Ricardo Massa Roldán

CONTACT

E-mail: ricardomassarol@gmail.com; r.massa@tec.mx
Website: https://orcid.org/0000-0002-8499-5775

RESEARCH INTERESTS

Membership, level 1, of the National System of Researchers (Mexico)

Convergence of time series, Econometric methods in finance, Energy risk management (ERM), Investment project valuation

R applications in Data Science, Econometric Methods, and Time Series

EDUCATION

PhD in Financial Sciences — Aug 2009 — Feb 2013

EGADE Business School, Tecnológico de Monterrey

Thesis: Bivariate Real Option Valuation Through Copula Modeling.

Description: Valuation of the Natural Gas Pipeline "Los Ramones" combining Real Options with a Copula-TGARCH model for two underlying assets.

Collaborator in the Research Group: Risk administration and corporate finance in the EGADE Business School.

Field of Specialty: Volatility Models for time series in the Energy Sector

BA in Economics — Aug 2004 — Dec 2008

Tecnológico de Monterrey, Mexico City Campus

Part of the Honors Group

Participant of the honors exchange program in London School of Economics and Political Science (LSE) by the Tecnológico de Monterrey.

Specialized in Mathematical Economics and Econometric Methods.

WORK EXPERIENCE

National Laboratory of Public Policy (LNPP) — Jan 2020 — Present

Coordinator

Coordinator of the Simulation Unit (**USim**) of the National Laboratory of Public Policy (**LNPP**), CIDE

Development and implementation of computational models to analyze social phenomena in order to forecast the potential economic and social effects of public policies.

CIDE — Jun 2016 — Present

CONACYT Research Fellow

Interdisciplinary Program of Regulation and Economic Competition (**PIRCE**)

Studies on: Risk Management, Mexican Financial Bill, Mexican Electric Sector

College Professor. Courses: *Microeconomics; Econometrics.*

Master's degree in public administration. Course: *Time Series.*

Master's degree in economics. Course: *Econometrics.*

Doctoral degree in public administration. Courses: *Statistics & Probability; Econometrics.*

EGADE Business School — Jul 2014 - Feb 2015 — Present

Part-Time Professor

Doctoral degree in Finance. Courses: *Corporate Finance; Stochastic Calculus for Finance; Derivative Products.*

EGyT School of Government — Jan 2022 — Present

Part-Time Professor

Master's degree in Applied Economics. Courses: *Econometrics; Time Series*

Tecnológico de Monterrey, Santa Fe Campus — Aug 2012 — Present

Part-Time Professor

College Professor. Courses: *Algorithms & data analysis; Financial Modeling & Programming; Multivariate Data Analysis; Econometric Methods for Finance; Time Series; Game Theory; Financial Mathematics; Risk Management; Credit Risk Management; Project Evaluation; Personal & Business Finance.*

Universidad Anáhuac, North Campus — Jun 2018 — May 2022

Part-Time Professor

College Professor. Courses: *Statistics; Financial Mathematics; Corporate Finance.*

Universidad Panamericana, Mexico City Campus — Feb 2019 — Dec 2020

Part-Time Professor

Master's degree in Energy Economics & Regulation. Courses: *Econometrics; Statistics & Probability.*

EGIA School of Engineering and Architecture — May 2018 - Jul 2018 — Jun - Jul 2019

Professor

Master's degree in Engineering Management. Course: *Project Risk Management.*

Center for U.S.-Mexican Studies, GPS, UCSD — Jan 2017 — May 2017

Visiting Fellow

Research Project 1: A Comparison Study of the Impact of the Oil Price Shocks in the Economic Performance of Mexico and United States: Implications to the Mexican Energetic Bill.

Research Project 2: Words Matter: Exploring the Relationship between Presidential Speeches and Homicides in Mexico.

FUDAN-Tecnológico de Monterrey Research Center for China-Latin America Studies — Aug 2015 — Apr 2016

Research Professor

College Professor. Courses: *Project Evaluation; Credit Risk Management.*

Fudan University, Shanghai, China — Feb - Jun 2013 — Sep - Jul 2015

Visiting Professor

College Professor. Courses: *International Finance; Project Evaluation; Personal & Business Finance.*

PUBLICATIONS

1. Triberti, Giuliana and **Massa, Ricardo** (2022). Savings and collective behavioral patterns in Mexico's pension system. *Análisis Económico, XXXVII*(94): 7-21.https://doi.org/10.24275/uam/azc/dcsh/ae/2022v37n94/Triberti
2. **Massa, Ricardo**; Vilalta, Carlos and Fondevila, Gustavo (2022). How to periodize a violent conflict A proposal using the case of Mexico. *International Journal of Social Research Methodology*. https://doi.org/1080/13645579.2022.2026131
3. Fondevila, Gustavo and **Massa**, **Ricardo** (2021). *El combate al secuestro en la Ciudad de México: una experiencia ambiguamente exitosa*. In Aguayo, S. et. al (Eds.) "Atlas de la Seguridad y la Defensa de México 2020". CASEDE; UDLAP; Senado de la República: 183-190.
4. Reyna, Montserrat; **Massa**, **Ricardo** and Gómez, Vicente (2021). Neuro-wavelet Model for price prediction in high-frequency data in the Mexican stock market.*The Mexican Journal of Economics and Finance, 17*(1): 1-23. https://doi.org/10.21919/remef.v17i1.570
5. **Massa**, **Ricardo** and Fondevila, Gustavo (2021). Criminal displacement in Mexico city's metropolitan area: The case of kidnapping. *International Journal of Law, Crime and Justice*. https://doi.org/10.1016/j.ijlcj.2021.100479
6. **Massa**, **Ricardo**; Fondevila, Gustavo and García-Tejeda, Enrique (2021) . Female homicide victimisation in Mexico: a group-based trajectory and spatial study, *Global Crime*. https://doi.org/10.1080/17440572.2020.1869539
7. Fondevila, Gustavo; Vilalta, Carlos and **Massa**, **Ricardo** (2021). On the relationship between police force presence and crime in Mexico: A spatial analysis, *Police Practice and Research*. https://doi.org/10.1080/15614263.2021.1915144
8. Meneses-Reyes, Rodrigo; García-Tejeda, Enrique; Fondevila, Gustavo and **Massa**, **Ricardo** (2021). No life, no land: Homicide and dispossession in Mexico. *Land Use Policy,108*, 105593. https://doi.org/10.1016/j.landusepol.2021.105593
9. **Massa**, **Ricardo** and Rosellón, Juan (2020). Linear and nonlinear Granger causality between electricity production and economic performance in Mexico. *Energy Policy*, *142,*111476. https://doi.org/10.1016/j.enpol.2020.111476
10. Ramírez, José Carlos and **Massa, Ricardo** (2020). Mexico's Energy Regulatory Reform in the Context of a New Trilateral Agreement (NAFTA-USMCA). *The International Trade Journal, 34*(1):55-73. https://doi.org/10.1080/08853908.2019.1693939
11. Gómez, Regina; Windler, Lia and **Massa**, **Ricardo** (2020). Determinantes de la inversión extranjera directa en América Latina: una visión desde la economía administrativa. *Revista Economía y Política*, *31*: 36-49. https://doi.org/10.25097/rep.n31.2020.03
12. Fondevila, Gustavo; **Massa**, **Ricardo** and Meneses Reyes, Rodrigo (2019). War on Drugs, War on Women: Visualizing female homicide in Mexico. *Women & Criminal Justice*, *30*(2):147-154. https://doi.org/10.1080/08974454.2019.1653812
13. **Massa**, **Ricardo** and Fondevila, Gustavo (2019). Police Crackdowns in Mexico City. *Policing: An international Journal*, 42(5): 798-813. https://doi.org/10.1108/PIJPSM-11-2018-0165
14. **Massa**, **Ricardo** and Reyna, Montserrat (2019). Valuing Natural Gas Pipeline Expansion: A Copula-TGARCH Application in Mexico. *Contaduría y Administración, 64*(2):1-19. http://dx.doi.org/10.22201/fca.24488410e.2018.1476
15. Fondevila, Gustavo and **Massa**, **Ricardo** (2018). Convergence Dynamics of Robbery Rates in Mexico. *Crime & Delinquency, 64*(14):1925-1950. https://doi.org/10.1177/0011128718757738
16. **Massa**, **Ricardo** (2018). Regulación por riesgo en el sector de hidrocarburos mexicano. ASEA/CIDE: México, 89-114.

17. **Massa**, **Ricardo** and Pérez, Ricardo (2018). Relación entre la volatilidad de los rendimientos de acciones y la actividad económica: Análisis empírico mediante un modelo GARCH multivariado. *Estocástica: Finanzas y Riesgo*, *8*(1): 5-34.
18. Reyna, Montserrat and **Massa**, **Ricardo** (2018). Linear and Nonlinear Diversification Opportunities in the Latin American Integrated Stock Market. *Recent Topics in Time Series and Finance: Theory and Applications in Emerging Markets*, 51-80.
19. Reyna, Montserrat; **Massa, Ricardo** and Santillán, Roberto (2017). An Exploratory Analysis on the Causality Among the MILA Markets. *Emerging Markets Finance and Trade*, *53*(10):2303-2317.http://dx.doi.org/10.1080/1540496X.2017.1308861
20. **Massa**, **Ricardo**; Reyna, Montserrat and Tapia, Armando (2017). Estrategia de Construcción de Portafolios de Inversión Considerando Causalidad y Cointegración, un Estudio Comparativo para América Latina. *Estocástica: Finanzas y Riesgo*, *7*(2):177-199.
21. Lorenzo, Arturo and **Massa**, **Ricardo** (2016). Dependencia Condicional en Colas entre el Mercado Accionario y el Crecimiento Económico: el Caso Mexicano. *Revista Investigación Económica*, *75*(296):111-131. http://dx.doi.org/10.1016/j.inveco.2016.07.005
22. Lorenzo, Arturo and **Massa**, **Ricardo** (2013). Measuring Dependence in Financial Crisis: a Copula Approach for Mexico and Brazil. *Economía Mexicana NUEVA ÉPOCA, 22*(2): 341-355.
23. **Massa**, **Ricardo** and Reyna, Montserrat (2012). Bootstrap de volatilidades. *Revista de Administración, Finanzas y Economía*, *6*(2):1-28.

LANGUAGES

Spanish (native language)

English 653 TOEFL

Italian (intermediate)

German (basic)