# TradingVisions, Inc. Presents
# Vista *WFO* Portfolios
## *Harness the Power of Diversification*

The best way to succeed at investing may well be to diversify. In futures investing, this may be even more important because of the leverage involved. Putting all your reliance upon one system and one market leaves you completely at the mercy of that system's performance. While this may be an exciting prospect when the system is hot, the inevitable downturns are magnified by this over-reliance on one strategy. It is possible to enhance our chances of success by extending the risk over several equity streams with low correlations, which helps smooth the equity curve and lessen drawdowns. This helps to reduce the capital necessary to trade the portfolio and increase the return on account.

- **The Systems**
  - Delphi II WFO
  - AXIOM Index II WFO
  - Sentinel WFO
  - Metrica WFO
- **The Markets**
  - e-mini Russell 2000
  - e-mini S&P 400 MidCap
  - e-mini S&P
  - e-mini NASDAQ
- **The Time-frames**
  - Day Trade
  - Swing Trade (>1 day)

There are three important ways to diversify a futures account: 1.) trade multiple systems, 2.) trade multiple markets, and 3.) trade multiple time-frames. TradingVisions meets all three objectives and makes the task of diversifying simple through the *Vista Portfolios*, varied combinations of up to four systems, two time-frames, and four index markets.

These portfolios have been carefully constructed with the objective of maximizing diversity & returns, while minimizing drawdowns. TradingVisions is especially excited about these portfolio configurations because they exclusively use our WFO series of systems that incorporate a walk-forward protocol that we believe results in a more realistic look at hypothetical results. **To further allow you to see a realistic picture of past performance, <u>slippage, commissions, and lease fees have been deducted from profits</u>**.

- Robust systems
- Diversity of systems, markets & time-frames
- Low equity curve correlations
- High hypothetical & out-of–sample, unoptimized returns
- Low lease rates
- Easy account setup

Account setup is simple: 1) choose a broker (if you don't already have one) from the list of participating brokerages, 2) fill out the Subscription Agreement, choose a payment method (credit card or direct account debiting), and 3) fax the agreement to TradingVisions. *The information herein is informational only, and no solicitation to buy or sell securities or futures is being made. Users are free to construct portfolios of their choosing. Portfolio configurations may change without notice, & as such, these results are not intended to show actual or hypothetical performance of past recommendations or for comparison to actual account results. Further, TradingVisions has neither the right not the responsibility to change what is traded in client accounts. The pages below only show hypothetical performance for the most current portfolios. Because of the risks involved in futures trading and in order to understand the limitations and assumptions of the numbers presented below, please carefully read the Disclosures & Disclaimers document that follows.*

*Commodity trading bears a high degree of risk. People can and do lose money. Past performance does not guarantee future results. Hypothetical results have many inherent limitations.*

# Walk-Forward Optimization: TradingVisions' New WFO Series

TradingVisions is very excited to release the WFO series of its automated trading systems and to incorporate them into the new Vista WFO Portfolios below. This powerful methodology utilizes a strict walk-forward optimization routine that has many advantages over traditional optimization.

Historically, the typical way to achieve strategies that are robust and give a reasonable expectation of future success is to test all available data for a market, adopt the "best" rules and parameters, and trade the system in real-time. We can call this approach look-backward optimization.

An improved approach is to not just look at all available data for one market, but to also look at additional markets, and to adopt the rules and parameters that best fit all or most of them. This approach--what I'll call look-beside optimization--is one I have used since I began developing systems over a dozen years ago.

I have been a firm believer that over-curve-fitting is the bane of system development, and to avoid it, I have been very reluctant to re-optimize systems once released. It is just too easy to find something that works on a single market for a few years in backtesting and re-jigger it every time results are poor.

My approach has worked quite well, but in early 2007 I began intensively testing a way of judiciously using re-optimization on Delphi II that has proven to be preferable. This involves the use of walk-forward optimization (WFO), and it helps to solve two critical shortcomings of traditional optimization: 1.) traditional hypothetical performance records are idealized (optimized), "in-sample" results that usually vary widely from real-time results, and 2.) traditional optimization has no articulated way to adapt to different markets or to changes within a market.

WFO optimizes a system over a set time period from the past--say three years--and applies the "best" parameters to a succeeding time period, say one year. The performance results of the three years are "in-sample," meaning that they are derived from data (the "study period" data) that was used to formulate the system rules or parameters; in other words, the in-sample data was used to find the optimal values. These results are curve-fitted, idealized performance that is rarely matched in actual trading. The performance on that one year after the study period is "out-of-sample," meaning that they are the result of trading outside the period from which the parameters were chosen. This is also called the "application period." The performance from the application period is much closer to what would have been achieved in actual trading, since we could theoretically have been trading during that time with that set of rules and parameters. In fact, if we use realistic slippage and commissions, we have what can be called "real-time" results, even though they are hypothetical in the sense that the trades were not actually made. These results are categorically more trustworthy than backtested results from a system's study period, and this is the most important advantage of WFO.

The "walk-forward" aspect of this approach comes in the next step. If I used data from 1.1.2001 to 12.31.2003 as the first study period of the analysis and 2004 as my first application year, the 2004 trading results are my first year of the hypothetical performance record. I now walk-forward a year and use the data from 1.1.2002 to 12.31.04 as my next study period, and I apply the "best" parameters from this period to 2005. These 2005 out-of-sample results are added to my 2004 hypothetical performance record. I continue to walk-forward to 1.1.2003-12.31.05, apply the best parameters to 2006, and I now have a 3-year hypothetical out-of-sample track record that should be reasonably close to what I could have achieved in actual trading. This methodology is calling "running" walk-forward, as opposed to "anchored" walk-forward. The anchored approach does not drop the earlier "study" periods of data, which has the effect of making each study period increasingly longer. This method, which is the one used by TradingVisions, usually leads to increasing stabilization of the parameter choices.

There are several additional benefits to WFO.

In the past, I have worked very hard to have little or no difference in rules/parameters for different markets trading the same system. Optimizing to each market using only in-sample data is very risky because there is no logical point at which to stop doing it. The almost inevitable result is over-curve-fitting and trading losses.

WFO allows for using different parameters for different markets because the backtested out-of-sample performance results for each market provide the validation of the methodology. When only in-sample data is used, the validation is based upon a circular relationship between the study data and the rules/parameters adopted: the results justify the rules/parameters, but the rules/parameters have been justified by the results. WFO takes us out of this pernicious loop and puts our expectations on a realistic foundation.

By allowing different parameters for different markets, WFO has the additional advantage of thereby decreasing correlation between results for those markets. With lower correlations, these markets then become stronger candidates for inclusion in a portfolio.

WFO also allows us to make in-flight corrections of our system parameters. In the past I have set an unswerving hoped-for course from hypothetical results to actual profits by carefully constructing a system and then not deviating from it. This straight-line approach ignores the fact that markets continually and of necessity change nature: Markets are moving targets. WFO allows a system to adapt to market changes.

This is both its inherent advantage, and its Achilles heel.

The advantage is that when there is a significant change in a market, if a system has rules that are sensitive to that change, the re-optimization will cause parameters that better fit the change to rise to the top of the optimization run.

The Achilles heel is that if the market changes don't have enough persistence, the parameters will be changed just in time to mis-perform during the next phase of the market. And this is why WFO is not the Holy Grail: important decisions are made in doing WFO that leave it susceptible to over-curve-fitting. Among these decisions are how long a study period and application period to use, how many iterations are ideal in an optimization, , what makes the "best" measure of performance, what makes the "best" choice of the results in an optimization run, what period in time does one use as the start point of the first study period, and how much variance in approach is acceptable for different markets.

To lessen the chance of over-optimization and over curve-fitting, TradingVisions uses the same protocols for all systems and markets. Specifically:

1.) Exhaustive, rather than genetic, optimization is used whenever possible. I've found that genetic, because it uses sampling, causes the walk-forward results to vary each time it's run, and to also vary from the exhaustive results. Therefore, to get a consistent reading, only exhaustive is used.

2.) Anchored walk-forward is used--each retired application period is added to all prior data as we move forward in time. I've found that for the TradingVisions systems, there is a slight performance edge to using anchored over running walk-forward. Anchored WFO also helps lessen the possibility of making parameter changes just in time to get out of phase with the market. The parameters change less dramatically and less frequently, and by optimizing over longer and longer study times, the best parameters will tend to be those that are able to adapt to a wider range of market permutations.

3.) A "run" is an out-of-sample application period. TradingVisions uses the number of runs that yields a period closest to 1 year.  For systems that trade 30-200 times per year, this yields a statistically significant number of trades. A year is also a natural time demarcation. For most of the TradingVisions systems, this means 8 or 9 runs.

4.) The "best" performance is determined by net profit/maximum drawdown. I believe this is the safest and most important metric, since it takes both risk and reward into account. My studies have shown this to be the metric that is most likely to yield good out-of-sample performance.

5.) Subjective judgments are strictly minimized.

Walk-forward optimization is the closest we can get to actual results prior to trading, and this is what makes it so powerful. Because the results are from out-of-sample, unoptimized data, it allows us to see how a strategy could have performed, had we been trading it in the past. This helps us to measure the system's robustness and to give us increased confidence when we start actual trading. WFO is not the holy grail and it does not guarantee profits, but it is a step closer to accurately measuring the strength of a system.

# Ideal versus Real Results

One of the most significant issues in system trading is "real" versus "ideal" performance numbers, so I'd like to provide a few informal definitions and discuss this important facet of automated trading, as well as provide some data.

Computers are powerful tools that allow us to analyze myriad data. When we state trading rules in analysis software like TradeStation and run tests on historical data, we are "backtesting."  With computers we can run thousands of backtests, finding the needle of a sharp idea in a haystack of numbers. Anyone can look at a chart, spot a pattern consisting of a few examples, and see where they should have entered and exited, but the computer allows us to find hundreds of examples of the same conditions to see whether trading that pattern is consistent enough to be profitable over time. A computer further allows us to refine our ideas through "optimization," which is a test of a numerical idea, running through a series of values to find the optimal one(s). Backtested, optimized results are idealized because they give us the "best" fit to the curves of past data, or they are "curve-fitted." The data used as our testing period is called the sample data, and to distinguish it from other data, it is called "in-sample" data. Results that are from past data are also called "in-sample," meaning that they are derived from the tested data sample.

Unfortunately, although backtesting is a powerful tool, devising a system that shows profitable backtesting does not provide assurance of profits in a trading account. This is because markets are constantly evolving and tend to mutate. As we must say, "Past performance does not guarantee future results." We therefore should not place too much credence in backtested, in-sample, optimized, curve-fitted, idealized results. Instead, we look to results that come from "out-of-sample" data. This data is any that resides outside the original test data used. It can be from an earlier period of time, a later period of time, or from a different market (e.g. the e-mini Russell, instead of the e-mini S&P). The results from out-of-sample data have much more import because they tell us how our system trades in real markets, as opposed to the ideal one of our test sample.  When those results are from data after the end of our study data, it is "real-time" results (some people use "real-time" to mean results from actual trades placed in an account, but I prefer to use it as any trades generated after the end period of in-sample data). The results are "real" in the sense that the trades could have been taken in real time, since the system already existed, and they were not results from the "ideal" time period over which the system was developed.

"Hypothetical" has two primary meanings in the context of trading. Less strictly it means results from the in-sample data set. More strictly it means any results that were not actual trades in an account. Unfortunately, this latter category masks an important distinction in hypothetical results. If the results are from the in-sample period, then they are idealized results. But if they are results from the out-of-sample period that may or may not have been actually traded in an account, then they have much more significance because they could have been real trades.

In judging a system, the real-time, out-of-sample, unoptimized results should carry more weight than the in-sample results, if there are a significant number of trades. We want to know how the system performed in less-than-ideal conditions.

The TradingVisions systems--particularly the WFO series--have a significant amount of out-of-sample, unoptimized performance, which in this case means either performance that occurred after the release of the system rules and parameters or performance based on out-of-sample data. If, for example, a system was released July 15, 2004, and it has not been substantively changed since then, the period after 7/15/04 is considered to be out-of-sample and real-time. Or if an optimization was run over the period 1/1/2000 to 12/31/2003, then any results from after that end date would be considered out-of-sample. [Please note the word "substantively;" over time minor clerical coding changes (usually related to changes in EasyLanguage, exchange session changes, or corrections to make the logic more closely fit the original system logic) have been made to most of the systems, as well as minor changes in exit times or in entry specifics that allow for different trade points in order to prevent all orders from being at the same time and price. These changes do not result in significant performance differences over time.]

## TradingVisions System Release Dates & Out-of-sample or Substantively Unchanged Periods

| System | Release Date | Out-of-sample since: |
|---|---|---|
| Delphi II WFO TF Day | 7/1/2013 | 2/5/2006 |
| Delphi II WFO ES Day | 7/1/2013 | 2/7/2004 |
| Delphi II WFO EM Swing | 7/1/2013 | 4/1/2006 |
| Sentinel WFO ES Day | 6/23/2013 | 7/7/2003 |
| Sentinel WFO NQ Day | 6/23/2013 | 10/3/2003 |
| Sentinel WFO TF Day | 6/23/2013 | 3/7/2006 |
| AXIOM II WFO ES Swing | 5/27/2013 | 2/13/2004 |
| AXIOM II WFO NQ Swing | 5/27/2013 | 3/5/2005 |
| Metrica WFO ES Swing | 12/15/2015 | 6/27/2002 |

# Portfolio Construction

The portfolios are generally constructed to fit a range of account sizes and lease expense and according to how the components fit together in terms of performance, correlation, and diversity. The first components are chosen because they have the best balance of performance with lowest drawdowns, therefore allowing them to be traded with a smaller account size. From there each remaining system and its markets is tested, and the one allowing the best risk/reward and smoothest return for the smallest account size is added. The ultimate goal is a smooth, upward-trending equity curve, which indicates excellent risk/reward and the ability to handle years of changing market dynamics.

# Recommended Account Size

The recommended account size is determined by finding the average maximum drawdown ("AMDD") of 2,000 randomly generated equity curves. This gives a much more statistically valid measure of a portfolio's risk profile. On the assumption that most investors are (reluctantly) willing to accept a 35% drawdown, the AMDD is then divided by .35, resulting in a recommended account size that in the past had sustained about a 35% drawdown. Clients are of course free to capitalize to their comfort level & are urged to do so.

# Lease Fees

TradingVisions charges user fees according to which of three groups you belong: 1.) broker-assist clients, where a brokerage has the system code and trades the signals for registered lease clients; 2.) TradeStation and MultiCharts users, who lease the encrypted code from TradingVisions and trade from their computer; and 3.) License purchasers, who purchase the open-source code and are charged no lease fees.

For the hypothetical results reported in this document, lease fees at the broker-assist level ($155 to $195/contract/quarter) have been deducted, in addition to slippage and commission, in order an attempt to present as realistic a picture as possible of what the past could have looked like. If you are comparing these results to those of other developers, please consider whether they deduct lease fees, in order to fairly compare. TradeStation & MultiCharts clients pay $165 to $225/contract/quarter, which is a little higher than the broker-assist rate. Clients who purchase system licenses do not pay lease fees, and the results presented here are therefore appreciably understated.

TradingVisions provides a free tool--Portfolio Calculator--that allows for adjusting or removing the lease fees, available at the "Performance" tab at the TradingVisions site, www.tradingvisions.com.

Here are the portfolio components & lease rates for broker-assist & TradeStation/MultiCharts users:

| | | TradingVisions Vista WFO Portfolios: Systems & Markets | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System | Markets | Vista II $17,500 | Vista III $23,000 | Vista IV $32,500 | Vista IV ES $32,000 | Vista V $33,000 | Vista V-L $35,500 | Vista VI $35,000 | Vista VI-L $37,500 | Vista VII $37,000 | Vista VII-L $42,500 | Vista VIII $42,000 | Vista VIII-B $42,000 | Vista VIII-L $60,000 | Vista IX $57,500 | Vista IX-B $57,500 |
| Delphi II WFO | TF day | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Delphi II WFO | EM swing | | | | | | | | | | | | | 1 | 1 | 1 |
| Delphi II WFO | ES day | | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | ES day | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | NQ day | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | TF day | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| AXIOM II WFO | ES swing | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| AXIOM II WFO | NQ swing | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Metrica WFO Level1 | ES swing | | | | 1 | 1 | | 1 | | 1 | | 1 | | | 1 | |
| Metrica WFO Level2 | ES swing | | | | | | | | | | | | 1 | | | 1 |
| Quarterly Lease Fee: Broker Assist | | $390 | $585 | $700 | $700 | $875 | $875 | $1,050 | $1,050 | $1,085 | $1,085 | $1,240 | $1,240 | $1,240 | $1,395 | $1,395 |
| TradeStation & MultiCharts Rate | | $450 | $675 | $780 | $780 | $975 | $975 | $1,170 | $1,170 | $1,155 | $1,155 | $1,320 | $1,320 | $1,320 | $1,485 | $1,485 |
| "TF"=emini Russell 2000; "EM"=emini Midcap S&P400; "ES"=emini S&P500; "NQ"=emini NASDAQ | | | | | | | | | | | | | | | | |

# Vista Legacy Portfolios: The "L" Series

You will notice in the grid above that four of the portfolios end in "-L". This is the Legacy series of portfolios, named as such in order to create continuity for users familiar with the portfolios offered prior to the introduction of TradingVisions' latest system, Metrica WFO ES. The current Vista I-IV and the portfolios ending in -L remain the same as before Metrica's release. Starting with the new Vista V, Metrica WFO ES has been added to each previous portfolio. For example, to the original Vista IV, Metrica was added, creating the new Vista V; to legacy Vista V (now Vista V-L), Metrica was added, creating the new Vista VI, & so on. The legacy portfolios were first released on 7/10/2013 & their components have not changed since then. Also, the portfolios up through Vista VI-L have been traded in live accounts since then. If you prefer to lease a legacy portfolio because they are more "seasoned," they are still available.

# The "B" Series

The "B" options for Vista VIII and IX are designed to give clients a choice of potential risk level that relates to Metrica. Metrica has two trading levels. Level1 trades a maximum of 1 contract. Level2 adds a second long contract under special circumstances that occur about 25% of the time. Although Level2 has almost the same statistical risk profile as Level1 (as measured by the average maximum drawdown of 2,000 randomly ordered equity curves), it adds about 55% of hypothetical profit, generating more hypothetical profits than the other WFO systems and markets. However, it also adds the inherent risk of at times holding 2 contracts versus 1, during that time potentially doubling a loss. Since the maximum dollar loss can be up to $2,000 per contract, it's important to be properly capitalized to sustain such a loss with 2 contracts. It's also important that the risk and reward contributions of each portfolio component be relatively balanced, so that if one component is underperforming, others can compensate. For these reasons, Level2 is generally recommended for only the larger account sizes.

# System & Market Correlations

## Correlations of Monthly Equity Changes for TradingVisions Systems and Markets

| | D WFO TF | D WFO ES | D WFO EM | Sent WFO NQ | Sent WFO TF | Sent WFO ES | AX WFO NQ | AX WFO ES | Metrica WFO ES |
|---|---|---|---|---|---|---|---|---|---|
| Delphi II WFO TF Day | | 0.17 | 0.19 | 0.09 | 0.23 | 0.02 | 0.04 | 0.10 | -0.15 |
| Delphi II WFO ES Day | 0.17 | | 0.26 | 0.19 | 0.24 | 0.11 | -0.02 | -0.09 | 0.06 |
| Delphi II WFO EM Swing | 0.19 | 0.26 | | 0.03 | 0.19 | 0.07 | 0.17 | 0.09 | 0.08 |
| Sentinel WFO NQ Day | 0.09 | 0.19 | 0.03 | | 0.53 | 0.52 | -0.10 | 0.03 | -0.10 |
| Sentinel WFO TF Day | 0.23 | 0.24 | 0.19 | 0.53 | | 0.48 | -0.02 | 0.08 | -0.09 |
| Sentinel WFO ES Day | 0.02 | 0.11 | 0.07 | 0.52 | 0.48 | | -0.08 | 0.01 | -0.10 |
| AXIOM WFO NQ Swing | 0.04 | -0.02 | 0.17 | -0.10 | -0.02 | -0.08 | | 0.61 | -0.02 |
| AXIOM WFO ES Swing | 0.10 | -0.09 | 0.09 | 0.03 | 0.08 | 0.01 | 0.61 | | -0.05 |
| Metrica WFO ES | -0.15 | 0.06 | 0.08 | -0.10 | -0.09 | -0.10 | -0.02 | -0.05 | |

**Correlation** is a statistical measurement of the relationship between two variables. Possible correlations range from +1 to −1. A zero correlation indicates that there is no relationship between the variables. A correlation of −1 indicates a perfect negative correlation, meaning that as one variable goes up, the other goes down. A correlation of +1 indicates a perfect positive correlation, meaning that both variables move in the same direction together. For trading systems that have positive returns, the closer the correlation is to zero, the better. Generally, a correlation between -.3 and +.3 is considered low correlation and indicates that the profitable systems would make a good combination, since there is low likelihood that they would consistently move in the same direction and to the same degree as each other in any given month. This helps to reduce volatility & risk.

# Delphi II WFO

**Delphi** is a swing and day trading system that was released September 27, 2005.

Delphi is a robust trend-following system that employs a proprietary dynamic channel for entries and exits. On July 1, 2013 TradingVisions released Delphi II WFO, which incorporates a walk-forward optimization protocol to day trade the emini Russell and emini S&P and swing trade the emini Midcap. The WFO version of Delphi II uses the original Delphi II logic introduced in May, 2007. All entries and exits are stops or limit orders. Exits are based upon volatility, as determined by ATR (average true range), while maximum dollar stops cap the losses. The three versions of Delphi II WFO have low correlations of .12, .22, and .29, making them excellent portfolio candidates.



Created with TradeStation

# Sentinel WFO

**Sentinel** was released in January, 2012, and is designed to trade the e-mini S&P, NASDAQ, and Russell.

Sentinel is a trend-following system that watches for early market strength or weakness and then a confirming continuation. It uses no indicators, relying exclusively on time and price patterns, which tend to provide the most reliable trade signals, since they are usually associated with general human emotions or a "crowd mentality." In the market for only about 1% of the time, it is remarkable that Sentinel is able to catch so much profit for so little time risk.

Sentinel is a simple system, with only 2 entry parameters. For purchasers, it is simple enough to be traded without software, or it can be completely automated with TradeStation. It has a high hypothetical profit-per-trade history, a high percentage of wins, and very low historical hypothetical drawdowns. It works well on the index futures markets, as well as index ETFs like SPY and IWN.

On June 7, 2013 TradingVisions released Sentinel WFO, which incorporates a walk-forward optimization protocol. Re-optimization will be done once a year, and the resulting best values will be used to trade for the next year.



Created with TradeStation

# AXIOM Index II WFO

**AXIOM Index** is a trend-following swing trading system that was released April 21, 2004. A channel-based strategy, it is recommended for trading the e-mini S&P and the e-mini NASDAQ. AXIOM employs a unique entry mechanism that utilizes a proprietary channel built upon the confluence and mutual confirmation of a number of trend cycles.

On June 1, 2013 TradingVisions released AXIOM Index II WFO, which incorporates several changes to AXIOM Index made over the last two years, most importantly a walk-forward optimization protocol. Re-optimization of only the exit stops is done once a year, and the resulting best values are used to trade for the next year.



# Metrica WFO

**Metrica**, TradingVisions latest offering, was released in December, 2015, and is designed to swing trade the e-mini S&P.

Unlike TradingVisions other WFO programs, Metrica is a counter-trend system, and as such it has almost no correlation with Delphi, AXIOM, or Sentinel. This makes it the perfect addition to the Vista Portfolios.

Metrica is highly selective in waiting for a unique signal that the market is oversold, with fear dominating price action, or that the market is overbought, with complacency dominating. These two extremes have a tendency to provide excellent trading opportunities.

In hypothetical out-of-sample performance, Metrica wins over 70% of the time, and its average trades exceeds $700, after slippage and commission. It trades about once a month and is in a trade about 21% of the time. The maximum dollar risk is $2,000 per contract.

Metrica has two trading levels. Level1 trades a maximum of 1 contract. Level2 adds a second long contract under special circumstances that occur about 25% of the time. Level2 adds about 55% of hypothetical profit, generating more hypothetical profits than the other WFO systems and markets. Because it can trade 2 contracts, Level2 is generally recommended for only the larger account sizes.

Metrica was submitted to Futures Truth for third-party tracking in December of 2015.

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*The portfolio components chosen herein are the most current choices. The components may change over time and as such these results are not intended to show the results of past portfolios or for comparison to actual account results. In some cases the same portfolio name is used, although the components may have changed.  The pages below only show hypothetical performance for the current component choices & parameters.*

ALL PERFORMANCE REPORTS BELOW ARE UPDATED THROUGH March 31, 2016.
*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 0 | 2/13/04 |
| Delphi II WFO TF Day | 0 | 2/15/06 |
| Delphi II WFO ES Day | 0 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| Total Profit | $61,068 |
|---|---|
| Max Drawdown (closed equity) | -$6,263 |
| Average Max. Drawdown** | -$6,013 |
| Rec. Account Size | $17,500 |
| Average Annual Profit | $4,366 |
| Avg. Annual Return (1 cont.) | 24.9% |
| Total Trades Days | 743 |
| Percent Winning Trade Days | 47.9% |
| Average Trade Day Profit | $82 |
| Sharpe Ratio | 1.04 |
| Lease fee deducted? | YES |
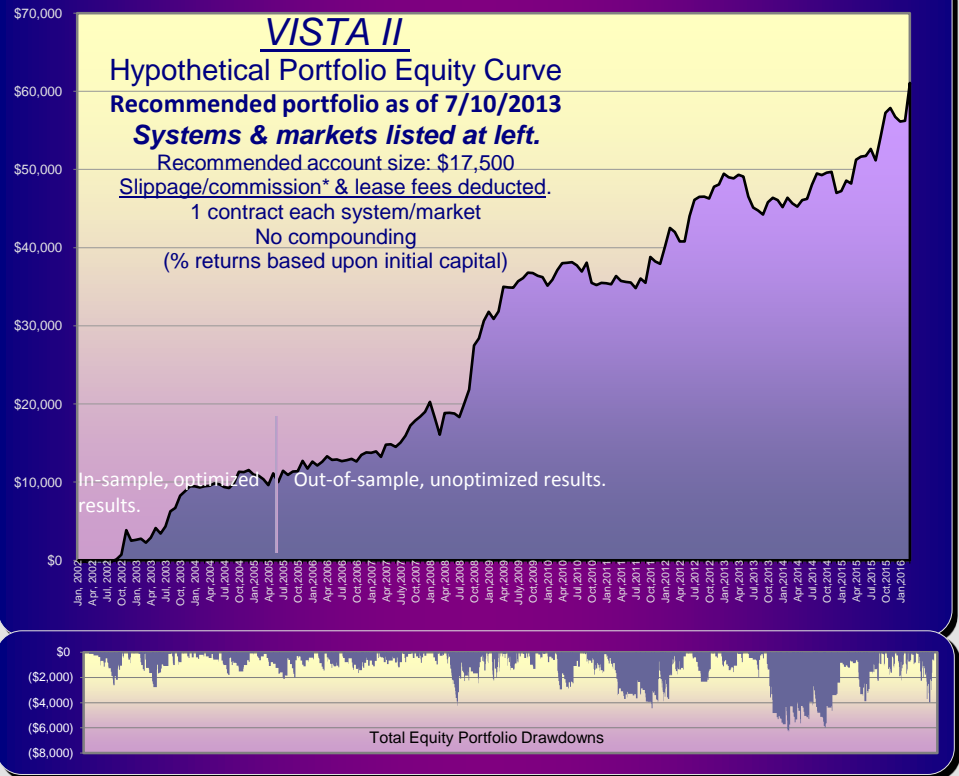
## VISTA II
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $17,500
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.     Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | (130) | (130) | (130) | (420) | (463) | (1,350) | 1,513 | 950 | 285 | 595 | 3,138 | (1,350) | 2,508 | 14.3% | -15.0% |
| 2003 | 110 | 143 | (503) | 633 | 1,240 | (710) | 910 | 1,935 | 435 | 1,565 | 580 | 630 | 6,968 | 39.8% | -15.3% |
| 2004 | (15) | (140) | 155 | 65 | 295 | (115) | (350) | (125) | 660 | 1,420 | (45) | 265 | 2,070 | 11.8% | -10.3% |
| 2005 | (590) | (125) | (460) | (750) | 1,500 | (1,120) | 1,455 | (530) | 430 | 40 | 1,325 | (990) | 185 | 1.1% | -11.3% |
| 2006 | 900 | (500) | 475 | 700 | (460) | 55 | (215) | 120 | 170 | (335) | 840 | 320 | 2,070 | 11.8% | -9.4% |
| 2007 | (50) | 180 | (700) | 1,560 | 50 | (330) | 560 | 865 | 1,305 | 635 | 508 | 610 | 5,193 | 29.7% | -5.5% |
| 2008 | 1,273 | (2,058) | (2,140) | 2,768 | 30 | (88) | (460) | 1,728 | 1,800 | 5,630 | 920 | 2,233 | 11,635 | 66.5% | -24.3% |
| 2009 | 1,163 | (918) | 968 | 3,150 | (85) | (35) | 830 | 400 | 695 | (50) | (348) | (180) | 5,590 | 31.9% | -16.8% |
| 2010 | (1,085) | 760 | 1,220 | 895 | 50 | 78 | (408) | (785) | 1,133 | (2,585) | (280) | 280 | (728) | -4.2% | -19.4% |
| 2011 | (50) | (130) | 1,060 | (633) | (125) | (80) | (715) | 1,233 | (555) | 3,310 | (575) | (305) | 2,435 | 13.9% | -22.2% |
| 2012 | 2,225 | 2,365 | (525) | (1,200) | 0 | 3,235 | 2,080 | 388 | 30 | (245) | 1,513 | 288 | 10,153 | 58.0% | -13.4% |
| 2013 | 1,378 | (460) | (140) | 463 | (230) | (2,555) | (1,415) | (373) | (515) | 1,570 | 575 | (303) | (2,005) | -11.5% | -35.8% |
| 2014 | (895) | 1,205 | (725) | (415) | 830 | 165 | 1,815 | 1,430 | (210) | 313 | 110 | (2,700) | 923 | 5.3% | -18.7% |
| 2015 | 248 | 1,328 | (373) | 3,045 | 398 | 90 | 895 | (1,465) | 2,955 | 3,123 | 625 | (1,133) | 9,735 | 55.6% | -18.5% |
| 2016 | (603) | 98 | 4,843 | | | | | | | | | | 4,338 | 24.8% | -22.8% |
| | | | | | | | | | | | | Average | 4,366 | 24.9% | -17.2% |

COMMODITY TRADING BEARS A HIGH DEGREE OF RISK. PEOPLE CAN & DO LOSE MONEY. PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS. HYPOTHETICAL RESULTS HAVE MANY INHERENT LIMITATIONS.
Please read the Disclosures & Disclaimers page.
TF=e-mini Russell 2000; EM=e-mini Midcap; ES=e-mini S&P 500; NQ=NASDAQ 100.
**\***Slippage/commission (roundturn): EM $50; TF/ ES/NQ $30.
**\*\*** Average maximum drawdown of 2,000 Monte Carlo random equity curve simulations as of date portfolio was first created.

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 0 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 0 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $112,683 |
| Max Drawdown (closed equity) | -$7,490 |
| Average Max. Drawdown** | -$7,964 |
| Rec. Account Size | $23,000 |
| Average Annual Profit | $8,001 |
| Avg. Annual Return (1 cont.) | 34.8% |
| Total Trades Days | 1,497 |
| Percent Winning Trade Days | 52.1% |
| Average Trade Day Profit | $75 |
| Sharpe Ratio | 1.89 |
| Lease fee deducted? | YES |
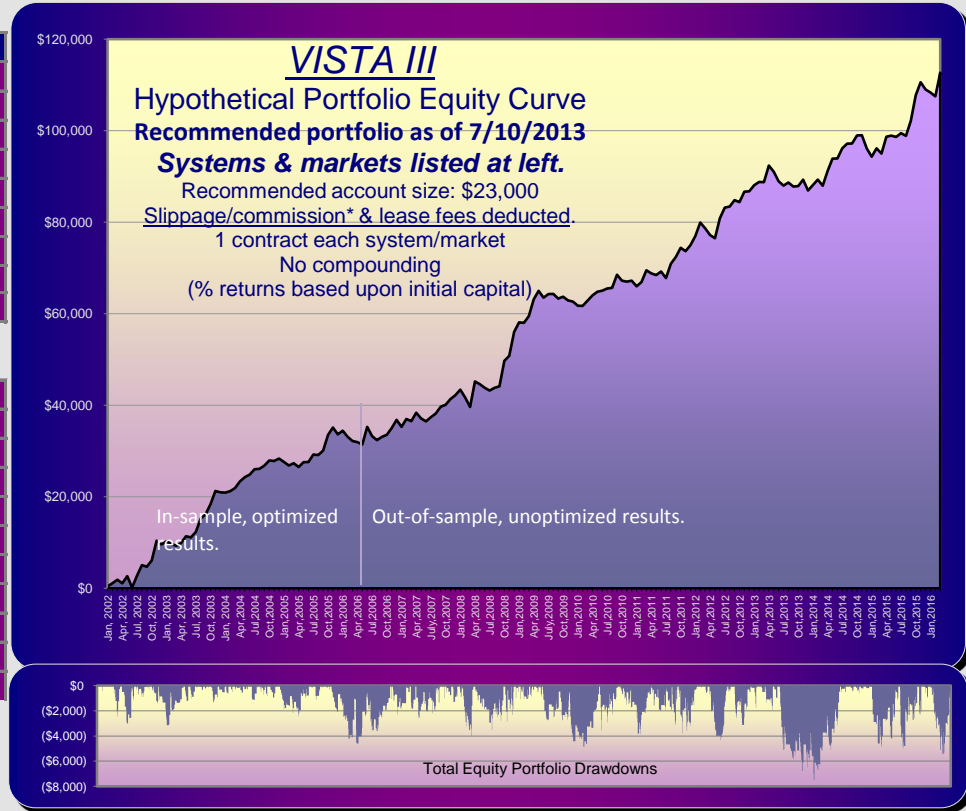
## VISTA III
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $23,000
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 445 | 695 | 745 | (785) | 1,573 | (2,475) | 2,588 | 2,295 | (350) | 1,350 | 4,343 | (815) | 9,608 | 41.8% | -13.0% |
| 2003 | 645 | (518) | (423) | 618 | 1,455 | (245) | 1,175 | 2,950 | 930 | 2,200 | 2,885 | (285) | 11,388 | 49.5% | -13.7% |
| 2004 | (70) | 305 | 680 | 1,440 | 950 | 550 | 1,185 | 80 | 715 | 1,115 | (110) | 530 | 7,370 | 32.0% | -5.1% |
| 2005 | (745) | (770) | 495 | (835) | 1,065 | 35 | 1,630 | (105) | 975 | 3,425 | 1,620 | (1,505) | 5,285 | 23.0% | -10.6% |
| 2006 | 805 | (1,335) | (920) | (245) | (515) | 3,850 | (2,030) | (875) | 715 | 460 | 1,465 | 1,800 | 3,175 | 13.8% | -17.0% |
| 2007 | (1,530) | 1,725 | (485) | 1,845 | (1,245) | (645) | 915 | 800 | 1,480 | 430 | 1,253 | 845 | 5,388 | 23.4% | -11.1% |
| 2008 | 1,208 | (1,703) | (2,085) | 5,583 | (595) | (793) | (605) | 603 | 325 | 5,565 | 1,095 | 5,228 | 13,825 | 60.1% | -17.5% |
| 2009 | 2,088 | (103) | 1,473 | 3,675 | 1,850 | (1,500) | 795 | 25 | (1,020) | 415 | (813) | (255) | 6,630 | 28.8% | -19.2% |
| 2010 | (910) | (25) | 1,155 | 1,140 | 795 | 233 | 468 | 140 | 2,868 | (1,290) | (215) | 215 | 4,573 | 19.9% | -15.5% |
| 2011 | (1,235) | 925 | 2,575 | (678) | (370) | 775 | (1,430) | 3,128 | 1,460 | 2,035 | (740) | 1,310 | 7,755 | 33.7% | -16.6% |
| 2012 | 2,010 | 2,940 | (1,270) | (1,465) | (705) | 4,360 | 2,335 | 233 | 1,405 | (440) | 2,278 | 93 | 11,773 | 51.2% | -18.9% |
| 2013 | 1,313 | 725 | (35) | 3,618 | (1,325) | (2,120) | (930) | 673 | (880) | 105 | 1,400 | (2,368) | 175 | 0.8% | -32.6% |
| 2014 | 1,190 | 1,190 | (1,340) | 3,220 | 2,705 | 30 | 2,240 | 1,005 | 25 | 1,768 | 45 | (2,905) | 9,173 | 39.9% | -12.6% |
| 2015 | (1,778) | 1,823 | (1,148) | 3,680 | 243 | (295) | 840 | (610) | 3,340 | 5,568 | 2,820 | (1,578) | 12,905 | 56.1% | -21.5% |
| 2016 | (668) | (838) | 5,168 | | | | | | | | | | 3,663 | 15.9% | -23.6% |
| | | | | | | | | | | | | Average | 8,001 | 34.8% | -16.6% |

## TradingVisions Systems, Inc.
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www.TradingVisions.com

# TradingVisions **Vista** WFO Portfolios: Harness The Power of Diversification

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 0 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

* "OOS" = "out-of-sample"

| Total Profit | $156,235 |
|---|---|
| Max Drawdown (closed equity) | -$10,787 |
| Average Max. Drawdown** | -$11,349 |
| Rec. Account Size | $32,500 |
| Average Annual Profit | $11,112 |
| Avg. Annual Return (1 cont.) | 34.2% |
| Total Trades Days | 1,980 |
| Percent Winning Trade Days | 51.3% |
| Average Trade Day Profit | $79 |
| Sharpe Ratio | 2.55 |
| Lease fee deducted? | YES |

## VISTA IV
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $32,500
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

### Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 407 | 657 | 707 | (1,471) | (208) | (3,373) | 3,919 | 3,537 | 134 | 882 | 7,724 | (1,788) | 11,125 | 34.2% | -17.5% |
| 2003 | 599 | 1,792 | (3,256) | 3,489 | 2,787 | (1,233) | (243) | 4,979 | 1,304 | 3,687 | 4,187 | 1,257 | 19,348 | 59.5% | -18.2% |
| 2004 | 1,262 | 509 | 1,662 | 1,509 | 1,422 | 102 | 352 | 572 | 999 | 3,644 | (263) | 2,282 | 14,050 | 43.2% | -5.9% |
| 2005 | (1,611) | 109 | 27 | (1,576) | 2,222 | (178) | 3,472 | (481) | 2,144 | 2,807 | 2,482 | (2,281) | 7,135 | 22.0% | -11.2% |
| 2006 | 1,622 | (1,493) | (413) | 104 | (863) | 3,907 | (1,953) | (1,326) | 962 | 1,672 | 2,740 | 2,861 | 7,817 | 24.1% | -13.4% |
| 2007 | (2,141) | 2,374 | (468) | 4,104 | (1,276) | (1,901) | 1,037 | (358) | 3,012 | 2,337 | 657 | 2,117 | 9,493 | 29.2% | -12.7% |
| 2008 | 1,079 | (3,121) | (2,553) | 7,769 | 462 | (2,548) | (473) | (693) | 192 | 4,837 | 1,684 | 8,287 | 14,920 | 45.9% | -18.0% |
| 2009 | 1,899 | 569 | 1,914 | 2,824 | 1,414 | (601) | 1,637 | 1,097 | (548) | 2,129 | (1,783) | (168) | 10,383 | 31.9% | -21.9% |
| 2010 | (1,638) | (526) | 1,829 | 2,212 | (533) | (163) | 2,459 | (1,448) | 3,339 | (1,202) | (2,897) | 2,897 | 4,328 | 13.3% | -16.3% |
| 2011 | (713) | 887 | 3,589 | (201) | (408) | (193) | (2,196) | 2,199 | 877 | 5,007 | (1,996) | 1,864 | 8,715 | 26.8% | -16.6% |
| 2012 | 2,824 | 4,727 | (2,183) | (3,586) | (726) | 5,417 | 877 | 139 | 2,094 | (776) | 3,779 | (183) | 12,403 | 38.2% | -22.2% |
| 2013 | 2,434 | 1,057 | 107 | 4,587 | (1,678) | (5,383) | 409 | (403) | (53) | 1,324 | 3,597 | (1,511) | 4,485 | 13.8% | -33.2% |
| 2014 | (258) | 2,722 | (443) | 3,634 | 2,794 | 809 | 2,557 | 1,037 | (741) | 1,729 | 837 | (4,326) | 10,350 | 31.8% | -11.0% |
| 2015 | (3,113) | 3,047 | (3,258) | 4,174 | 227 | (1,073) | 2,307 | (2,823) | 4,932 | 7,472 | 2,917 | (1,748) | 13,057 | 40.2% | -24.6% |
| 2016 | (626) | 1,502 | 7,752 | | | | | | | | | | 8,627 | 26.5% | -19.4% |
| | | | | | | | | | | | | Average | 11,112 | 34.2% | -17.5% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 0 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 0 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| Total Profit | $169,628 |
|---|---|
| Max Drawdown (closed equity) | -$9,429 |
| Average Max. Drawdown** | -$9,721 |
| Rec. Account Size | $32,000 |
| Average Annual Profit | $11,981 |
| Avg. Annual Return (1 cont.) | 35.3% |
| Total Trades Days | 1,614 |
| Percent Winning Trade Days | 54.5% |
| Average Trade Day Profit | $105 |
| Sharpe Ratio | 1.45 |
| Lease fee deducted? | YES |

## VistaI IV-ES (e-mini S&P 500)
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 4/21/2016**
*Systems & markets listed at left.*
Recommended account size: $32,000
Slippage/commission* & lease fees deducted
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

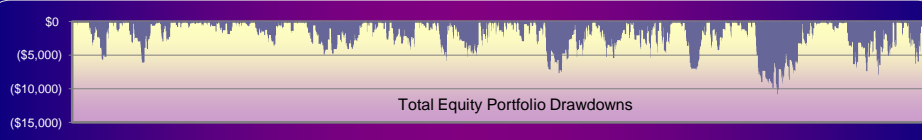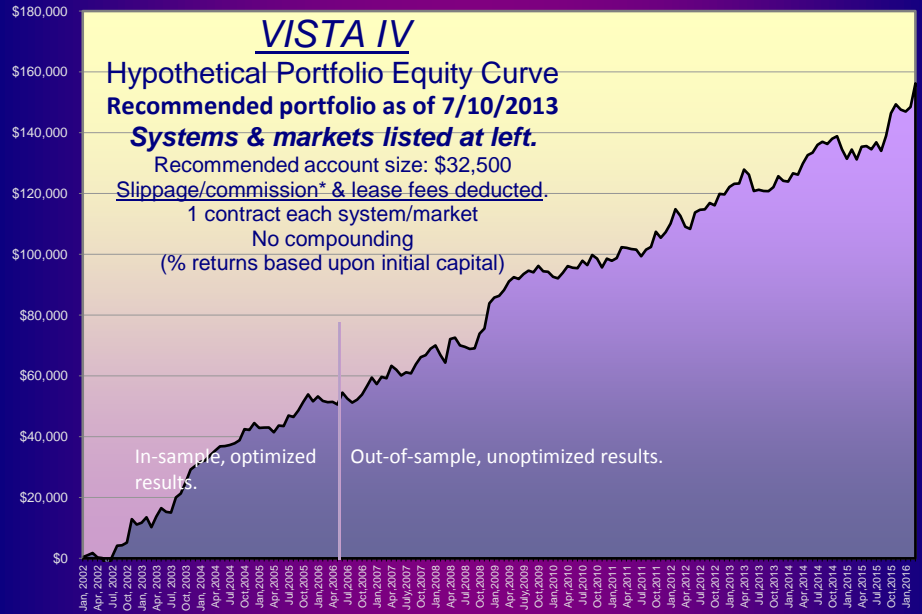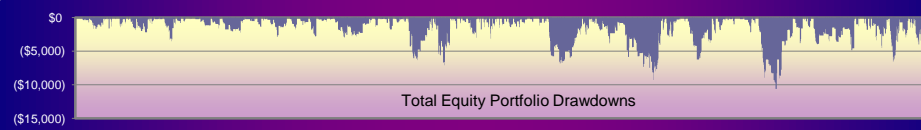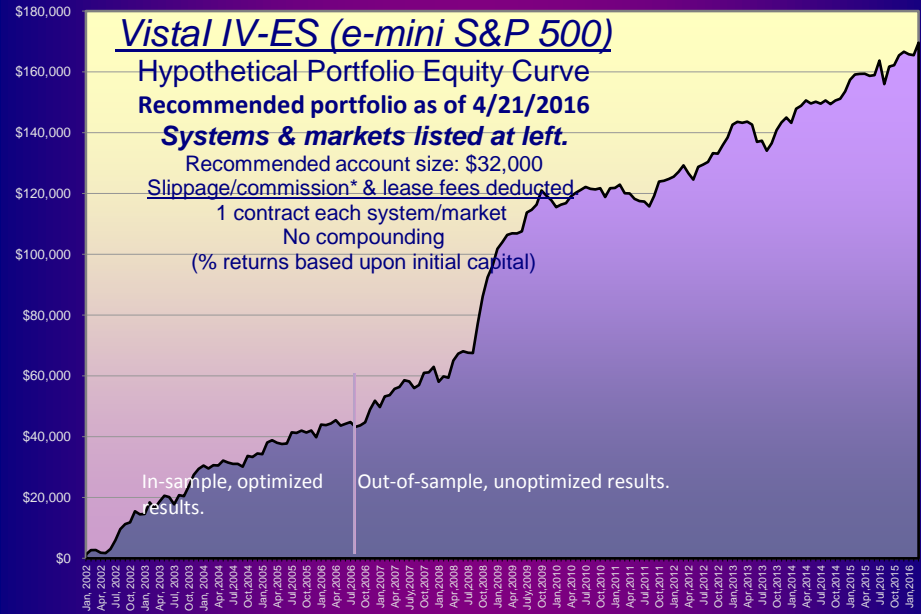| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,297 | 1,412 | 32 | (886) | (118) | 1,342 | 2,879 | 3,654 | 1,662 | 569 | 3,657 | (1,016) | 14,483 | 45.3% | -5.2% |
| 2003 | 139 | 3,794 | (2,023) | 2,257 | 1,967 | (461) | (2,381) | 3,024 | (328) | 3,314 | 3,692 | 1,959 | 14,953 | 46.7% | -11.1% |
| 2004 | 1,094 | (958) | 1,077 | (101) | 1,629 | (656) | (438) | (1) | (923) | 3,542 | (348) | 1,159 | 5,075 | 15.9% | -7.0% |
| 2005 | (241) | 3,839 | 754 | (843) | (393) | 152 | 3,679 | (188) | 757 | (636) | 667 | (2,216) | 5,330 | 16.7% | -9.0% |
| 2006 | 4,162 | (168) | 534 | 1,089 | (1,781) | 592 | 574 | (1,596) | 494 | 1,017 | 4,205 | 2,901 | 12,023 | 37.6% | -9.3% |
| 2007 | (2,106) | 3,514 | 417 | 2,072 | 629 | 2,212 | (403) | (2,178) | 1,009 | 3,994 | 172 | 1,812 | 11,143 | 34.8% | -19.8% |
| 2008 | (4,918) | 1,772 | (428) | 5,624 | 2,279 | 799 | (488) | (106) | 9,822 | 8,799 | 6,312 | 3,722 | 33,188 | 103.7% | -22.1% |
| 2009 | 5,619 | 2,169 | 2,419 | 519 | (41) | 687 | 6,194 | 899 | 1,709 | 4,654 | (1,708) | (1,476) | 21,645 | 67.6% | -18.1% |
| 2010 | (2,303) | 834 | 479 | 2,222 | 1,184 | 934 | 997 | (628) | (193) | 393 | (2,889) | 2,889 | 3,918 | 12.2% | -12.1% |
| 2011 | 99 | 1,087 | (2,836) | (56) | (1,791) | (726) | (156) | (1,606) | 3,452 | 4,729 | 257 | 594 | 3,048 | 9.5% | -27.3% |
| 2012 | 764 | 1,592 | 2,114 | (2,601) | (2,083) | 4,197 | 749 | 877 | 2,872 | (158) | 2,777 | 2,539 | 13,638 | 42.6% | -19.5% |
| 2013 | 4,214 | 942 | (318) | 384 | (981) | (5,676) | 377 | (3,291) | 2,447 | 4,322 | 2,534 | 1,617 | 6,570 | 20.5% | -33.2% |
| 2014 | (1,751) | 4,644 | 967 | 1,767 | (1,008) | 584 | (643) | 1,059 | (1,196) | 1,172 | 597 | 2,389 | 8,580 | 26.8% | -15.2% |
| 2015 | 3,824 | 1,744 | 217 | 42 | (703) | 244 | 4,804 | (7,756) | 5,774 | 439 | 3,222 | 1,217 | 13,067 | 40.8% | -20.6% |
| 2016 | (851) | (291) | 4,112 | | | | | | | | | | 2,970 | 9.3% | -12.6% |
| | | | | | | | | | | | | Average | 11,981 | 35.3% | -16.1% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted .*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 0 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $240,803 |
| Max Drawdown (closed equity) | -$11,359 |
| Average Max. Drawdown** | -$11,432 |
| Rec. Account Size | $33,000 |
| Average Annual Profit | $17,061 |
| Avg. Annual Return (1 cont.) | 51.7% |
| Total Trades Days | 2,131 |
| Percent Winning Trade Days | 52.8% |
| Average Trade Day Profit | $113 |
| Sharpe Ratio | 1.72 |
| Lease fee deducted? | YES |

## Vista V
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 4/22/2016**
*Systems & markets listed at left.*
Recommended account size: 33,000
Slippage/commission\* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

**Total Equity** (open+clos **Total Equity** (closed trade)

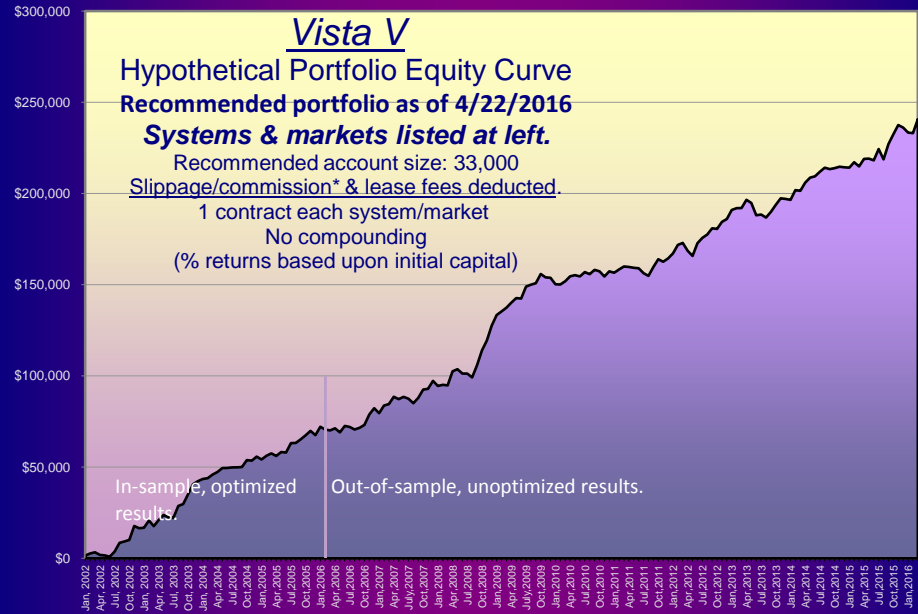| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,533 | 1,156 | 648 | (1,437) | (282) | (734) | 2,846 | 4,776 | 763 | 823 | 7,666 | (1,239) | 16,520 | 50.1% | -11.1% |
| 2003 | 281 | 3,976 | (3,124) | 3,416 | 2,728 | (1,292) | (302) | 6,553 | 1,018 | 5,376 | 5,463 | 1,696 | 25,790 | 78.2% | -15.2% |
| 2004 | 1,203 | 451 | 1,963 | 1,436 | 2,148 | 53 | 293 | 43 | 188 | 3,793 | (322) | 2,223 | 13,475 | 40.8% | -6.5% |
| 2005 | (1,564) | 2,033 | 1,301 | (1,429) | 2,163 | (264) | 5,161 | 108 | 1,983 | 2,193 | 2,423 | (2,339) | 11,770 | 35.7% | -9.5% |
| 2006 | 4,603 | (1,552) | (472) | 1,166 | (2,232) | 3,543 | (572) | (1,384) | 903 | 1,613 | 5,692 | 3,449 | 14,760 | 44.7% | -13.4% |
| 2007 | (2,729) | 4,196 | 783 | 4,046 | (1,334) | 1,283 | (1,044) | (2,467) | 2,953 | 4,551 | 391 | 4,376 | 15,005 | 45.5% | -27.5% |
| 2008 | (2,802) | 626 | (299) | 7,711 | 1,148 | (2,374) | (32) | (2,092) | 6,716 | 8,091 | 5,403 | 8,228 | 30,325 | 91.9% | -18.8% |
| 2009 | 5,756 | 1,978 | 2,051 | 2,766 | 2,501 | (262) | 6,571 | 1,038 | 813 | 5,036 | (1,842) | (227) | 26,180 | 79.3% | -21.8% |
| 2010 | (3,552) | (127) | 1,771 | 2,711 | 648 | (704) | 2,373 | (1,129) | 2,363 | (820) | (2,838) | 2,838 | 3,535 | 10.7% | -15.9% |
| 2011 | (772) | 1,813 | 1,623 | (259) | (467) | (252) | (2,707) | (1,467) | 4,858 | 4,263 | (1,384) | 1,806 | 7,058 | 21.4% | -26.4% |
| 2012 | 2,766 | 4,668 | 1,078 | (4,312) | (2,814) | 6,978 | 2,916 | 1,826 | 3,431 | (339) | 3,856 | 1,581 | 21,635 | 65.6% | -29.9% |
| 2013 | 4,948 | 998 | 48 | 4,528 | (1,737) | (6,737) | 386 | (1,639) | 3,111 | 3,898 | 3,538 | (349) | 10,995 | 33.3% | -34.4% |
| 2014 | (519) | 5,368 | (394) | 4,483 | 2,736 | 751 | 2,498 | 2,223 | (799) | 536 | 778 | (319) | 17,343 | 52.6% | -17.9% |
| 2015 | (207) | 2,988 | (2,297) | 4,116 | 168 | (947) | 6,193 | (5,652) | 8,391 | 5,368 | 5,053 | (1,412) | 21,765 | 66.0% | -22.9% |
| 2016 | (2,714) | (332) | 7,693 | | | | | | | | | | 4,648 | 14.1% | -24.2% |
| | | | | | | | | | | | | Average | 17,061 | 51.7% | -19.7% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS\* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $182,140 |
| Max Drawdown (closed equity) | -$13,416 |
| Average Max. Drawdown\*\* | -$12,301 |
| Rec. Account Size | $35,500 |
| Average Annual Profit | $12,915 |
| Avg. Annual Return (1 cont.) | 36.4% |
| Total Trades Days | 2,707 |
| Percent Winning Trade Days | 52.0% |
| Average Trade Day Profit | $67 |
| Sharpe Ratio | 2.65 |
| Lease fee deducted? | YES |

## Vista V-L
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $35,500
Slippage/commission\* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results. | Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns
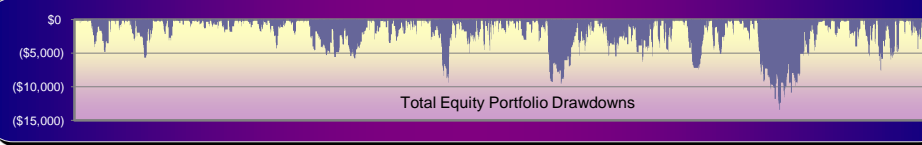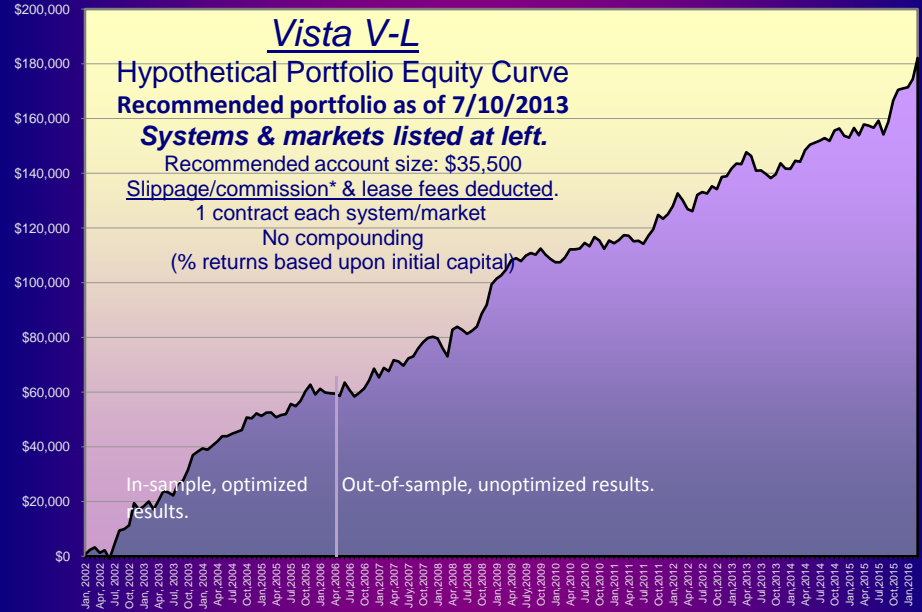
| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 693 | 1,686 | 913 | (1,997) | 948 | (3,134) | 5,296 | 5,068 | 496 | 1,396 | 8,083 | (2,302) | 17,148 | 48.3% | -13.6% |
| 2003 | 1,181 | 1,743 | (2,932) | 3,223 | 3,558 | (569) | (1,089) | 4,478 | 966 | 3,903 | 5,378 | 1,313 | 21,155 | 59.6% | -16.0% |
| 2004 | 1,161 | (517) | 1,533 | 1,491 | 1,931 | 21 | 883 | 686 | 681 | 4,586 | (322) | 1,826 | 13,960 | 39.3% | -5.3% |
| 2005 | (954) | 1,223 | 53 | (1,747) | 808 | 351 | 3,698 | (804) | 1,971 | 3,481 | 2,423 | (3,584) | 6,920 | 19.5% | -12.4% |
| 2006 | 2,063 | (1,367) | (249) | (139) | (849) | 4,883 | (2,759) | (2,334) | 1,346 | 1,613 | 2,953 | 4,269 | 9,430 | 26.6% | -13.8% |
| 2007 | (3,204) | 3,496 | (1,242) | 4,053 | (479) | (1,539) | 2,671 | 703 | 2,906 | 2,288 | 1,551 | 461 | 11,665 | 32.9% | -9.8% |
| 2008 | (644) | (3,542) | (3,009) | 9,766 | 1,076 | (1,122) | (1,457) | 1,091 | 1,546 | 4,783 | 3,136 | 7,513 | 19,137 | 53.9% | -23.5% |
| 2009 | 2,066 | 1,283 | 2,166 | 3,251 | 801 | (1,074) | 2,013 | 941 | (594) | 2,241 | (2,192) | (1,594) | 9,307 | 26.2% | -26.2% |
| 2010 | (1,222) | (7) | 1,771 | 2,941 | 6 | 288 | 2,056 | (1,224) | 3,376 | (1,265) | (3,021) | 3,021 | 6,720 | 18.9% | -15.2% |
| 2011 | (999) | 1,163 | 1,793 | (224) | (2,024) | 186 | (1,117) | 2,913 | 2,383 | 5,306 | (1,437) | 1,701 | 9,645 | 27.2% | -15.6% |
| 2012 | 2,911 | 4,668 | (2,459) | (3,262) | (792) | 5,988 | 1,008 | (532) | 2,648 | (1,052) | 4,453 | 268 | 13,850 | 39.0% | -20.9% |
| 2013 | 2,833 | 1,803 | (217) | 4,361 | (1,359) | (5,419) | 128 | (1,287) | (1,519) | 1,341 | 4,071 | (1,942) | 2,795 | 7.9% | -37.8% |
| 2014 | (117) | 2,971 | (359) | 4,216 | 2,013 | 751 | 713 | 956 | (1,034) | 3,768 | 778 | (2,704) | 11,953 | 33.7% | -13.1% |
| 2015 | (619) | 3,521 | (2,687) | 3,968 | (427) | (804) | 2,616 | (5,059) | 4,608 | 7,821 | 3,888 | 518 | 17,345 | 48.9% | -21.4% |
| 2016 | 431 | 2,986 | 7,693 | | | | | | | | | | 11,110 | 31.3% | -12.3% |
| | | | | | | | | | | | | Average | 12,915 | 36.4% | -17.1% |

# TradingVisions Vista WFO Portfolios: Harness The Power of Diversification

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 0 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $266,708 |
| Max Drawdown (closed equity) | -$13,318 |
| Average Max. Drawdown** | -$12,217 |
| Rec. Account Size | $35,000 |
| Average Annual Profit | $18,855 |
| Avg. Annual Return (1 cont.) | 53.9% |
| Total Trades Days | 2,858 |
| Percent Winning Trade Days | 53.1% |
| Average Trade Day Profit | $93 |
| Sharpe Ratio | 1.78 |
| Lease fee deducted? | YES |
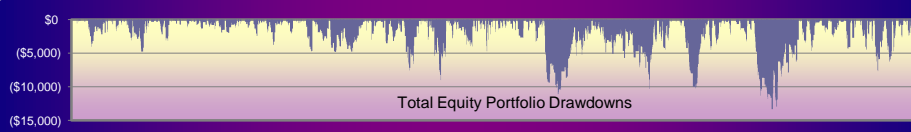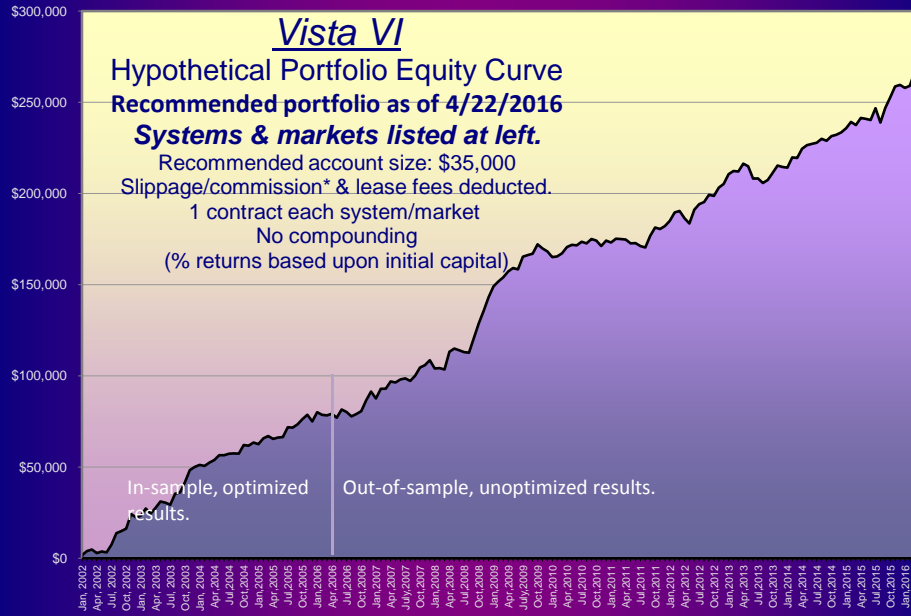
## Vista VI
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 4/22/2016**
*Systems & markets listed at left.*
Recommended account size: $35,000
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,820 | 2,185 | 855 | (1,963) | 875 | (495) | 4,223 | 6,308 | 1,125 | 1,338 | 8,025 | (1,753) | 22,543 | 64.4% | -11.6% |
| 2003 | 863 | 3,928 | (2,800) | 3,150 | 3,500 | (628) | (1,148) | 6,053 | 680 | 5,593 | 6,655 | 1,753 | 27,598 | 78.9% | -13.6% |
| 2004 | 1,103 | (575) | 1,835 | 1,418 | 2,658 | (28) | 825 | 158 | (130) | 4,735 | (380) | 1,768 | 13,385 | 38.2% | -5.8% |
| 2005 | (908) | 3,148 | 1,328 | (1,600) | 750 | 265 | 5,388 | (215) | 1,810 | 2,868 | 2,365 | (3,643) | 11,555 | 33.0% | -12.7% |
| 2006 | 5,045 | (1,425) | (308) | 923 | (2,218) | 4,520 | (1,378) | (2,393) | 1,288 | 1,555 | 5,905 | 4,858 | 16,373 | 46.8% | -13.7% |
| 2007 | (3,793) | 5,318 | 10 | 3,995 | (538) | 1,645 | 590 | (1,405) | 2,848 | 4,503 | 1,285 | 2,720 | 17,178 | 49.1% | -21.7% |
| 2008 | (4,525) | 205 | (755) | 9,708 | 1,763 | (948) | (1,015) | (308) | 8,070 | 8,038 | 6,855 | 7,455 | 34,543 | 98.7% | -25.7% |
| 2009 | 5,923 | 2,693 | 2,303 | 3,193 | 1,888 | (735) | 6,948 | 883 | 768 | 5,148 | (2,250) | (1,653) | 25,105 | 71.7% | -26.7% |
| 2010 | (3,135) | 393 | 1,713 | 3,440 | 1,188 | (253) | 1,970 | (905) | 2,400 | (883) | (2,963) | 2,963 | 5,928 | 16.9% | -14.3% |
| 2011 | (1,058) | 2,090 | (173) | (283) | (2,083) | 128 | (1,628) | (753) | 6,365 | 4,563 | (825) | 1,643 | 7,988 | 22.8% | -25.5% |
| 2012 | 2,853 | 4,610 | 803 | (3,988) | (2,880) | 7,550 | 3,048 | 1,155 | 3,985 | (615) | 4,530 | 2,033 | 23,083 | 66.0% | -29.3% |
| 2013 | 5,348 | 1,745 | (275) | 4,303 | (1,418) | (6,773) | 105 | (2,523) | 1,645 | 3,915 | 4,013 | (780) | 9,305 | 26.6% | -38.1% |
| 2014 | (378) | 5,618 | (310) | 5,065 | 1,955 | 693 | 655 | 2,143 | (1,093) | 2,575 | 720 | 1,303 | 18,945 | 54.1% | -13.4% |
| 2015 | 2,288 | 3,463 | (1,725) | 3,910 | (485) | (678) | 6,503 | (7,888) | 8,068 | 5,718 | 6,025 | 855 | 26,053 | 74.4% | -21.9% |
| 2016 | (1,658) | 1,153 | 7,635 | | | | | | | | | | 7,130 | 20.4% | -18.4% |
| | | | | | | | | | | | | Average | 18,855 | 53.9% | -19.5% |

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS\* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $195,395 |
| Max Drawdown (closed equity) | -$13,708 |
| Average Max. Drawdown\*\* | -$13,117 |
| Rec. Account Size | $37,500 |
| Average Annual Profit | $13,827 |
| Avg. Annual Return (1 cont.) | 36.9% |
| Total Trades Days | 3,075 |
| Percent Winning Trade Days | 52.2% |
| Average Trade Day Profit | $64 |
| Sharpe Ratio | 2.26 |
| Lease fee deducted? | YES |



**Vista VI-L**
Hypothetical Portfolio Equity Curve
Recommended portfolio as of 7/10/2013
*Systems & markets listed at left.*
Recommended account size: $37,500
Slippage/commission\* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

**Total Equity (closed trade)**

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 85 | 1,628 | 255 | (1,735) | 2,290 | (3,383) | 5,868 | 4,990 | (43) | 1,728 | 7,595 | (3,130) | 16,148 | 43.1% | -12.0% |
| 2003 | 1,453 | 1,730 | (2,825) | 3,175 | 3,500 | (1,058) | (838) | 4,420 | 908 | 3,925 | 5,320 | 1,255 | 20,965 | 55.9% | -14.6% |
| 2004 | 1,103 | (575) | 1,475 | 1,433 | 1,873 | (38) | 825 | 628 | 623 | 4,528 | (380) | 1,768 | 13,260 | 35.4% | -5.2% |
| 2005 | (1,013) | 1,165 | (5) | (1,805) | 750 | 293 | 3,640 | (863) | 1,913 | 3,423 | 2,365 | (3,643) | 6,220 | 16.6% | -11.9% |
| 2006 | 1,845 | (1,425) | (308) | (198) | (908) | 4,825 | (2,738) | (2,393) | 1,288 | 1,555 | 2,778 | 5,153 | 9,475 | 25.3% | -13.4% |
| 2007 | (4,088) | 4,438 | (1,300) | 3,995 | (538) | (1,598) | 2,613 | 645 | 2,953 | 2,905 | 3,798 | 148 | 13,970 | 37.3% | -9.4% |
| 2008 | 138 | (3,600) | (1,928) | 10,693 | 1,018 | 150 | (1,935) | 603 | 3,298 | 6,285 | 2,893 | 7,945 | 25,558 | 68.2% | -20.4% |
| 2009 | 2,383 | 845 | 3,118 | 3,143 | 1,053 | (1,073) | 1,805 | 823 | (653) | 2,443 | (2,560) | (2,083) | 9,243 | 24.6% | -26.9% |
| 2010 | (1,280) | (230) | 1,713 | 2,883 | 173 | 705 | 1,833 | (1,208) | 3,498 | (1,380) | (2,878) | 2,878 | 6,705 | 17.9% | -14.9% |
| 2011 | (1,273) | 1,740 | 1,720 | (168) | (2,248) | 128 | (345) | 4,470 | 2,540 | 6,148 | (930) | 473 | 12,255 | 32.7% | -15.4% |
| 2012 | 2,853 | 4,595 | (2,743) | (3,275) | (830) | 7,525 | 625 | (590) | 2,825 | (1,110) | 5,330 | 525 | 15,730 | 41.9% | -20.2% |
| 2013 | 3,030 | 1,655 | (275) | 4,578 | (1,558) | (5,593) | 485 | (1,215) | (2,008) | 1,643 | 4,013 | (2,000) | 2,755 | 7.3% | -36.6% |
| 2014 | 250 | 3,538 | (1,103) | 4,678 | 1,375 | 693 | 800 | 693 | (328) | 3,805 | 720 | (4,383) | 10,738 | 28.6% | -13.7% |
| 2015 | (398) | 3,943 | (1,375) | 3,130 | (35) | (68) | 2,663 | (5,843) | 4,205 | 8,503 | 5,275 | 1,040 | 21,040 | 56.1% | -21.5% |
| 2016 | (1,413) | 4,568 | 8,180 | | | | | | | | | | 11,335 | 30.2% | -20.5% |
| | | | | | | | | | | | | Average | 13,827 | 36.9% | -17.1% |

# TradingVisions Vista WFO Portfolios: Harness The Power of Diversification

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 0 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $287,943 |
| Max Drawdown (closed equity) | -$12,804 |
| Average Max. Drawdown** | -$15,027 |
| Rec. Account Size | $37,000 |
| Average Annual Profit | $20,324 |
| Avg. Annual Return (1 cont.) | 54.9% |
| Total Trades Days | 3,226 |
| Percent Winning Trade Days | 53.1% |
| Average Trade Day Profit | $89 |
| Sharpe Ratio | 1.81 |
| Lease fee deducted? | YES |

## Vista VII
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 4/22/2016**
*Systems & markets listed at left.*
Recommended account size: $37,000
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

### Total Equity (closed trade)

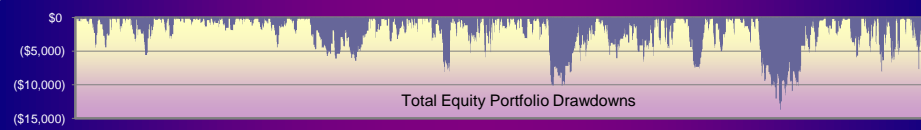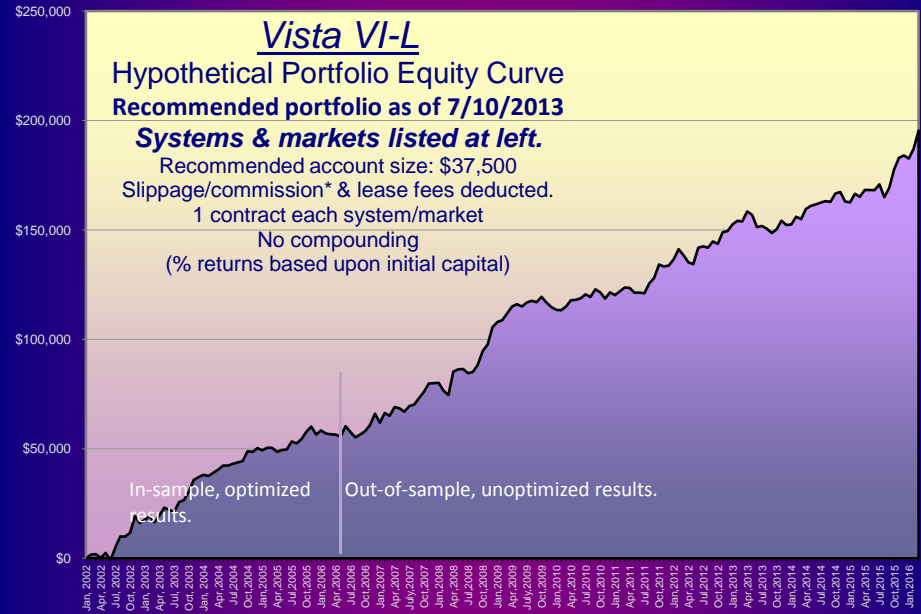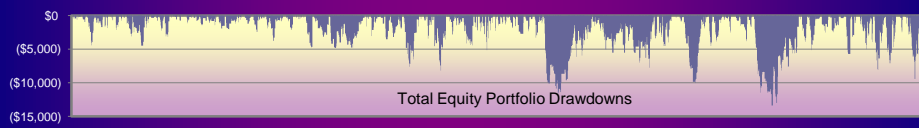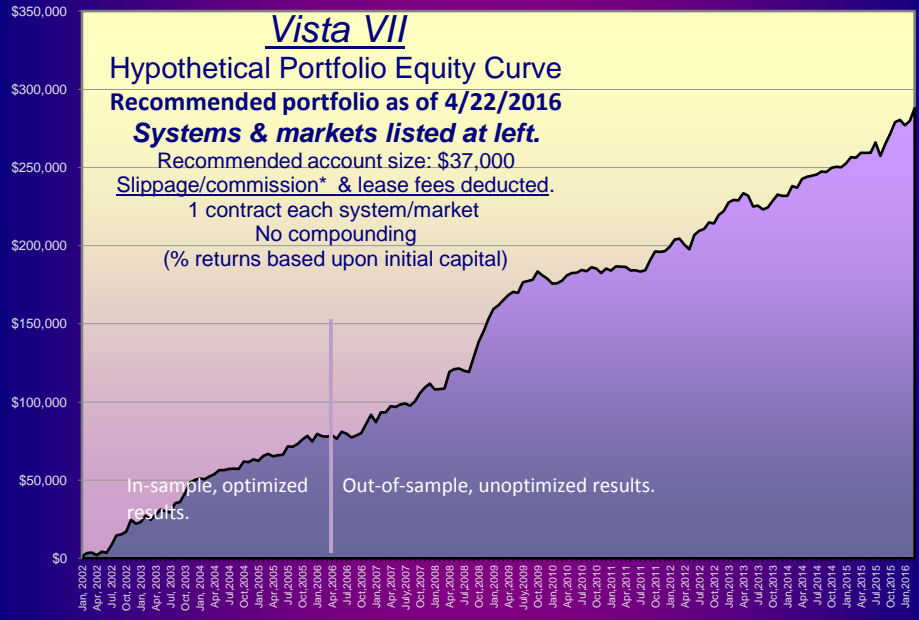| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,258 | 2,173 | 243 | (1,654) | 2,263 | (697) | 4,841 | 6,276 | 633 | 1,716 | 7,583 | (2,534) | 22,103 | 59.7% | -12.0% |
| 2003 | 1,181 | 4,101 | (2,787) | 3,148 | 3,488 | (1,069) | (849) | 6,041 | 668 | 5,661 | 6,643 | 1,741 | 27,968 | 75.6% | -12.1% |
| 2004 | 1,091 | (587) | 1,823 | 1,406 | 2,646 | (39) | 813 | 146 | (142) | 4,723 | (392) | 1,756 | 13,245 | 35.8% | -5.5% |
| 2005 | (919) | 3,136 | 1,316 | (1,612) | 738 | 253 | 5,376 | (227) | 1,798 | 2,856 | 2,353 | (3,654) | 11,415 | 30.9% | -12.1% |
| 2006 | 4,873 | (1,437) | (319) | 911 | (2,229) | 4,508 | (1,309) | (2,404) | 1,276 | 1,543 | 5,870 | 5,834 | 17,117 | 46.3% | -13.0% |
| 2007 | (4,769) | 6,306 | (2) | 3,983 | (549) | 1,633 | 578 | (1,417) | 2,941 | 5,166 | 3,578 | 2,453 | 19,903 | 53.8% | -20.5% |
| 2008 | (3,697) | 193 | 373 | 10,681 | 1,751 | 371 | (1,447) | (749) | 9,868 | 9,586 | 6,658 | 7,933 | 41,523 | 112.2% | -22.1% |
| 2009 | 6,286 | 2,301 | 3,301 | 3,131 | 2,186 | (687) | 6,786 | 811 | 756 | 5,396 | (2,572) | (2,094) | 25,600 | 69.2% | -27.3% |
| 2010 | (3,147) | 216 | 1,701 | 3,428 | 1,401 | 211 | 1,793 | (842) | 2,568 | (857) | (2,866) | 2,866 | 6,473 | 17.5% | -14.6% |
| 2011 | (1,284) | 2,713 | (199) | (179) | (2,259) | 116 | (809) | 851 | 6,568 | 5,451 | (272) | 461 | 11,158 | 30.2% | -17.9% |
| 2012 | 2,841 | 4,583 | 566 | (3,954) | (2,872) | 9,133 | 2,711 | 1,143 | 4,208 | (627) | 5,453 | 2,336 | 25,523 | 69.0% | -27.2% |
| 2013 | 5,591 | 1,643 | (287) | 4,566 | (1,569) | (6,899) | 508 | (2,404) | 1,203 | 4,263 | 4,001 | (792) | 9,825 | 26.6% | -36.1% |
| 2014 | 36 | 6,231 | (1,007) | 5,573 | 1,363 | 681 | 788 | 1,926 | (339) | 2,658 | 708 | (329) | 18,290 | 49.4% | -15.5% |
| 2015 | 2,556 | 3,931 | (367) | 3,118 | (47) | 106 | 6,596 | (8,624) | 7,711 | 6,446 | 7,458 | 1,423 | 30,308 | 81.9% | -21.9% |
| 2016 | (3,454) | 2,781 | 8,168 | | | | | | | | | | 7,495 | 20.3% | -25.5% |
| | | | | | | | | | | | | Average | 20,324 | 54.9% | -18.9% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $258,770 |
| Max Drawdown (closed equity) | -$15,806 |
| Average Max. Drawdown** | -$14,862 |
| Rec. Account Size | $42,500 |
| Average Annual Profit | $18,307 |
| Avg. Annual Return (1 cont.) | 43.1% |
| Total Trades Days | 3,609 |
| Percent Winning Trade Days | 53.2% |
| Average Trade Day Profit | $72 |
| Sharpe Ratio | 2.07 |
| Lease fee deducted? | YES |

## Vista VII-L
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $42,500
Slippage/commission\* & lease fees deducted.
1 contract each system/market.
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

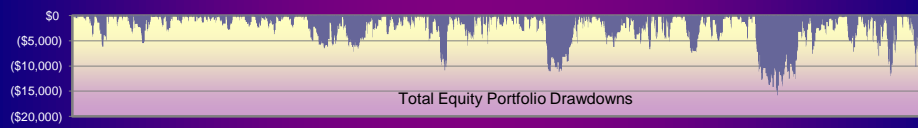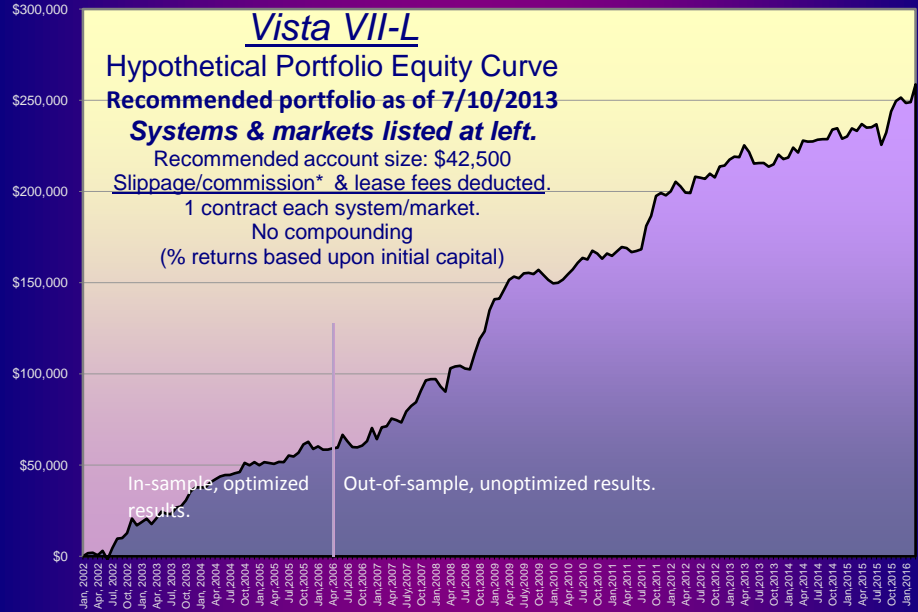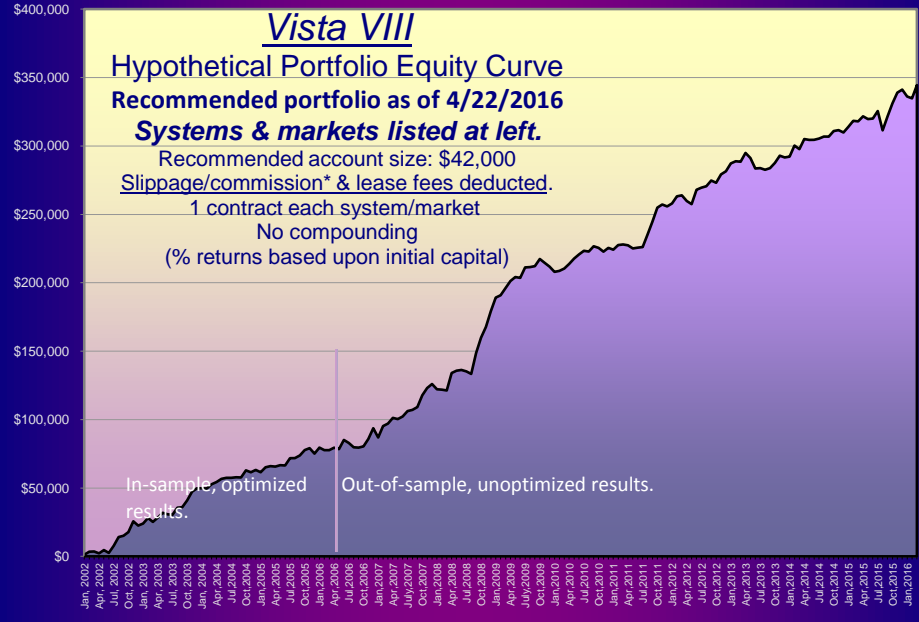| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 73 | 1,686 | 243 | (1,427) | 2,478 | (4,734) | 6,246 | 5,178 | 296 | 2,726 | 7,963 | (3,702) | 17,028 | 40.1% | -14.5% |
| 2003 | 1,801 | 1,823 | (2,942) | 3,183 | 3,608 | (1,069) | (279) | 3,578 | 646 | 3,293 | 5,088 | 1,993 | 20,725 | 48.8% | -12.9% |
| 2004 | 111 | (127) | 2,793 | 1,681 | 1,581 | 801 | 53 | 926 | 661 | 5,036 | (1,342) | 1,756 | 13,930 | 32.8% | -6.7% |
| 2005 | (1,734) | 1,693 | (447) | (487) | 1,078 | (129) | 3,628 | (534) | 2,071 | 4,551 | 1,463 | (3,954) | 7,200 | 16.9% | -11.2% |
| 2006 | 1,423 | (1,797) | 21 | 741 | 341 | 7,033 | (3,589) | (3,114) | (194) | 973 | 2,473 | 7,199 | 11,510 | 27.1% | -16.8% |
| 2007 | (6,134) | 6,496 | 568 | 4,233 | (849) | (1,289) | 6,031 | 2,983 | 2,091 | 6,383 | 5,586 | 656 | 26,755 | 63.0% | -11.8% |
| 2008 | 36 | (4,022) | (2,859) | 12,811 | 1,006 | 358 | (1,507) | (449) | 8,826 | 7,893 | 4,101 | 11,533 | 37,727 | 88.8% | -24.2% |
| 2009 | 6,101 | 303 | 5,076 | 5,221 | 1,821 | (944) | 2,703 | 281 | (674) | 2,321 | (2,782) | (2,724) | 16,703 | 39.3% | -26.1% |
| 2010 | (1,912) | 328 | 1,771 | 2,871 | 2,691 | 3,573 | 2,741 | (879) | 4,826 | (1,555) | (2,836) | 2,836 | 14,455 | 34.0% | -13.5% |
| 2011 | (1,284) | 2,438 | 2,418 | (579) | (2,239) | 636 | 943 | 12,778 | 5,498 | 10,936 | 1,658 | (1,319) | 31,885 | 75.0% | -15.7% |
| 2012 | 2,211 | 5,263 | (2,544) | (3,427) | (212) | 8,933 | (507) | (652) | 2,813 | (2,052) | 6,008 | 513 | 16,350 | 38.5% | -17.6% |
| 2013 | 3,228 | 1,643 | (287) | 6,486 | (3,669) | (6,314) | 283 | 33 | (2,019) | 1,271 | 5,341 | (2,472) | 3,525 | 8.3% | -37.2% |
| 2014 | 868 | 5,436 | (2,694) | 6,546 | (577) | 111 | 948 | 291 | 11 | 5,253 | 708 | (5,724) | 11,178 | 26.3% | -17.9% |
| 2015 | 1,221 | 4,441 | (1,367) | 3,738 | (1,957) | 241 | 1,601 | (11,284) | 6,723 | 11,631 | 5,693 | 1,868 | 22,550 | 53.1% | -28.2% |
| 2016 | (2,964) | 486 | 9,728 | | | | | | | | | | 7,250 | 17.1% | -23.9% |
| | | | | | | | | | | | | Average | 18,307 | 43.1% | -18.5% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $344,478 |
| Max Drawdown (closed equity) | -$15,611 |
| Average Max. Drawdown** | -$14,495 |
| Rec. Account Size | $42,000 |
| Average Annual Profit | $24,311 |
| Avg. Annual Return (1 cont.) | 57.9% |
| Total Trades Days | 3,760 |
| Percent Winning Trade Days | 54.0% |
| Average Trade Day Profit | $91 |
| Sharpe Ratio | 1.71 |
| Lease fee deducted? | YES |

## *Vista VIII*
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 4/22/2016**
*Systems & markets listed at left.*
Recommended account size: $42,000
Slippage/commission\* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.



Total Equity Portfolio Drawdowns

### Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,207 | 2,192 | 192 | (1,386) | 2,412 | (2,088) | 5,179 | 6,424 | 932 | 2,674 | 7,912 | (3,146) | 22,503 | 53.6% | -9.9% |
| 2003 | 1,489 | 4,034 | (2,823) | 3,117 | 3,557 | (1,121) | (331) | 5,159 | 367 | 4,989 | 6,372 | 2,439 | 27,248 | 64.9% | -10.9% |
| 2004 | 59 | (178) | 3,102 | 1,614 | 2,314 | 759 | 2 | 404 | (143) | 5,192 | (1,393) | 1,704 | 13,435 | 32.0% | -7.2% |
| 2005 | (1,681) | 3,624 | 834 | (333) | 1,027 | (208) | 5,324 | 62 | 1,917 | 3,944 | 1,412 | (4,006) | 11,915 | 28.4% | -11.5% |
| 2006 | 4,412 | (1,848) | (31) | 1,809 | (1,021) | 6,677 | (2,201) | (3,166) | (246) | 922 | 5,445 | 7,801 | 18,553 | 44.2% | -13.9% |
| 2007 | (6,736) | 8,324 | 1,827 | 4,182 | (901) | 1,902 | 3,957 | 882 | 2,039 | 8,604 | 5,327 | 2,922 | 32,328 | 77.0% | -12.0% |
| 2008 | (3,838) | (268) | (598) | 12,759 | 1,699 | 539 | (1,058) | (1,841) | 15,357 | 11,154 | 7,827 | 11,482 | 53,213 | 126.7% | -23.0% |
| 2009 | 9,964 | 1,719 | 5,219 | 5,169 | 2,914 | (598) | 7,644 | 229 | 694 | 5,234 | (2,833) | (2,776) | 32,580 | 77.6% | -26.5% |
| 2010 | (3,818) | 734 | 1,719 | 3,377 | 3,879 | 3,039 | 2,662 | (553) | 3,857 | (1,153) | (2,784) | 2,784 | 13,742 | 32.7% | -13.2% |
| 2011 | (1,336) | 3,372 | 459 | (631) | (2,291) | 584 | 439 | 9,119 | 9,487 | 10,199 | 2,277 | (1,371) | 30,307 | 72.2% | -15.9% |
| 2012 | 2,159 | 5,212 | 724 | (4,146) | (2,293) | 10,502 | 1,539 | 1,042 | 4,157 | (1,608) | 6,092 | 2,284 | 25,663 | 61.1% | -23.9% |
| 2013 | 5,749 | 1,592 | (338) | 6,434 | (3,721) | (7,661) | 267 | (1,196) | 1,152 | 3,852 | 5,289 | (1,303) | 10,115 | 24.1% | -37.2% |
| 2014 | 614 | 8,089 | (2,638) | 7,402 | (628) | 59 | 897 | 1,484 | (41) | 4,067 | 657 | (1,711) | 18,250 | 43.5% | -18.2% |
| 2015 | 4,134 | 4,389 | (398) | 3,687 | (2,008) | 374 | 5,494 | (14,106) | 10,189 | 9,534 | 7,837 | 2,212 | 31,338 | 74.6% | -29.8% |
| 2016 | (5,046) | (1,341) | 9,677 | | | | | | | | | | 3,290 | 7.8% | -28.8% |
| | | | | | | | | | | | | Average | 24,311 | 57.9% | -18.8% |

TF=e-mini Russell 2000; EM=e-mini Midcap; ES=e-mini S&P 500; NQ=NASDAQ 100.
\*Slippage/commission (roundturn): EM $50; TF/ ES/NQ $30.
\*\* Average maximum drawdown of 2,000 Monte Carlo random equity curve simulations as of date portfolio was first created.

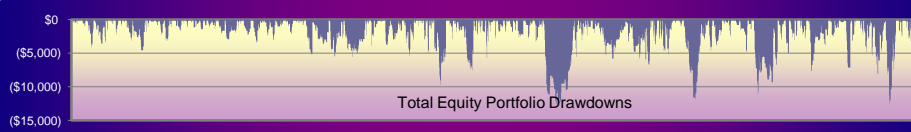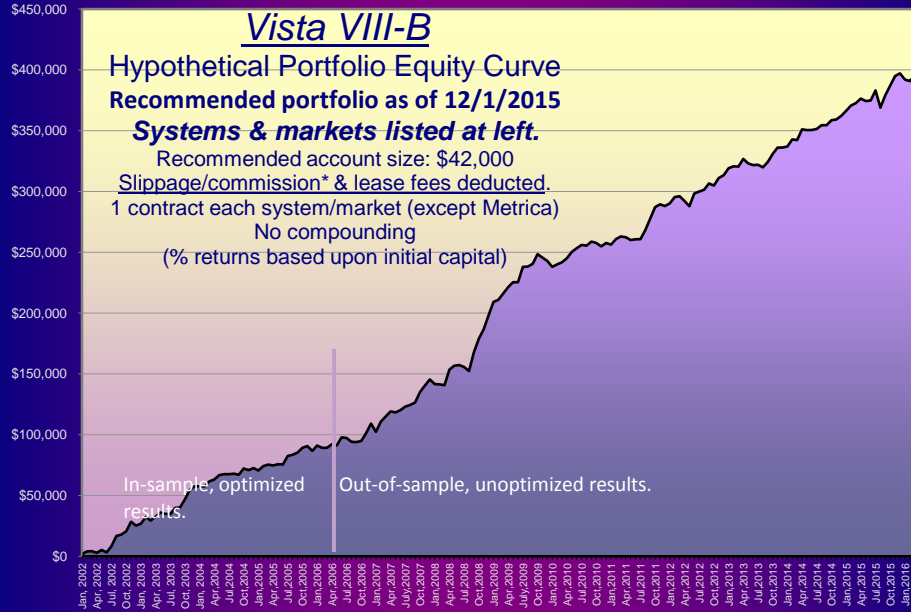# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 0 | 4/1/06 |
| Metrica WFO ES Lev1 | 0 | 7/22/02 |
| Metrica WFO ES Lev2 | 1 | 7/22/02 |

\* "OOS" = "out-of-sample"

| Total Profit | $395,505 |
|---|---|
| Max Drawdown (closed equity) | -$12,533 |
| Average Max. Drawdown** | -$14,555 |
| Rec. Account Size | $42,000 |
| Average Annual Profit | $27,912 |
| Avg. Annual Return (1 cont.) | 66.5% |
| Total Trades Days | 3,767 |
| Percent Winning Trade Days | 53.9% |
| Average Trade Day Profit | $105 |
| Sharpe Ratio | 1.94 |
| Lease fee deducted? | YES |

## Vista VIII-B
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 12/1/2015**
*Systems & markets listed at left.*
Recommended account size: $42,000
Slippage/commission\* & lease fees deducted.
1 contract each system/market (except Metrica)
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,902 | 2,192 | 192 | (1,386) | 2,412 | (2,088) | 5,179 | 8,362 | 1,127 | 2,674 | 7,912 | (3,146) | 25,330 | 60.3% | -9.9% |
| 2003 | 1,489 | 5,454 | (2,793) | 3,087 | 3,557 | (1,121) | (331) | 5,159 | 367 | 6,722 | 7,722 | 2,922 | 32,233 | 76.7% | -10.9% |
| 2004 | 59 | (178) | 4,227 | 1,584 | 3,589 | 754 | 2 | 404 | (911) | 5,192 | (1,393) | 1,704 | 15,033 | 35.8% | -7.2% |
| 2005 | (1,986) | 3,624 | 1,247 | (738) | 1,027 | (208) | 7,057 | 949 | 1,799 | 3,944 | 1,412 | (4,006) | 14,120 | 33.6% | -11.5% |
| 2006 | 4,412 | (1,848) | (31) | 2,979 | (1,021) | 6,677 | (506) | (3,166) | (246) | 922 | 6,503 | 7,801 | 22,475 | 53.5% | -13.3% |
| 2007 | (6,736) | 8,324 | 4,297 | 4,182 | (901) | 1,902 | 2,944 | 1,302 | 2,039 | 8,604 | 5,327 | 5,042 | 36,325 | 86.5% | -12.8% |
| 2008 | (3,838) | (268) | (598) | 12,759 | 3,232 | 539 | (1,646) | (3,283) | 15,357 | 11,154 | 7,827 | 11,482 | 52,715 | 125.5% | -23.0% |
| 2009 | 11,047 | 1,719 | 5,219 | 5,169 | 4,097 | (48) | 12,634 | 229 | 2,189 | 8,042 | (2,833) | (2,776) | 44,687 | 106.4% | -26.5% |
| 2010 | (4,883) | 2,094 | 1,719 | 3,377 | 5,174 | 3,039 | 2,662 | (553) | 3,314 | (1,153) | (2,784) | 2,784 | 14,790 | 35.2% | -13.2% |
| 2011 | (1,336) | 4,522 | 2,174 | (631) | (2,291) | 584 | 114 | 7,414 | 9,487 | 9,457 | 2,277 | (1,371) | 30,400 | 72.4% | -15.9% |
| 2012 | 2,159 | 5,212 | 724 | (3,938) | (4,323) | 10,502 | 1,539 | 1,504 | 5,177 | (1,721) | 6,212 | 2,284 | 25,330 | 60.3% | -28.2% |
| 2013 | 5,749 | 1,592 | (338) | 6,434 | (3,721) | (1,361) | 232 | (2,108) | 4,359 | 6,597 | 5,289 | 54 | 22,778 | 54.2% | -26.6% |
| 2014 | 814 | 5,859 | (556) | 8,834 | (628) | 59 | 897 | 3,104 | (41) | 4,067 | 657 | 2,947 | 26,013 | 61.9% | -18.2% |
| 2015 | 4,134 | 4,389 | 2,009 | 3,687 | (2,008) | 374 | 8,352 | (14,106) | 10,189 | 7,892 | 7,837 | 2,212 | 34,960 | 83.2% | -29.8% |
| 2016 | (5,046) | (1,303) | 4,667 | | | | | | | | | | (1,682) | -4.0% | -28.8% |
| | | | | | | | | | | | | Average | 27,912 | 66.5% | -18.4% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

## Systems & markets included:

| Systems & markets included: | | OOS\* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 1 | 4/1/06 |
| Metrica WFO ES 2 Sw | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| | |
|---|---|
| Total Profit | $363,065 |
| Max Drawdown (closed equity) | -$21,049 |
| Average Max. Drawdown\*\* | -$20,963 |
| Rec. Account Size | $60,000 |
| Average Annual Profit | $25,724 |
| Avg. Annual Return (1 cont.) | 42.9% |
| Total Trades Days | 4,398 |
| Percent Winning Trade Days | 53.0% |
| Average Trade Day Profit | $83 |
| Sharpe Ratio | 2.22 |
| Lease fee deducted? | YES |

### Vista VIII-L
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 7/10/2013**
*Systems & markets listed at left.*
Recommended account size: $60,000
Slippage/commission\* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

## Total Equity (closed trade)

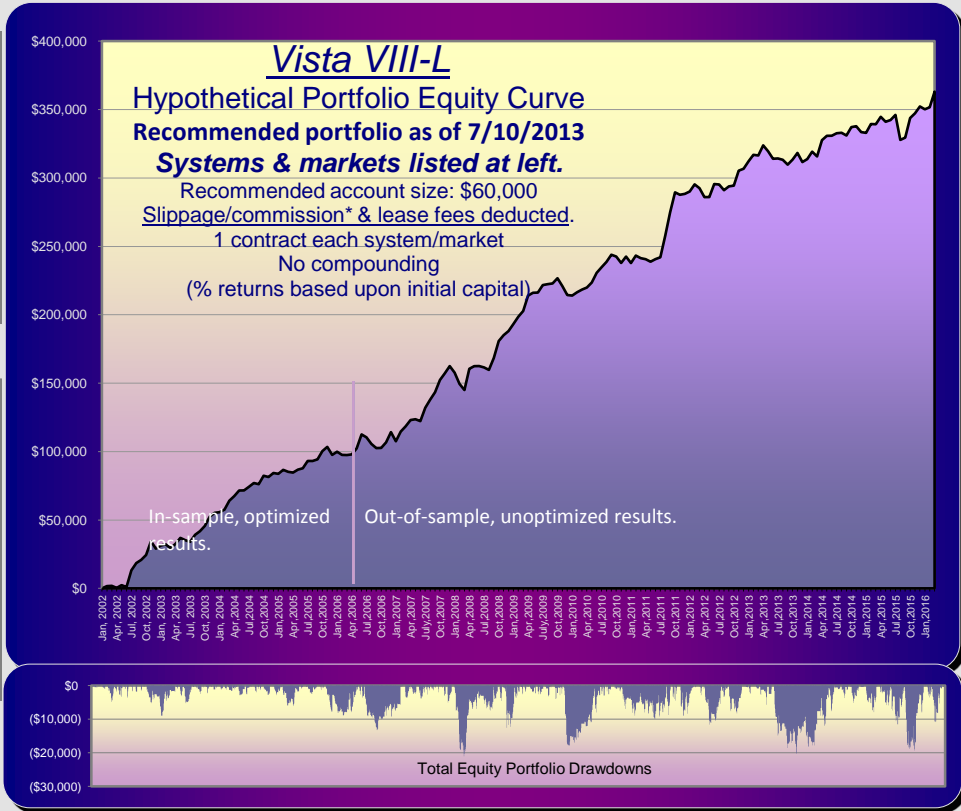| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 1,634 | 192 | (1,478) | 1,992 | (1,386) | 12,209 | 5,312 | 2,324 | 3,589 | 9,992 | (5,363) | 29,038 | 48.4% | -8.3% |
| 2003 | 2,269 | 907 | (2,763) | 3,057 | 4,397 | (1,666) | (1,206) | 5,097 | 2,669 | 3,852 | 6,822 | 2,752 | 26,185 | 43.6% | -12.5% |
| 2004 | 484 | 1,822 | 6,542 | 3,369 | 4,104 | 59 | 2,647 | 2,759 | (846) | 6,164 | (938) | 2,954 | 29,120 | 48.5% | -4.8% |
| 2005 | (621) | 2,922 | (1,433) | (583) | 2,142 | 1,024 | 5,362 | (51) | 1,189 | 6,059 | 3,077 | (5,851) | 13,235 | 22.1% | -11.5% |
| 2006 | 2,312 | (2,313) | (121) | 474 | 4,394 | 10,217 | (2,141) | (4,776) | (3,081) | 117 | 4,048 | 7,501 | 16,630 | 27.7% | -22.1% |
| 2007 | (6,661) | 7,074 | 3,832 | 4,592 | 589 | (1,381) | 9,729 | 5,927 | 5,464 | 8,942 | 4,889 | 5,289 | 48,285 | 80.5% | -8.4% |
| 2008 | (4,816) | (8,213) | (4,461) | 15,514 | 1,904 | 77 | (978) | (1,821) | 8,724 | 12,377 | 4,264 | 3,017 | 25,587 | 42.6% | -35.1% |
| 2009 | 5,169 | 5,307 | 4,199 | 11,274 | 2,034 | 174 | 5,467 | 669 | 519 | 3,814 | (5,753) | (6,526) | 26,347 | 43.9% | -29.7% |
| 2010 | (403) | 2,427 | 1,949 | 1,514 | 3,639 | 7,107 | 4,064 | 3,909 | 5,249 | (1,330) | (4,679) | 4,679 | 28,125 | 46.9% | -12.4% |
| 2011 | (4,741) | 5,452 | (1,893) | (761) | (1,831) | 1,884 | 1,352 | 15,717 | 17,187 | 14,564 | (1,768) | 654 | 45,815 | 76.4% | -14.9% |
| 2012 | 1,739 | 5,212 | (2,816) | (6,498) | 27 | 9,517 | (318) | (4,168) | 2,787 | 547 | 10,927 | 1,407 | 18,360 | 30.6% | -19.4% |
| 2013 | 5,402 | 4,772 | (458) | 7,394 | (4,296) | (5,506) | 232 | (978) | (3,546) | 3,684 | 4,859 | (6,653) | 4,905 | 8.2% | -33.6% |
| 2014 | 2,157 | 5,434 | (3,491) | 11,904 | 3,177 | 59 | 1,807 | 349 | (1,991) | 6,122 | 657 | (4,276) | 21,908 | 36.5% | -13.9% |
| 2015 | (566) | 6,444 | (158) | 5,447 | (3,618) | 1,259 | 3,744 | (18,291) | 1,702 | 14,299 | 3,452 | 5,012 | 18,725 | 31.2% | -32.2% |
| 2016 | (2,091) | 1,494 | 11,397 | | | | | | | | | | 10,800 | 18.0% | -18.1% |
| | | | | | | | | | | | | Average | 25,724 | 42.9% | -18.4% |

# TradingVisions Vista WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 1 | 4/1/06 |
| Metrica WFO ES Lev1 | 1 | 7/22/02 |
| Metrica WFO ES Lev2 | 0 | 7/22/02 |

\* "OOS" = "out-of-sample"

| Total Profit | $448,773 |
|---|---|
| Max Drawdown (closed equity) | -$19,955 |
| Average Max. Drawdown** | -$19,270 |
| Rec. Account Size | $57,500 |
| Average Annual Profit | $31,715 |
| Avg. Annual Return (1 cont.) | 55.2% |
| Total Trades Days | 4,549 |
| Percent Winning Trade Days | 53.7% |
| Average Trade Day Profit | $99 |
| Sharpe Ratio | 1.71 |
| Lease fee deducted? | YES |

## Vista IX
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 12/1/2015**
*Systems & markets listed at left.*
Recommended account size: $57,500
Slippage/commission* & lease fees deducted.
1 contract each system/market
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

### Total Equity (closed trade)

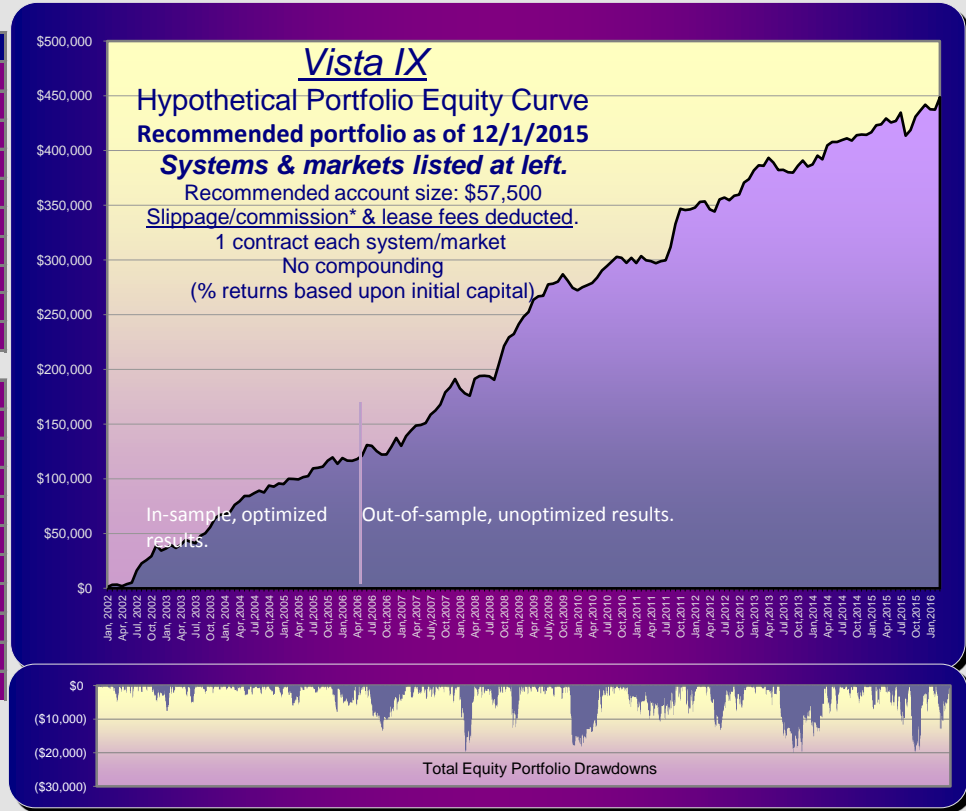| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,155 | 2,140 | 140 | (1,438) | 1,925 | 1,260 | 11,143 | 6,558 | 2,960 | 3,538 | 9,940 | (4,808) | 34,513 | 60.0% | -8.5% |
| 2003 | 1,958 | 3,118 | (2,645) | 2,990 | 4,345 | (1,718) | (1,258) | 6,678 | 2,390 | 5,548 | 8,105 | 3,198 | 32,708 | 56.9% | -11.4% |
| 2004 | 433 | 1,770 | 6,850 | 3,303 | 4,838 | 18 | 2,595 | 2,238 | (1,650) | 6,320 | (990) | 2,903 | 28,625 | 49.8% | -5.0% |
| 2005 | (568) | 4,853 | (153) | (430) | 2,090 | 945 | 7,058 | 545 | 1,035 | 5,453 | 3,025 | (5,903) | 17,950 | 31.2% | -12.0% |
| 2006 | 5,300 | (2,365) | (173) | 1,543 | 3,033 | 9,860 | (753) | (4,828) | (3,133) | 65 | 7,020 | 8,103 | 23,673 | 41.2% | -23.3% |
| 2007 | (7,263) | 8,903 | 5,090 | 4,540 | 538 | 1,810 | 7,655 | 3,825 | 5,413 | 11,163 | 4,630 | 7,555 | 53,858 | 93.7% | -8.7% |
| 2008 | (8,690) | (4,460) | (2,200) | 15,463 | 2,598 | 258 | (530) | (3,213) | 15,255 | 15,638 | 7,990 | 2,965 | 41,073 | 71.4% | -34.1% |
| 2009 | 9,033 | 6,723 | 4,343 | 11,223 | 3,128 | 520 | 10,408 | 618 | 1,888 | 6,728 | (5,805) | (6,578) | 42,225 | 73.4% | -31.0% |
| 2010 | (2,310) | 2,833 | 1,898 | 2,020 | 4,828 | 6,573 | 3,985 | 4,235 | 4,280 | (928) | (4,628) | 4,628 | 27,413 | 47.7% | -13.0% |
| 2011 | (4,793) | 6,385 | (3,853) | (813) | (1,883) | 1,833 | 848 | 12,058 | 21,175 | 13,828 | (1,150) | 603 | 44,238 | 76.9% | -15.4% |
| 2012 | 1,688 | 5,160 | 453 | (7,218) | (2,055) | 11,085 | 1,728 | (2,475) | 4,130 | 990 | 11,010 | 3,178 | 27,673 | 48.1% | -23.1% |
| 2013 | 7,923 | 4,720 | (510) | 7,343 | (4,348) | (6,853) | 215 | (2,208) | (375) | 6,265 | 4,808 | (5,485) | 11,495 | 20.0% | -34.7% |
| 2014 | 1,903 | 8,088 | (3,435) | 12,760 | 3,125 | 8 | 1,755 | 1,543 | (2,043) | 4,935 | 605 | (263) | 28,980 | 50.4% | -14.5% |
| 2015 | 2,348 | 6,393 | 810 | 5,395 | (3,670) | 1,393 | 7,638 | (21,113) | 5,168 | 12,203 | 5,595 | 5,355 | 27,513 | 47.8% | -34.7% |
| 2016 | (4,173) | (333) | 11,345 | | | | | | | | | | 6,840 | 11.9% | -22.5% |
| | | | | | | | | | | | | Average | 31,715 | 55.2% | -19.5% |

# TradingVisions *Vista* WFO Portfolios: Harness The Power of Diversification

*All results are hypothetical. Slippage+commission\* & lease fees have been deducted.*

| Systems & markets included: | | OOS\* since |
|---|---|---|
| Sentinel WFO ES Day | 1 | 7/7/03 |
| Sentinel WFO TF Day | 1 | 3/7/06 |
| Sentinel WFO NQ Day | 1 | 10/3/03 |
| AXIOM II WFO NQ Sw | 1 | 3/5/05 |
| AXIOM II WFO ES Sw | 1 | 2/13/04 |
| Delphi II WFO TF Day | 1 | 2/15/06 |
| Delphi II WFO ES Day | 1 | 2/7/04 |
| Delphi II WFO EM Sw | 1 | 4/1/06 |
| Metrica WFO ES Lev1 | 0 | 7/22/02 |
| Metrica WFO ES Lev2 | 1 | 7/22/02 |

\* "OOS" = "out-of-sample"

| Total Profit | $499,800 |
|---|---|
| Max Drawdown (closed equity) | -$19,933 |
| Average Max. Drawdown\*\* | -$19,270 |
| Rec. Account Size | $57,500 |
| Average Annual Profit | $35,322 |
| Avg. Annual Return (1 cont.) | 61.4% |
| Total Trades Days | 4,556 |
| Percent Winning Trade Days | 53.6% |
| Average Trade Day Profit | $110 |
| Sharpe Ratio | 1.88 |
| Lease fee deducted? | YES |

## Vista IX-B
### Hypothetical Portfolio Equity Curve
**Recommended portfolio as of 12/1/2015**
*Systems & markets listed at left.*
Recommended account size: $57,500
Slippage/commission\* & lease fees deducted.
1 contract each system/market (except Metrica)
No compounding
(% returns based upon initial capital)

In-sample, optimized results.

Out-of-sample, unoptimized results.

Total Equity Portfolio Drawdowns

### Total Equity (closed trade)

| Year | January | February | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total | Year % | Max DD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 1,850 | 2,140 | 140 | (1,438) | 1,925 | 1,260 | 11,143 | 8,495 | 3,155 | 3,538 | 9,940 | (4,808) | 37,340 | 64.9% | -8.5% |
| 2003 | 1,958 | 4,538 | (2,615) | 2,960 | 4,345 | (1,718) | (1,258) | 6,678 | 2,390 | 7,280 | 9,455 | 3,680 | 37,693 | 65.6% | -11.4% |
| 2004 | 433 | 1,770 | 7,975 | 3,273 | 6,113 | 13 | 2,595 | 2,238 | (2,418) | 6,320 | (990) | 2,903 | 30,223 | 52.6% | -5.9% |
| 2005 | (873) | 4,853 | 260 | (835) | 2,090 | 945 | 8,790 | 1,433 | 918 | 5,453 | 3,025 | (5,903) | 20,155 | 35.1% | -12.0% |
| 2006 | 5,300 | (2,365) | (173) | 2,713 | 3,033 | 9,860 | 943 | (4,828) | (3,133) | 65 | 8,078 | 8,103 | 27,595 | 48.0% | -23.3% |
| 2007 | (7,263) | 8,903 | 7,560 | 4,540 | 538 | 1,810 | 6,643 | 4,245 | 5,413 | 11,163 | 4,630 | 9,675 | 57,855 | 100.6% | -8.7% |
| 2008 | (8,690) | (4,460) | (2,200) | 15,463 | 4,130 | 258 | (1,118) | (4,655) | 15,255 | 15,638 | 7,990 | 2,965 | 40,575 | 70.6% | -34.1% |
| 2009 | 10,115 | 6,723 | 4,343 | 11,223 | 4,310 | 1,070 | 15,398 | 618 | 3,383 | 9,535 | (5,805) | (6,578) | 54,333 | 94.5% | -31.0% |
| 2010 | (3,375) | 4,193 | 1,898 | 2,020 | 6,123 | 6,573 | 3,985 | 4,235 | 3,738 | (928) | (4,628) | 4,628 | 28,460 | 49.5% | -13.0% |
| 2011 | (4,793) | 7,535 | (2,138) | (813) | (1,883) | 1,833 | 523 | 10,353 | 21,175 | 13,085 | (1,150) | 603 | 44,330 | 77.1% | -15.3% |
| 2012 | 1,688 | 5,160 | 453 | (7,010) | (4,085) | 11,085 | 1,728 | (2,013) | 5,150 | 878 | 11,130 | 3,178 | 27,340 | 47.5% | -26.2% |
| 2013 | 7,923 | 4,720 | (510) | 7,343 | (4,348) | (553) | 180 | (3,120) | 2,833 | 9,010 | 4,808 | (4,128) | 24,158 | 42.0% | -26.0% |
| 2014 | 2,103 | 5,858 | (1,353) | 14,193 | 3,125 | 8 | 1,755 | 3,163 | (2,043) | 4,935 | 605 | 4,395 | 36,743 | 63.9% | -13.4% |
| 2015 | 2,348 | 6,393 | 3,218 | 5,395 | (3,670) | 1,393 | 10,495 | (21,113) | 5,168 | 10,560 | 5,595 | 5,355 | 31,135 | 54.1% | -34.7% |
| 2016 | (4,173) | (295) | 6,335 | | | | | | | | | | 1,868 | 3.2% | -22.5% |
| | | | | | | | | | | | | Average | 35,322 | 61.4% | -19.1% |

COMMODITY TRADING BEARS A HIGH DEGREE OF RISK. PEOPLE CAN & DO LOSE MONEY. PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS. HYPOTHETICAL RESULTS HAVE MANY INHERENT LIMITATIONS. Please read the Disclosures & Disclaimers page.
TF=e-mini Russell 2000; EM=e-mini Midcap; ES=e-mini S&P 500; NQ=NASDAQ 100.
\*Slippage/commission (roundturn): EM $50; TF/ ES/NQ $30.
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\*\* Average maximum drawdown of 2,000 Monte Carlo random equity curve simulations as of date portfolio was first created.
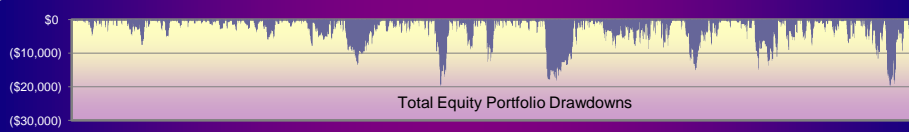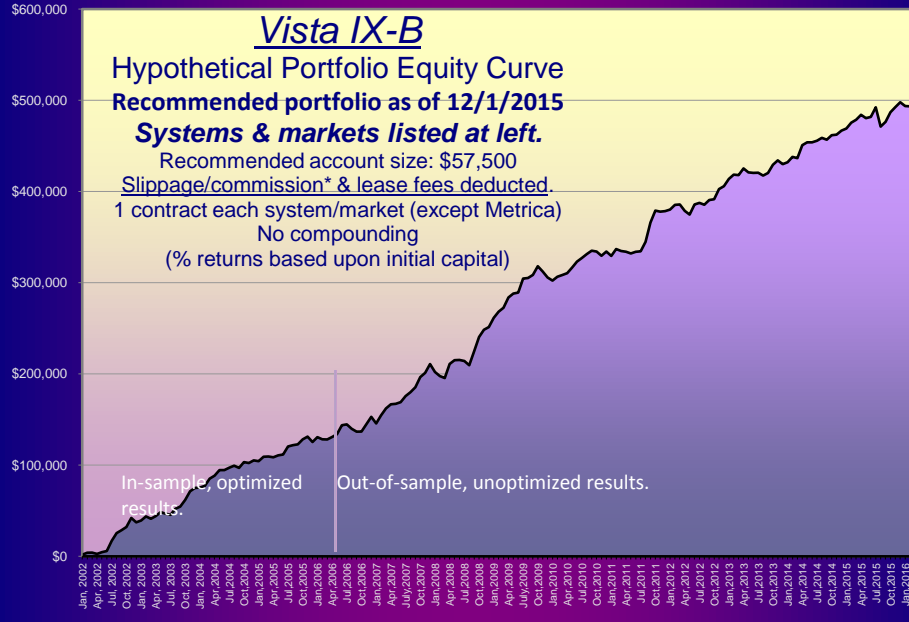
**TradingVisions Systems, Inc.**

# Subscription Form & Agreement

**Purpose:** This agreement is solely for the purpose of subscribing to the transmittal of trade signals generated by the TradingVisions trading systems listed below, & for making payment for these signals.

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**LEASE RATES for e-minis :**

- 1-3 contracts (any combination of systems & markets) : $195 US per quarter per contract (TradeStation & MultiCharts* $225)
  For example, if you want to lease 1 contract of Delphi II WFO TF for a quarter and have a broker trade it for you, the cost would be $195 total.
- 4-6 contracts:                                    $175 US per quarter per contract (TradeStation & MultiCharts $195)
- 7 contracts and more:                             $155 US per quarter per contract (TradeStation & MultiCharts $165)
- *FREE MONTHS*:  Pay for 6 months in advance (2 quarters) & get 1 free additional month (7 months total)
                 Pay for 12 months in advance (4 quarters) & get 3 free additional months (15 months total)

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\* TradeStation & MultiCharts have higher rates because of the additional programming & support required.

The lease period is in 3, 6, or 12-month increments (1, 2, or 4 quarters). At least five days prior to your lease-period expiration, you will be sent a renewal notice, at which point you will decide and notify TradingVisions if you wish to renew. **Subscription fees are non-refundable.**

Once this signed form and your initial subscription fee have been received or authorized, your subscription term begins the next trading day or the date you choose below.

To preserve effectiveness of the systems, TradingVisions reserves the right to limit the number of subscribers &/or contracts traded & to end subscriptions with a thirty-day notice prior to your subscription expiration.

**To subscribe to the system(s) signals, please print this form (3 pages total), fill it out, initial each page, & sign. Receipt of a signed copy is required before your subscription can be started. Fax, scan and e-mail, or mail this form to:          TradingVisions Systems, Inc., 351 Palisades Dr N, Sedona, AZ, 86336-6292**
**telephone: 928-554-4052   fax 330-248-0034   e-mail: systems@tradingvisions.com**

---

Client Name:_____

Full Mailing address+zip:_____

E-mail address:_____Telephone:_____

**1.) Choose your brokerage option (check one):**

→*Date you wish to begin trading, if not the next trading day:* _____

☐  **1. Broker-Assist:   name of brokerage: _____     broker's name & phone: _____**

☐  **2. TradeStation: You receive the encrypted strategy & trade it yourself; TradeStation customer number: _____**

☐  **3. MultiCharts: You receive the encrypted strategy & trade it yourself; MultiCharts version & client account id number: _____**

**2.) Check the box(es) below of the systems or portfolios you wish to trade, & where applicable, list the number of contracts for each market. You may either A.) choose to make your own combinations of systems and markets, or B.) choose a Vista Portfolio.**

**A.)   Create your own combination. (ES=emini S&P; NQ=emini NASDAQ; TF=emini Russell; EM=emini Midcap)**

☐  **Delphi II WFO**          ___ TF Day Trade; ___ ES Day Trade; ___ EM Swing Trade

☐  **AXIOM II WFO**          ___ ES Swing Trade; ___NQ Swing Trade

☐  **Sentinel WFO**          ___ TF Day Trade; ___ ES Day Trade; ___NQ Day Trade

please initial:_____

☐  **Metrica WFO**          ___ ES Swing Trade Level 2; ___ ES Swing Trade Level 1 (Level 1 trades 1 contract at a time; Level 2 trades up to 2)

**B.)   OR choose a Vista Portfolio (see graphic on p.2 below for portfolio components; specialized portfolios available upon request).**

☐  **Vista II** ($390; TS/MC $450/quarter)                    ☐  **Vista III** ($585; TS/MC $675/quarter)

☐  **Vista IV** ($700; TS/MC $780/quarter)                    ☐  **Vista IV-ES** ($700; TS/MC $780/quarter)

☐  **Vista V** ($875; TS/MC $975/quarter)                     ☐  **Vista V-L** ($875; TS/MC $975/quarter)

☐  **Vista VI** ($1050; TS/MC $1170/quarter)                  ☐  **Vista VI-L** ($1050; TS/MC $1170/quarter)

☐  **Vista VII** ($1085; TS/MC $1155/quarter)                 ☐  **Vista VII-L** ($1085; TS/MC $1155/quarter)

☐  **Vista VIII** ($1240; TS/MC $1320/quarter)                ☐  **Vista VIII-B** ($1240; TS/MC $1320/quarter)

☐  **Vista VIII-L** ($1240; TS/MC $1320/quarter)              ☐  **Vista IX** ($1395; TS/MC $1485/quarter)

☐  **Vista IX-B** ($1395; TS/MC $1485/quarter)

## TradingVisions Vista WFO Portfolios: Systems & Markets

| System | Markets | Vista II $17,500 | Vista III $23,000 | Vista IV $32,500 | Vista IV ES $32,000 | Vista V $33,000 | Vista V-L $35,500 | Vista VI $35,000 | Vista VI-L $37,500 | Vista VII $37,000 | Vista VII-L $42,500 | Vista VIII $42,000 | Vista VIII-B $42,000 | Vista VIII-L $60,000 | Vista IX $57,500 | Vista IX-B $57,500 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Delphi II WFO | TF day | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Delphi II WFO | EM swing | | | | | | | | | | | | | 1 | 1 | 1 |
| Delphi II WFO | ES day | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | ES day | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | NQ day | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sentinel WFO | TF day | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| AXIOM II WFO | ES swing | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| AXIOM II WFO | NQ swing | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Metrica WFO Level1 | ES swing | | | | 1 | 1 | | 1 | | 1 | | 1 | | | 1 | |
| Metrica WFO Level2 | ES swing | | | | | | | | | | | | | 1 | | 1 |
| Quarterly Lease Fee: Broker Assist | | $390 | $585 | $700 | $700 | $875 | $875 | $1,050 | $1,050 | $1,085 | $1,085 | $1,240 | $1,240 | $1,240 | $1,395 | $1,395 |
| TradeStation & MultiCharts Rate | | $450 | $675 | $780 | $780 | $975 | $975 | $1,170 | $1,170 | $1,155 | $1,155 | $1,320 | $1,320 | $1,320 | $1,485 | $1,485 |

**"TF"=emini Russell 2000; "EM"=emini Midcap S&P400; "ES"=emini S&P500; "NQ"=emini NASDAQ**

**3.)**

> **Lease fee calculation:** number of e-mini contracts ___ X $_____/contract X 1 / 2 / 4 quarters (circle one)= _____
>
> **OR**  Vista Portfolio quarterly lease $_____ X 1 / 2 / 4 quarters (circle one) =total for Vista Portfolio lease: _____
>
> Sales tax? If you are an Arizona resident, please add your sales tax: _____
>
> If you reside outside the United States, please add 1% to cover the special PayPal credit card surcharge : _____
>
> **TOTAL** _____

**4.) Choose a payment method (please check the appropriate box):**

☐ **a.)To pay by debiting your brokerage account  (limited availability; check with your broker)**

☐ **b.)To pay by credit card, we will email you an invoice that enables you to use your credit card through PayPal. You do not need a PayPal account for this. If you are a PayPal member and prefer to make your payment now, please log into your account and send your payment to systems@tradingvisions.com. For non-US residents, please add 2% to your bill to cover  the special PayPal surcharge.**

☐ **c.) To pay by wire, you will need to request wiring instructions from TradingVisions. For international wires, please add $20 to the total paid, in order to cover the $20 fee charged by the receiving bank. The number of days for which your lease has been paid will be calculated based on the net amount received, after fees.**

☐ **d.) To pay with a personal check (10-day hold), cashier's check, or money order, mail this form to:**

please initial:_____

**TradingVisions**
**Systems, Inc.**

**TradingVisions Systems, Inc.**
**351 Palisades Dr N**
**Sedona, AZ 86336-6292**
**928-554-4052; fax 300-248-0034**

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In some cases, slightly different entry and exit times and prices may be used in leased and/or purchased copies of the trading systems, in an attempt to lessen the impact of multiple orders reaching the market at or close to the same time. While over time and an extended number of trades these differences have in the past tended to be small and immaterial, they may in fact prove to have a material impact or over shorter timeframes have a material impact.

## AGREEMENT

By leasing a TradingVisions system or portfolio, I, the undersigned, hereby acknowledge that I have read, that I understand, and that I accept the statements, terms and conditions presented in the lease form and agreement text on this page and on the previous page. I am leasing the systems exclusively for my own use in trading my personal funds and will not use the systems to trade the accounts of other parties or allow other accounts to trade the signals.

I agree that I will trade the systems entirely at my own risk and that I will be solely responsible for any losses that may be incurred. I understand that the leasing of the systems includes no guarantee of accuracy or future profitability.

I have been informed about the risks of relying on hypothetical performance and I am aware that any form of past performance is not necessarily indicative of future results.

I understand and agree that any dispute arising out of connected to this agreement will be submitted to binding arbitration or non-binding mediation. I will bear my own expenses in connection with any such arbitration or non-binding mediation. In no event will TradingVisions or its owners or employees be held liable for any costs or damages or losses, direct or indirect, beyond the amount of lease fees paid by me.

I understand and agree that this agreement shall be governed by, construed and enforced in accordance with the laws of the State of Arizona or the current state of domicile for TradingVisions, Inc. Any action or proceeding pursuant to this agreement shall be brought only within Coconino County or the current county of domicile for TradingVisions, Inc.

_____          _____

**Signed:  (Please initial pages 1 & 2 also.)**          **Dated:**