

Editorial

Empirical Finance

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Abstract: The research field related to finance has made great progress in recent years due to the development of information processing technology and the availability of large-scale data. This special issue is a collection of 16 articles on empirical finance and one book review. The content is six articles on machine learning, five articles based on traditional econometric analysis, and five articles on emerging markets. The large share of articles on the application of machine learning is in line with recent trends in finance research. This special issue provides a state-of-the-art overview of empirical finance from economic, financial, and technical points of view.

Keywords: machine learning; artificial intelligence; financial econometrics; emerging markets

Empirical research is crucial in finance. This research area has experienced remarkable progress due to the development of information technology. This Special Issue focuses on the broad topic of empirical finance and includes many studies using financial data. The Special Issue is mainly divided into three types of analysis: the application of machine learning based on artificial intelligence, the application of the traditional econometric approach, and the analysis of emerging markets.

The first group includes Wang et al. (2018); Liu et al. (2018); Vezeris et al. (2018); Xu et al. (2018); Ptak-Chmielewska (2019) and Hamori et al. (2018). Wang et al. (2018) proposed two estimation algorithms for extracting cross-lingual news pairs based on machine learning from multilingual financial news articles. Luo et al. (2019) introduced convolutional neural network (CNN) techniques to forecast the short-term crude oil futures prices. Vezeris et al. (2018) compared the addition of various strategies to a simple Moving Average Convergence Divergence (MACD) automated trading system. Xu et al. (2018) combined random forest and wavelet transformation to model the prediction of currency crises. Ptak-Chmielewska (2019) compared various machine learning methods to analyze small enterprise failures using individual-level data. Hamori et al. (2018) used default payment data to compare the prediction accuracy and classification ability of three ensemble learning methods and various neural network models.

The second group includes Ogawa and Muto (2019); Tivnan et al. (2018); Nakajima (2019); Miyazaki (2019) and Toyoshima (2018). To analyze the determinants of the utility of international currencies, Ogawa and Muto (2019) used a dynamic panel data model. Tivnan et al. (2018) used trading data and quote data to provide various measures of Securities Information Processor (SIP) latency related to high-speed data feeds between exchanges. Nakajima (2019) analyzed whether profit can be gained from statistical arbitrage between wholesale electricity futures and natural gas futures listed on the New York Commodity Exchange. Miyazaki (2019) analyzed how gold reacts to changes in various financial measures based on a quantile regression model. Toyoshima (2018) applied a two-step procedure to analyze the causality-in-mean and causality-in-variance between the housing and stock markets in the United Kingdom.

The third group includes Liu et al. (2018); He et al. (2018); Lizińska and Czapiewski (2019); Lu and Li (2019) and Thuy and Thuy (2019). Liu et al. (2018) used a copula model to study the dependence structure of the share price returns of Beijing Bank, Ningbo Bank, and Nanjing Bank

in China. He et al. (2018) used a time-varying parameter vector autoregressive (VAR) model with stochastic volatility to analyze the dynamic relationship between Chinese house prices and bank credit. Lizińska and Czapiewski (2019) used a set of proxies of earnings management to test the long-term, Initial Public Offering (IPO) performance in Poland. Lu and Li (2019) applied panel data regression and piecewise regression models to analyze the institutional investor's shareholding base on the corporate governance system in Taiwan. To investigate the impact of exchange rate volatility on exports in Vietnam, Thuy and Thuy (2019) used the autoregressive distributed lag (ARDL) bounds testing approach.

Finally, Xu (2018) provided a book review on "Credit Default Swap Markets in the Global Economy" by Tamakoshi and Hamori. Routledge: Oxford, UK, 2018.

These articles all contribute to the development of empirical finance, addressing a wide range of issues and topics related to risk analysis, portfolio analysis, and risk attribution.

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