

Main:

This strategy trades on a dynamic combination of four technical and fundamental factors. The entire structure is designed to be a proof of concept and testing for what regression type is best suited for the market (OLS assumptions don't hold and therefore an OLS model cannot be relied on). I didn't yet try to optimize the weights with respect to aggregate alpha or covariance estimates.

Universe Selection:

On the first day of every month a new universe is created by choosing the most liquid and tradeable securities. The number of eligible securities ranges from 1,000 – 2,000 per month and only these securities get ranked.

Portfolio Features:

125% of the portfolio value is long and 25% is short.

Beginning portfolio value is \$250,000 on 08/31/2010

Margin cost is 2.69% per annum (interactive brokers quote)

Trading cost is 0.3% per order (interactive brokers quote)

Portfolio rebalancing is done on the first trading day of every week at the end of the day.

Market Impact is assumed to be negligible.

Taxes and fees are assumed to be 2% annually paid at the end of the year.

Incentive fee is 10% assessed on marginal returns at the end of the year.

Reference benchmark is SPDR SP500 TR (SPY) – chosen as a simple low cost, tax efficient and fully investable vehicle.

My data doesn't contain any lookahead and survivorship bias.

Discussion of results:

I have yet to optimize the alphas which I firmly expect to bolster the sharpe ratio to be much higher than the market. There is clear visual cyclical in performance which is responsible for the increased volatility. Notwithstanding, over the course of the sample period and assuming tax deferred investment structure the strategy performs extremely well on a non-risk-adjusted basis. The analysis also shows slight positive return kurtosis as a "reward" for accepting higher volatility. Strategy results are inclusive of costs and fees.

	Strategy	SPY
Average Return:	0.00144	0.00063
Average Volatility:	0.01949	0.00886
Annualized daily SR:	1.16989	1.11814
Return Skewness:	0.32876	-0.42599
Ret Excess Kurtosis:	6.66696	5.02224
Correlation Coef:	0.63455	NA
Market beta:	1.39605	1

Strategy Back-test

