



Cyprus
University of
Technology

Department of Finance,
Accounting and
Management Science

Doctoral Dissertation

**Investigating Risk Characteristics and Dynamic
Connectedness among Traditional and Modern Investments
during Crises**

Konstantinos Dimitriadis

Limassol, March 2024

CYPRUS UNIVERSITY OF TECHNOLOGY
FACULTY OF MANAGEMENT AND ECONOMICS
Department of Finance, Accounting and Management Science

Doctoral Dissertation

Investigating Risk Characteristics and Dynamic Connectedness
among Traditional and Modern Investments during Crises

Konstantinos Dimitriadis

Supervisors

Faculty of Management and Economics

Professor Christos C. Savva

Assistant Professor Demetris Koursaros

Limassol, March 2024

Approval Form

Doctoral Dissertation

Investigating Risk Characteristics and Dynamic Connectedness among Traditional and Modern Investments during Crises

Presented by

Konstantinos Dimitriadis

Supervisor: Prof. Christos C. Savva ,

Signature: _____

Members of the committee: Associate Prof. Eleni Kalotychou,

Signature: _____

Members of the committee: Associate Prof. Nektarios Aslanidis,

Signature: _____

Cyprus University of Technology

Limassol, March 2024

Copyrights

Copyright© 2024 Konstantinos Dimitriadis

All rights reserved.

The approval of the dissertation by the Department of Finance, Accounting and Management Science does not necessarily imply the approval by the Department of the writer's views.

Acknowledgements: I am deeply grateful to my supervisors, Christos Savva and Demetris Koursaros, who provided me with the required knowledge and strengthened my willingness to complete this thesis successfully. I am also indebted to the committee members, Christos Savva, Eleni Kalotyhou and Nektarios Aslanidis, for their constructive criticism, which helped to improve the final version of this dissertation. Moreover, I am really thankful to the teaching staff and my colleagues at the Department of Finance, Accounting and Management Science at the Cyprus University of Technology for the very interesting conversations about fundamental and modern financial and economic issues that we had during the so beautiful academic journey. I will be always full with gratitude for helping me build the level of knowledge that will always constitute the foundations for my scientific involvement.

I would also like to thank my parents, Andreas and Fani, for the endless support and encouragement they provided to me for the completion of this difficult and strenuous essay. To be more precise, I devote this thesis to my mother who stood always by me even in the hardest times and was telling me: ‘Have faith and God will help you, He is great and is here for everyone, you only have to pray and He will help you’. It is beyond doubt that this thesis is also devoted to my father who always advised me to make out people’s character and I will never forget his words: ‘For whoever invests in knowledge, it works like investing in a portfolio consisting of gold’. My parents constitute paradigms for my life and I thank them for their unlimited affection for me and I wish that God saves them from every evil.

ABSTRACT

This PhD thesis examines the risk-return characteristics and dynamic interconnection of a diverse group of modern financial instruments. Such investments include 'environmentally friendly' stocks, which are vulnerable to systemic risk and the impact of non-normal distributions. Furthermore, well-known financial instruments such as gold, oil, and sectoral stock indices are examined, as well as emergingly popular investments such as wheat. Notably, this thesis focuses not only on highly innovative digital investment tools such as cryptocurrencies, but also on the most modern forms of digital assets, such as 'environmentally-friendly' cryptocurrencies, which are considered riskier but have the potential to become the most appealing to investors in the medium to long term. Diversification or hedging against higher systemic risk through the optimal synthesis of portfolios based on a thorough assessment of risk-adjusted performance dynamics may be a valuable tool for investors during crises such as the Covid-19 or the Russia-Ukraine conflict.

Keywords: Market crash price risk, Dynamic connectedness, Hedging, Traditional and modern investments, Environmentally-friendly character