

論文の要旨

氏名 **LIV WEI**

論文題目

Research on Corporate Governance, Financing, and Stock Liquidity in SMEs

論文の要旨

In addition to the introduction and conclusion chapters, this dissertation examines the corporate governance, financing, and stock liquidity of listed small and medium-sized firms (SMEs) using the Chinese market as a case study. In addition to traditional empirical analysis, I also employ artificial intelligence methods. The individual summaries for each chapter are listed below:

Chapter 2: The nonlinear relationship between corporate governance and stock liquidity of Chinese-listed SMEs.

This chapter explores the relationship between corporate governance and stock liquidity of Chinese small and medium-sized enterprises (SMEs). The findings reveal a nonlinear (U-shaped) relationship between the overall quality of corporate governance and stock liquidity, implying that, unlike large-sized listed firms, SMEs cannot monotonically increase liquidity through improved corporate governance. After examining the sub-indicators individually, I find that the percentage of institutional shareholdings is the main driver of this U-shaped relationship. The nonlinear relationship between institutional shareholdings and stock liquidity suggests that continuously enhancing corporate governance may reduce stock liquidity, posing challenges for SMEs in securing financing.

Chapter 3: Stock Liquidity, financial constraints, and innovation in Chinese SMEs.

This chapter investigates the relationship between stock liquidity and firm innovation for publicly traded growing small and medium-sized enterprises (SMEs) in China using both innovation input and output. I collected samples of 785 SMEs from China's Shenzhen Growth Enterprises Market (GEM) without the financial industry from 2010 to 2020. The empirical findings demonstrate a significant positive relationship between stock liquidity and both innovation input, as measured by R&D investments, and innovation output, as proxied by patenting activities. A series of robustness tests demonstrate the reliability of the results. Increased liquidity enhances SMEs' innovation mainly by alleviating financial constraints, whereas the mediating effect of mergers and acquisitions (M&A) is not apparent at the firm level. Furthermore, the inhibitory effect of blockholder ownership on firm innovation is weak. Further analysis reveals that this favorable impact can last for at least four years, with manufacturing SMEs benefiting the most. This study shows that the innovation abilities of SMEs can be enhanced by improving stock liquidity, which is mainly driven by tackling financial constraints.

Chapter 4: Forecasting the stock price of listed innovative SMEs using machine learning methods based on Bayesian optimization: Evidence from China.

Innovative SMEs have had an important impact on the economies of emerging countries in recent years. In particular, the volatility of their share prices is closely related to economic development and investor behaviors. Therefore, this chapter takes the Chinese market as an example, after constructing 34 determinants that affect the stock price, the RF, DNN, GBDT, and AdaBoost models under Bayesian optimization are employed to forecast the next day's closing price of listed innovative SMEs. The number of samples is 78,708 from 337 SMEs listed on the Chinese SSE STAR market, from July 22, 2019, to September 10, 2021 period. The experimental results show the RF and DNN models perform at a better prediction level than the GBDT and AdaBoost models, in terms of the evaluation indicators of R^2 , RMSE, MAPE, and DA. Then K-fold method and t-tests as robustness checks ensure my experimental results are more reliable and robust.