

EDITORIAL

Open Access

Editor's introduction



Gang Kou^{1*}

*Correspondence:
kougang@swufe.edu.cn

¹Southwestern University
of Finance and Economics,
Chengdu, China

The 46th issue of *Financial Innovation* (FIN), Volume 10, No.4 (2024) presents 30 papers contributed by authors and co-authors from 25 countries: Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, France, Germany, Greece, Iran, Israel, Lebanon, Netherlands, Pakistan, Republic of Korea, Russia, Serbia, Singapore, Spain, Tunisia, Turkey, United Kingdom, United States of America, Vietnam. These papers are primarily categorized into three sub-themes: FinTech, Asset Pricing, and Risk Management and Analysis.

FinTech

Brito et al. (2024) present a framework to enhance churn prediction in retail banking using feature engineering and data balancing with ADASYN and NEARMISS, achieving superior performance with XGBoost and elastic net models, and offering valuable insights for effective customer retention strategies. Zhuo et al. (2024) systematically review text analysis methodologies used in blockchain-related research, identifying the most common approaches like sentiment analysis for cryptocurrencies and topic modeling for broader blockchain concepts, and highlights future research directions based on the findings. Perea et al. (2024) explore the determinants of user experience in peer-to-peer (P2P) payment systems in Spain using text mining and sentiment analysis, finding that independent apps generate more positive user experiences than those linked to banks. Lu et al. (2024) identify the critical factors influencing blockchain adoption in Taiwan's banking sector using a hybrid approach that integrates DEMATEL and EDAS methods, revealing that security and technological aspects are the most important considerations for successful blockchain implementation. Eti et al. (2024) develop a fuzzy decision-making model to prioritize investment strategies in European insurtech, identifying pricing as the most critical factor and big data as the most effective tool for enhancing performance. Zealand and Pierson (2024) examine how the accelerated digitalization of banking during the COVID-19 pandemic affected European bank staff's ability to protect personal data, revealing that increased platformization disempowers staff and shifts data protection responsibilities to clients, potentially undermining trust in digital banking. Pham et al. (2024) investigate the relationship between fintech Google

search volume and bank stock returns in Vietnam using VAR-Granger causality and copula methods, finding that fintech lending has a bidirectional negative impact on bank returns, while fintech payment has a positive correlation. Blanco-Oliver et al. (2024) use machine learning models to analyze factors influencing the adoption of mobile peer-to-peer payment systems, finding that perceived usefulness, social influence, trust, and enjoyment are key drivers of adoption, with nonparametric methods outperforming traditional models in predictive accuracy. Anas et al. (2024) offer a meta-review of cryptocurrency research using high-frequency data, identifying key research streams such as return prediction, market efficiency, and diversification, while highlighting emerging trends and future research directions. Lim (2024) proposes a predictive automated market maker architecture for decentralized finance, integrating deep reinforcement learning to enhance liquidity provision by reducing divergence loss, slippage, and improving capital efficiency, with the architecture empirically outperforming Uniswap V3.

Asset pricing

Kaya et al. (2024) rank the financial performance of firms in the Borsa Istanbul Sustainability Index using nine MCDM methods and simulation, finding that the current ratio is the most critical factor, and demonstrating that the proposed framework offers a reliable tool for financial performance evaluation. Amirteimoori et al. (2024) evaluate scale elasticity and technical efficiency in two-stage production processes, finding that Iranian insurers need substantial input reductions and increased investment output to improve efficiency. Htun et al. (2024) use machine learning models to predict S&P 500 stocks' outperformance, finding long short-term memory superior and challenging the random walk and efficient market hypotheses. He and Lin (2024) present a probabilistic approach for pricing variance swaps under stochastic volatility with jump clustering and regime switching, developing a closed-form solution that simplifies the process by avoiding numerical integration, and demonstrating that jump clustering and regime switching significantly impact variance swap prices. Leung et al. (2024) develop a deterministic model for predicting implied volatility in cryptocurrency options, finding that incorporating a momentum indicator with machine learning significantly improves accuracy. Huang et al. (2024) introduce an unconstrained transformation method for modeling OHLC (Open-High-Low-Close) data in candlestick charts using VAR and VECM, demonstrating its effectiveness with simulations and Chinese market data. Esparcia et al. (2024) analyze DeFi and G7 stock market interactions, revealing that DeFi assets offer diversification benefits and weak positive correlations with G7 ETFs during market turbulence. Xia and Grabchak (2024) introduce a diagonal model for pricing multi-asset options using tempered stable distributions, simplifying higher-dimensional estimation and demonstrating its effectiveness. Hatamerad et al. (2024) use Bayesian model to analyze the relationship between macroeconomic variables and OPEC members' stock indices, finding positive correlations with CPI and money growth, and a weak negative correlation with oil prices. Chen and Yang (2024) investigate the pricing of Bitcoin options, revealing that short-maturity options often exhibit pricing errors due to market smiles, while long-maturity options show a "smirk." Ayoub and Qadan (2024) find that financial ambiguity lowers oil prices and increases volatility, as demonstrated through advanced econometric analysis of intraday data. Marchese et al. (2024) introduce a method to enhance the predictive power of high-dimensional regression models for yearly stock

returns and telematics data by robustifying and simplifying the models, demonstrating superior performance over traditional regression techniques in financial and insurance applications.

Risk management and analysis

Alim et al. (2024) examine the influence of political stability on stock market returns and volatility in Pakistan using GARCH and EGARCH models, finding that political stability positively affects both returns and volatility, with instability causing greater volatility than stability. Atance and Navarro (2024) propose a simplified dynamic mortality model to measure longevity and mortality risks for life insurance products by simulating the Value-at-Risk (VaR) and Conditional-Value-at-Risk (CVaR), finding that the model offers accurate and robust predictions using out-of-sample data from multiple populations. Corrales et al. (2024) use machine learning models to predict defaults in the P2B invoice-trading market, finding that models like random forests enhance default detection and that platform pricing often overestimates default risk. Kim et al. (2024) examine the impact of hashrate on Bitcoin network security using vector error correction modeling, finding that fluctuations in hashrate significantly influence the security level, highlighting the importance of computational power in maintaining Bitcoin network security. Andreadis et al. (2024) use recurrence plots to compare original and credit card-augmented Divisia monetary aggregates, finding that broad aggregates are more stable and potentially more effective for monetary policy, especially during crises. Kristjanpoller (2024) develops a hybrid econometric and machine learning approach, using HAR and LSTM models, to forecast the realized volatility of natural gas prices, finding that the Euro-Dollar exchange rate is the most significant factor influencing daily volatility among the financial assets analyzed. Fan et al. (2024) develop an intelligent fusion forecast model for new energy stock prices by combining Empirical Wavelet Transform and Support Vector Regression optimized with Ant Lion Optimization, to predict new energy stocks' chaotic and volatile prices accurately. Alam et al. (2024) apply a fuzzy multi-criteria decision-making approach, combining FUCOM and fuzzy WASPAS methods, to evaluate and prioritize flood risk mitigation strategies for Pakistan, finding that hard engineering solutions, such as dams and embankments, are the most effective in mitigating flood risks.

Author contributions

The author read and approved the final manuscript.

Declarations

Competing interests

The author declares that he has no competing interests.

Published online: 04 September 2024

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.