

# StatisTrade Strategy Evaluation

Each StatisTrade Strategy Evaluation uncovers system strengths and weaknesses capable of radically changing future returns. By applying rigorous, statistically-sound analyses, we show strategy and capital providers what they can realistically expect from a specific trading system before money is at stake.

More investors are embracing systematic strategies than ever before and there are literally thousands of alternatives.

As a **strategy provider**, how do you stand out from the crowd?

As a **capital provider**, how do you distinguish between strategies capitalizing on “real” edges — those likely to persist in the future — versus those built on market noise? Until you know the answers, creating a portfolio of complimentary approaches is, at best, unsafe.

StatisTrade Strategy Evaluations provide specific, statistically-sound answers to these questions using industry-standard metrics. We have tested hundreds of alternative strategies and identified the most common sources of failure. Using this information, our tests were designed by traders, system developers, and statisticians to give you the most accurate forecasts available.

**Do you KNOW THE ODDS? Let us show you.**

Strategy Evaluation Report - ETF Momentum Monthly Rotation		Page   1-1
<b>1. Strategy Scorecard</b>		
This brief summary shows which tests were conducted and how well the strategy performed in each of them. All individual results are combined into a summary grade. Potential scores on each test are A, B, C, D, and F in descending order of favorability.		
<b>B</b>	<b>OVERALL ASSESSMENT</b> Aggregate score based on all tests performed.	
<b>TESTS PERFORMED AND EVALUATED</b>		
<input checked="" type="checkbox"/> <b>B</b>	<b>1. Parameter Range Sensitivity</b> <i>How robust is the choice of strategy parameters?</i>	
<input checked="" type="checkbox"/> <b>B</b>	<b>2. Skipped Trade Sensitivity</b> <i>How sensitive is the strategy to missing trades?</i>	
<input checked="" type="checkbox"/> <b>A</b>	<b>3. Selection Rule Quality</b> <i>Does the selection rule contribute to strategy performance?</i>	
<input checked="" type="checkbox"/> <b>B</b>	<b>4. Exit Rule Quality</b> <i>Do the exit rules contribute to strategy performance?</i>	
<b>ADDITIONAL TESTS</b>		
<input type="checkbox"/>	<b>5. Filter Rule Quality</b> <i>Do the filter rules contribute to strategy performance?</i>	
<input type="checkbox"/>	<b>6. Setup Rule Quality</b> <i>Do the setup rules contribute to strategy performance?</i>	
<input type="checkbox"/>	<b>7. Entry Rule Quality</b> <i>Do the entry rules contribute to strategy performance?</i>	
<input type="checkbox"/>	<b>8. Market Data Noise Sensitivity</b> <i>How sensitive is the strategy to noise in market price data?</i>	
<input type="checkbox"/>	<b>9. Price Shock Sensitivity</b> <i>How do price shocks impact the strategy?</i>	
 <span style="float: right;">This information is subject to the disclaimer on page 1. <a href="http://www.statistrade.com">www.statistrade.com</a></span>		

*“Based on the tests performed, the strategy has an **82% chance** of achieving your primary long-run objectives of a 14% Compound Annual Return (CAR) and a CAR to Maximum Drawdown (MaxDD) ratio of 0.9.”*

# Key Features

## Realistic Expectations

We provide specific odds of meeting your objectives and minimum expectations based on statistically-valid tests. We replace misleading “point estimates” by providing a range of expected performance and an associated level of confidence. As a result, you no longer have to wonder whether the current drawdown is normal or means the system is broken.

## Long-Run Performance Expectations

Description	Usage	CAR <sup>2</sup>	MaxDD <sup>3</sup>	CAR / MaxDD <sup>4</sup>
Original Backtest	Original 'point' estimate	21.6%	-17.4%	1.24
Performance Median	Best 'point' estimate of future performance	13.0%	-23.2%	0.57
Performance at 95% Confidence	Lower bound of expected performance <sup>5</sup>	5.2%	-34.6%	0.16
Performance at 5% Confidence	Upper bound of expected performance <sup>6</sup>	17.7%	-17.7%	0.88
Tested Variants Worse Than Backtest	Results above 50% raise chance original backtest estimate reflected 'luck'	77.6%	92.3%	99.7%
SPY (Total Return) Benchmark	Benchmark for strategy performance	6.2%	-56.2%	0.11
Probability of Outperforming Benchmark	Shows value in comparison to benchmark	91.9% <sup>7</sup>	99.9% <sup>15</sup>	97.7% <sup>15</sup>
Strategy Objective				>= 0.70
Probability of Meeting Objective <sup>8</sup>				25.1%

## Comprehensive Tests

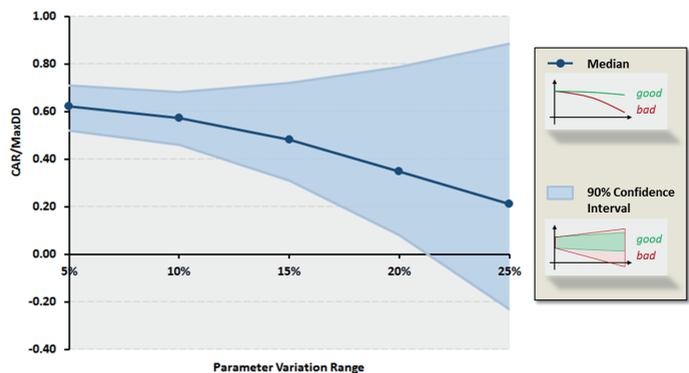
We offer the most comprehensive, realistic set of tests available. Conceived by traders, systems developers, and statisticians, every test provides practical value in determining the future performance you are likely to see. Our tests are designed to find common strategy flaws and show you both the performance of individual elements and the system as a whole.

- Parameter Range Sensitivity**  
How robust is the choice of strategy parameters?
- Skipped Trade Sensitivity**  
How sensitive is the strategy to missing trades?
- Selection Rule Quality**  
Does the selection rule contribute to strategy performance?
- Exit Rule Quality**  
Do the exit rules contribute to strategy performance?
- Filter Rule Quality**  
Do the filter rules contribute to strategy performance?
- Setup Rule Quality**  
Do the setup rules contribute to strategy performance?
- Entry Rule Quality**  
Do the entry rules contribute to strategy performance?
- Market Data Noise Sensitivity**  
How sensitive is the strategy to noisy market data?

## Sensitivity to Changing Markets

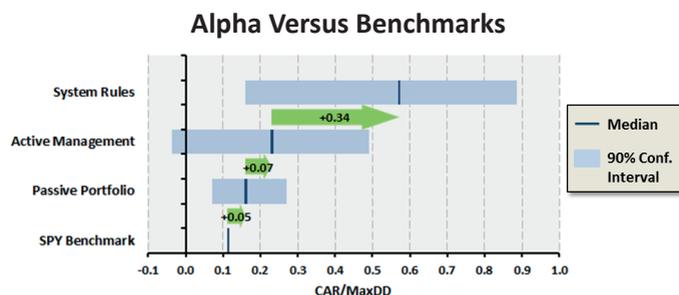
Determining a strategy’s ability to adapt to changing market conditions is critical. Data Mining Bias, also known as over-optimization and data snooping, can cause seemingly valuable strategies to quickly self-destruct. Using a variety of sensitivity tests, we show you how changing market conditions are likely to affect your returns.

### Parameter Range Sensitivity



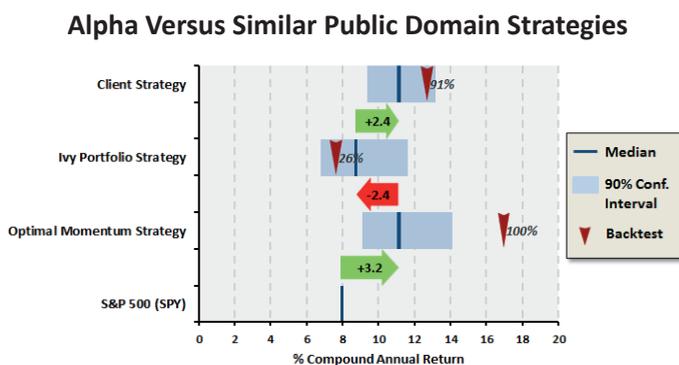
## Alpha vs. Active and Passive Benchmarks

In addition to industry-standard benchmarks, we compare your system to active and passive benchmarks designed to simulate the primary edges your strategy exploits. We also show you how your strategy performed using alternative trading instruments and data variations. The benefit is you see how much value your specific rules really add.



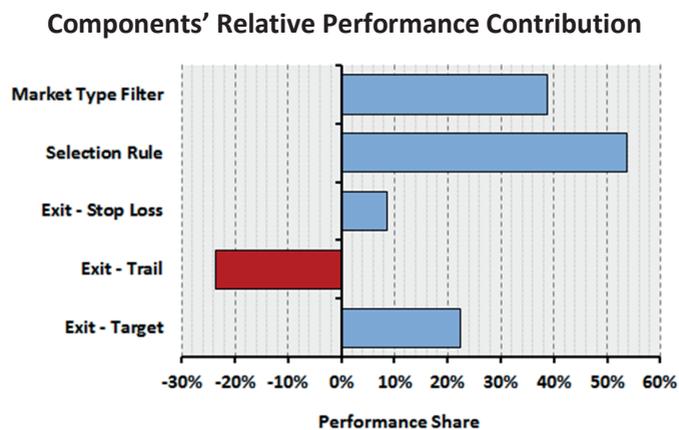
## Alpha vs. Similar Strategies

Interested in how your strategy performs versus others built to take advantage of similar market edges? We compare your strategy against its peers based on key metrics like CAR, maximum drawdown, and Sharpe ratio.



## Relative Performance Contribution

You expect each component to improve your strategy, so would you ever use rules that detract from performance? The surprising answer is often “yes”. By isolating individual strategy components (e.g., entry, exit, filter), we show you the relative value of each concept and whether it adds — or subtracts — from total performance.



*“While the original backtest ‘point estimate’ indicated an average Compound Annual Return (CAR) of 21%, our tests revealed this result is unlikely to persist in the future. At 95% confidence, we estimate the average long-run CAR to range between 5.2% (lower bound) and 17.7% (upper bound), with a median of 13%.”*

## Scenario Exposure

Ever wonder how your strategy would have performed during the crash of 1987? The 1973-1974 bear market? Or during more recent situations like September 11th? Our tests expose your strategies to real events from the past as well as imagined variations that haven’t happened... yet.

## Realistic Historical Testing

Valid testing of index-based strategies requires access to detailed, historically-accurate constituent lists to avoid errors due to survivorship bias. The additional complexity of appropriately adjusting stock data for dividends without invalidating indicators makes achieving realism very challenging. Our proprietary, professionally-cleaned database avoids survivorship bias and allows accurate testing of stocks in major indexes back to the 1970’s.

## Proposed Improvements

We provide recommendations capable of adding quantifiable performance enhancements to your strategy. For example, removing rules adding relatively limited value can improve system longevity and even enhance future performance by reducing exposure to meaningless market noise.

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StatisTrade is a quantitative trading system modeling and evaluation company. Applying our award-winning statistical methods, we objectively evaluate trading strategies and offer training and consulting services to strategy providers (e.g., hedge funds, Commodity Trading Advisors [CTA]) and capital providers (e.g., institutions, family offices, and Registered Investment Advisors [RIA]).

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