

Vertical Solutions

S&P Futures Trading Strategy

A TRADING STRATEGY WITH HISTORICALLY LOW DRAWDOWNS AND CONSISTENT RETURNS

Average Annual Return: 33.1%

Sharpe Ratio: 2.74

Leverage: 1.25x

Max Peak-to-Trough Drawdown: -8.04%
from January 1, 1997 thru October 31, 2008

THERE IS A RISK OF LOSS IN FUTURES TRADING. ADDITIONALLY, 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.

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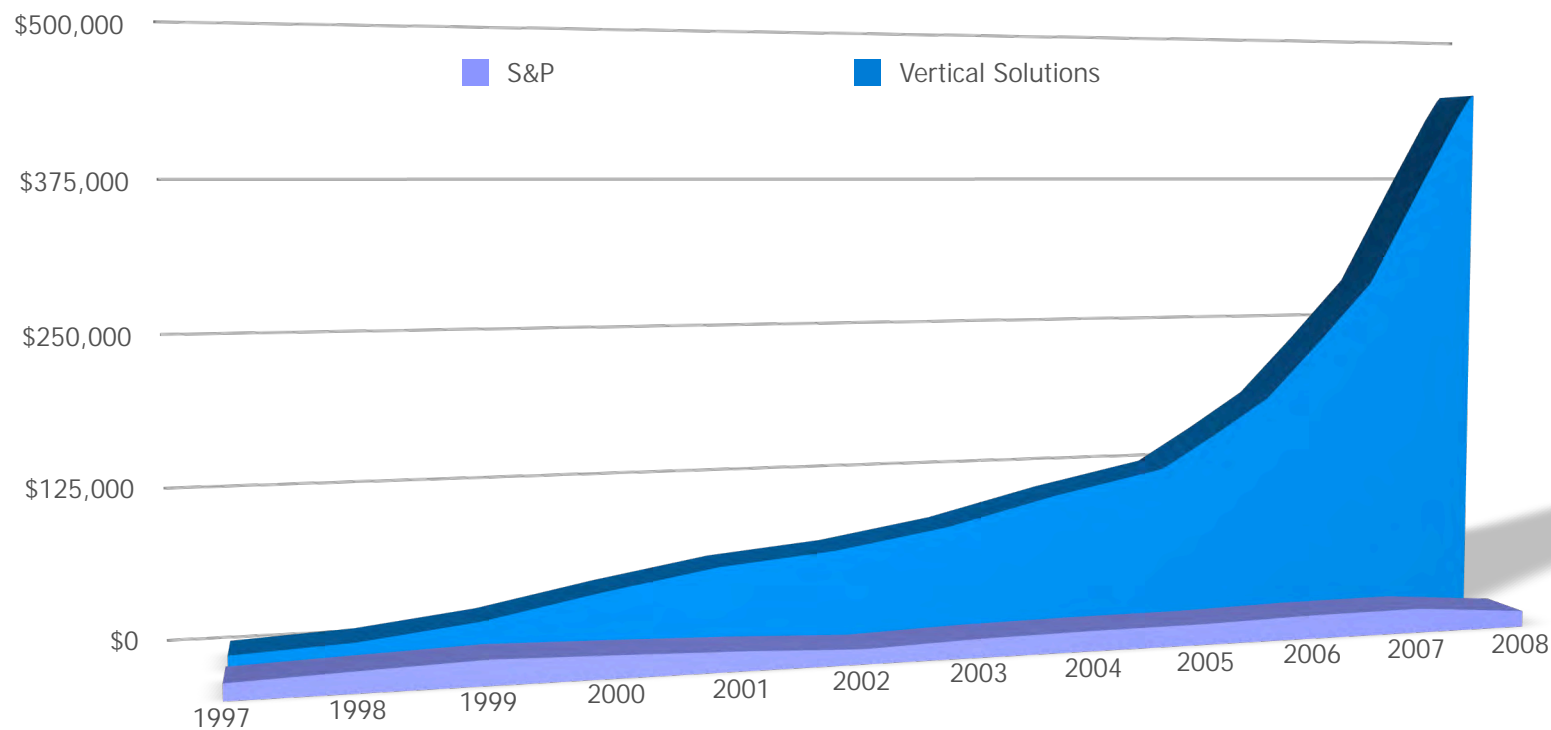
S&P Futures Trading Strategy • Hypothetical Performance

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec		Total
1997	7.2%	1.2%	3.2%	3.6%	1.0%	1.8%	6.3%	3.3%	8.0%	3.9%	2.1%	1.4%		24.0%
1998	4.7%	0.1%	1.2%	3.1%	5.7%	5.8%	0.4%	1.7%	6.3%	0.1%	3.5%	5.4%		34.3%
1999	7.0%	7.6%	6.7%	11.9%	2.4%	8.1%	2.1%	1.7%	1.9%	12.9%	0.9%	3.9%		52.3%
2000	9.5%	7.7%	1.9%	10.0%	4.6%	4.7%	1.5%	3.3%	1.7%	1.6%	3.7%	4.7%		51.1%
2001	4.8%	2.3%	0.1%	1.8%	5.6%	1.8%	2.7%	1.0%	1.1%	1.5%	3.0%	6.6%		30.1%
2002	1.7%	3.2%	1.9%	2.3%	4.4%	3.0%	3.5%	1.8%	1.9%	0.6%	1.8%	0.8%		13.5%
2003	3.7%	1.0%	0.9%	1.7%	0.5%	3.6%	3.0%	0.6%	0.9%	5.9%	0.8%	0.3%		19.8%
2004	3.0%	4.8%	3.4%	4.2%	0.9%	2.1%	0.7%	3.5%	0.5%	3.2%	0.0%	0.5%		23.6%
2005	0.2%	4.1%	1.1%	2.1%	2.5%	0.6%	1.7%	0.9%	2.7%	1.8%	1.6%	2.2%		16.2%
2006	4.8%	3.1%	2.0%	6.2%	2.4%	8.8%	0.8%	2.3%	1.9%	0.3%	3.4%	2.1%		37.5%
2007	2.4%	3.3%	0.0%	1.0%	2.6%	7.2%	0.8%	5.1%	4.0%	3.8%	8.1%	6.2%		42.9%
2008	1.3%	8.5%	1.1%	6.9%	5.0%	4.1%	1.9%	5.2%	6.9%	5.7%				46.3%

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S&P Futures Trading Strategy • Hypothetical Compound Performance



\$10,000 investment made on January 1, 1997 was worth \$447,201 on October 31, 2008

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S&P Futures Trading Strategy • Design

STRATEGY DESIGN

The strategy design is quantitative with reversion, trend following and momentum components operating long and short on daily and multi-day time frames. At times, the strategy can be active in both timeframes. The daily components hold for a period of 24 hours or less. The multi-day components generally hold for a period of two to five days.

RISK CONTROL

These tenets help control risk:

- Low leverage
- All trades utilize stops
- Components can programatically shut themselves off when market conditions are unfavorable to their design, e.g., a long only component might shut itself off in periods of high VIX
- Overall design minimizes the effects of curve-fitting and behavioral changes in the market upon the model

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S&P Futures Trading Strategy • Statistics & Notes

STATISTICS

- Maximum Peak-to-Trough Drawdown: (8.04%) (10/16/2002)
- Maximum Monthly Drawdown: (3.4%) (July 1997)
- Alpha: 2.73%
- Beta: .01
- Sharpe Ratio 1997-present: 2.74
- Average Annual Return: 33.1%
- Percent of Profitable Months: 81.7%
- Leverage: 1.25x (see notes)

NOTES

- Performance is hypothetical based on simulated trades against historical data. The model has evolved since 1996 and continues to evolve.
- There are inherent limitations in simulated trading - past results may not reflect future performance.
- Results are net of slippage and commissions.
- Results have not been audited.
- Leverage of 1.25x means a 1% move in the market will cause a 1.25% move in the model.
- [Pacific Futures and Capital](#) has started a fund based on this trading strategy. For information on the fund contact [Josh Wallace](#) 800.640.3372.

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S&P Futures Trading Strategy • About

BIO

Henry Carstens, age 49, is the owner of Vertical Solutions. Henry has degrees in Mathematics, Economics and a minor in Physics. He began his career in software engineering, sold his software company in 1995 and began building trading systems in 1996. He has been the Chess Coach at the Portland Jewish Academy for the past 3 years.

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