

# **10th Annual Meeting of Risk Analysis Council of China Association for Disaster Prevention (RAC 2022)**

Risk Analysis and Management of  
Uncoordinated Crises

Advances in Economics, Business and Management Research  
Volume 248

Beijing, China  
24 - 25 September 2022

ISBN: 978-1-7138-9612-8

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Print copyright© (2023) by Atlantis Press (part of Springer Nature)  
All rights reserved.  
Copyright for individual electronic papers remains with the authors.

For permission requests, please contact the publisher:

Atlantis Press  
Van Godewijckstraat 30  
3311GX Dordrecht  
The Netherlands

[contact@atlantis-press.com](mailto:contact@atlantis-press.com)

Printed with permission by Curran Associates, Inc. (2025)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

Risk Identification and Response of "the Belt and Road Initiative" in Southeast Asia Under COVID-19 Epidemic Situation—— Based on the Perspective of Transportation Infrastructure Construction Investment.....	1
<i>Wenyang Zhou, Jing Xin, Yusheng Yang</i>	
Analysis of Risk Factors of Agricultural Crowdfunding from the Perspective of Operation—— based on Fuzzy ISM and MICMAC Models .....	7
<i>Ye Xue, Ying Cui, Ying Li, Shuang Yang</i>	
Basin Effect of Wenchuan Earthquake from NGA-West2 Data .....	14
<i>Ting Huang, Qing Wu, Xueliang Chen, Tiefei Li, Zongchao Li, Zhiwei Ji, Lijun Qiu</i>	
Credit Risk Evaluation of Chip Manufacturing Listed Companies Based on Fermatean Fuzzy VIKOR Method .....	19
<i>Yu-tong Luo, Mu Zhang</i>	
Research on Credit Evaluation of Metaverse Listed Companies Based on Hesitant Fuzzy Language PROMETHEE Method.....	26
<i>Yi-fan Fu, Mu Zhang</i>	
Analysis of Pollution Characteristics and Health Risk of Phenolic Pollutants in the Surface Soil of an Industrial Park in Ningxia, China .....	33
<i>Yue Sun, Zengyu Han, Wenjuan Jiang, Hongbin Cao</i>	
Impact of Financial Subsidies and Tax Benefits on Tibetan Listed Companies .....	42
<i>Nan Sheng, Chengyi Pu</i>	
Research Review on Seismic Test of Cross-Fault Pipeline .....	48
<i>Xiaoqing Fan, Aiwen Liu</i>	
Research on the Supporting Role of Big Data Finance in the Construction of Guizhou Digital Village .....	57
<i>Rui Li, Hongmei Zhang</i>	
Chlorine Poisoning Risk Management Based on ALOHA Simulation.....	64
<i>Minyan Li, Jianchao Wang, Qian Zhang, Deyin Huang</i>	
Research on Financial Distress Diagnosis of Real Estate Listed Companies Based on PCA-Logistic Model .....	70
<i>Yu Jiang, Kai Xu, Yan Hu, Dongyang Li, Dongxu Long</i>	
Risk Assessment of Extreme Precipitation-Geological Hazard Chains in the Yunnan-Guizhou Plateau .....	77
<i>Guangzhi Rong, Jiquan Zhang</i>	
Remote Sensing Monitoring and Analysis on Heavy Rainstorm Flood in Yongji County, Jilin Province.....	85
<i>Xiaoyu Liao, Walian Du, Rina Su</i>	
Does the Degree of Digitalization Inhibit Credit Risk Contagion of New Economy Firms .....	91
<i>Dongyang Li, Kai Xu, Kailing Dong, Chun Wen, Chun Wan</i>	

Evolutionary Game Analysis of Public Participation in Emergency Management in COVID-19 Prevention and Control.....	98
<i>Qiang Zeng, Caili Wang</i>	
Evaluation of the Use of an Airline's Voluntary Reporting System Based on RFV Model .....	106
<i>Junjie Liu, Liying Dong</i>	
Research on the Coordinated Development of Big Data, Financial Agglomeration and Regional Economy in Guizhou Province.....	114
<i>Shan Wei, Hongmei Zhang</i>	
Estimation of Resources Required for Emergency Supplies Dispatch——Take Shanghai Xuhui District as an Example .....	121
<i>Ying Xue, Hanping Zhao, Haoyue Qiu</i>	
Dynamic Evaluation of Drought Disaster Comprehensive Risk for Soybean in Northeast China .....	128
<i>Kaiwei Li, Jiquan Zhang</i>	
Emotion Analysis of Industry Research Report Based on the Hybrid Method of BERT and BiLSTM .....	135
<i>Qi Luo, Mu Zhang</i>	
Comparative Analysis of Domestic Airline Network Risks in Typical Time Periods.....	142
<i>Yan Pei Li, Hang Li</i>	
Research on Community Resilience Improvement Path Based on Fuzzy Cognitive Map .....	150
<i>Weijing Liang, Ye Xue, Ying Li, Hao Dong Wu, Jing Xu</i>	
Research on Risk Factors of Water Conservancy Project Requisition and Resettlement Based on PCA .....	160
<i>Jianan Liu, Qian Wu, Jinshui Jin</i>	
Analysis of the Impact of Topographic Effect on Ground Motion Characteristics in the Extreme Seismic Region of Yangbi MS6.4 Earthquake on May 21, 2021.....	165
<i>Libao Zhang, Lei Fu, Zhenghua Zhou, Guoliang Lin, Su Chen, Aiwen Liu, Xiaojun Li</i>	
Scenario Expression Model of Zhengzhou Rainstorm Subway Disaster Event Based on Knowledge Element Theory .....	180
<i>Yongcun Ren, Ren Zhang</i>	
Research on Credit Risk Perception System and Its Influencing Factors Based on Text Information——Taking Technological SMEs as an Example.....	187
<i>Wenyan Wang, Hongmei Zhang</i>	
Study on the Influence of Maximum Magnitude Uncertainty to the Seismic Hazard in North China .....	194
<i>Changlong Li</i>	
Risk Assessment of Potato Drought Disaster in the Northern Single Cropping Area of China .....	200
<i>Dao Riao, Kaiwei Li, Suri Guga, Du Walian, Jiquan Zhang</i>	
The Impact of Basic Public Service Expenditure on Income Level in Tibet .....	208
<i>Haichao Wu</i>	
Research Progress of OFDI Risks from the Perspective of Risk Factors .....	214
<i>Xin Cao, Li Li</i>	

Study on the Correlation Between Fractal Dimension of Sedimentary Soil Layer and Shear Wave Velocity in Yuxi Basin .....	220
<i>Tiefei Li, Xueliang Chen, Sen Qiao</i>	
Identification of Typical Grassland Fire Areas in the Northern Border Based on Sentinel-2 Dead Fuel Index (DFI).....	228
<i>Lumen Chao, Yulong Bao, Jiquan Zhang, Yuhai Bao</i>	
An Empirical Study on Financial Support for Agriculture and Agricultural Loans to Achieve Common Prosperity in Tibet .....	235
<i>Xuan Ye, Chengyi Pu</i>	
The Role of Insurance Industry in Urban Disaster Prevention and Mitigation.....	242
<i>Shuhong He, Qi Lei</i>	
Does Macroprudential Policy Reduce Bank Risk-Taking? a Quasi-Natural Experiments Based on “Administrative Measures for the Capital of Commercial Banks (for Trial Implementation)” .....	249
<i>Yongkui Li, Qixuan Du, Jinli Liu</i>	
Inclusive Finance, Public Education Expenditure and Multidimensional Poverty Alleviation .....	256
<i>Chi Long, Hongmei Zhang</i>	
Customer Volatility, Social Responsibility and Business Risk .....	263
<i>Xuqian Wen, Kai Xu</i>	
Research on Intersection Vehicle Collision Warning Based on Roadside LiDAR .....	271
<i>Xuan Dou, Hanping Zhao, Xiaowen Mei</i>	
Preliminary Discussion on Site Effect of Strong Earthquake Stations in Lushan M6.1 Earthquake .....	280
<i>Xueliang Chen, Kelin Chen, Mingjie Chi, Tiefei Li</i>	
Comparison of Geological Disasters Induced by the 2008 Wenchuan and 1303 Hongdong Earthquakes of M 8.0 and Seismic Intensity Characteristics.....	288
<i>Xiao-fei Han, Li Zhang, Shuang-shuang Shi, Bin Dong</i>	
Research on the Spatial-Temporal Differentiation and Influencing Factors of the Coordinated Development of Rural Ecological Environment and Economy in Hunan Province .....	293
<i>Ting Wang, Dehua Mao</i>	
Aggregation Characteristics and Social Influencing Factors of COVID-19 in Shijiazhuang.....	300
<i>Xufan Wei, Zhihai Shang, Baolin Jiang, Yingying Huang</i>	
Research on Credit Evaluation of Listed Companies in Science and Technology Sector Based on SVM .....	307
<i>Su-juan Xu, Mu Zhang</i>	
Spatio-Temporal Characteristics and Hazard Assessment of Chilling Injury on Millet in Northern China .....	314
<i>Sicheng Wei, Yueting Yang, Kaiwei Li, Jiquan Zhang</i>	
Analysis of Earthquake Damage and Strong Ground Motion Characteristic of Maerkang M6.0 Swarm Type Earthquake in Sichuan.....	322
<i>Sen Qiao, Zongchao Li, Tiefei Li, Changlong Li, Xueliang Chen, Keng Chen, Zhiwei Ji</i>	
Spatiotemporal Pattern and Influencing Factors of Ecological Degradation Risk in Dongliao River Basin Based on DPSIRM Model .....	330
<i>Walian Du, Zhijun Tong, Su Rina, Dao Riao, Xingpeng Liu, Jiquan Zhang</i>	

Research on the Influence of the Development Level of Digital Inclusive Finance on the Social and Economic Income Gap Between Urban and Rural Groups in Guizhou Province Under the Background of Introducing Money into Guizhou Province .....	338
<i>Kairui Yang, Hongmei Zhang</i>	

An Empirical Study on the Financial Development, Industrial Structure and Urban Rural Integration Development in Tibet.....	345
<i>Yanhong Gong, Haiwei Wu</i>	

## **Author Index**