Innealta
CAPITAL

COMMENTARY: SEPTEMBER 2, 2013

THIS TIME IS NOT DIFFERENT

Some of our recent research focuses on the information in short-term price trends, which is often (incorrectly) referred to as “momentum.” Momentum is a cross-sectional phenomenon. One measures momentum based on the contemporaneous returns to a universe of individual securities. Each individual security is assigned to a momentum portfolio based on its recent relative return when compared to the others.

The context of our framework differs from that of (cross-sectional) momentum since our framework focuses on the relative attractiveness of asset classes, not individual securities. For this reason, we focus on a technical form of price “momentum,” which is closely related to what some practitioners refer to as time-series momentum. Unlike traditional momentum, time-series momentum does not require cross-sectional analysis of individual security returns and the ranking is not a relative ranking. Instead, time-series momentum is built upon the recent price trends in a particular security, which may be a broad index, facilitating its applicability to tactical ETF portfolio management.

Given the recent market environment, our focus on a technical trend factor is timely. Certainly looking back over recent history, one may be tempted to pursue investment strategies based purely upon “momentum,” or price trends in light of recent market trending. Our purpose herein is to provide some context across a longer and more representative time span to illustrate that returns to such strategies are largely specific to this recent period and that such strategies typically perform very poorly during crisis periods. Such a metric should not be regarded as a stand-alone metric, but is more appropriate when considered in conjunction with other metrics.

DEFINING THE TECHNICAL SIGNAL

Generally speaking, our trend signal captures the price returns over a recent time period, which we call the look-back, or observation, period. Consistent with most research on both cross-sectional and time-series "momentum," we use both 6-month and 12-month look-back periods and find the results are robust across both specifications.

To match the commonly used approaches, we consider a positive price trend during the look back period as a Bullish signal. Correspondingly, a negative trend is a Bearish signal. In robustness analysis, we considered varying the thresholds to reduce portfolio turnover, but the qualitative results are invariant to such changes.

Additionally, we consider an enhanced trend signal that takes into account the second-order characteristics of returns during the look back (observation) period. The higher order metrics capture the acceleration or deceleration of the first-order measures. We conjecture that augmenting the trend with a measure of its acceleration/deceleration has the potential to add value through early detection of changing trends, allowing the investment strategy to react before a formal trend change.

CONSTRUCTING THE TRADING STRATEGY

To evaluate the performance of a trading strategy based on the short-term technical metric, we construct portfolios weighted equally among 30 different country indexes. The indexes are chosen to resemble the non-U.S. country exposures available through the extant ETF product space. Over the time period of 1996 to August 2013, we form portfolios based on the trend signal. The portfolios are re-constituted and rebalanced monthly.

Each month, we set the portfolio allocation for each country to long exposure for all country indexes exhibiting positive trend signals and short for all exhibiting negative trend signals. The portfolio exposure may therefore range from -100% (fully short all 30 country indexes) to +100% (fully long all 30). To ascertain the role of the short exposure, we also consider a long-only strategy which invests in a country when the trend is positive and alternatively invests in U.S. T-bills otherwise.

ANALYZING THE TRADING STRATEGY

We begin by presenting in Exhibit 1 the average returns to a passive strategy that consists of an equally weighted portfolio of all 30 country indexes. That portfolio over the period 1996 through August 2013 generates average (arithmetic) annual returns of 8.49% with a standard deviation of 16% and Sharpe Ratio of 0.46.

Exhibit 1: Strategy Returns

	Passive Strategy	Trend Strategy	Trend Strategy (Long Only)	Trend & Dynamic Strategy	Trend & Dynamic Strategy (Long Only)
Average Annual Return	8.49%	5.68%	8.34%	1.51%	6.75%
Average Annual Standard Deviation	16.01%	13.46%	8.26%	13.92%	8.95%
Sharpe Ratio	0.46	0.33	0.86	0.02	0.62

SOURCE: Innealta Capital

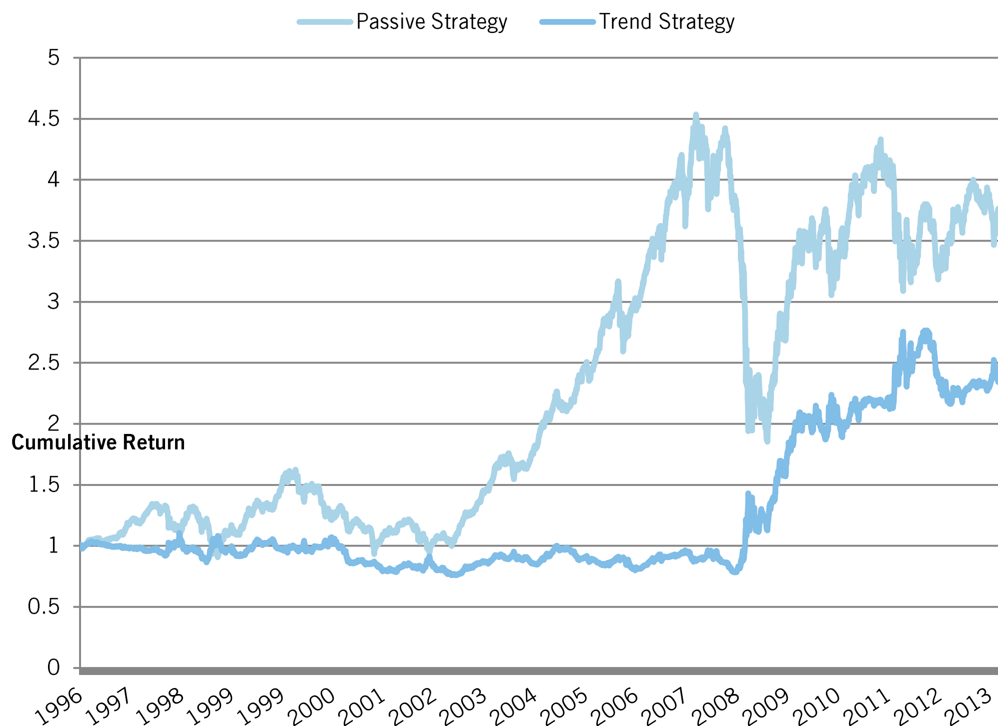
Next, we consider the long-short strategy based the trend strategy. This strategy generates only a 5.68% average return and has a corresponding Sharpe Ratio of 0.33. To provide some context for this result, we present the cumulative return graph of the Long/Short trend strategy and the passive strategy in Exhibit 2. The striking

pattern emerging from the figure is that from 1996 to 2008, the returns to the trend strategy are on average negative. The figure suggests during that time period, the technical trend exhibited no power to differentiate attractive return environments. Suddenly, since 2008, the trend strategy exhibits strong performance. Initially, this performance came through short exposures during the financial crisis. Although the strategy initially loses money during the crisis, due to the fact that the positive trends did not reverse into negative territory until the crisis was well underway, the strategy began to benefit from short exposures as the crisis continued.

That the strategy exhibits superior returns only during recent years is important given the uniqueness of that period. During this period, the unprecedented policies of the Federal Reserve and other central banks have had significant impacts on global asset prices. This intervention has inflated global asset prices, creating a low-volatility market environment favorable to a trend strategy. As the Fed prepares to unwind or taper its easing, the trend strategies expose investors to significant loss potential. Periods of heightened market volatility, such as are likely to result from expected tapering of the Fed's quantitative easing or heightened geopolitical tensions, are clearly the environments in which trend strategies perform poorly.

Overall, the strategy has experienced attractive returns since the crisis as the underlying markets have exhibited stronger trends. Regardless, the pattern remains clear that the technical strategies tend to suffer in the early stages of market downturns unless the signal can move faster than the signal in this strategy. By definition, however, such a signal is impossible.

Exhibit 2: Cumulative Returns, Passive Strategy Compared to Long/Short Trend Strategy

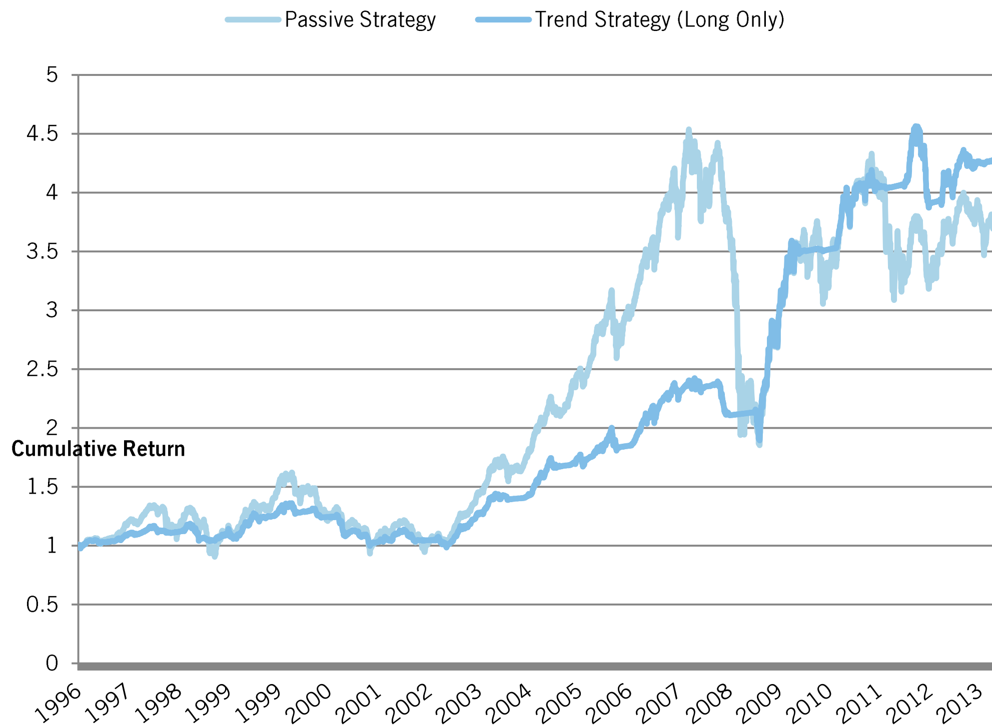


SOURCE: Innealta Capital

Next, we consider a simple modification to the trend strategy by restricting the strategy to long only equity positions. When a signal turns negative, the portfolio invests in U.S. T-bills as opposed to shorting the index.

Referring to Exhibit 3, we notice the results are noticeably different for the long-only strategy. The strategy does not exhibit excess returns through 2002. In fact, the strategy suffers significant losses of around 30% during the bear market of the early 2000s. During the bull market run of the mid-2000s, the strategy benefitted from a generally strongly trending market. The majority of excess returns to the strategy, however, are highly concentrated in the time period immediately following the financial crisis. Overall, the results suggest that potentially enticing returns to trend strategies are concentrated heavily in recent time periods. Additionally, the strategies experience heavy losses when the most severe bear markets develop as the technical trends typically do not reverse as quickly as the market declines.

Exhibit 3: Cumulative Returns, Passive Strategy Compared to Long Only Trend Strategy



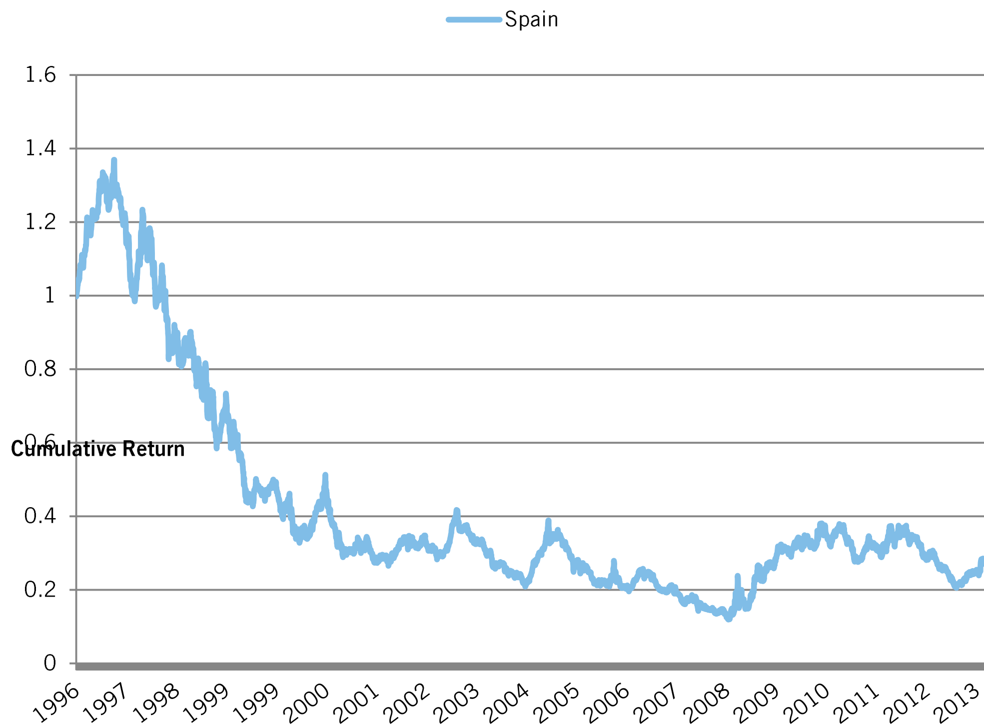
SOURCE: Innealta Capital

Finally, we consider an augmented strategy via which we also consider the trend change over the look-back period. Specifically, we quantify whether the trend is increasing, decreasing or remaining unchanged. We alter the trend strategies such that the portfolios pre-empt the trend chasing strategy's exposure to market downturns. Simply put, we construct a trend in the trend to identify a weakening trend to signal a market exit. The final two columns in Exhibit 1 present the average returns and highlight that the returns are not an improvement over the passive international index investment.

As an example of the potential dangers of a trend strategy, we present in Exhibit 4 the cumulative return performance for the trend strategy conducted on one equity market in isolation. In this case, we selected Spain, as it is an extreme example illustrating the periodicity of returns to the trend strategy. Initially, during 1996 and 1997, the strategy performed very well. However, the strategy suffered severe negative returns over the next 10 years. The strategy performed well in the wake of the financial crisis, generating over 100% returns, although many of those gains have reversed in recent years. In summary, this example illustrates the potential pitfalls of a

technical strategy and the period-specific nature of the returns to such strategies, leaving investors vulnerable to sharp downturns.

Exhibit 4: Illustrating an Individual Country (Spain)



SOURCE: Innealta Capital

CONCLUSION

Our analysis highlights several important characteristics of trend strategies. First, that attractive returns generated by these strategies are heavily concentrated in certain periods. For example, these strategies have performed well during recent history, but much less so over a longer time frame. Second, these strategies tend to leave investors exposed to market corrections as market declines happen faster than trends reverse. A reader may be tempted to suggest the design of an even shorter-term metric that is more sensitive to reversing trends. Unfortunately, we have found that doing so results in strategies that are overly influenced by noisy returns, causing the signals to flip-flop too frequently.

In recent years, unprecedented actions by central banks have had significant impacts on global asset prices. These policies have had the effect of creating return environments that benefit trend strategies such as those presented herein. Our analysis highlights that any investor following such as strategy will experience strong reversals of fortune when the inevitable market correction occurs. Many investors fall into the trap of chasing returns, meaning they flock to strategies which have performed well in recent years. This return chasing behavior ultimately leads to subsequent losses when the investment environment changes.

Unlike the simple strategy presented herein, it is important to keep in mind that a sound quantitative framework accounts for numerous metrics. The pitfalls of the trend strategy, namely exposure to market declines, and periods during which the strategy does not generate excess returns, highlight the importance of considering any factor in conjunction with multiple other factors. An investment strategy employing only one

factor to identify return environments is not sufficient. In this context, it is important to note that several competing tactical ETF managers employ strategies constructed entirely on a single technical measure. The results in this commentary illustrate the risks of such strategies that leave investors fully exposed to market downturns.

CURRENT STATE OF OUR SOLUTIONS—MONTHLY UPDATE

United States and Europe

Equity markets have mostly moved sideways or down over August. We believe that further corrections are on the horizon and we have positioned the portfolios so we are ready when new opportunities arise. As we have argued previously, recent equity and fixed income valuations are driven almost entirely by monetary policy rather than by the real economy, both in the U.S. and Europe. We believe that this monetary policy bubble has continued to inflate to enormous proportions. At some point this bubble is going to burst as it becomes unsustainable for even the richest country to finance. In order for the U.S. and Europe to become attractive investment opportunities again, significant market corrections will be necessary. We believe that in the near future, capital markets will recognize the unsustainability of the current system. We have already seen how nervous markets can get in response to a mere discussion of "tapering" in the U.S. Once the coin has dropped, there will be tremendous opportunity for investors and we are excited for the opportunity to manage our way through the ensuing volatility.

In Europe we strongly believe that the longer the Eurozone credit crisis lingers below the surface without the fundamental issues being addressed the more the situation becomes overwhelming even for all the stronger Eurozone members together. Sooner or later countries like Germany, which has been the major creditor to the Eurozone, will exceed its financing capacity.

With the German parliamentary elections looming (on September 22) however, we don't foresee any immediate major developments within the Eurozone until well after the election. All the election polls in Germany suggest that the current chancellor Angela Merkel will remain in power, most likely in another coalition government. Once the election and coalition talks in Germany are over, tough decisions on the Eurozone that have been postponed for political reasons will have to be made. It is no secret that Greece and several other countries will need substantially more bailout funds to be able to remain within the Eurozone, which is the stated objective of almost all Eurozone politicians, for better or worse.

While we closely monitor European markets for valuation adjustments that might make short- to medium-term investments in the region attractive, our long-term outlook for the Eurozone remains negative as long as the fundamental problems are not credibly addressed. The unfolding of all these issues will result in market volatility and attractive investment opportunities.

Asia

A major focus is now on the developments in India. We took advantage of a short-term opportunity to establish an equity position in India and were able to catch some of the upswing over the second half of June and the first half of July. However, the framework soon turned negative against a backdrop of negative macroeconomic news. In response, we closed out the beta position before the end of July. India's currency is currently in free fall, making imports very expensive for the country. Moreover, inflation is high as well at around 10% and many economists expect it to rise further. Indian companies with foreign currency debt see their debt servicing cost sharply increased. India's current account deficit is likely to rise further as well. There is a widespread concern that the Indian government has lost control of the economic situation. Moreover, the prospect of "tapering" in

the U.S. has negatively affected several emerging markets, particularly those that, like India, have large current account deficits, as investors move money back to the U.S.

Indonesia is another emerging market country that has been in the news recently. Its currency has lost about 13% of its value over the last six months and about 9% over August alone. Over the last few years it has been one of the strong beneficiaries of international investors' diversification efforts into emerging markets. These fund flows are now being at partially reversed as investors have become more concerned about widening current account deficits and concerns about progress of political and economic reforms.

We have some concerns over the sustainability of mainland China's economic growth. China's growth over the last few years has been mostly fuelled by demand increases for the country's exports, rather than by an increase in domestic consumption. Most of the increased demand has come from the United States and Western Europe. As discussed above, the economic situation in those regions is unlikely to be sustainable. As a result, demand for Chinese goods is likely to increase less or remain stagnant, at best. Instead of China, other countries such as Hong Kong are positioned more attractively, benefiting from their geographic proximity to China and their relatively free market economy. Our quantitative framework remains positive on Hong Kong and we are currently invested in the city state.

The heavy monetary stimulus efforts in Japan aimed at depreciating the Yen and stimulating growth by making Japanese exports more attractive have added significantly to the Japanese debt burden. The country's current debt level is already more than twice the size of its GDP. As in many other regions the long-term benefits for the real economy of an extremely loose monetary policy have yet to be seen in Japan. The flip side of the coin is that widespread monetary stimuli across the globe increase the risk of a currency war with the associated negative consequences, which could be quite severe.

Japan's actions already have had some negative implications for other export-oriented economies such as South Korea, which competes heavily with Japan in global trade. A weaker yen has made competing with Japanese export prices more difficult.

Overall, our views continue to be relatively more favorable on Asia Pacific than most other regions with the exception, perhaps, of some parts of Latin America, where opportunities could arise as well.

Latin America

We continue to monitor this region in search of attractive opportunities as they present themselves. In particular we are considering an equity investment in Brazil. Despite Brazil's main problems, namely slow economic growth and inflationary pressure, equity valuation levels in Brazil are closer to reflecting their underlying fundamentals and may present an opportunity if they come down further. In the medium to longer term the Brazilian economy is likely to benefit from the soccer World Cup next year and from the upcoming Summer Olympic Games in 2016 as the government expands infrastructure development and makes other related investments.

SUMMARY

In a nutshell, since current market valuations in the U.S. and Europe are almost entirely policy driven and unsustainable, it is our view that significant market corrections are needed to make these two regions attractive again. In contrast, Asia Pacific and Latin America present more immediate investment opportunities.

In the short to medium term, the prospect of some Western nations interjecting themselves in Syria's civil war, coupled with the implications this involvement could have for the entire region, may also increase investors' risk

aversion globally which would have an adverse effect on capital market valuations. For Western forces either option, military intervention in Syria or not, could have undesirable consequences for the world economy. A military intervention might help topple a violent and corrupt government, but it may also help one of our biggest enemies, namely Al-Qaeda and other terrorist organizations, who are more likely than others among the numerous rebel factions to gain power should Assad's regime fall. This could also strengthen and embolden Islamists within the Iranian government and broaden their area of influence while secular forces are pushed aside. We have seen similar developments in Egypt, Libya and Tunisia already. In these countries the so-called Arab Spring has turned into an Arab nightmare. Needless to say that these developments can negatively impact the world economy through increased uncertainty, higher oil prices and increased risk of terrorist attacks if Western forces get involved in another military conflict. Any Western intervention in the Syrian conflict has the potential to tip the balance of power in one of two directions, both of which are undesirable (Assad or Al Qaeda).

On the other hand, the failure to intervene in Syria also bears significant risks as Western forces may lose credibility after having drawn an objective "red line." A lack of military action is likely perceived as writing a blank check to all dictators and despots allowing them to commit whatever crime they desire against their own people or others without any serious consequences. Such a signal is likely to embolden other nations that pose even greater threats to peace and security, namely Iran or North Korea.

As a result of these economic and geopolitical concerns, we feel extremely comfortable with our portfolios' defensive posturing through mostly short-duration fixed income securities, as well as some selective equity positions. These positions are highly liquid, providing us the ability to act quickly to take advantage of opportunities as they arise. Due to these concerns we foresee significant negative adjustments in the world economy in the near future that will result in more attractive equity valuations. We are confident that we will see significant investment opportunities once these valuation adjustments have taken place.

IMPORTANT INFORMATION

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Sector ETFs, such as Real Estate Investment Trusts ("REITs") are subject to industry concentration risk, which is the chance that stocks comprising the sector ETF will decline due to adverse developments in the respective industry.

The use of leverage (borrowed capital) by an exchange-traded fund increases the risk to the fund. The more a fund invests in leveraged instruments, the more the leverage will magnify gains or losses on those investments.

Country/Regional risk is the chance that world events such as political upheaval or natural disaster will adversely affect the value of securities issued by companies in foreign countries or regions. Country/Regional risk is especially high in emerging markets.

Emerging markets risk is that chance that stocks of companies located in emerging markets will be substantially more volatile, and substantially less liquid, than the stocks of companies located in more developed foreign markets.

Securities rated below investment grade, commonly referred to as "junk bonds", may involve greater risks than securities in higher rating categories. Junk bonds are regarded as speculative in nature, involve greater risk of default by the issuing entity, and may be subject to greater market fluctuations than higher rated fixed income securities.

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Innealta's competitive advantage is its quantitative investment strategy driven by a proprietary econometric model created by Dr. Gerald Buetow, Innealta's Chief Investment Officer. The firm's products include Tactical ETF Portfolios, a U.S. Sector Rotation Portfolio and a Country Rotation Portfolio. Innealta aims to beat appropriate benchmark performance by tactically managing portfolios utilizing a proprietary econometric model. By harnessing the benefits of ETFs, Innealta is able to provide investors with exposure to multiple asset classes and investment styles in highly liquid, low cost portfolios.

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