Hidden Orders and impact in financial markets

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Financial markets provide a detailed record of human decision making under risk and uncertainty in a complex environment over long spans of time. It is of major interest to design models whose components are empirically grounded and also able to make accurate quantitative predictions of the phenomena of interest.

In this lines, we concentrate in the statistical identification of trading and scheduling strategies of the different participants of a real stock market. Specifically, we implement a statistical segmentation algorithm on trading time series during a four-year record of the Spanish stock exchange. We are able to extract and distinguish "hidden orders"or packets which are executed by using several independent trades, design in this way so as to minimise market impact. Furthermore, we characterise these statistical properties and analyse their most salient features. Finally, we study how the total impact builds in time and how this "hidden-order"impact compare with instantaneous price formation models[1].

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[1] Kissell, R., and M. Glantz (2003), "Optimal Trading Strategies," AMACOM, Inc.