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Editorial

Editorial for Special Issue "Finance, Financial Risk Management and Their Applications"

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Abstract: We are pleased to announce the Special Issue on the Finance, Financial Risk Management and their Applications in the International Journal of Financial Studies. This Special Issue collects papers pertaining to several lines of research related to finance and financial risks. This Guest Editor's note synthesizes the contributing authors' propositions and findings regarding these developments and hopes that new areas can be opened for future researches.

1. Introduction

In modern financial markets, derivatives pricing becomes more and more important. However, a hedging is even more important than the pricing. The risk management is of extreme importance to investors and derivative traders, especially during financial turmoil. In addition, effective risk management is conducive to the stability and the safety of financial systems in the world. To understand and reduce the risks in derivative markets, stock markets and insurance sectors become the key issue of making the safer financial system. These risks include market risk, model risk, credit risk, operation risk, liquidity risk, longevity risk, reinvestment risk, etc.

2. Papers

This Special Issue of the International Journal of Financial Studies attempted to attract certain special papers that could help us understand the risks in the derivative market. The first paper entitled "Impending Doom: The Loss of Diversification before a Crisis" by Yang et al. (2017) examines the diversification potential within a stock market, i.e., the Australian stock exchange, from the year 2000 to the year 2014. Their results showed the potential for diversification decreased almost monotonically in the three years prior to the 2008 financial turmoil, consequently leaving investors poorly diversified at the onset of the global financial crisis. The second paper entitled "Risk Culture during the Last 2000 Years—From an Aleatory Society to the Illusion of Risk Control" by Milkau (2017) studies the history of the risk dated back to the Roman "Aleatory Society" and its up-to-date developments. The third paper entitled "A Logistic Regression Based Auto Insurance Rate-Making Model Designed for the Insurance Rate Reform" by Duan et al. (2018) investigates auto insurance ratemaking models by making use of the auto burden index. Based on data from a Chinese insurance company, authors built a clustering model that classifies auto insurance rates into three risk levels. In addition, the claim frequency was estimated by the logistic regression model. The fourth paper entitled "Noise Reduction in a Reputation Index" by Mitic (2018) studies the state-space model of a reputation index by using a Kalman filter and a smoother. Their results indicated that noise constitutes 10% of the raw signal of the time series. In addition, a comparison with low-pass filtering methods was made. The fifth paper entitled "Gas Storage Valuation and Hedging: A Quantification of Model Risk" by Hénaff et al. (2018) investigates the valuation and hedging of gas storage facilities using a spot-based valuation framework coupled with a financial hedging strategy implemented with

futures contracts. The authors evaluated the associated model risk, and showed that the valuation is strongly dependent on the dynamics of the spot price and the hedging strategy commonly used in the industry, leaving the storage operator with significant residual price risk. The sixth paper entitled "An Empirical Investigation of Risk-Return Relations in Chinese Equity Markets: Evidence from Aggregate and Sectoral Data" by Chiang and Zhang (2018) studies the risk–return relations in Chinese equity markets. The authors showed that stock returns are positively correlated with predictable volatility, supporting the risk–return relation in both aggregate and sectoral markets, based on a TARCH-M model. The seventh paper entitled "Quantifying Correlation Uncertainty Risk in Credit Derivatives Pricing" by Turfus (2018) studies the quantification of correlation risk in the context of credit derivatives pricing and credit valuation adjustment, where the correlation between rates and credit is often uncertain or unmodeled. The analytic pricing formulae for credit default swaps including defaultable Libor flows, capped and floored, are summarized and derived. The eighth paper entitled "Cross Hedging Stock Sector Risk with Index Futures by Considering the Global Equity Systematic Risk" by Hsu and Lee (2018) investigates the effectiveness of Taiwan Stock Exchange (TAIEX) futures, Taiwan 50 futures, and nonfinance nonelectronics subindex (NFNE) futures for cross hedging the price risk of stock sector indices traded on the TAIEX. The authors proposed a state-dependent volatility spillover GARCH hedging strategy to capture the regime switching global equity volatility spillover effects. Their findings showed that the NFNE futures exhibit superior effectiveness as an instrument for hedging stock sector exposures, compared with the TAIEX and Taiwan 50 futures. The ninth paper entitled "Bank Interest Margin, Multiple Shadow Banking Activities, and Capital Regulation by Lin et al. (2018) investigates a contingent claim model to evaluate a bank's equity and liabilities that integrates the premature default risk conditions with loan rate-setting behavioral mode and multiple shadow banking activities under capital regulation. The authors focused on a type of earning asset portfolio, consisting of balance sheet banking activities of loans and liquid assets and shadow banking activities of wealth management products (WMPs) and entrusted loans (ELs). The optimal bank interest margin, i.e., the spread between the loan rate and the deposit rate, was derived and analyzed. The results provided an alternative explanation for the decline in bank interest margins, which better fits the narrative evidence on bank spread behavior under capital regulation, in particular during a financial crisis. Raising either WMPs or ELs leads to a transfer of wealth from equity holders to the debt holders, and hence increases the deposit insurance liabilities. They also showed that the multiple shadow banking activities of WMPs and ELs captured by scope equities may produce superior return performance for the bank. Tightened capital requirements may reinforce the superior return performance by a surge in shadow banking activities that makes the bank less prudent and more prone to risk-taking at a reduced margin, thereby adversely affecting banking stability. They demonstrated that financial disturbance may be created because of the potential for shadow banking activities to spill over to regular banking activities and damage the real economy. Finally, the tenth paper entitled "Optimal Timing to Trade along a Randomized Brownian Bridge" by Leung et al. (2018) investigates an optimal trading problem that incorporates the trader's market view on the terminal asset price distribution and uninformative noise embedded in the asset price dynamics. The authors modeled the underlying asset price evolution by an exponential-randomized Brownian bridge and considered various prior distributions for the random endpoint. The optimal trading strategies were numerically solved and comparisons with different prior beliefs were made.

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