

THE MOST POWERFUL
TRADING SYSTEM EVER
PUBLICLY REVEALED

YOU'RE
WELCOME
PLANET
EARTH

HARRY LONG

You're Welcome Planet Earth:
The Most Powerful Trading System Ever Publicly
Revealed

Harry Long

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HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN; IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL

PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK OF ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL WHICH CAN ADVERSELY AFFECT TRADING RESULTS.

DEDICATION

To my father Sumner A. Long, the best man I have ever known.

“Makes things as simple as possible, but not simpler.”

--Albert Einstein

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AN APPENDIX FOR MARKET PROFESSIONALS

1 LEAVING SOMETHING BEHIND OF VALUE TO HUMANITY

I always knew that the people of Planet Earth would need me one day. Seriously, I just knew. Since the age of fourteen, I have dedicated my life to solving the mysteries of the financial markets by creating the world's best systematic investment strategies. I thought that my biggest challenge would be to create such strategies. But I was wrong. Years ago, the only real challenge was to convince clients that such solutions actually existed--that someone through sheer force of intellect and effort could make groundbreaking, mathematical discoveries

about markets that are commonly ascribed to legends or to thriller movies such as Pi. By the time you finish reading this book, you will be forced to objectively agree with me that I have succeeded--even if you do not enjoy the manner in which I do it.

And unfortunately, the gentle reader will be confronted with the harsh reality that financial markets are not about events, intuition, judgement, artistry, economics, fundamental analysis, thought, or anything resembling normal human reasoning.

The cruel joke of the financial markets is that markets are about pure math, plain and simple. And markets are not even about data. Markets are about how humans respond to data. Similarly, History, correctly studied, is not actually about events. It is really about how humans respond to events. This is a subtle but essential distinction. Judged in that light, History is not actually about events, but about how humans process information about events. I have termed this The Information Processing Theory of History.

For example, History teachers will fallaciously teach students that following the assassination of Archduke Ferdinand in 1914, Europe spontaneously burst into WWI. Since 1914, many world leaders such as President

John F. Kennedy have been assassinated, but World War never followed. There is something unique about how Europeans in 1914 processed information that led to such an outcome.

Once we accept this reality, a study of History can move from a descriptive study in primitive story telling about events to a more scientific enterprise in which we can start making excellent predictions about the future from cognitive information processing models of human decision making. For example, many psychologists would agree with the proposition that our deepest beliefs govern our thoughts, our thoughts govern our actions, and our actions lead to outcomes--but it all starts with our beliefs about the nature of reality.

Of course, a scientific study of human information processing leads to many unpleasant, but highly accurate predictions. We can predict that Jews and Muslims in the Middle East who effectively believe in "an eye for an eye" as the guiding directive in international relations will be at war indefinitely until that belief changes. We can predict that nation states whose leadership believe in mutually assured destruction (the secular, institutionalized belief in "an eye for an eye") will eventually engage in nuclear war. And we could have predicted that Catholics and Protestants (who at least

theoretically recognize that they should forgive) would eventually forge peace in Northern Ireland. In each case, deeply held beliefs (even if they are implicit and unspoken) govern the information processing and meta-outcomes of the participants involved. And thus it goes in financial markets and any other area of human endeavor. By the end of this book, you will be forced to accept that trading, like History, is at its core an information processing endeavor to identify strong patterns in how humans process information.

I also wrote this book, because I wanted to leave behind something of value. Ideas are the only things that ever last. My friends all impressed upon me that I am doing something certifiably insane. No good investor or trader has ever published truly original systematic strategies which can compound at over thirty percent per year. It is simply not done.

Invariably, strategies are published after they stop working. Most traders write self-indulgent autobiographies which are peppered with useless, banal, commonly known, or generic advice. Often it is a tired version of, "If only you could interpret financial statement or charts like I can, you would divine the secret of markets, because investing really is a high art form!". The same could be said about most investment firms'

marketing materials and public pronouncements. What total hogwash.

Correctly practiced, investment research and management is a scientific endeavor with clear, objective rules requiring zero interpretation which can be proven or disproven using data. That's science. If an author, portfolio manager, or investment firm does not adhere to the discipline that authentic research consists of developing objective rules which can be objectively proven or disproven using data, run in the opposite direction. Let them practice mentally lazy witchcraft with their own money, not yours. Testing ideas scientifically is not only real work, but it is also an ethical responsibility.

Judged by that standard, most investment and trading books are total scams when it comes to delivering high value to the reader. This is my effort in writing the most useful book on investing and trading ever written. And the test is, can the strategy explicated herein outperform anything else in the public domain?

2 FORGET STANDING ON THE SHOULDERS OF GIANTS, SOLVE THE PERFECT PROBLEM LIKE A SPACE ALIEN

If you want to be an amazing systematic trader, it is essential to view yourself as an advanced life form from another planet who was sent to Earth to observe and to chronicle systematic human foibles. Quite literally, you have to view people as unfortunate beings who make constant logical and mathematical errors in judgement. Your job is to exploit their systematic mistakes in how they process information.

Lest you think this is too easy, remember that while it is

very fashionable for humans to constantly comment upon how illogical, dumb, and predictable other humans are, that most people are unable to profit from the misjudgment, pettiness, and emotionalism they are constantly confronted with. Unfortunately, most humans only suffer from their fellow humans' stupidity, and with grave consequences, ranging from the seriousness of war and peace, to the horrors of genocide and starvation, to the banality of infidelity.

To create a high performing systematic trading strategy, one must actually find an error that humans make constantly. In practice, this is actually quite difficult. Humans make numerous errors constantly, but rarely do they make the exact same error in the exact same way on an almost daily basis in a manner which can be easily quantified or exploited. And rarely is the error so large and glaring that it can both provide ample profits and simultaneously hide in plain sight and remain undiscovered for years. Economic theorists commonly refer to this as a massive market inefficiency. It's like the Loch Ness Monster. Everyone talks about it, but no one has really proven it exists (until now, my dear reader).

In order to find massive hiding-in-plain-sight market inefficiencies, you have to think like a space alien and see things for what they are in substance, rather than form.

And you have to stop unthinkingly accepting names and appearances that other humans blindly accept.

For example, many humans are very impressed when they walk on to the trading floor at a large hedge fund and see bright, well dressed young people sitting in front of rows upon rows of gleaming screens pulsating with real-time market data. They marvel at the scope of the information, news, and analysis being fed to the traders and the seemingly scientific, high tech nature of the undertaking. But in reality, an advanced life form from another planet would be no more impressed with this than with a group of cobblers in a guildhall of old, hammering away at new shoes. Like the guild master with a ruler who inspects the cobblers' shoes, periodically finding a size error ("that size 8 you're working on, my dear boy, is really only a 7.5!"), modern day risk managers step in when losses go beyond proscribed limits (only in theory of course, as we've seen in the last ten years) and ask the cobbler, ahem I mean trader, to correct the problem. It may look scientific, but most modern day investment or trading enterprises are really no better than the cobblers of old. They are not designed like modern industrial concerns, they are just a bunch of glorified craftsmen at long tables.

3 TRADING SYSTEMS ARE LIKE FACTORIES AND ENGINES

An advanced life form would see the need to create order out of this unscientific craftsmanship and to manufacture trading profits as products would be manufactured in a factory. As the great statistician W. Edwards Deming taught the Japanese, in order to improve a manufacturing system, we first must make the rules of the manufacturing process explicit. Everything is a system, whether it is explicit and the product of design, or implicit and the

product of circumstance.

Imagine if in the modern world, all products were made by hand. Quality control would be a nightmare without modern mass production. Everything would be unnecessarily expensive, craftsmen would be overpaid, and the products would be subpar. Superstition and tradition, rather than science, would govern the day. Sounds a lot like modern investment management, eh?

Another way to view a trading system is as an engine where capital (or fuel) goes in one end, and profits (or horsepower) come out the other end. By making adjustments to the engine, we can increase its output of horsepower. We are always trying to increase performance and to reduce breakdowns. That's good engineering. Unfortunately, that approach is very rare in the investment and trading world.

4 OPEN YOUR EYES AND REFRAME THE FAMILIAR

I often think of my mother. What strategy could I develop which would crush the equity indices, have far less risk than the S&P 500, be totally non-correlated, and only take two instruments to implement so she could run it herself if something happened to me? Sounds impossible, eh? Not so. We are always most creative within the boundaries of firm constraints, as Robert McKee teaches aspiring screenplay writers.

You need to look where no one else is looking, think like a space alien, and reframe the familiar in novel terms. And you need to have very little competition. Long's Law

is that long term profit margins in any industry tend towards the inverse of the number of competitors in that industry (i.e., two competitors would enjoy roughly 50% profit margins over the long term, but that's another book). Therefore, I need to look at a new and unrigorously studied corner of the market which my older competitors didn't grow up with and do not understand. That leads us to the volatility market.

In the past few years, Exchange Traded Products (ETPs) based upon the short term Vix futures indices (Vix ETPs) have become tremendously popular. In theory, these instruments increase in value when markets become more volatile, and decrease in value when markets become less volatile. In practice, these funds act almost as if they are continuously traded Put options on the S&P 500, with the associated time decay. The effect of contango in these markets effectively resembles time decay, so that Vix ETPs tend to lose value over long time periods. Moreover, it is very well chronicled that these funds may represent effective hedges during very short, discrete time periods, but are very poor hedges over longer time periods.

Interestingly enough, 30 year U.S. Government Bonds (Long Bonds) tend to also behave like hedges for the S&P 500, often moving inversely to the market,

especially in times of severe equity market stress. In Chapter 2, I impressed upon the gentle reader that one must think like a space alien and see things for what they are in substance, rather than in form.

Synthetically, or in substance, we can view Long Bonds as Put options on the S&P 500 as well. However, unlike Vix ETPs, not only do Long Bonds hedge equities well in discrete time periods of market stress, but they also tend to retain more of their value over time than Vix ETPs. And this is quite logical, since a Long Bond is an asset which pays interest over time, whereas Vix ETPs, like Put options, are almost like ice cubes with values that melt away in one's hand if significant downside volatility does not materialize.

So let's reframe the familiar like a space alien and stop accepting names and descriptions that other humans blindly accept. Both Long Bonds and Vix ETPs effectively behave as Put options in relation to the S&P 500. So let's think of them as such in their function, if not their form.

5 EVERYTHING IS RELATED, ESPECIALLY IN FINANCIAL MARKETS

Most humans are interested in trading things on their own merits. They have predictions about Long Bonds, and they trade Long Bonds accordingly. Or they have predictions about future volatility, and trade Vix ETPs accordingly. But advanced life forms also think about instruments and markets in inter-relation to each other.

It is difficult to think this way, especially in financial markets where we have to be somewhat precise and cannot fall back upon weed-fueled, new age, nebulous, freshman-seminar-on-spirituality, unquantifiable notions of inter-relation. But the potential benefit of studying inter-relationships between markets is that we might find an inefficiency that lasts for years. It may be logical for individual markets to behave a certain way when traded upon their own merits, but this behavior may be inter-market inefficient when the meta-behavior of such trading creates pricing discrepancies in how risk is priced between totally different markets.

Therefore, we might syllogistically make the proposition that if Vix ETPs are related to the S&P 500 and if Long Bonds are also related to the S&P 500, that then Long Bonds and Vix ETPs must also be inter-related to each other.

6 THE TRADING SYSTEM AS A VIRTUAL INSURANCE COMPANY

Simply put, Vix ETPs lose much of their value over time. This makes them a very expensive form of insurance, or equity hedge. Long Bonds retain more of their value over time than Vix ETPs do. This makes Long Bonds a cheaper form of insurance, or equity hedge.

An Economist might say that we can treat Long Bonds and Vix ETFs as close substitutes for equity hedging. And close substitutes should sell for similar prices. But in this case, they most definitely do not. They sell for wildly divergent prices. Illogically, the worse hedge is more expensive, and the better hedge is cheaper!

Why not, like a shrewd insurance company, sell the more expensive form of insurance, and buy the cheaper form of insurance as reinsurance against catastrophe? Maybe we could pocket the difference in how these two markets price equity risk as a profit.

Literally, if the idea works, we will be running a virtual insurance company for S&P 500 market risk. But we will not have the overhead (or competition!) of a conventional insurance company. Imagine an insurer that sells insurance, then reinsures against catastrophe. Similarly, we are selling expensive insurance by synthetically shorting Vix ETPs, then reinsuring more cheaply by purchasing ETFs which hold Long Bonds. But unlike most insurers, our theory is that we can fully reinsure the risk we have written by selling insurance which is usually too expensive, and by buying reinsurance which is usually too cheap.

Now like a proper manufacturer or engine maker, let's move beyond a cool idea, or hypothesis, and explore some objective, explicit, systematic rules that are testable. No cobbling for us!

7 THE SECRET IS HIDING IN PLAIN SIGHT—THE
ANATOMY OF AN INEFFICIENCY

Let us first test the performance of shorting Vix ETPs and buying Long Bonds ETFs. After brute force testing of every combination, the best performance is obtained by a system in which we:

Go Short VXX with 40% of the portfolio

Go Long TMF with 60% of the portfolio

Rebalance Weekly between VXX and TMF to maintain the 40% / 60% ratio.

Note that TMF is a 3X levered Long Bond fund. The instrument negates the need for margin leverage since the leverage is inherent to the instrument itself.

Here is a graph of the equity curve of the strategy and the system's performance statistics.



Fantastically, this strategy destroys the S&P 500 with a CAGR of 49.5%, but with similar drawdowns, a higher MAR ratio, and a higher Sharpe. This strategy is world class. And it has a correlation of 0.10 to the S&P 500 over the entire time period. That is outstanding. Even more impressively, the system outperforms the S&P 500 by over 30% per year!

Great strategies deserve names. I have named this

strategy Structural Arbitrage, because it arbitrages structural differences in pricing equity risk between two different markets, and reframes market structures in novel synthetic terms.

8 PUSHING THE ENVELOPE WITH CONTINUOUS IMPROVEMENT--EVEN RACE CARS NEED BRAKES

Advanced research should increase the safety of a trading system in order to create the highest return to risk, or MAR ratio, over the long term. Even race cars need excellent brakes. To negate the need for shorting an instrument which may not be available to short, and to reduce open-ended tail risk, one can go long the inverse of VXX, which is XIV, while leaving the rest of the strategy the same.

Performance is slightly lower. Amazingly, XIV is an instrument which is short volatility, but you can only lose

what you put into the instrument! In other words, even without TMF as a hedge, going long XIV is synthetically like selling naked Puts, but without open-ended risk! Inverse Vix ETPs are some of the only instruments that Wall Street has ever created which have the profit benefits of selling volatility naked, but without the open-ended risk!

In addition, since Structural Arbitrage relies upon a structural mispricing between how two different markets price equity risk, it is important to remember that like any other strategy, that it could stop working if the inefficiency it exploits ceases to exist.

Therefore, we need to build a quantitative switch for the system for turning it on and off. That way, we can stay in the strategy when it is profitable, and exit the strategy when it is not. I have some ideas for how to do this that are the subject of an ongoing research effort. Until that research is completed, I think a barbell strategy might make sense, whereby the strategy is kept as a very small part of a larger portfolio, to reduce correlation to equity indices. But that is something for you and for your investment advisor to decide upon together, if you decide to use Structural Arbitrage at all.

9 NOTHING LASTS FOREVER IN MARKETS, ESPECIALLY WHEN EVERYONE KNOWS ABOUT IT

Remember Long's Law. Long term profit margins in any industry tend towards the inverse of the number of competitors in that industry. The same could be said of investment strategies. Despite my trader's bravado and tongue-in-cheek tone, I am extremely humble about the prospect of any massive market inefficiency persisting for a decade, especially after becoming widely publicized. Of course, one does not need ten years of massive returns to make a tidy fortune.

Previously, I pointed out that massive market inefficiencies have the status of the Loch Ness Monster in the Economic world. Everyone claims a sighting, but no one has proof that it exists. Beyond a shadow of a doubt,

I have proven that a massive market inefficiency exists. And it may continue, because it takes advantage of structural inter-market relationships that persist because these markets are being traded rationally on their own terms. Arbitraging away this particular inefficiency might require Vix and Long Bond markets to *not* trade rationally on their own terms, which may be a disequilibrium position for markets. Hence this arbitrage could persist.

However, the bigger picture is that massive and easy profits tend to never last, especially in financial markets. Hence, I estimate unscientifically that Structural Arbitrage will make outsized returns for four more years, at best. And for me? On to the next strategy. My clients demand that we stay a thousand steps ahead.

Have I kept my word? Remember, the goal was to crush the equity indices, take far less risk than the S&P 500, be totally non-correlated, and use two instruments to implement the system so that my mother could easily run the strategy herself. I also promised that it would be the most powerful trading system ever publicly disclosed. Mission accomplished.

AN APPENDIX FOR MARKET PROFESSIONALS

Structural Arbitrage: A New Paradigm in Alpha Generation

Structural Arbitrage is a new paradigm in alpha generation created by Contrarian Industries LLC which systematically exploits persistent macro arbitrage opportunities between seemingly unrelated asset classes to create uncorrelated, benchmark- beating, return streams with highly efficient risk/return profiles. Structural Arbitrage creates these uncorrelated return streams by systematically arbitraging mispricings between entire markets which represent mispriced sources of hedging* and alpha generation.

For example, a massive structural arbitrage exists between the 20 year + Treasury Bond market and the S&P 500 Short Term Volatility Futures market. Indeed, if we view both long bonds and Short Term Volatility Futures as synthetic ways to insure systematic risk in the U.S. equity market, we find that a 40/60 ratio between the XIV and TMF instruments in a portfolio is an excellent synthetic method of selling expensive insurance for S&P 500 Short Term volatility while simultaneously fully

reinsuring that risk more cheaply in the long bond market. While we believe that the above ratio is optimal for non-correlation and risk-return MAR objectives, a higher proportion of TMF, or long bonds, could of course create an arbitrage which is highly negatively correlated to the S&P 500 and implicitly heavily long gamma.

This arbitrage persists, because while market participants recognize that volatility and long bonds are both linked to equity prices, they have not made the logical/syllogistic leap that, therefore, volatility and long bond markets should also be linked to each other. Simply put, if the volatility market is linked to the equity market, and if the long bond market is also linked to the equity market, then therefore, the volatility market and the long bond market must also be linked to each other. The persistent difference between how these two markets synthetically price equity risk is exceedingly glaring. We ascribe this Structural Arbitrage's persistence to the industry-wide focus on incrementally improving tired, commoditized arbitrage strategies which have existed for decades, rather than a focus on innovation.

We are in essence synthetically arbitraging asset class inter-market structures the way that other firms might arbitrage multiple currency pairs or stock pairs and their relationships intra-market. In the Structural Arbitrage

frame, we are in essence synthetically pairs trading markets themselves. Since the volatility futures market prices systematic equity risk more expensively and the long bond market prices systematic equity risk more cheaply, the difference in synthetically pricing equity risk in these two markets represents a robust return stream with excellent risk/reward characteristics. Simply put, a long XIV position insures equity risk with an expensive premium in the volatility market, so to speak, and a long TMF position reinsures this same equity risk by paying a cheaper premium in the long bond market. The ongoing mispricings between these two synthetic premiums represents this Structural Arbitrage strategy's profits. Therefore, any entity putting on this arbitrage trade implicitly becomes an insurer which insures systematic equity risk dearly and then reinsures, or lays off, that risk more cheaply.

Another, perhaps less precise, way of viewing a 40/60 XIV/TMF portfolio is as creating alpha generation by a short gamma position, whose drawdown and tail risk can be cheaply insured or hedged in the long duration U.S. government bond market at a price which creates substantial profits and risk control. Indeed, when a XIV position is combined with a TMF position in a 40/60 ratio, the resultant portfolio is not short gamma at all, but represents a non-correlated return stream with excellent investment characteristics as a systematic investment

strategy. By systematically introducing other instruments which represent mispriced sources of drawdown reduction and alpha generation when combined together, we can further improve the risk-return profile of the XIV/TMF arbitrage.

Structural Arbitrage in Context

Structural Arbitrage is a new paradigm in alpha generation, because unlike Statistical Arbitrage, Risk Arbitrage, or Capital Structure Arbitrage which are tired, commoditized strategies which seek to arbitrage often less-liquid mispricings between individual securities, Structural Arbitrage seeks out far larger, macro arbitrages between seemingly unrelated markets and asset classes. Since the arbitrages are inherent to the structure of seemingly non-related markets, the mispricings are often between highly liquid index-based instruments, rather than esoteric securities, and are an excellent complement to other strategies due to their non-correlation.

While an old strategy such as Convertible Arbitrage might claim to arbitrage diverse asset classes such as debt and equity, it is not arbitraging structural, or macro inefficiencies between debt and equity markets as a whole, it is merely focusing on inefficiencies at the level of the individual firm's capital structure. To the contrary,

Convertible Arbitrage's "alpha" often comes from the esoteric, illiquid nature of a firm's securities, and the strategy's profits often quickly vanish and turn into losses during market dislocations, proving that Convertible Arbitrage is, in reality, highly short gamma. Therefore, Convertible Arbitrage is really an intra-firm rather than inter-market macro arbitrage. When viewed in these terms, it becomes clear that even seemingly sophisticated newer strategies which arbitrage CDS vs. debt or equity instruments are usually intra-firm arbitrages rather than Structural Arbitrages for macro phenomenon such as the insurance and reinsurance of systematic equity risk.

Indeed, because the macro inefficiencies which Structural Arbitrage seeks to uncover must be sizeable, it takes painstaking systematic methods to find these "hiding in plain sight" mispricings by reframing macro market structures in novel synthetic terms. Structural Arbitrage seeks to find entirely new statistical inter-market relationships, rather than incrementally improving currently existing, commoditized intra-market arbitrage strategies.

Another major benefit of structural arbitrage strategies is that they require sometimes as few as two highly liquid, index-based instruments to execute, whereas Statistical Arbitrage strategies, for example, are often a nightmare to

implement and execute, containing hundreds of positions in a highly commoditized, tired strategy, with shrinking returns. Commoditized strategies such as Statistical Arbitrage require massive leverage to achieve returns that are competitive with equity markets, whereas Structural Arbitrage strategies, which should rely on unique insights, rather than leverage, can achieve benchmark-crushing returns without the need for margin borrowing. Structural Arbitrage can use exchange-traded products (ETFs and ETNs) with inherent leverage, although ETFs and ETNs without inherent leverage can be used very profitably as well.

Moreover, rather than being driven by misguided notions of "risk parity" or "asset allocation" which have highly weak theoretical, rather than empirical underpinnings, structural arbitrage is driven by the empirical objective to efficiently optimize risk/return as measured by sharpe, sortino, information, calmar, correlation, and drawdown statistics. In other words, structural arbitrage seeks to systematically maximize returns vs. risk, rather being driven by theoretically flimsy structures such as risk parity, asset allocation, or nebulous, illusory notions of diversification, by systematically arbitraging macro mispricings between entire markets which represent mispriced sources of hedging and alpha generation in an empirical framework.

*Hedging is a mathematically imprecise term which should be more precisely defined as drawdown reduction or elimination. Cleverly constructed hedges may actually in different time periods and/or in relation to other instruments actually become important sources of alpha generation and vice-versa.

ABOUT THE AUTHOR

Harry Long is the Managing Partner of Contrarian Industries LLC, a firm that specializes in proprietary trading, systematic investment research, and strategic consulting. Mr. Long is a globally recognized expert on the research and development of empirical investment strategies. As a consultant, Mr. Long is sought after by asset management firms, hedge funds, principal trading organizations, index providers, ETP sponsors, and private equity firms to help them develop and deploy benchmark crushing systematic investment strategies. Mr. Long is a graduate of Rice University with a B.A. in Economics.

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