My Quant Review

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2015-3-15

Abstract

keywords: PCA, Markov, ANN, Bayess, Elliott Waves

1 Introduction

a	b	c
a1	b1	c1

2 PCA

Since Avellaneda and Lee (2010) using Principal Components Analysis (PCA) to build statistical arbitrage strategies is quite common **To do** cites (1). Usually these strategy exploits mean reversion of stock prices to some statistical "equilibrium point", which is determined using PCA.

However, Infantino and Itzhaki (2010) report that PCA model could behave poor when market switches to new "regime", implying quite different equilibrium state. Panic selloff period during financial crisis is example of such regimes. Infantino and Itzhaki (2010) used volatility of PCA vectors as metric to identify these regime switches. When identified, they used opposite strategy **To do** (2). After such modification their reported sharp-ratio looked quite good **To do** sharpe numbers (3).

3 Conclusion

4 Future Work

To do...

- [ ] 1 (p. 1): cites
- [ ] 2 (p. 1): trading away from PCA
- [ ] 3 (p. 1): sharpe numbers

References

Avellaneda, Marco and Jeong-Hyun Lee (2010), "Statistical arbitrage in the us equities market." *Quantitative Finance*, 10, 761–782.

Infantino, Leandro Rafael and Savion Itzhaki (2010), "Developing high-frequency equities trading models."