Problem Statement

Trading and war are extremely opposite, but they share some communalities. For once, trading does not imply the use of weapons to oppress an enemy; however, someone always loses because of lack or presence of a weaker strategy. In this market driven world, information is power. Adverse selection refers to a scenario in which the parties on a trade have unequal information over the subject. This study acknowledges that institutional investors have access to news before the public does, but… What is it the impact of information on stock prices? Our research will pursue the development of an automated process which feeds from stock prices, from *"Dukascopy" (3)*, and news feeds, from *"Tiingo" (4)*, to determine the presence of informed traders, length, and strength of several classes of sources. It tests the hypothesis that different profiles of stocks are affected differently by news sentiment analysis. Section 1 uses methods explored by *Marcos Loped de Prado (1)* and *Joel Hasbrouck (2)* to heuristically describe the use of classification models to predict the presence of decompressed markets, a scenario in which the price information is non-redundant, in other words, the entropy is high. Section 2 exploits clustering as means to develop stock profiles, refers to the traders that manipulate it and to the historical characteristics of the stock, while analyzing their behavior on the presence of information. Section 3 utilizes time series predictions to measure the inference of alternative data sources (offers the opportunity to work with truly unique, hard-to-process datasets) on the stock prices, as a means to determine the characteristics of the information-driven price waves. Section 4 develops an automated system to feed live news into the data warehouse and then use Natural Language Processing to determine the sentiment of the news based on the price changes. It also composes a structure to take actions based on the research. Define the weight of the different models and add them to a stochastic strategy.