The 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development Program

June 25, 2021

Organizing Committee

– Faten Ben Bouheni, Ipag Business School, France.
– Ishaq Bhatti, La Trobe University, Australia.
– James Boyer, Hemif4ire-Université Catholique de Lille, France
– Amir Hasnaoui, Excelia Group, France
– Mehdi Nekhili, ARGUMans, Le Mans University, France
– Hassan Obeid, European Business School Paris /INSEEC, France
– Josse Roussel, Paris 8 Vincennes University, France
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Dear Presenters and Participants,

We are delighted to welcome you to the 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development proceeding.

With 35 presentations and 117 participants from around the world, we have built interesting discussion on innovation in finance, business models and real economy. Special thanks go to the session chairs and the scientific committee for their valuable contribution.

We had an exciting online one-day program: 9 virtual parallel sessions; first keynote address by Professor Sayed Kumail Abbas Rizvi discussing “Fintech and Crypto Assets: Historical Perspective, Behavioral Biases and the way forward for Investors”; second keynote address by Professor Thomas Ankenbrand discussing “Venture Capital – Skin in the game matters”; and a special session on Cryptocurrency in partnership with finance innovation by finance industry professionals Stephane Reverre and Arnaud Dartois.

Both academic and practitioner discussions were rich and offered networking opportunities and we hope that all participants made good use of those in their academic or professional endowments.

Organizing a conference, in particular a virtual version in the new normal imposed by COVID-19 health crisis, is always a team effort, and the outcome of this event was only as good as the teamwork was.

We thank our partners for the reliable support without whom this virtual conference would have not been possible.

Sincerely,

The 2021 Virtual Conference Organizing Committee

Organizing Committee

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- Hassan Obeid, European Business School Paris /INSEEC, France
- Josse Roussel, Paris 8 Vincennes University, France
A. Background and Objectives

Now more than ever, we are confronted with digital transformation which brings discontinuous and disruptive technologies such as big data, artificial intelligence (AI), or Internet of Things (IoT) (Dalenogare, Benitez, Ayala & Frank 2018; Patnaik, 2020). The Covid-19 crisis reinforces the need to accelerate the digital revolution characterized by the convergence of the virtual world, digital design, application of the Internet of Things and the exploitation of massive data within the industrial production process of goods and services (Keesara, Jonas & Schulman, 2020). Digital transformation brings major challenges and opportunities in all spheres of society, as well as at social, economic, environmental and political levels. It transforms the consumption models of people, households and users. It constrains firms to deep changes, transformations and disruptive innovations. Therefore, companies must adapt to the new technological context and new paradigms by using internal resources and exploit external opportunities often offered by Innovation Ecosystems particularly at regional level.

Financial and industrial sectors are very concerned in developing successfully technologies to improve the quality of services in the context of global integration. Most of recent digital technologies in the finance sector are gathered around what they called “Fintech” (Chishti and Barberis, 2016; He et al. 2017). In a broader perspective, FinTechs bring together all companies using disruptive operational, technological or economic models, aimed at addressing existing or emerging issues in the financial and industrial sector.

While Business Ecosystem are developing all over the world, Fintech technologies seem to be relevant in order to foster and accelerate Innovation process born by start-ups and firms. More and more star-ups use Fintech in order to accelerate their development and their internationalization (Anderson, 2016).

Even though academic literatures on Fintech and Business Ecosystem is growing, the link between these two-literature corpus is not obvious (Lee and Shin, 2018; Still, Huhtala & Saraniemi, 2016). Work is still needed to understand the dynamic of Fintech, the organizational structures of
innovation ecosystems and how FinTechs impact Business Ecosystem development, and overall, how FinTechs affect economic development and resilience.

The goal of this academic conference is therefore to provide a critical review of the development of FinTechs and how FinTechs affect Business Ecosystem and economic development.

For academics, doctoral students and practitioners interested in the topic of Fintech and new financial challenges issues, particularly within Business Ecosystem and Real Economy, the Conference is an opportunity to share research and issues related to digitalization and technology-enabled business model in many industries that have emerged to meet the needs of businesses and their globalization challenges. We encourage authors to submit research papers for presentation consideration at the Fintech, Business Ecosystem and Economic Development Conference that will be held on June 25, 2021.

The Conference is jointly organized by, Ipag Business School, La Trobe University, Catholic University of Lille, Excelia Business School, Paris 8 Vincennes University, EBS Business School, Le Mans University and Finance Innovation Institute to discuss the role of innovative finance in Business Ecosystem and economic development, in particular, the role of innovative financing mechanisms and Fintech in revitalizing economic growth.

References


B. General Information

The 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development was Virtually held on June 25, 2021, Central European Time (CET).

The 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development attracted over 117 researchers and PhD. students from renowned business schools and universities from around the world. Only 35 papers were selected by the scientific committee for presentation. The conference hosted 9 virtual parallel sessions, two keynote addresses and round table over online one-day. The conference is hosted on the website https://rifed-global.com and the sessions are managed by Zoom technology.

In this publication, we present some of the highlights of this remarkable online day. Bridging the gap between academia and practice in order to share knowledge is an important part of the mission of the 2021 Virtual Conference. We therefore integrated two keynote addresses and a round table for senior finance professionals that were excellent networking platforms.

The conference, which hosted 117 senior and young researchers, and industry practitioners from around the world, was a unique opportunity to discuss Innovation & Finance topics (Cryptocurrency and forecasting models; Crowdfunding and Financial inclusion; and Asset pricing and Risk factors), Disruptive Economy & Technology (Disruptive technology and Economy; Financial Economics and Modelling; Policy, Technology and Business performance; and Financial Institutions and Risk) and Corporate governance issues. Given COVID-19 context, the 2021 Virtual Conference had dedicated a special session to COVID-19 and its effects on developing countries’ economies.

The e-event entirely focused on “Technological change and Challenges in Business and Economy” and gave insights into the latest academic research and the business practices in this field. The 113 attendees were academics and finance professionals from Europe and abroad (20 Countries).

With 35 presentations, 35 discussions and 9 parallel sessions the 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development was impactful both in terms of quality and participation. The time allocated to each presentation was 20 minutes and it was followed by 10 minutes discussion (and/or Q & A) session. This gave for each paper an allocated time of 30 min which allowed authors receiving significant comments.

We encourage you to explore the abstracts of 35 presented academic papers included in this document.

The organization of the 2021 Virtual Conference on Fintech, Business Ecosystem and Economic Development was only possible thanks to the collaboration and support of our session Chairs.

1. Cryptocurrency and forecasting models - Ishaq Bhatti, La Trobe University, Australia
2. Crowdfunding and financial inclusion - Wilsonn Labossiere, Institut Mines-Télécom/CRSET, France
3. Financial Institutions and risk - Selim Mekdissi, Lebanese University, Lebanon
4. Disruptive technology and Economy – Hassan Obeid, European Business School Paris /INSEEC, France
5. Special COVID-19 - Olivier Levyne, ISC Paris, France
6. Financial Economics and Modelling – Kenel Cadet, Clark University, United States
7. Asset pricing and Risk factors - Faten Ben Bouheni, Ipag Business School – France
8. Policy, Technology and Business performance - James Boyer, Catholic University of Lille/ LEM HEMISF4ire – France
9. Corporate governance - Frédéric Valognes, ESLSCA Business School, Paris — France
C. Program Overview and Timing

The program is organized chronologically by time of the activities from 9 AM to 5:30 PM (CET). Papers, discussants, and virtual sessions rooms are indicated below:

- **9:00 AM – 9:30 AM** — Opening Remarks
  - Faten Ben Bouheni, Ipag Business School – France
  - Ishaq Bhatti, Latrobe University – Australia
  - James Boyer, Catholic University of Lille/ LEM HEMISF4ire – France
  - Amir Hasnaoui, Excelia Business School – France
  - Selim Mekdissi, Lebanese University – Lebanon
  - Hassan Obeid, EBS Business School – France INSEEC U
  - Frédéric Valognes, ESLSCA Business School, Paris — France

- **9:30 AM – 10:30 AM** — Keynote speech
  - “Fintech and Crypto Assets: Historical Perspective, Behavioral Biases and the way forward for Investors”, **Professor Syed Kumail Abbas Rizvi, CFA, FRM** (Lahore School of Economics, Lahore – Pakistan, Senior Research Fellow Qingdao University – China)

10:30 AM – 12:30 PM — 5 Parallel Sessions

- **Session I : Cryptocurrency and forecasting models: Chair Ishaq Bhatti**, (Latrobe University – Australia)
  - **Paper 1 (10:30 – 11:00): Semi-nonparametric risk assessment with cryptocurrencies by Ines Jiménez** (University of Salamanca – Spain), **Andrés Mora-Valencia** (Universidad de los Andes – Colombia) and **Javier Perote** (University of Salamanca – Spain)
  - **Paper 2 (11:00 – 11:30): Is it possible to forecast the price of Bitcoin? by Julien Chevalier** (Université Paris 8 (LED) – France), **Dominique Guegan** (University Paris 1 Panthéon-Sorbonne – France and University Ca’Foscari of Venezia – Italy) and **Stéphane Goutte** (CEMOTEV, UVSQ, Paris-Saclay and Paris School of Business – France)
  - **Paper 3 (11:30 – 12:00): Analysis on the influence factors of Bitcoin’s price based on FMOLS estimator by Nadia Slimene** (University of Sousse – Tunisia), **Hassan Obeid** ( EBS Business School – France) and **Faten Ben Bouheni** (Ipag Business School – France)
  - **Paper 4 (12:00 – 12:30): Studying the properties of the Bitcoin and gold as a diversifying and hedging assets during COVID19 crisis using a copula approach by Salah Hamad** (Faculty of Economics and Management of Tunis – Tunisia), **Hana Bel Hadj** (University of Tunis El Manar – Tunisia) and **Khaled Guesmi** (Center of Research for Energy and Climate Change (CRECC) and Paris School of Business -France).
Session II: Crowdfunding and financial inclusion: Chair Wilsonn Labossiere, (Institute Mines-Télécom / IMT-BS (LITEM)/CRSET- France)
  - Paper 1 (10:30 – 11:00): Determinants of online Islamic crowdfunding platforms among Females: An extended UTAUT2 Conceptualization by Mennatalah Abokaassem (German University in Cairo – Egypt), Hadeer Hammad (German University in Cairo – Egypt) and Hagar Adib (German University in Cairo – Egypt)
  - Paper 2 (11:00 – 11:30): Strengthening signals: Enhancing equity crowdfunding in the Lebanese context by Mireille Chidiac El Hajj (Lebanese university – Lebanon) and May Chidiac (Notre Dame University, Louaize – Lebanon)
  - Paper 3 (11:30- 12:00): La finance technologique : une alternative au progrès économique et social en Haïti by Wilsonn Labossiere (CRSET – France)
  - Paper 4 (12:00 – 12:30): Financial inclusion a perspective for Lebanon by Layla Tannoury (Lebanese University – Lebanon) and Mariella Afif (Lebanese University – Lebanon)

Session III: Financial Institutions and risk: Chair Selim Mekdissi, (Lebanese University – Lebanon)
  - Paper 1 (10:30 – 11:00): Bank Profitability and Default Risk By Anum Zahra (Capital University of Science and Technology, Islamabad – Pakistan), Saifullah Khan (University of Swabi-Khyber Pakhtunkhwa – Pakistan), Waqar Khalid (Near East University, Nicosia/TRNC – Cyprus) and Naveed Hussain Shah (University of Swabi-Khyber Pakhtunkhwa – Pakistan)
  - Paper 2 (11:00 – 11:30): The relationship between institutional reforms and bank risk in developing countries: evidence from Tunisia by Lamia Bouaziz (University of Manouba – Tunisia)
  - Paper 3 (11:30 – 12:00): Impact of liquidity risk on Commercial banks’ performance by Hari Gopal Risal (Kathmandu University – Nepal) and Mijash Humagain (Kathmandu University – Nepal)
  - Paper 4 (12:00 – 12:30): The Impact of Corporate Governance on Banking Risks in Lebanon by Hassan Obeid (EBS Business School – France) and Lama Hamzeh (Lebanese University – Lebanon)

Session IV: Disruptive technology and Economy: Chair Hassan Obeid (European Business School Paris /INSEEC, France)
  - Paper 1 (10:30 – 11:00): Understanding the Adoption of Cryptocurrencies for Financial Transactions within a High Risk Context by Amal Dabbous (Saint Joseph University of Beirut – Lebanon), May Merhej Sayegh (Saint Joseph University of Beirut – Lebanon) and Karine Aoun Barakat (INSEEC Grande Ecole, INSEEC U – France)
  - Paper 2 (11:00 – 11:30): Industry 4.0, disruptive technologies and the role of complex collaborations within the Regional Innovation Ecosystems by James Boyer (Lille Catholic University – France)
o Paper 3 (11:00 – 11:30): Persistent Inefficiency, Transient Inefficiency, and Firm Unobserved Heterogeneity: A Comparison of Two Frontier Approaches using Simulated and Bank data by Yawose Anani Kudawoo (University of Clermont Auvergne, INRAE – France), Jean-Joseph Minviel (University of Clermont Auvergne, INRAE – France) and Faten Ben Bouheni (Ipag Business School – France)

• Session V: Special COVID-19: Chair Olivier Levyne, (ISC Paris – France)
  o Paper 1 (10:30 – 11:00): On the Effect of Economic Policy Uncertainty Index on Indian Economy in the Wake of COVID-19 Pandemic by Raktim Ghosh (University of Gour Banga – India), Bhaskar Bagchi (University of Gour Banga, India) and Susmita Chatterjee (Department of Economics, Maharaja Manindra Chandra College – India)
  o Paper 2 (11:00 – 11:30): Impact of COVID-19 Pandemic and Political Upheavals on Tunisian Stock market by Fatma Aloui (Faculty of Economic Sciences and Management of Sfax, University of Sfax – Tunisia) and Amal Bakour (Higher Business School of Tunis – Tunisia)
  o Paper 3 (11:30 – 12:00): Managing and controlling COVID-19 in Lebanon using the Internet of Things and Artificial Intelligence by Chadi Azoury (Faculty of Economics and Business Administration at Lebanese University – Lebanon), Arz Wehbe (Lebanese Canadian University – Lebanon and Estia Institute of Technology at University of Bordeaux – France), Claude Baron (LAAS-CNRS, INSA Toulouse, University of Toulouse – France) and Rob Vingerhoeds (ISAE-Supaéro, LAAS-CNRS, Toulouse – France)

• 1:00 PM – 2:00 PM — Keynote speech
  o “Venture Capital – Skin in the game matters”, Professor Thomas Ankenbrand, Lucerne University of Applied Sciences and Arts – Switzerland

• 2:00 PM – 3:00 PM — Round Table
  o “la Cryptomonnaie : entre recherche et application”
  o 2:00 PM – 2:20 PM: Stéphane REVERRE (President SUN ZU Lab) – « actifs digitaux : quel équilibre entre régulation et innovation »
  o 2:20 PM – 2:40 PM: Arnaud DARTOIS (Co-Founder at Napoleon Group) – « La tokenisation des actifs: le futur de l’investissement».
  o 2:40 PM : 3:00 PM : Q & A

3:00 PM – 5:00 PM : 4 Parallel Sessions

  • Session I : Financial Economics and Modelling : Chair Kenel Cadet (Clark University, United States)
Paper 1 (3:00-3:30): The impact of uncertainties on the interaction between green bonds and other financial markets by Haifa Talbi (ISFA Lyon – France), Christian De Peretti (ISFA, University Claude Bernard Lyon1 – France) Meriem Youssef (ISFA Lyon – France) and Lotfi Belkacem (ISFA Lyon – France)

Paper 2 (3:30-4:00): Contagion in the Euro Area Sovereign CDS market: a spatial approach by Nadia Ben Abdallah (Institute of Higher Commercial Studies of Sousse – Tunisia), Halim Dabbou (Higher Institute of Management of Sousse – Tunisia) and Gallali Mohamed Imen (Higher Institute of Management of Sousse – Tunisia)

Paper 3 (4:00-4:30): Static and Dynamic Interrelationship between External Debt and Economic Development by Harpreet Mehton (Punjab School of Economics, Guru Nanak Dev University, Amritsar, Punjab – India)

Paper 4 (4:30-5:00): The Influence of Research and Development and High-tech on Economic Growth: A Nonparametric Dynamic Panel data Approach by Faten Ben Bouheni (Ipag Business School – France) and Jean-Joseph Minviel (University of Clermont Auvergne, INRAE – France)

Paper 5 (5:00-5:30): Extreme Severity Modeling using a GLM-GPD Combination: Application to an Excess of Loss Reinsurance Treaty by Sarra Ghaddab (University of Lyon 1, Lyon – France and University of Sousse – Tunisia), Manel Kacem (University of Sousse – Tunisia), Christian de Peretti (ISFA, University Claude Bernard Lyon1 – France) and Lotfi Belkacem (University of Sousse – Tunisia)

Session II: Asset pricing and Risk factors: Chair Faten Ben Bouheni (Ipag Business School – France)

Paper 1 (3:00-3:30): Long-run carbon consumption risks model and Asset prices by Kouadio Guillaume Stephane N’Dri (University of Montreal – Canada)

Paper 2 (3:30-4:00): Who gets believed? trust and investor reaction to earnings announcements by Quratulain Nazeer Ahmed (Sindh Madressatul Islam University and Institute of Business Administration in Karachi – Pakistan) and Saqib Sharif (Sindh Madressatul Islam University and Institute of Business Administration in Karachi – Pakistan)

Paper 4 (4:00-4:30): The Spillover effect between Macroeconomic Variables and Stock Markets Dynamics: Evidence from the MENA zone by Nesrine Mecradi (University Claude Bernard Lyon 1 – France), Saker Sabkha (University of South Brittany – France) and Christian De Peretti (ISFA, University Claude Bernard Lyon 1 – France).

Session III: Policy, Technology and Business performance: Chair James Boyer, (Catholic University of Lille/ LEM HEMISF4ire – France)

Paper 1 (3:00–3:30): The Digital Transformation of the Supply Chain management: Challenges of applying Blockchain technology by Sanae Ben Yaich (Université d’Artois – France) and Stéphane Callens (Université d’Artois – France)
- **Paper 2 (3:30- 4:00)**: Information Technology Governance is Rewriting the Rules of Corporate Governance by Randa Sharafeddine (Faculty of Business Administration, Jinan University – Lebanon)

- **Paper 3 (4:00 – 4:30)**: Application of machine learning and GLM methods for pricing healthcare contracts: The case of a Tunisian insurance company by Amal Ben Hamida (University Claude Bernard Lyon 1 – France and Institute of High Commercial at University of Sousse – Tunisia), Manel Kacem (Institute of High Commercial at University of Sousse – Tunisia), Christian de Peretti (ISFA, University Claude Bernard Lyon 1 – France) and Lotfi Belkacem (Institute of High Commercial at University of Sousse – Tunisia).

- **Paper 4 (4:30- 5:00)**: The emerging renewable energy ecosystem by Julie Chehaita (University of Technology of Troyes – France), Eddie Soulier (University of Technology of Troyes – France) and Raed Kouta (University of Technology of Troyes – France).

- **Session IV: Corporate Governance**: Chair Frédéric Valognes, (ESLSCA Business School, Paris — France)

  - **Paper 1 (3:00- 3:30)**: L’exploration de l’impact de dispersion entre contrôle et propriété by Hani El Chaarani (Beirut Arab University – Lebanon) and Zouhour El Abiad (Lebanese University – Lebanon).

  - **Paper 2 (3:30- 4:00)**: The determinants of banks’ political connection across MENA countries by Rihem Braham (University of Sousse – Tunisia), Christian de Peretti (ISFA, University Claude Bernard Lyon 1 – France) and Lotfi Belkacem (LyonI university – France).

  - **Paper 3 (4:00-4:30)**: Do banks with effective board and strong risk governance adopt more ethics codes? Evidence from large banks worldwide by Oumeima Kacem (University of Sousse – Tunisia) and Sana El Harbi (University of Sousse – Tunisia).

  - **Paper 4 (4:30 – 5:00)**: Does Women Director Education Matter: Evidence from Indian Commercial Banks by Priti Bakhshi (S P Jain School of Global Management – India), Neeraj Gupta (N L Dalmia Institute of Management Studies and Research – India), Ravinath Dammalapati (Vignana Jyothi Institute of Management – India) and Tarun Agarwal (N L Dalmia Institute of Management Studies and Research – India).

- **5:00 PM to 5:30 PM — Concluding Remarks**
  - Faten Ben Bouheni, Ipag Business School – France
  - Ishaq Bhatti, Latrobe University – Australia
  - James Boyer, Catholic University of Lille/ LEM HEMISF4ire – France
  - Amir Hasnaoui, Excelia Business School – France
  - Selim Mekdissi, Lebanese University, Lebanon
  - Hassan Obeid, EBS Business School – France
  - Frédéric Valognes, ESLSCA Business School, Paris — France
D. List of abstracts

Morning Sessions from 10:30 to 12:30 (CET)

Session I : Cryptocurrency and forecasting models

1. Semi-nonparametric risk assessment with cryptocurrencies

   Ines Jiménez1, Andrés Mora-Valencia2, Javier Perote1

1University of Salamanca – Spain

2Universidad de los Andes – Colombia

Abstract

This paper establishes a brand-new perspective of analyzing the risk of crypto assets through a semi-nonparametric approach, discussing its theoretical advantages and testing its performance compared to parametric approaches and in terms of backtesting techniques and different risk measures: Value-at-Risk, Expected Shortfall and Median Shortfall. Our comprehensive analysis for six cryptocurrencies shows that flexible semi-nonparametric approaches outperform risk measures of most crypto assets (particularly Bitcoin) and tend to provide the most conservative risk assessment. Furthermore, we propose the Median Shortfall as a robust-to-outliers and reliable risk measure for cryptocurrencies and discuss on the choice of the appropriate probability levels according to the assumed distribution. The evidence supports that Median Shortfall at 98.31% and 98.51% confidence levels as accurate alternatives to Value-at-Risk at 99% and Expected Shortfall at 97.5%.

Keywords: Gram Charlier series, Value-at-Risk, Expected Shortfall, Median Shortfall, Backtesting, cryptocurrencies

2. Is it possible to forecast the price of Bitcoin?

   Julien Chevallier1, Dominique Guegan2, Stéphane Goutte3

1Ipag Business School and Université Paris 8 (LED) – France

2University Paris 1 Panthéon-Sorbonne – France and University Ca’Foscari of Venezia – Italy

3CEMOTEV, UVSQ, Paris-Saclay and Paris School of Business – France

Abstract

This paper focuses on forecasting the price of Bitcoin, motivated by its market growth and the recent interest of market participants and academics. We deploy six machine learning algorithms
(e.g., Artificial Neural Network, Support Vector Machine, Random Forest, k-Nearest Neighbours, AdaBoost, Ridge regression), without deciding a priori which one is the ‘best’ model. The main contribution is to use these data analytics techniques with great caution in the parameterization, instead of classical parametric modelings (AR), to disentangle the non-stationary behavior of the data. As soon as Bitcoin is also used for diversification in portfolios, we need to investigate its interactions with stocks, bonds, foreign exchange, and commodities. We identify that other cryptocurrencies convey enough information to explain the daily variation of Bitcoin’s spot and futures prices. Fore-casting results point to the segmentation of Bitcoin concerning alternative assets. Finally, trading strategies are implemented.

**Keywords:** Forecasting; Bitcoin; machine learning; trading strategies

3. *Analysis on the influence factors of Bitcoin’s price based on FMOLS estimator*

Nadia Slimene¹, Hassan Obeid², Faten Ben Bouhni³

¹University of Sousse – Tunisia

²EBS Business School – France

³Ipag Business School – France

**Abstract**

In this paper we aim to identify the relationship between Bitcoin and economic factors using the Fully Modified Least Square (FMOLS) estimator. Key economic factors identified for the investigation are exchange rate, net trade, consumer price index, inflation, and interest rate. To test the validity of the chosen technique, we conducted the unit root tests and co-integration tests of Pedroni (1999,2004) based on monthly data over the period January 2015 - December 2018. The results indicate that there is a strong positive correlation of the variables with Bitcoin except the interest rate while we do not find a positive correlation with the Bitcoin. The long-run relationship between Bitcoin price and different variables considered in the FMOLS estimate is stronger than the short-run impact. The inflation favors the use of Bitcoin.

**Keywords:** Bitcoin; economic indicators; co-integrating relationship; FMOLS

4. *Studying the properties of the Bitcoin and gold as a diversifying and hedging assets during COVID19 crisis using a copula approach*

Salah Hamad¹, Hana Bel Hadj², Khaled Guesmi³

¹Faculty of Economics and Management of Tunis – Tunisia

²University of Tunis El Manar – Tunisia
Abstract

This study addresses the timely question of whether bitcoin is a safe haven and a diversification factor for developed and emerging stock indices during covid19 crisis, and whether such property is similar or different from that of gold. To do this, we will use the EGARCH-Copula approach to analyze the dependence between bitcoin and the main developed and emerging stock indices on the one hand and the dependence between gold and the latter on the other hand. Our sampling period extends from 06/18/2012 to 05/25/2020. Our main results show that investors and portfolio managers should not rely on Bitcoin as an alternative asset that provides shelter from turbulence, when they should instead rely on gold.

Keywords: Bitcoin, Gold, Copula, safe haven, covid19, developed market, emerging market

Session II: Crowdfunding and financial inclusion

1. Determinants of online Islamic crowdfunding platforms among Females: An extended UTAUT2 Conceptualization

Mennatalah Aboalkassem1, Hadeer Hammad1, Hagar Adib1

1German University in Cairo – Egypt

Abstract

Islamic finance has witnessed robust growth globally, this resilience to financial shocks attracted the interest of many scholars, practitioners and regulators. Fintech disruptions have been booming across the Islamic finance ecosystem, businesses, in particular, are considered the largest potential market for Islamic Fintech, especially crowdfunding and peer to peer lending. These insights mandates scholars to assess determinants of behaviour in the Islamic Fintech context. The paper aims to extend the UTAUT2 model to integrate religiosity in the online Islamic Fintech context. The research offers a novel contribution to the existing body of knowledge by adopting UTAUT2 to Islamic marketing and proposing religiosity as a determinant of I-Fintech behaviour intention and the study offers a greater understanding of Islamic Fintech potential in communicating several SDGs and the importance of tackling this underexplored area by marketing scholars. The paper sheds the light on several future research propositions to guide future studies in the Islamic marketing field as well as Insights to several stakeholders including scholars, marketers, Islamic financial institutions and regulators were tackled.
2. **Strengthening signals: Enhancing equity crowdfunding in the Lebanese context**

Mireille Chidiac El Hajj¹, May Chidiac²

¹Lebanese university – Lebanon

²Notre Dame University, Louaize – Lebanon

**Abstract**

The objective of this paper is to shed light on the entrepreneurs’ willingness to choose crowdfunding as a tool to raise capital, and secondly to send appropriate signals to the investors. Failing to communicate good signals can jeopardize not only the firms’ viability but also the country’s economic stability, growth, and employment; as SMEs and startups constitute 95% of the Lebanese enterprises. The search strategy is based on three methodological approaches: a web-based information searching, to map the crowdfunding phenomenon on the one side; a quantitative approach with a survey data collected from June through December 2020, targeting a sample of 147 SMEs and startups, chosen depending on a Cluster sampling; and semi-structured interviews with ten entrepreneurs to understand the causes behind their choices. Between losing their work or losing part of their firms’ equity, entrepreneurs are keen to send good signals to investors. They are adopting a new way of thinking, as their primary goal is to save their firms, their jobs and their source of living. Many challenges are yet observed. We particularly cite those related to fear of losing reputation, of losing intellectual property, of losing control, of becoming simple shareholders and fear from asymmetric information. Social network and ties to the Diaspora, can nevertheless make a difference. Overcoming the challenges can reduce brain drain, promote a culture of entrepreneurship, serve the economy, diminish poverty, achieve a more equitable society, increase the levels of expectations and turn the flywheel. Restoring trust, a lost value in Lebanon's social climate, is nevertheless essential to promote social cohesion. The country is in the middle of a health, economic and financial crises. Bank lending is drying up and access to finance is shrinking. Securing funds from the crowds can close the pay gap and help grow small business.

**Keywords:** Startups and SMEs; Crowdfunding; The Signaling Theory; Entrepreneurial behavior; Entrepreneurship
3. **La finance technologique : une alternative au progrès économique et social en Haïti**

Wilsonn Labossiere

1CRSET – France

**Abstract**

Malgré la croissance de l’utilisation des outils numériques en Haïti, la fracture technologique reste un problème préoccupant dans ce pays. En effet, l’environnement macro-économique du pays ne facilite pas le déploiement et la diffusion des technologies, d’où l’intérêt d’appréhender les facteurs déterminant de la pénétration de la finance technologique sur le territoire haïtien à partir d’une analyse de cas. Au final, le constat tiré de l’analyse que les conditions facilitatrices sont à la base de l’adoption et de l’utilisation de la FINTECH en Haïti.

**Mots clés:** Déploiement, Technologie, Finance, NTIC, Utilisation, Législation, FinTech

4. **Financial inclusion a perspective for Lebanon**

Layla Tannoury, Mariella Afif

1Lebanese University – Lebanon

**Abstract**

This research discusses the importance of financial inclusion in terms of financial education and poverty alleviation according to the SDGs 2030 agenda of the United Nations. It emphasizes all aspects that will be utilized to build through design thinking and backward technique the comprehensive fintech Beam of Light that applies responsible financial inclusion such as circular, static equilibrium, and sharing economy in addition to the economics of digitization, and blockchain supply chain economy. Then it encompasses three explorative quantitative surveys. They show that Lebanese are willing to use, save, and barter through a fintech electronic application. And finally, it creates the fintech.

**Keywords:** Backward Technique, Circular Economy, Design Thinking, Financial Inclusion, Poverty Alleviation, SDGs
Session III: Financial Institutions and risk

1. **Bank Profitability and Default Risk**

Anum Zahra¹, Saifullah Khan², Waqar Khalid³, Naveed Hussain Shah²

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²University of Swabi-Khyber Pakhtunkhwa – Pakistan
³Near East University, Nicosia/TRNC – Cyprus

**Abstract**

This empirical study investigates the effect of the bank-specific determinants of bank profitability on the default risk of the banks listed on the Stock Exchange of Pakistan. For this purpose, the study considers balanced panel data covering the period 2009-2018 for the 20 selected commercial banks of Pakistan, and the probability of default is used to measure the default risk of these banks. The bank profitability is measured using bank-specific determinants such as the net interest margin, non-interest income to total assets, return on assets, return on equity, and spread ratios. The empirical findings of the fixed effects model reported that net interest margin, non-interest income, and spread ratio are the significant determinants of default risk. The findings highlight that the bank profitability determinants can act as early warning signs of a bank’s deteriorating stability level. The study recommended that the central bank of Pakistan should guide the commercial banks to disclose the probability of default values in their financial reports. The study also suggested that the risk management department of a bank should consider these bank-specific determinants of profitability to manage default risk.

**Keywords:** Bank profitability; Default risk; Bank-specific determinants; Stability; Banking sector; Pakistan

2. **The relationship between institutional reforms and bank risk in developing countries: evidence from Tunisia**

Lamia Bouaziz¹

¹University of Manouba – Tunisia

**Abstract**

This paper examines the role of institutional variables in explaining bank risk in developing countries using data for Tunisian banks over the period 1980-2013. The investigation is carried out into two stages. First, I construct indices to gauge institutional development with respect to financial liberalization, corporate restructuring and creditor rights. These indices are then regressed...
on Z-score, our main measure of bank risk. After controlling for macroeconomic and bank specific variables, I find support for liberalization-competition-fragility view as a higher degree of financial liberalization induces more risk. I also find that corporate reforms help mitigate this negative effect of financial liberalization. However, creditor rights reforms reduce the benefits associated with improved corporate reforms. Further, results suggest that financial reforms play the most leading role in explaining Tunisian bank risk. Guided by these results, the paper makes several important policy recommendations.

**Keywords:** Institutional reforms, financial liberalization, corporate reforms, creditor rights, bank risk, Z-score

### 3. Impact of Liquidity Risk on Commercial Banks’ Performance

Hari Gopal Risal¹, Mijash Humagain¹

¹Kathmandu University – Nepal

**Abstract**

The recent scandals have served to raise awareness about the importance of transparency and governance especially within banks. The aim of our research is to examine the association between risk governance and ethics codes. There is no research that treats this issue in terms of using committees, for which this study seems to be the only article in the literature that examines this issue. By focusing on a sample of large banks worldwide, we want to assess the effect of the board of directors as well as risk management committee features on the adoption of ethical codes of conduct over the period 2006 to 2017. Panel logit regression is used to investigate this relationship. Most importantly, we find that highly-sized and gender-diverse boards are more sensitive to ethical issues. We also find that banks in which boards meet less frequently are more likely to adopt ethics codes. These findings highlight the important role of the board in enhancing the elaboration of ethics codes. Additionally, results show that risk management committee independence has a positive and significant effect on the adoption of ethical codes of conduct. This result suggests that the risk governance function should have a sufficient number of independent and qualified directors, which seems to be an effective tool in enhancing the implementation of ethics codes.

**Keywords:** Risk management, board of directors, risk governance, codes of ethics, banks
4. The Impact of Corporate Governance on Banking Risks in Lebanon

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¹EBS Business School – France
²Lebanese University – Lebanon

Abstract

This article aims at discovering the impact of corporate governance variables on the banking risks, and that is by employing panel data analysis to study 18 Lebanese during the period of 2012-2018, in order to help policy-makers build a framework that manages risks. The empirical results showed that the corporate governance factors that affect the Lebanese banks risks are the female representation, chairman’s age, audit committee size and board size. Lebanese banks face increased risks that led to a banking crisis due to their increased investment in the government’s treasury bonds.

Session IV: Disruptive technology and Economy

1. Understanding the Adoption of Cryptocurrencies for Financial Transactions within a High Risk Context

Amal Dabbous¹, May Merhej Sayegh¹, Karine Aoun Barakat²

¹Saint Joseph University of Beirut – Lebanon
²INSEEC Grande Ecole, INSEEC U – France

Abstract

Cryptocurrencies such as bitcoins represent a novel method of conducting financial transactions and exchanging money, however, their adoption by the general public remains low. Within countries facing financial distress and characterized by a high level of risk, cryptocurrency adoption might offer opportunities for countering crises. This study explores the factors that influence individuals’ adoption of cryptocurrencies for financial transactions. To do so, it presents a behavioral model, which is tested using data collected from a survey and analyzed through Structural Equation Modeling. The outcomes contribute to existing theories of cryptocurrencies adoption and provides policymakers with insight into how adoption is unfolding in this context.
2. Industry 4.0, disruptive technologies and the role of complex collaborations within the Regional Innovation Ecosystems

James Boyer

1Lille Catholic University – France

Abstract

This paper analyzes disruptive technologies of the Industry 4.0 paradigm and the role of complex collaborations within Regional Innovation Ecosystems on the involvement in this technological paradigm. Using an original survey of 200 companies of Hauts-de-France region exploiting Industry 4.0 technologies, our results highlight four main clusters of technologies based on Bigdata, Artificial Intelligence, Internet of Things and Human-machine-interaction exploited by these companies. Complex relationships within the Innovation Ecosystem as well as economic characteristics of companies are decisive in the involvement of firms in the industry 4.0 paradigm. Furthermore, B-to-B relationships, business incubation mechanisms, technological projects and interaction with Openlabs are also significant.

Keywords: Innovation Ecosystem; Industry 4.0; Technological paradigm, Complex Adaptive System

3. Persistent Inefficiency, Transient Inefficiency, and Firm Unobserved Heterogeneity: A Comparison of Two Frontier Approaches using Simulated and Bank

Yawose Anani Kudawoo1, Jean-Joseph Minviel1, Faten Ben Bouheni2

1University of Clermont Auvergne, INRAE – France
2Ipag Business School – France

Abstract

Sound implementation of managerial and innovative practices requires appropriate tools to measure firms’ success in achieving their goals. Since its introduction by Aigner et al. (1977) and Meeusen and van den Broeck (1977), the stochastic frontier analysis (SFA) framework has motivated considerable research to develop efficiency indices to assess this success. In this line, recent advances in the SFA framework suggest distinguishing between firm heterogeneity and transient and persistent inefficiency. Technical inefficiency exhibits heterogeneity among firms, thus if we do not control for unobserved individual effects (i.e., heterogeneity), they will be confused with technical inefficiency (Manevska-Tasevska et al., 2017). In addition, Kumbhakar et al. (2015) have argued that accounting for persistent inefficiency is a very important feature, because it reflects the effects of factors like management quality (Mundlak, 1961) as well as the effects of unobserved factors that may vary across firms but not over time.
An appealing feature of persistent inefficiency is that it is very unlikely to change, unless there is a major reorganization or restructuring of firm’s activities, or profound changes in factors that may affect firm’s management style such as public policies, change in firm-ownership or technological innovation (Kumbhakar et al., 2014; Minviel and Sipiläinen, 2021). By contrast, the transient or residual inefficiency might change over time without any change in firm management practices. For instance, transient inefficiency may change, inter alia, because of managers’ experience and random factors such as weather conditions, disease or pandemic outbreaks (Kumbhakar et al., 2014; Manevska-Tasevska et al., 2017). As such, it seems reasonable to separate firm heterogeneity, persistent and transient efficiency in evaluating their performance.

Session V: Special COVID-19


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²Maharaja Manindra Chandra College – India

Abstract

The paper tries to analyse empirically the impact of India’s economic policy uncertainty (EPU) index on different macro-economic variables of India like import, export, interest rate, exchange rate, inflation rate and stock market during pre-COVID-19 and COVID-19 era. Although, there exist several works where relationship and volatility among the stock markets and macro-economic indicators during the COVID-19 pandemic have been estimated, but till now none of the studies examine the effect of economic policy uncertainty (EPU) index on different macro-economic variables in Indian context along with the stock market due to the outbreak of COVID-19 pandemic. This is considered to be a noteworthy gap and hence, opens up new dimension which has been examined in our study. In order to get a clear picture, monthly data from January, 2018 to March, 2021 have been considered where January, 2018 to February, 2020 is taken as the pre-COVID-19 period and March, 2020 to March, 2021 as the COVID-19 period. All the data is converted into log natural. We applied DCC-GARCH model to investigate the impact of EPU index on volatility of selected variables over the study period across a multivariate framework and Markov regime switching model to examine the switching over of the variables from pre-COVID-19 to COVID-19 period. The results of DCC-GARCH model indicates the presence of volatility in the dependent variables arising out of economic policy uncertainty considering the segmentation of the study period into pre-COVID-19 and COVID-19. The results of Markov regime switching model shows that the variables makes a significant move from low volatility regime to high volatility regime due to the presence of COVID-19.
2. Impact of COVID-19 Pandemic and Political Upheavals on Tunisian Stock market

Fatma Aloui¹, Amal Bakour²

¹Faculty of Economic Sciences and Management of Sfax, University of Sfax – Tunisia
²Higher Business School of Tunis – Tunisia

Abstract

The purpose of this article is to study the reaction of the Tunisian stock market following the emergence of the Coronavirus pandemic and Political upheavals through four econometric methods ARCH, GARCH, TGARCH and GARCH-M and the ICSS algorithm to detect sudden changes in the conditional variance. Our sample is made up of the Tunisian stock market index "TUNINDEX", the qualitative variables Coronavirus and Political upheavals. We are working over a period of 14 years (2007 to 2020), we use the daily returns. The main results of this article indicate that Political upheavals and the Coronavirus have a negative impact on the volatility of "TUNINDEX". According to the ICSS algorithm method, the different structural breaks in conditional variance are caused by the emergence of Coronavirus and Political upheavals. Few studies have analyzed the reaction of "TUNINDEX" according to the following econometric models; therefore, this study enriches the scientific research concerning this problem.

Keywords: COVID-19, Political upheavals, GARCH (1.1), ICSS algorithm, TUNINDEX, Stock Market Volatility

3. Managing and controlling COVID-19 in Lebanon using the Internet of Things and Artificial Intelligence

Chadi Azoury¹, Arz Wehbe², Claude Baron³, Rob Vingerhoeds⁴

¹Faculty of Economics and Business Administration at Lebanese University – Lebanon
²Lebanese Canadian University – Lebanon and Estia Institute of Technology at University of Bordeaux – France
³LAAS-CNRS, INSA Toulouse, University of Toulouse – France
⁴ISAE-Supaéro, LAAS-CNRS, Toulouse – France

Abstract

COVID-19 recently grew as a major problem worldwide and is considered the pandemic of the third century. Among the issues in dealing with this pandemic is the urgency, the bad communication, the decentralization of decision and the mismanagement of this crisis. In order to address these issues, the authors propose the use of Internet of Things and Artificial Intelligence. The Internet of Things proposes several solutions to the aforementioned problems, while using the
Genetic Algorithm in AI to calibrate the proposed generalized SEIR mathematical model. This model, when calibrated to the existent recorded and confirmed data in Lebanon, will help predict the number of infected individuals. Thus, it will better prepare for the fight with the virus.

**Keywords:** COVID-19 Lebanon, Internet of Things, Artificial Intelligence, Machine learning

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4. *L’agilité, un pilier de relance pour l’organisation post Covid-19*

Ghita Sekkat¹, Adil Bami¹

¹ISCAE Casablanca – Morocco

**Abstract**

La pandémie de la Covid-19 a fait émerger une crise à l’échelle mondiale qui semble avoir des conséquences au-delà de la simple propagation de la maladie et des mesures de confinement. Elle a davantage confirmé le modèle VUCA (Volatility, Uncertainty, Complexity et Ambiguity) qui caractérise la « nouvelle réalité » du monde d’aujourd’hui. Dans ce contexte extrême de crise d’un genre nouveau, la pression du temps est intense. Les entreprises ont besoin plus que jamais de s’adapter à cet imprévu et trouver des solutions rapidement. Le but de ce présent article est d’étudier les apports de la littérature sur le construit de l’agilité organisationnelle, comme un moyen permettant aux entreprises de faire face à un univers incertain, non prédictible, en rupture et instable.

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**Afternoon Sessions from 3:00 to 5:00 (CET)**

**Session I : Financial Economics and Modelling**

1. *The impact of uncertainties on the interaction between green bonds and other financial markets*

Haifa Talbi¹, Christian De Peretti², Meriem Youssef¹, Lotfi Belkacem¹

¹ISFA Lyon – France

²ISFA, University Claude Bernard Lyon1 – France

**Abstract**

This paper investigates the impact of Economic Policy Uncertainty (EPU) and equity market uncertainty (VIX) on the relationship of green bonds among financial markets namely conventional bonds, stocks, oil and clean energy stocks using daily returns data that ranges from 1 July 2014 to 29 May 2020. Firstly, we examine the dependence structure in the full quantile
range applying the cross-quantilogram approach developed by Han et al. (2016). Then, we control
for uncertainties to evaluate the impact of macroeconomic factors namely the EPU and VIX via
the partial cross-quantilogram model. Our empirical results show that (1) Green bonds and
conventional bonds boom and bust together. (2) Green bond is a useful tool for diversification to
investors in stock, oil and clean energy markets. (3) The uncertainty measures do not contain
information that could affect the dependence structures between these markets. Our findings are
crucial to portfolio managers and environmentally friendly investors in terms of strengthening eco-
friendly portfolios.

Keywords: Green bonds, financial markets, stock, oil, clean energy, Cross-quantilogram

2. **Contagion in the Euro Area Sovereign CDS market: a spatial approach**

Nadia Ben Abdallah¹, Halim Dabbou², Gallali Mohamed Imen²

¹Institute of Higher Commercial Studies of Sousse – Tunisia
²Higher Institute of Management of Sousse – Tunisia

Abstract

This paper explores whether the euro-area sovereign credit default swap (CDS) market is prone to
contagion effects. More precisely, it investigates whether the sharp increase in sovereign CDS
spread of a given country is due to a deterioration of the macroeconomic variables or to some form
of contagion such as pure contagion or wake-up contagion or shift-contagion. For this purpose, the
authors use an innovative approach, i.e., the spatial econometrics techniques. Modeling spatial
dependence structures, that depends on neighborhood interaction, is a popular topic in several
research areas. However, it has been overlooked in the field of finance. The results show that there
is strong evidence of spatial dependence. The Sovereign CDS spread observed for each country is
determined jointly with that of its neighbors and that changes in spread commoved together
highlighting the presence of pure contagion. Furthermore, this paper finds evidence of wake-up
call contagion- an increased sensitivity of investors to fundamentals of neighboring countries- and
Shift-contagion- an increased sensitivity to common factors. The originality of this study consists
in using sovereign credit default swap spreads (SovCDSs) as a better advanced measure of
sovereign credit risk. Also, it considers a much broader set of fundamentals to explain the variation
in SovCDSs, including global factors, Eurozone common factors, local factors and behavioral
variables. A methodological contribution is made by extending the specification of the Spatial
Durbin Model (SDM) to take into consideration several forms of contagion: (i) pure contagion,
(ii) wake-up call contagion and (iii) shift-contagion.

Keywords: Financial Contagion, sovereign credit risk, CDS spreads, The euro sovereign debt
crisis, spatial econometrics, SDM model
3. Static and Dynamic Interrelationship between External Debt and Economic Development

Harpreet Mehton¹

¹Punjab School of Economics, Guru Nanak Dev University, Amritsar, Punjab – India

Abstract

The aim of this paper is to investigate the static and dynamic relationship between economic development variables and external debt of 72 developing countries over a long period covering from 1979 to 2014. This paper measures both static and dynamic model for the relationship of external debt and economic development variables. The static panel model is measured using the fixed effects estimator, whereas the dynamic model is measured using a generalized method of moments (GMM) estimator which is explained by Arelleno and Bond (1991) and Blundell and Bond (1998). By employing the Generalized Method of Moments (GMM) estimators, empirical results reveal that there occurs a high external debt persistence in the developing countries. Further, it exhibits that there is a positive relationship between agriculture value added and external debt whereas relationship between industry value added and external debt is negative. This is due to the shift from agriculture to the industrial sector. There is a positive relationship between service value added and external debt which is due to the infrastructural development financed through external loans. The gross domestic product has a negative impact, gross capital formation has a positive impact on external debt, trade has a negative impact on external debt.

Keywords: Developing Countries, External Debt, Economic Development, Dynamic model, Generalized methods of moments

4. The Influence of Research and Development and High-tech on Economic Growth: A Nonparametric Dynamic Panel data Approach

Faten Ben Bouheni¹, Jean-Joseph Minviel²

¹Ipag Business School – France)

²University of Clermont Auvergne, INRAE – France)

Abstract

This paper aims at providing new evidence on the impact of Research and Development (R&D) and high-tech on economic growth. To this end, we apply a nonparametric dynamic panel data model to a sample of 240 observations from 16 Euro area countries over the period 1999-2013. The average estimates indicate that R&D expenses and high tech exports influence positively and significantly economic growth. An appealing feature of the nonparametric model is that it provides detailed pictures on the effects of the variables of interests. In this line, we find that R&D expenses and high tech exports are associated with economic growth in a nonlinear manner. For instance, the estimates show that small increase in R&D expenses and high tech exports could not boost
economic growth for less rich countries (low values of economic growth), and may lead to moderate and larger increases in economic growth for richer countries.

**Keywords:** Research and Development, high-tech, economic growth, nonparametric dynamic panel

5. **Extreme Severity Modeling using a GLM-GPD Combination: Application to an Excess of Loss Reinsurance Treaty**

Sarra Ghaddab$^{1,2}$, Manel Kacem$^2$, Christian de Peretti$^1$, Lotfi Belkacem$^2$

$^1$University of Lyon 1, Lyon – France

$^2$University of Sousse – Tunisia

**Abstract**

This article studies the model proposed by Laudagé et al. (2019) and examines whether the combination between a Generalized Linear Model (GLM) and a Generalized Pareto Distribution (GPD) is valid for modeling claims severity in a practical framework. For this, we consider a real fire insurance dataset and fit the proposed model to these data. In this modeling, the threshold is of great importance since it separates the data into two parts and represents the point from which the observations become extremes. Therefore, in order to guarantee the correct choice of this threshold, one extra method is adopted in addition to that used by Laudagé et al. (2019). Furthermore, we build on the authors’ results and extend them by fitting the attritional data to three well-known distributions. The results of this study show that the GLM-GPD combination outperforms the benchmark model (classical GLM) in terms of predictive power. In addition, the application of an excess of loss reinsurance treaty to these two models proves that it is more interesting for an insurer to adopt a GLM-GPD combination so as not to underestimate the risk and go bankrupt. This justifies that the combined modeling is reasonably good to describe insurance claim costs.

**Keywords:** Pricing; Extreme claims amounts; Combined modeling; Generalized Linear Model; Generalized Pareto Distribution; Excess of Loss Reinsurance Treaty
Session II: Asset pricing and Risk factors

1. Long-run carbon consumption risks model and Asset prices

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¹University of Montreal – Canada

Abstract

This paper analyzes how carbon risk can affect the stochastic discount factor (SDF). We found that the SDF is affected by both the green and carbon shocks of the consumption. Moreover, as opposed to the usual long-run risk model, where researchers extract the long-run state variables using econometric methodology such as autoregressive moving average model, this paper uses the carbon consumption growth and its variance as such long-run state variables and find similar and more concluding results. Furthermore, this paper proposes a solution to the critic of the canonical long-run risks model by showing that carbon consumption does have both long-run risks in mean and in volatility as opposed to goods and services consumption. We find the carbon consumption growth persistence to be consistently significant. This means one should encourage households to consume green which is equivalent in terms of the policy to encourage firms to produce green.

Keywords: Climate finance, Consumption-based carbon emission, Carbon risk, Long-run risk, Green consumption

2. Who gets believed? trust and investor reaction to earnings announcements

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Abstract

Considering the proclamations of trustworthiness of the Islamic financial system and the positive relationship between stock market reaction and earning announcement of trustworthy firms, this paper aims to empirically test the presence of trust in the Islamic listed firms in Pakistan. The research question has been examined on Pakistan Stock Exchange (PSX) listed firms, during July 1, 2019, to June 30, 2020. Event study method has been used by taking Abnormal Return Variance (ARV) and Abnormal Trading Volume (ATV) as proxies to measure the investors’ reaction following the earnings announcement. The results suggest that stock prices around the earning announcements are negatively related to the trustworthiness of the firms compared to less-trusted firms (i.e., non-Shari’ah compliant companies). While, for abnormal trading volume, traders perceive/react to annual earnings announcements for both types of companies in a similar way. This research is an attempt to evaluate the Islamic financial system from its trustworthiness
perspective. Where, sufficient literature has already documented that being trustworthy is obligatory for Islamic companies, a literature gap has been felt to assess that whether the market/investor trust such companies or not. This paper has made a valuable contribution to the literature by providing the guideline that how investors’ reaction to Shari’ah compliant firms differ from non-Shari’ah firms; as well as by indicating that how religious element may subdue other social factors, like trust. This paper has also explored the market reaction by employing both liquidity and volatility in Pakistan.

Keywords: Trust, Shari’ah Complaint Companies, Stock market reaction, earning announcements, Pakistan Stock Exchange

3. The Spillover effect between Macroeconomic Variables and Stock Markets Dynamics: Evidence from the MENA zone

Nesrine Mechri¹, Saker Sabkha², Christian De Peretti¹

¹University Claude Bernard Lyon 1 – France
²University of South Brittany – France

Abstract

While numerous research in the literature oriented their works on developed countries and used the multivariate GARCH model to investigate the links between only one macroeconomic variable volatility and the stock market fluctuations, this paper illustrates a large analysis about the spillover effect between five macroeconomic variables (Exchange Rate, Inflation Rate, Interest Rate, Oil and Gold prices) and the dynamics of stock markets returns. For this purpose, five countries that belong to the MENA zone with different financial and economic characteristics are considered. A VAR-DCC-GARCH methodology is employed in this paper, allowing to take into account the financial and statistical time series features. A new framework based on heteroscedasticity robustness, is used. 4 steps that combing a VAR and a DCC-GARCH model illuminate the accuracy of the econometric estimates. Thanks to this new 4steps methodology we contribute to the existing literature by providing more robust estimates and much thinner results for the MENA region. The findings suggest a generalized evidence of the MENA zone, giving that, both gold prices, oils prices and inflation rates volatilities have negative spillover effects on stock markets dynamics. Otherwise, exchange rates fluctuations tend to have negative spillover impact on stock markets movements.

Keywords: Volatility, heteroscedasticity, MENA, Stock market dynamic, VAR-DCC-GARCH
Session III : Policy, Technology and Business performance

1. The Digital Transformation of the Supply Chain management: Challenges of applying Blockchain technology

Sanae Ben Yaich¹, Stéphane Callens¹

¹Université d’Artois – France

Abstract

The application of blockchain in the supply chain management process has caused a lot of ink to flow over the past three years, especially in the period between 2018 and 2021. This is due to the advantages this technology could present for supply chain’ managers who seek maximum transparency and fluidity to optimize the management of logistics operations and to improve the profitability of their companies. The complexity of the supply chain, with its vast and diverse network of actors, lies in the existence of hidden elements for the supplier and the consumer, which consequently poses the problem of information asymmetry. The lack of transparency in the monitoring of the various actors in the supply chain can give rise to ethically dubious activities such as the exploitation of natural and human resources, the creation of environmental footprints, the contribution in production waste and transport. (Baker et al., 2015). In order to facilitate product traceability, stand against fraud, and reduce waste during the transport of goods, blockchain, as a distributed, transparent and incorruptible ledger, can precisely help fight the opacity of these supply chains, and lead to much faster diagnoses on the sources of failure. In this article we will try to assess the impact of the application of blockchain on supply chain management in several sectors such as health, agri-food, luxury goods and distribution. The results have already demonstrated a positive correlation between the blockchain and the supply chain, particularly in the food industry, which is the most likely to be impacted by this technology, with the system of traceability, transparency and control of all transactions, which is important to gain the trust of all stakeholders (Kchetrie, 2018, Lu and Xu, 2017). In addition, the results show that the use of this technology could reduce transaction time and costs with its decentralized exchange system, something that has already been confirmed in the work of Christidis and Devetsikiotis (2016).

Keywords : Blockchain, SCM, Tracability, transparency, Trust
2. Information Technology Governance is Rewriting the Rules of Corporate Governance

Randa Sharafeddine

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Abstract

Information Technology governance “is an integral part of corporate governance and addresses the definition and implementation of processes, structures and relational mechanisms in the organization that enable both business and IT people to execute their responsibilities in support of business/IT alignment and the creation of business value from IT-enabled business investments” (De Haes and Van Grembergen, 2015). Digital transformation is becoming pervasive, resulting in the intertwine of organizational strategy with IT strategy and increasing importance of IT risk. IT governance and the factors that may influence it falls into the domain of the board of directors, who are ultimately accountable for strategy and control. Yet, research shows that the involvement of boards in governing digital assets is low. In order to address this topic, this paper summarizes the state-of-the-art of this research domain and identifies an agenda for future research on board-level IT governance inside the rules of corporate governance.

Keywords: IT Governance, Board of Directors, Corporate Governance, Board-Level IT, Governance, Research Agenda

3. Application of machine learning and GLM methods for pricing healthcare contracts: The case of a Tunisian insurance company

Amal Ben Hamida1,2, Manel Kacem 2, Christian de Peretti1, Lotfi Belkacem2

1University Claude Bernard Lyon 1 – France
2Institute of High Commercial at University of Sousse – Tunisia

Abstract

The health insurance industry in Tunisia is increasingly subject to regulations that create a significant occurrence between different market players. The evolution of these regulations makes the health insurance market very competitive. The pricing of the pure premium, therefore, represents a major demarcation issue for the various representatives of this market. Currently, generalized linear models (GLM) are the methods most used by Tunisian insurance companies. These parametric methods impose constraints on the one hand on the structure of the modelled risk and the non-linear interactions between the loss factors on the other hand. Besides, the development of data science has led in recent years to an interest in alternative approaches to statistical learning. This article aims to improve the pricing processes of individual health insurance contracts in Tunisia using Machine Learning algorithms. The idea is to compare these new non-parametric methods (CART, Random Forest) with current pricing methods (GLM). We
use as support for the study health insurance data from a Tunisian insurance company. A comparative analysis of the results showed the predictive capacity of machine learning algorithms, in particular the CART algorithm.

**Keywords:** Health insurance, Pricing, Generalized Linear Models, CART tree, Random forest

### 4. The emerging renewable energy ecosystem

Julie Chehaita¹, Eddie Soulier¹, Raed Kouta¹

¹University of Technology of Troyes – France

**Abstract**

Recently, companies in the energy sector are increasingly faced with the need to transform their economic model (business model) to integrate current ecological concerns and ensure a sustainable energy transition. Innovation, particularly in terms of technology, appears to be a determining factor in this energy transition. The players in this sector are in continuous interaction and their future is interdependent. It is, therefore, relevant to reflect on the transition from conventional energies to renewable energies by introducing the concept of renewable energy ecosystem. Innovation is a key factor in this emerging ecosystem, as much as startups. In this article, we propose to study, using an approach based on the assessment of the risks associated with innovation, the characteristics of the renewable energy emerging ecosystem and especially the role of innovation communities in accelerating the process of energy transition.

**Keywords:** Business ecosystem, renewable energy, risks of investment in renewable energy

**Session IV : Corporate governance**

1. *L'exploration de l'impact de dispersion entre contrôle et propriété*

Hani El Chaarani¹, Zouhour El Abiad²

¹Beirut Arab University – Lebanon

²Lebanese University – Lebanon

**Résumé :**
Cette étude consiste à étudier l’impact de la séparation entre la propriété et le contrôle sur la performance des entreprises familiales cotées en France durant les années 2017, 2018 et 2019. Les résultats de l’étude ont démontré qu’il existe deux méthodes de déviation entre le contrôle et la propriété en France, notamment la structure pyramidale et les droits de vote double. Ensuite, les résultats ont indiqué que le recours aux structures pyramidale pour séparer entre le contrôle et la propriété à un impact négatif sur la performance des entreprises familiales lorsque la famille détient
entre 10% et 66% des droits de vote. Enfin, les résultats obtenus indiquent que l’utilisation des droits de vote double pour séparer entre le contrôle et la propriété a un impact négatif sur la performance des entreprises familiales lorsque la famille détient entre 33% et 50% des droits de vote.

**Mots Clés :** Droit de vote double, structure pyramidale, entreprise familiale, performance

2. **The determinants of banks’ political connection across MENA countries**

Rihem Braham¹, Christian de Peretti², Lotfi Belkacem²

¹University of Sousse – Tunisia

²University Claude Bernard Lyon 1 – France

**Abstract**

The political connection literature suggests that firms have strong incentives to forge ties with politicians. This paper investigates the determinants of political connection to analyse the profile of banks that are most likely to forge political alliances. We analyse the data of banks in the MENA region for the period 2003 to 2017. Panel regression analyses reveal that these alliances measured by political connection index can be explained by some financial characteristics along with the institutional environment. We further document that banking activities are important determinants of political connections. Our analysis enhances our understanding of the willingness to build political ties and finds that policy makers should pay more attention to the relationship between banks and political patronage.

**Keywords:** political connection, MENA bank, panel data, banking activity

3. **Do banks with effective board and strong risk governance adopt more ethics codes? Evidence from large banks worldwide**

Oumeima Kacem¹, Sana El Harbi¹

¹University of Sousse – Tunisia

**Abstract**

The recent scandals have served to raise awareness about the importance of transparency and governance especially within banks. The aim of our research is to examine the association between risk governance and ethics codes. There is no research that treats this issue in terms of using committees, for which this study seems to be the only article in the literature that examines this issue. By focusing on a sample of large banks worldwide, we want to assess the effect of the board
of directors as well as risk management committee features on the adoption of ethical codes of conduct over the period 2006 to 2017. Panel logit regression is used to investigate this relationship. Most importantly, we find that highly-sized and gender-diverse boards are more sensitive to ethical issues. We also find that banks in which boards meet less frequently are more likely to adopt ethics codes. These findings highlight the important role of the board in enhancing the elaboration of ethics codes. Additionally, results show that risk management committee independence has a positive and significant effect on the adoption of ethical codes of conduct. This result suggests that the risk governance function should have a sufficient number of independent and qualified directors, which seems to be an effective tool in enhancing the implementation of ethics codes.

**Keywords** Risk management, board of directors, risk governance, codes of ethics, banks

4. **Does Women Director Education Matter: Evidence from Indian Commercial Banks**

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**Abstract**

The aim of this research is to study the influence of women director education on the performance of commercial banks in India and to find the relation between professional finance education and bank’s performance. A panel data is considered for this work to determine the relation between women director education and bank’s performance for the period 2009-10 to 2017-18 using fixed effect estimation technique. It was found that professional education of women director in finance domain increases bank’s performance. The findings are strong across the numerous proxies of bank’s performance on the basis of ownership and size. Findings of this paper are useful to the policy makers who are assigned the appointment of the women directors. This is one of the initial studies to find the relationship between women director education and bank’s performance for an emerging economy seeing both public sector and private sector banks in India.

**Keywords:** Qualification, Bank’s performance, Board size, Public Sector Bank, Private Sector Bank, Gender
### E. List of partners

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