



Financial Engineering. Simplified.



Success Stories

How we helped analyze trading strategies on an equity index?

A Chicago based private investment firm was looking at trading strategies which could exploit trends in daily returns on a universe of stocks. One strategy involved performing a Momentum analysis which could relate the lagged daily returns with future daily returns. Similar analysis was to be extended for excess returns, defined as returns over standard indices like S&P500.



Challenges

- ▶ Lack of any distinctive trends which could enhance the prediction capabilities of trader
- ▶ Lack of understanding of impact of factors like P/E, Market Capitalization, trading activity on the prediction power
- ▶ Inability to factor in correlation between these factors, which might lead to spurious conclusions



Our Solution

- ▶ Mapped the actual returns as a linear combination of three mutually exclusive time buckets of the lagged returns
- ▶ Performed a Principal Component Analysis (PCA) which could isolate the factors which impact the prediction from the ones which don't.
- ▶ Performed a stepwise multiple regression, which could sort all the factors and lagged returns in the order of importance for prediction.



Benefits

- ▶ Could obtain clear patterns of short and long term returns.
- ▶ Clear understanding of factors which contribute to prediction of actual returns and their order of priority
- ▶ Desk could clearly identify distinct patterns of correlation flips and hotspots