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Editorial

Editorial Statement and Research Ideas for Efficiency and Anomalies in Stock Markets

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Abstract: The Efficient Market Hypothesis states that it is impossible for an investor to outperform the market because all available information is already built into stock prices. However, some anomalies could persist in stock markets while some other anomalies could appear, disappear and re-appear again without any warning. To explore new theories with applications in this direction, in this editorial, we suggest ideas to authors on what types of papers we will accept for publication in the areas of on Efficiency and Anomalies in Stock Markets. We will discuss some papers published in the special issue of Efficiency and Anomalies in Stock Markets.

Keywords: market efficiency; anomaly; stock market; finance; applications

The Efficient Market Hypothesis believes that it is impossible for an investor to outperform the market because all available information is already built into stock prices. However, some anomalies could persist in stock markets while some other anomalies could appear, disappear and re-appear again without any warning. To explore new theories with applications in this direction, the special issue on Efficiency and Anomalies in Stock Markets edited by Wing-Keung Wong is devoted to advancements in the theory development on market efficiency and anomalies in stock markets as well as applications in market efficiency and financial anomalies in 2019. We invite investigators to submit manuscripts of original innovative research in theory, practice and applications in the areas of market efficiency and anomalies in stock markets to be considered for publication in *Economies*. We are open to interesting and imaginative ideas that fit within the spirit and scope of the call for papers that should have a quantitative orientation.

The special issue of Efficiency and Anomalies in Stock Markets has published 10 papers including (Guo et al. 2017; Ali et al. 2018; Ahn et al. 2018; Chiang 2019; Ehigiamusoe and Lean 2019; Jena et al. 2019; Lam et al. 2019; Zhang and Li 2019; Chang et al. 2019; Woo et al. 2019; Wong 2020).

Among them, (Woo et al. 2019) review the theory and literature on market efficiency and market anomalies. (Chiang 2019) examines the efficient market hypothesis for 15 international equity markets, and (Guo et al. 2017) develop the theory to test for market efficiency and check whether there is any expected arbitrage opportunity and anomaly in the market. market. (Ehigiamusoe and Lean 2019) examine the moderating effects of the real exchange rate and its volatility on the finance-growth nexus and determine the marginal effects of financial development on economic growth at various levels of the real exchange rates and its volatility, (Zhang and Li 2019) explore the fitting of Autoregressive (AR) and Threshold AR (TAR) models with a non-Gaussian error structure and propose to use a Gamma random error to cater for the non-negativity of the realized volatility, and (Ahn et al. 2018) examine the effects of low-frequency liquidity, high-frequency spread measures and price impact measures. On the other hand, (Lam et al. 2019) examine whether there is any value premium in the Chinese stock market

by using the conventional buy-and-hold approach to buy long the portfolio with the highest BM ratio and sell short the one with the lowest BM ratio, (Ali et al. 2018) use three methods to construct factors and identify pitfalls that arise in the application of Fama-French's three-factor model and examine the ability of the three factors to predict the future growth of economy, (Jena et al. 2019) examine the efficacy of the Put–Call Ratio (PCR) measured in terms of volume and open interest in predicting market return at different time scale, and (Chang et al. 2019) study the effect of financial constraints on short-term performance.

We first discuss more detail about the work by (Woo et al. 2019; Chiang 2019; Guo et al. 2017). (Woo et al. 2019) review the theory and literature on market efficiency and market anomalies. They first review market efficiency, define clearly the concept of market efficiency and efficient-market hypothesis (EMH), and discuss some efforts that challenge EMH. Thereafter, they review different market anomalies and review different theories of Behavioral Finance that could be used to explain market anomalies. Their review is useful to academics for their studies in EMH, anomalies, and Behavioral Finance, useful to investors for their decisions on their investment, and useful to policy makers in reviewing their policies in stock markets. (Chiang 2019) examines the efficient market hypothesis by applying monthly data for 15 international equity markets. He finds that the null for the absence of autocorrelations of stock returns is rejected except Canada and the U.S, the independence of market volatility correlations is rejected. However, the existence of correlations between stock returns and lagged news measured by lagged economic policy uncertainty is not rejected for all markets, implying that a change of lagged EPUs positively predicts conditional variance. In addition, (Guo et al. 2017) study the relationship between stochastic dominance and the Omega ratio. They find that second-order stochastic dominance (SD) and/or second-order risk-seeking SD (RSD) alone for any two prospects is not sufficient to imply Omega ratio dominance insofar that the Omega ratio of one asset is always greater than that of the other one. They extend the theory of risk measures by proving that the preference of second-order SD implies the preference of the corresponding Omega ratios only when the return threshold is less than the mean of the higher return asset. They also find that the preference of the second-order RSD implies the preference of the corresponding Omega ratios only when the return threshold is larger than the mean of the smaller return asset and observe that first-order SD does imply Omega ratio dominance. Applying their theory to examine the relationship between property size and property investment in the Hong Kong real estate market, they conclude that the Hong Kong real estate market is not efficient and there are expected arbitrage opportunities and anomalies in the Hong Kong real estate market.

We turn to discuss the work by (Ehigiamusoe and Lean 2019; Zhang and Li 2019; Ahn et al. 2018) on volatility and liquidity. (Ehigiamusoe and Lean 2019) examine the moderating effects of the real exchange rate and its volatility on the finance-growth nexus in the West African region and determine the marginal effects of financial development on economic growth at various levels of the real exchange rates and its volatility. They find that financial development has a long-term positive impact on economic growth, but this impact is weakened by real exchange rate and its volatility. They also find that the marginal effects of financial development on economic growth vary with the levels of the real exchange rate and its volatility: the higher the real exchange rate and its volatility, the less finance spurs growth. Their findings imply that the development of the financial sector would not provide the desirable economic benefits except it is accompanied by a reduction and stability in the real exchange rates. Motivated by the problem of finding a possible probabilistic model for the realized volatility, (Zhang and Li 2019) explore the fitting of Autoregressive (AR) and Threshold AR (TAR) models with a non-Gaussian error structure. They propose to use a Gamma random error to cater for the non-negativity of the realized volatility, apply the maximum likelihood estimation and employ a non-gradient numerical Nelder–Mead method for optimization and a penalty method, introduced for the non-negative constraint imposed by the Gamma distribution, in their analysis. In their simulation, they show that their proposed fitting method fits the true AR or TAR model with insignificant bias and mean square error (MSE). They also test the AR and TAR models with Gamma random error

on empirical realized volatility data of 30 stocks and find that one third of the cases are fitted quite well, implying that the models have potential as a supplement for current Gaussian random error models with proper adaptation. On the other hand, (Ahn et al. 2018) conduct a comprehensive analysis on 1183 stocks from 21 emerging markets to examine the low-frequency liquidity proxies that best measure liquidity in emerging markets and compare several low-frequency liquidity proxies with high-frequency spread measures and price impact measures. They find that the Lesmond, Ogden, and Trzcinka measure is the most effective spread proxy in most of the emerging markets. In addition, the Amihud measure is the most effective one among the price impact proxies.

Lastly, we discuss the work done by (Lam et al. 2019; Ali et al. 2018; Jena et al. 2019; Chang et al. 2019) on value premium, the application of Fama-French's three-factor model, the efficacy of the Put–Call Ratio, and the effect of financial constraints on short-term performance. (Lam et al. 2019) examine whether there is any value premium in the Chinese stock market by using a conventional buy-and-hold approach to buy long the portfolio with the highest BM ratio and sell short the one with the lowest BM ratio. They propose a new strategy by combining the value premium effect and technical analysis. To trade the objective portfolio or risk-free asset according to the moving average timing signals, they find excess return from such a zero-cost trading strategy. They perform various robustness tests and find that the excess returns remain significantly positive after adjusting for risks (on three factor models) and transaction costs and find that the combined trading strategy can generate significant positive risk-adjusted returns after the transaction costs. (Ali et al. 2018) use three methods to construct factors and identify pitfalls that arise in the application of Fama-French's three-factor model to the Pakistani stock returns and examine the ability of the three factors to predict the future growth of Pakistan's economy. They find that the special features in Pakistan significantly affect both size and value factors and influence the explanatory power of the three-factor model. They find that size and book-to-market factors exist in the Pakistani stock market and two mimic portfolios SMB and HML generate a return of 9.15% and 12.27% per annum, respectively. They observe that including both SMB and HML factors into the model will increase the explanatory power of the model. They also find that except for value factor, the model's factors predict future gross domestic product (GDP) growth of Pakistan and remain robust. (Jena et al. 2019) examine the efficacy of the Put–Call Ratio (PCR) measured in terms of volume and open interest in predicting market return at different time scale. They find that volume PCR is an efficient predictor of the market return in a short period of 2.5 days and open interest PCR in a long period of 12 days. Their findings suggest that traders and portfolio investors should use the appropriate PCR depending upon the time horizon of their trade and investment. In addition, (Chang et al. 2019) hypothesize that when companies have investment plans, they are expected to have higher future cash flows and they will become increasingly more valuable regardless of the fact that they raise funds through the issue of convertible bonds (due to financial constraints), positively affecting the performance of companies. Their findings show that financial constraints have no effect on short-term performance but have a significantly positive impact on the long-term performance of companies after their issuance of convertible bonds.

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