Algorithmic trading to replace humans in the stock market

September 14 2011, by Deborah Braconnier

(PhysOrg.com) -- The UK Government's Foresight panel, led by Dame Clara Furse, has released a working paper that points out that algorithmic trading, or high frequency trading, will soon replace human decision making when it comes to the stock markets. Many countries have already begun replacing humans with one third of the UK trading going to computers and three-quarters of trading in the United States being computer generated.

The Foresight panel warns that this transition to algorithmic trading has its benefits and risks. They have found instances where computer trading can increase volatility in the market and cause massive damage. One example is what is known as self-reinforcing feedback loops. In this case, small changes such as data delays, loop back on themselves and create a bigger change. Normalization of deviance can also occur where risky events are seen as normal until the inevitable crash of the market occurs.

Some benefits the panel sees are an improvement in liquidity, lower costs of transactions and greater market efficiency.

The trend toward more and more algorithmic traders and the reduction in need for front-line traders is expected to increase. Similar to the use of physical robots in the manufacturing industry replaced human workers in places like automobile plants throughout the 20th century; the 21st century will likely bring the replacement of human workers throughout the global financial markets. The paper notes that while humans will be replaced in trading, the need for algorithm developers will be increased.

The Foresight panel notes that human workers are made with hardware that is too slow and runs on limited bandwidth in comparison to their computer counterparts.

The current paper from the Foresight panel is a work in progress designed to add to the growing evidence on the pros and cons of computer trading. The final report is expected to be released in the Fall season of 2012.

provided for information purposes only.