News Sentiment Incorporation in Real-Time Trading: Alpha Testing the Event Trading Strategy in HFT

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ABSTRACT

This article describes how machines are the new breed of traders as news sentiment arrivals drive the stock price change. Strategies are the technical approach to search for profit from event-based speculations. This paper revisits these topics in a novel way and first uncovers distinctive characteristics of high frequency trading in Helsinki stock exchange insinuating the impression on positive recoveries of event trading. Here is a better prediction by the incorporation of news on returns that proposed event trading strategy has significant effects on Finnish stock. This article contributes to the con temporarily embarked, upgrading form of practical paperwork on the take of news events in high economic science.

KEYWORDS
Decision Support System, Directional Trading, Finland, Helsinki Stock Exchange, Market Inefficiency, Metso, Network Programmed, Nokia, Nokian, Nordea, Outokumpu, Stora, Ultralow Latency Machine, Value at Risk

INTRODUCTION

These days’ setup devices in trading industry are network-programmed to reread info news. The programs are very much leeway of a highly sophisticated computerized automated trading system (Gagnon, 2013). It psychoanalyzes those estimable nifty words in the news based on algorithms fitted and does the trading accordingly. Stock traders can evaluate news trends to seize up public sentiment on a specific company or industry to spot a combination of sentiment plus trading activity, and trending over time (Foucault, Hombert, & Roşu, 2016). Leaked information to the high frequency trading (HFT) corporations is strings to the trading venue. HFT traders queen it over on an electronic order book in fractions of a second to fulfill trades using encyclopedic algorithms technology to decode signals from the upturning market mandate (like events and news) securing lots of quick buck (Brown, 2011). The consequences of the news declaration are computed in a simple linear regression:

\[ R_t = \phi + \lambda \Delta X_t + \varepsilon_t \]  \hspace{1cm} (1)

where,

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\( R_t \) is the vector of returns  
\( \Delta X \) is the vector of “surprise”

\[ \mu_t \] is eccentric error correlating to announcement of news; \( \phi \) is regression intercept that claims
shifts in returns and, finally, \( \gamma \) is the effect of the news announcement. In spite of the instinct of
simple returns, good deals of the financial literatures rely on logarithmic returns. Mathematically
logarithmic returns denoted as,

\[ \ln(R_t) = \ell(R_t) = (P_t) - (P_{t-1}) \]  

Previous studies (Henry, 2008; Schumaker & Chen, 2009; Schumaker, Zhang, Huang, & Chen, 2012) triumphed in enacting connect between real time information and stock earning, however in
Finnish HFT firms, it is not perceptible, which are just in startup phase. To hit this need, this research
analyses how an event based trading strategy proposed by Aldridge, can enrich news tone as value
drive to get lofty profit. We get quantitative evidence for alpha testing the event trading strategy in HFT
firms in Finland. The question that we answer is how in newly developed HFT markets of Finland,
the information-communicated impact in the illusion of better trading strategies for generating alpha
profit, without emphasizing need for speed “based on Aldridge event trading strategy.”

LITERATURE REVIEW

There is an emergent literature in management information system and finance that uses news sentiment
incorporation in real time analysis and trading to strive and alter qualitative information. The IS
based finance literature has had some degree of achievement at viewing a sturdy liaison between
profits from bazaar and news as a proxy of information, (Shiller, 1981; French & Roll, 1986; Cutler,
Poterba, & Summers, 1989; Campbell, 1991; Mitchell & Mulherin, 1994) While paper including
(Engelberg, 2008) carries the initiative that news event has significant clues for stock prices, none
stand for a major move in idea about by and large relation between feasibility of profits in stock and
information in specific market. Specifically, this paper documents this feasibility in Finnish market.

The connection between trading activity and the quantity of news assertion is investigated in depth
in early 90’s by Mitchell & Mulherin (1994). In early 90s, the majority of microstructure models for
generalizing the scale of events and information from a marketplace have been alienated into three
major segments. First group researchers like (Hasbrouck, 1991a, 1991b; Madhavan & Smidt, 1991)
includes models quantifying the impact of information on price fluctuation. The second segments cover
models using irrefutable proxies, like firm size (Hasbrouck, 1991b), trade volume and size (Keim &
Madhavan, 1995, 1997), bid-ask spread (Bagehot, 1971; Jaffe & Winkler, 1976; McInish & Wood,
1992), the proportion of insiders (Chiang & Venkatsh, 1988), and number of trades (Jones, Kaul,
& Lipson, 1994). The third generation presents sequential trade models estimating the probability
of informed trading developed by (Easley, Kiefer, O’Hara, & Paperman (1996) and Easley, Kiefer,
& O’Hara (1997a, 1997b) via the means of maximum likelihood estimation. Technical trading has
previously been used with the goal of financial forecasting as in detail explored by Leigh, Purvis,
& Ragusa (2002), and Mehta & Bhattacharyya (2004) thus motivating our choice for this approach.
The relevance between news forecasts and monthly returns is also explored in Chan (2003). Here
the scholar agrees that stocks possess freakish returns after public news. Later Zhang (2006) studied
the trading activity and price movements as information uncertainty and stock returns. The scale of
anxiety of information is contemplated in Rosen (2006). The most promising one relevant to our
work are (Padala et al., 2003; Lai, Rasmusson, Adar, Zhang, & Huberman, 2005; Neumann, Stoesser,
Anandasivam, & Borissov, 2007)
An International Comparative Study of the Roles, Rules, Norms, and Values That Predict Email use
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