INFORMATION ON DOCTORAL DISSERTATION

Title of Thesis:

THE IMPACT OF INTERNET-BASED INFORMATION ON THE CHANGES OF THE VIETNAMESE STOCK MARKET

Specified field of study: **Business Administration**

Code of specialty: **9.34.01.01**

Name of PhD candidate: **Nguyen Thu Hoai**

Committees:

1. **Associate Professor, Doctor Dang Thi Viet Duc**
2. **Doctor Ho Hong Hai**

Academic Institution: **Posts and Telecommunications Institute of Technology**

NEW RESULTS OF THE DISSERTATION

The dissertation offers three significant contributions by extending the framework of behavioral finance within the context of the Vietnamese frontier market as following:

1. Theoretical integration and elucidation of irrationality: the study integrates diverse hypotheses, such as the herding effect, investor attention, and overreaction phenomena, to precisely delineate the mechanism through which information influences investor behavior. This integration serves to clarify the concept of "irrationality" in investment decisions.

2. Modeling non-traditional information: the dissertation advances asset pricing theory by extending the Fama-French Three-Factor model, integrating psychological variables derived from non-traditional information sources, specifically: search intensity, social media sentiment, and journalistic coverage sentiment. This extension compellingly explains the mediating role of market sentiment in stock price volatility and various irrational phenomena observed in the market.

3. Pioneering interdisciplinary methodology: the dissertation pioneers a novel interdisciplinary approach within Vietnam, combining behavioral finance principles with big data analytics sourced from the Internet. The process of transforming unstructured data into robust quantitative variables establishes a firm bridge between theoretical constructs and empirical realities, thereby promoting interdisciplinary research in the field of finance.

APPLICATION AND USED IN THE REAL WORLD OR FUTURE WORKS

Application in the real word

First, the dissertation provides evidence for the Ministry of Finance to develop AI-based information monitoring systems, leveraging GSVI and online news sentiment as early indicators of price movements. The findings can serve as a foundation for designing risk-warning tools and preventing information manipulation.

Second, the identified strong effects of negative news enable regulators to design appropriate communication and financial literacy programs. The dissertation can be used to develop training materials, guiding investors in detecting misinformation and rumours and improving their ability to “filter” noise.

Third, the models and empirical results offer a basis for constructing rapid response systems to information shocks originating from online news and digital platforms. Regulators may rely on the

model structure to establish procedures for tracking sources, isolating risk signals, and activating market-stabilizing mechanisms during communication crises.

Fourth, the dissertation highlights the need to develop big data infrastructure and advanced Vietnamese natural language processing algorithms. Its findings may serve as prototype cases for the Ministry of Science and Technology to prioritise AI and big data projects supporting financial information surveillance.

Fifth, the results help firms better recognise the importance of transparent disclosure, IFRS adoption, and enhanced investor relations. Firms can use the dissertation's analytical framework to design financial communication strategies, produce more accessible reports, and proactively manage rumours.

Sixth, the dissertation provides empirical evidence for investors to use GSVI and online news sentiment as reference signals, while understanding the risks of herd behaviour and social media influence. The findings can be incorporated into training programs, investment handbooks, and decision-support tools.

Future works

First, future studies may broaden the analytical scope by examining differences in the effects of online information across industries, firm size, liquidity levels, or transparency. Stratifying by stock groups or extending coverage to the entire listed market, as well as analysing crisis versus post-crisis periods or longer time series, would clarify information transmission mechanisms and price reactions in frontier market settings.

Second, subsequent research could develop an integrated model to simultaneously evaluate and capture interactions among the three Internet-based information channels analysed in this dissertation: search intensity, online news sentiment, and social media signals. This approach would offer a more holistic understanding of how information flows jointly influence market volatility.

Third, qualitative research represents a promising direction to complement quantitative findings, particularly in exploring investor behaviour, psychology, and decision-making motives—dimensions that statistical models can only reflect superficially.

Fourth, future studies may adopt the Carhart four-factor model to account for momentum effects not captured by the Fama–French three-factor framework, thereby improving portfolio or fund performance evaluation. Additionally, the application of machine-learning techniques and advanced estimation approaches such as GMM or instrumental variable modelling could open new avenues for research by uncovering nonlinear relationships and complex interactions, especially as big data and unstructured information (e.g., images and video) become available.

Supervisors **PhD candidate**

Associate Professor. Doctor. Dang Thi Viet Duc **Doctor. Ho Hong Hai** **Nguyen Thu Hoai**