CARLSON
SCHOOL OF MANAGEMENT
UNIVERSITY OF MINNESOTA

Honors Research Assistant Program

Title: Temporary Price Trends in the Securities Markets: Examining Short-term Direction Indicators in Securities Prices

Description of the Research: Adherents to the Efficient Market Hypothesis conclude that the aggregate impact of investors upon securities prices leaves securities very efficiently priced at any point in time, making it nearly impossible for portfolio managers to consistently "beat the market" and thereby outperform their competitors. It is obvious, however, that investors' actions result in strong temporary movements in major market indices that often cancel each other in producing the more stable long-term results. This research project is designed to examine these very short term daily and weekly price adjustments that make the market as a whole as efficient as it is. The purpose is to determine the degree to which temporary price patterns are extended by speculators attempting to "join" more fundamentally motivated investors whose buy and sell orders usually initiate the short term price trends.

Responsibilities of the Student:
This study will extend research conducted during the 2008-2009 school year. The student will extend an existing Matlab program that uses new data mining techniques to identify predictive patterns. Price movements that appear to precede significant changes in an index's direction will be recorded and then tested for consistency and outcomes. This research can be expected to reinforce the Hypothesis to some degree while testing assertions that short-term opportunities develop as prices move to new levels of equilibrium.

Approximate Number of Hours/Schedule:

The student will average ten hours per week of research and programming design work each week after being provided with the programs already developed. This time includes contact with the faculty advisor as needed to be sure the research methodology is consistent with the purpose of the project. The schedule is flexible to accommodate other time demands.

Qualifications: Student will need some programming skills with Java or C++ and the ability to learn Matlab as well as some course work in calculus and statistics.