most metrics we model are equity-market specific, though various reviews under the macroeconomic header are broadly applicable. It may be best to think about the framework in terms of layers. The first layer involves the collection and collation of individual time series, some specific to one bucket (e.g. corporate earnings to the Fundamental bucket) and some to many

(price series are relevant to three of the four). The next layer involves the application of a range of econometric analyses on these individual variables. Methods to standardize these analyses comprise a following layer, with a composite scoring system the output of the final layer.

This final composite score aids the Investment Committee's determination of its bullish/bearish opinions on individual equity markets relative to fixed income. Implementation of the framework output into the investment process then amounts to adjusting the corresponding individual equity market exposure to reflect this signal. This process is purely a function of product design and structure. The composite score is independent of the product application, thereby greatly enhancing its versatility. So depending on the strategy, to varying degrees, bullish signals result in increasing equity exposure; bearish signals result in decreasing equity exposure. Relevant to the Global All Asset portfolios, bullish (bearish) signals result in equity market overweights (underweights). Tactical decisions within the Rotation strategies are binary, with bullish signals resulting in specific allocation to the equity market and bearish signals resulting in no allocation to that market.

Fundamental

The model includes fundamental valuation metrics which contain information regarding the current attractiveness of the risk/return profile of equity asset classes. The model includes valuation factors shown by the financial econometric literature to be related to returns and to have predictive power for future returns. These factors may include, but are not limited to earnings yields, dividend yields, credit spreads and the general level of Treasury yields. Once we generate a time series from these proprietary measures, we evaluate their present characteristics in the context of historical norms by calculating historically adjusted level and corresponding rate-of-change measures.

An example output of this thread within the framework is what we generically refer to as the "valuation dynamic," charted in Figure 1. Readers should note the above/below nature of the series, with a nearer-term lower (higher) ratio being bullish (bearish) for the respective equity market. Figure 2 is an example of a somewhat more involved, "fundamental dynamic." With this signal, we are looking not only for a growth trend (a positive slope in the underlying fundamental series), but also an acceleration in that trend. Thus, slowing growth also results in a bearish signal for the equity market.

FIGURE 1

Valuation Dynamic

Trailing data. From 08.24.00 to 05.29.15. SOURCE: Innealta Capital using data from Thomson Reuters

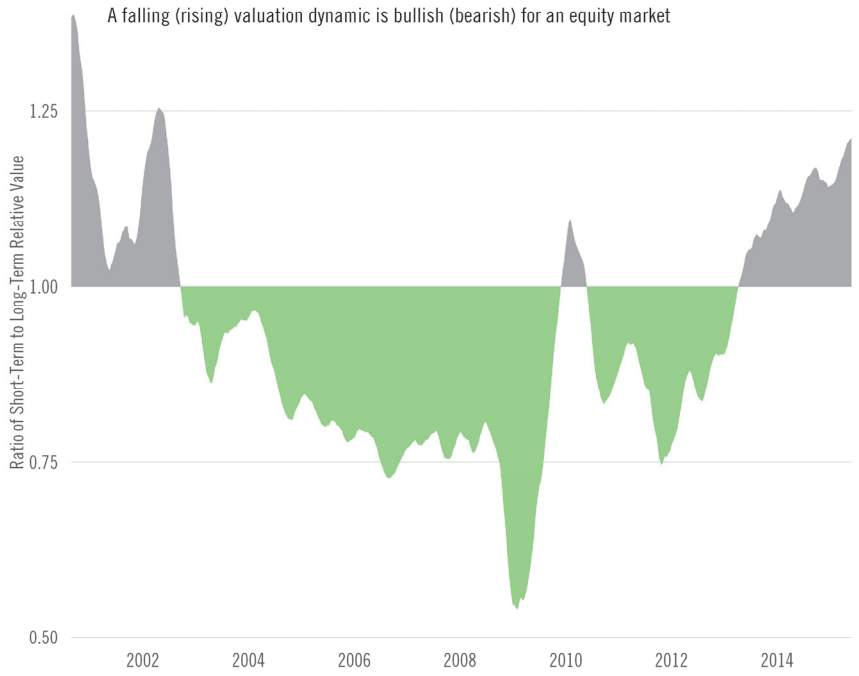
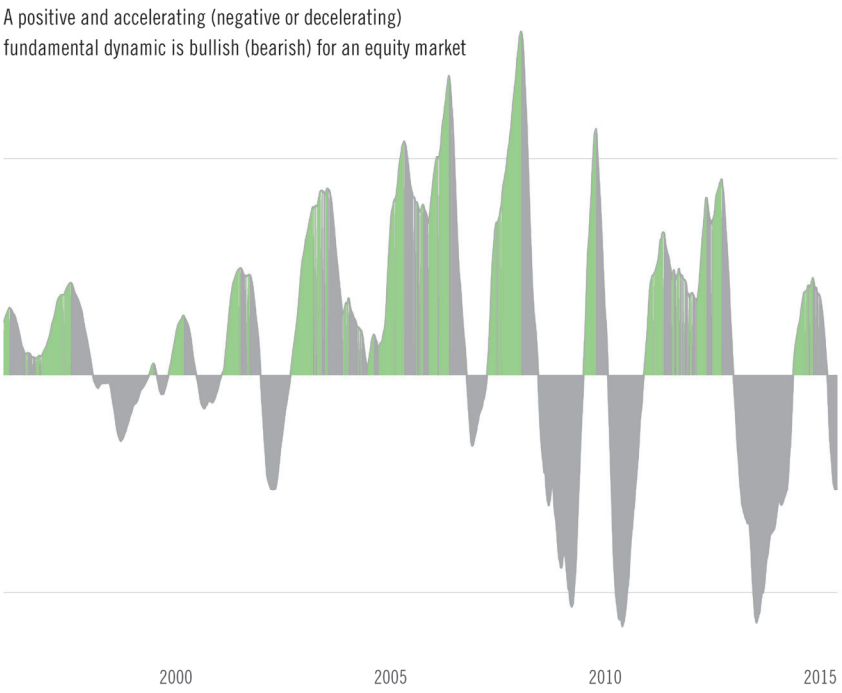


FIGURE 2

Fundamental Dynamic

Trailing data. From 12.28.95 to 05.29.15. SOURCE: Innealta Capital using data from Thomson Reuters



Macroeconomic Environment

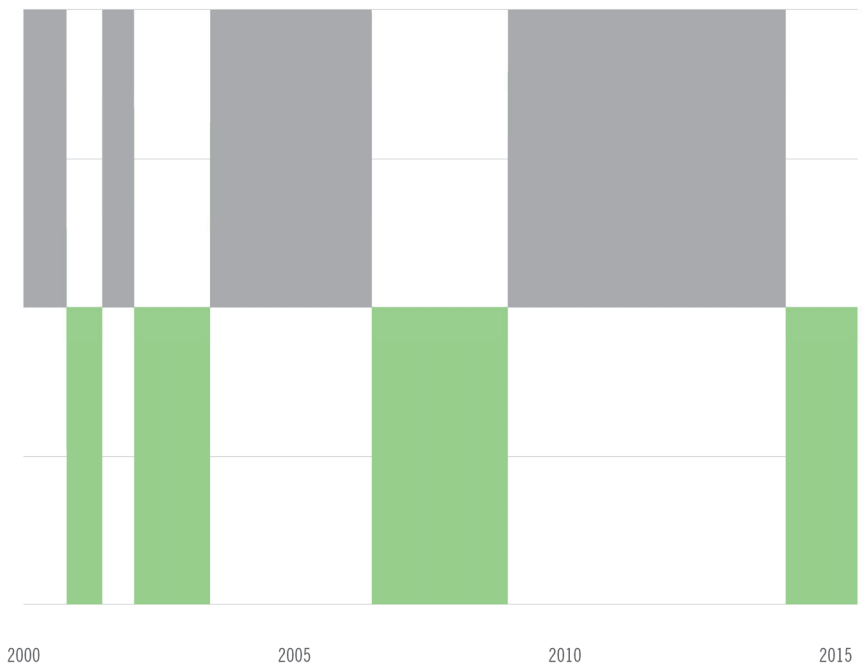
There are a number of inputs to determine if the broader economy might be supportive of equity investments. Federal Reserve and local monetary policies (with local applying to the Global All Asset and Country Rotation Portfolios) top the list of criteria. Restrictive monetary policy generally is considered bearish for equity investment, while accommodative policy generally portends a bullish investment environment for equities. The level and dynamic of real interest rates, employment and consumer spending also contribute to this indicator, among others.

The extant literature demonstrates a robust relationship between accommodative monetary policy and asset class returns. The consideration of monetary policy involves both a long-term view of the relevant policy rate, as well as an evolving determination of the stance as accommodative or restrictive. Figure 3 plots the signal output (green for accommodative; grey for restrictive) for a specific developing economy as an example of the potential evolution of this signal.

FIGURE 3

Monetary Policy Signal

Trailing data. From 12.31.99 to 05.29.15. SOURCE: Innealta Capital using data from Thomson Reuters



Distributional Characteristics / Risk

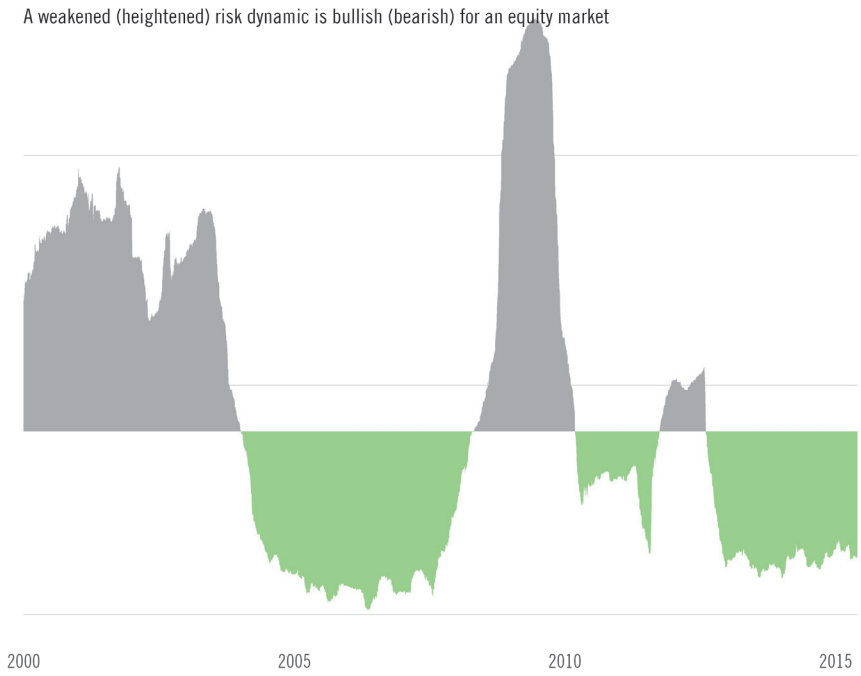
We utilize historical and implied (from liquid equity index options) risk measures with the primary intent of controlling overall portfolio volatility. Our risk reviews also include the level, change and volatility of credit spreads. The model emphasizes the rate of change of risk over recent periods over the present level of risk. As such, framework risk factors include the time series characteristics of the various distributional metrics relative to the underlying returns distributions. One such metric is the variance ratio of near-term and long-term index returns, which we chart for a specific U.S. equity sector in Figure 4.

The basic idea is that the rates of change of these risk measures begin to increase (decrease) as investors begin to increase (decrease) their expected equity risk premiums. This revaluation dynamic increases (decreases) volatility. A secondary effect that takes place is that the risk premium adjustment manifests itself into negative (positive) equity performance through the revaluation dynamic (i.e., discounting process). Loosely it produces an inverse relationship between recent changes of risk and forward equity performance. This second attribute is of secondary importance when compared to the primary objective of controlling risk of our portfolios. Ultimately, our risk indicator produces output that tends to under (over) weight equities when risk increases (decreases).

FIGURE 4

Risk Signal

Trailing data. From 12.31.99 to 05.29.15. SOURCE: Innealta Capsectoral using data from Thomson Reuters



Behavioral / Technical

In order to capture market conviction, various proprietary metrics are used to quantify momentum. In a manner similar to our development of the fundamental indicator, we break short- and long-term momentum measures into both levels and rates of change. These metrics are used to measure the strength of the current market trend. This is our only technical indicator and tends to be shorter term in nature. We next adjust the momentum indicator dynamically, using recent statistical characteristics to ensure that we minimize spurious trading.

The momentum component has to be corroborated by the other categories in order to change the overall TAA signal. This last property is extremely important. The momentum indicator is the one component of the model that is most influenced by short-term dynamics, but it still operates together with the fundamental indicators. For the TAA to drive an overall tactical signal some of the fundamental variables would have to be in agreement. This “tactical democracy” is by design and is an effort to ensure that tactical shifts are not spurious but of an intermediate- or longer-term nature.

AGGREGATING THE SIGNALS

Variously, depending on the particular strategy (Sector Rotation, Country Rotation and Global All Asset), the relative emphases of the four threads in the composite are approximately as shown in Figure 5.

FIGURE 5

Signal Emphases

Relative emphases provided as approximations and vary by investment strategy and specific equity market exposure. SOURCE: Innealta Capital

Combining the metrics into an overall indicator includes a discrete mapping process that converts each measure to a more easily interpreted and normalized signal. Following the conversion, the signals are then aggregated for each equity market. This normalized total is then used to determine whether the model is bullish or bearish on each individual equity market relative to non-equity classes.

Though the emphasis specific to the distributional characteristics of the individual equity market may seem relatively light in Figure 5, it should be noted that these characteristics are embedded into many of the other metrics directly or indirectly by way of computation. This is accounted for by using time varying control limits as part of the aggregation methodology. Investment decisions, therefore, are often on the margin and due to corroborating dynamics across the metrics. Thus, while direct measurement may appear small their impacts often are not. Hence, our regular confirmation of the framework's broad emphasis on risk and diversification of conceptually unique identifiers of expected risk to reward opportunities across the capital markets.

CONCLUSION

The Innealta TAA has evolved over decades of research by Dr. Buetow and, in the more recent past, the Innealta Investment Committee he leads. Though we continue to see capital markets diverge from paths that might have been plotted in advance using historically reliable methods of analysis, we remain firm in our belief that our framework remains uniquely suited to inform the tactical decisions that define our investment strategies. Nonetheless, as we often have noted on these pages, the Committee, "reserves the right to get smarter." In fact, getting smarter is an internal directive that continues to guide the team's ongoing research and developmental efforts.

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