

REPORT

Title of the workshop

SUPTECH WORKSHOP II AI, Robo Advisory and Market Risk Sovereign Risk

Venue

ONLINE

On the virtual campus (<http://campus.ief.es>) of the Institute of Fiscal Studies (<https://www.ief.es/>) through the ZOOM software.

It was carried out in this way because of the COVID-19 pandemic.

Madrid (Spain)

Date

June 16, 2020.

Hosting university

Complutense University of Madrid

Regulator/supervisor

DIR. GRAL. DE SEGUROS Y FONDOS DE PENSIONES. MINISTERIO DE ASUNTOS ECONÓMICOS Y TRANSFORMACIÓN DIGITAL.

The speakers

1. Javier Arroyo Gallardo
2. Miller Janny Ariza Garzón

Number of participants

30

The main topics:

Use Case I_VIII: Convergence And Divergence In European Bond Correlations (Schwendner, Schüle and Hillebrand, 2019).

Use case II_VII: Sovereign risk zones in Europe during and after the debt crisis (Arakelian, Dellaportas, Savona and Vezzoli, 2019)

The main results

The cases presented apply alternative methodologies and analyses for the evaluation of the transmission of sovereign risks associated with political, economic and financial phenomena.

They show how the risk associated with investments and the dynamics of the market for hedging instruments is affected by political interventions, macroeconomic phenomena. The increasing connectivity and risk is transmitted and fed back between the different axes and actors. It demands efficient regulation for the good development of financial markets. For this reason, it is valued positively the new methodologies presented for understanding and measuring the transmission or contagion associated with the risk factors.

The quantitative tools presented can be used in other problems such as prevention of money laundering taking into account different patterns, correlation of variables, among others. It is also possible to evaluate the connectivity that could exist derived from these events or others

as financing of terrorism. The attendees also mention the possibility of applying the methodologies presented in business observation units, in national contexts with internal or transnational operations.

New insights and main takeaways

The participants state that so far the analysis and identification of atypical companies are developed mostly by qualitative tools using expert criteria and variables such as the use of cash, nationality, type of business, etc., and demand to complement these tools with the use of robust quantitative methodologies that estimate the underlying models associated with their decisions, that improve them, or that provide added value in their management and regulation tasks.

Attendees consider as a potential alternative the use of AI in the insurance market in the processes of supervision and regulation, unsupervised methods based on the identification of atypical groups or differentiating segments that allow the identification of events with abnormal behavior, the potential for illegal and fraudulent operations. As a complement, the use of supervised models, based on the history of these events, together with other variables to identify determinants and the adjustment of predictive models.

In the case of identifying similarities and the generation of clusters between markets or countries concerning some risk drivers, we ponder on the use of hierarchical methods such as the dendrogram, considering it appropriate since it allows us to understand the level of similarity to which the clusters are generated.

The attendees consider that the tools presented can be useful to understand the evolution and forecast a crisis in the insurance sector, in particular, the connectivity networks can be used to estimate transmission effects, and evaluate the incorporation of forward-looking information.

Further remarks

The attendees once again stated that the regulatory bodies in the insurance sector do not efficiently exploit the information they have, the calculations are reduced to traditional actuarial calculation methodologies, with the accompaniment of some multivariate techniques for the pricing processes. Thus, they consider that the tools presented are novel and could potentially contribute to better risk management and pricing in the insurance sector.

For example, for vehicle insurance, they use information such as age, sex, information associated with the driver, vehicle information, among other variables. In the pricing of household insurance, they take into account geospatial variables such as city, area of the dwelling, neighborhood where the client lives, number of people living in the dwelling, age, among other determinants.

Complement Report

AI– MADRID – DIRECTORATE-GENERAL FOR INSURANCE AND PENSION FUNDS. MINISTRY OF ECONOMIC AFFAIRS AND DIGITAL TRANSFORMATION– JUNE 16, 2020

- Parties participating, their roles and their responsibilities:

- Balance sheet and risk analysis area
- Inspection equipment
- Subdirector General for Solvency
- Area of Studies.

The role of the participants: Directors, head of division, informatics and state insurance inspectors.

- how will they stay involved? They have access to the platform to see the exposed cases, other use cases and all the tools and material provided by the project. They receive the papers with the use cases, the presentations and the codes as material derived from the seminars. They receive continuous sending of the summaries of other use cases, from the different WPs, to evaluate their interest and the possibility of new seminars, considering that they are different regulatory bodies and different departments. We are committed to providing participants with a report that collects comments and feedback from the same seminars in other EU countries. We share our publications so that they can see results of the feedback given, collect feedback on their applied approach, and carry out knowledge transfer. They have been invited to participate in different supotech and regtech events.
- what is their feedback on the use cases presented? They value the knowledge of alternative tools that allow their use to be transferred to other problems such as the prevention of money laundering taking into account similar patterns, the correlation of variables, together with patterns of transmissibility that could exist due to these events or others such as the financing of terrorism. To transfer the methodologies presented at the level of countries and markets as observation units, to companies in national contexts with internal or transnational operations.
- Are the selected use cases in the end the ones that meet the expectations and requirements at most? Although specifically the cases are not directly applicable in their areas, they again consider that they show some developments and ideas that allow them to glimpse the advance that data analysis has had in risk management, along with the possibilities that they could take advantage of with the amount of data and the varied information that they receive from the companies' reports.

Annex. Event photo

Instituto de Estudios Fiscales

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Convocatorias

Avisos

Formación

Evaluación

Comunicación

Mensajes

Foros de debate

Videoconferencias

Encuestas

Encuestas de profesores

Alumnos conectados

Profesores

Alefas

Personal

16/06/2020 12:25

Ayuda

Bloc de notas

Cerrar sesión

Javier Arroyo Gallardo

Convocatoria: Análisis y visualización de datos, Big Data

Convocatorias > Análisis y visualización de datos, Big Data >

Videoconferencias

Nuevo

Registros 1

ID	Nombre	Inicie	Fin	Organizador	Identificador externo	Acción				
96	Sesión 23 de junio, BIG DATA	23/06/2020 09:30	23/06/2020 14:00	profesorief@ief hacienda gob es	96011785385	Editar	Borrar	Panelistas	Alumnos	Informe
94	Sesión 16 de junio, BIG DATA	16/06/2020 09:30	16/06/2020 13:30	profesorief@ief hacienda gob es	91001259427	Editar	Borrar	Panelistas	Alumnos	Informe
57	Sesión 9 de junio, BIG DATA	09/06/2020 09:00	09/06/2020 14:30	profesorief@ief hacienda gob es	99270999070	Editar	Borrar	Panelistas	Alumnos	Informe

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