Purdue University
Department of Statistics

Stat 590

Summer 2006 internship report

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Introduction

This report serves to relate my summer experience as an intern. It is understood that an internship is to serve as a bridge between school and industry. To that end, I am going to describe a couple of particular problems I had to solve and also talk a bit about how it felt for a student of my background to work outside academia. My internship began in May 2006 when, as a Statistics Ph.D. student at Purdue University, I was already equipped with M.S. in Applied Statistics and M.S. in Computational Finance obtained from the same institution.

My summer employer, WR Capital Management LP, was one of the numerous hedge funds located in CT, USA. It was named after its current Chairman and CEO Mr. Walter Raquet who was also previously known as Founder and Director of Knight Trading Group.

The fund hires and finances a number of money managers (each of them can be an individual or a firm) who are located well outside the central office in CT. The “office building” (pictured on the title page) includes what is called “middle office” (risk management) and “back office” (administration and support). As the money managers take positions on the market, it is monitored from the middle office but only on the purpose of risk management. Once a money manager is hired, the fund doesn’t interfere with his trading decisions unless his cumulative record becomes so bad that he has to be terminated.

The only trading activity taking place in the middle office (where I formally belonged) was to do with managing the overall risk through taking positions in such instruments as options and futures. At the time, 80% of the fund’s holdings consisted of equity (formally, WR was classified as Market-Neutral Equity Fund of Funds) and therefore ETF and equity indices served as underlying for those derivatives.

Despite being called a “Risk Management Associate” my work at WR was mostly about quantitative analysis. To illustrate the kind of problems I had to deal with, I provide two examples…..

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