# ADRIAN LICHT

## **CURRICULUM VITAE**

Date of Birth:

Place of Birth:

E-mail:

December 16, 1959

Buenos Aires, Argentina
adrian.licht@gmail.com

Nationality: Argentine

#### **EDUCATION**

- Ph.D. in Economics. Universidad Francisco Marroquín, Guatemala City, Guatemala (2018-2021). Thesis: "Score-Driven Time Series Models: Econometric Theory and Empirical Applications in Finance and Economics". Supervisors: Szabolcs Blazsek and Álvaro Escribano.
- Bachelor's Degree in Physics. Universidad del Valle de Guatemala. Guatemala City, Guatemala (1977-1982).

## PROFESSIONAL AND CORPORATE EXPERIENCE

### 1999 to present:

Independent financial consultant, adviser, and external member of the board of Family Offices, regional and local corporations. Economic, financial, regulatory, and technical Consultant and Adviser for the Telecommunications sector in Central America.

Wide experience in portfolio management, corporate valuation, financial assets valuation, analysis of financial situation of corporations under stressing macroeconomic environment, financial restructuring, and M&A.

#### 1996 to 1999:

Member of the Board of Directors for TELGLOB, a holding company, at that time, involved in several telecommunication enterprises in Central America, such as: Comtech, S.A., Telered, S.A., Intelcom, S.A., Visual Electrónica, S.A., Globatel.

### ACADEMIC EXPERIENCE

University professor in the following areas: Finance and Investments, Business Administration, Economics, Physics, Mathematics and Computer Science, at Francisco Marroquin University (Guatemala and Panama) and Universidad del Valle de Guatemala.

Courses recently taught: Wealth Management, Capital Markets, Portfolio Management, Investment Theory, International Corporate Finance, Forecasting Models, Fixed and Variable Income Instruments, Project Evaluation, Advanced Topics in Physics (General Relativity).

Thesis advisor for the following degrees: (i) master's in finance (ii) engineering (administrative sciences, electronics, computer science, industrial), and (iii) undergraduate degrees in mathematics and physics.

### Journal articles:

- 1) Blazsek, S., Escribano, A., and Licht, A. (2022) Score-driven location plus scale models: asymptotic theory and an application to forecasting Dow Jones volatility. *Studies in Nonlinear Dynamics & Econometrics*. <a href="https://doi.org/10.1515/snde-2021-0083">https://doi.org/10.1515/snde-2021-0083</a> Supplementary Material is available at the same website.
- 2) Ayala, A., Blazsek, S., and Licht, A. (2022). Signal Smoothing for Score-Driven Models: A Linear Approach. *Communications in Statistics Simulation and Computation*. https://doi.org/10.1080/03610918.2022.2032165
- 3) Ayala, A., Blazsek, S., and Licht, A. (2022). Score-driven stochastic Seasonality of the Russian rouble: An application case study for the period 1999 to 2020. Empirical Economics. 62, 2179-2203. https://doi.org/10.1007/s00181-021-02103-6
- 4) Blazsek, S., Escribano, A., and Licht, A. (2021). Co-Integration with Score-Driven Models: An Application to US Real GDP Growth, US Inflation Rate, and Effective Federal Funds Rate. *Macroeconomic Dynamics*. 1-21. <a href="https://doi.org/10.1017/S1365100521000365">https://doi.org/10.1017/S1365100521000365</a>
- 5) Blazsek, S., Escribano, A., and Licht, A. (2021). Multivariate Markov-Switching Score-Driven Models: An Application to the Global Crude oil Market. *Studies in Nonlinear Dynamics & Econometrics*. <a href="https://doi.org/10.1515/snde-2020-0099">https://doi.org/10.1515/snde-2020-0099</a>
- 6) Blazsek, S., and Licht, A. (2021). Prediction Accuracy of Volatility Using the Score-Driven Meixner Distribution: An Application to the Dow Jones. *Applied Economic Letters*. https://www.tandfonline.com/doi/full/10.1080/13504851.2020.1859445
- 7) Blazsek, S., Escribano, A., and Licht, A. (2020). Identification of Seasonal Effects in Impulse Responses Using Score-Driven Multivariate Location Models. *Journal of Econometric Methods* 10 (10): 53-66. https://doi.org/10.1515/jem-2020-0003
- 8) Blazsek, S., and Licht, A. (2020). Dynamic Conditional Score Models: A Review of Their Applications. *Applied Economics* 52 (11): 1181-1199. <a href="https://doi.org/10.1080/00036846.2019.1659498">https://doi.org/10.1080/00036846.2019.1659498</a>
- 9) Blazsek, S., and Licht, A. (2018). Robustness of Score-Driven Location and Scale Models to Extreme Observations: An Application to the Chinese Stock Market. *Financial Statistical Journal* 1 (2): 507-516. <a href="http://dx.doi.org/10.24294/fsj.v1i2.699">http://dx.doi.org/10.24294/fsj.v1i2.699</a>

### Working papers:

- 1) Ayala, A., Blazsek, S., and Licht A. (2022) Optimal choice of the scaling parameters in score-driven filters. Discussion Paper 4/2022, Francisco Marroquin University, School of Business. <a href="https://en.ufm.edu/wp-content/uploads/2022/05/BLAZSEK-AYALA-LICHT-2022-GESG-WP-04-2022.pdf">https://en.ufm.edu/wp-content/uploads/2022/05/BLAZSEK-AYALA-LICHT-2022-GESG-WP-04-2022.pdf</a>
- 2) Ayala, A., Blazsek, S., and Licht A. (2022) A short note on the scaling parameter in score-driven filters. Discussion Paper 3/2022, Francisco Marroquin University, School of Business. <a href="https://en.ufm.edu/wp-content/uploads/2022/05/AYALA-BLAZSEK-LICHT-2022-GESG-WP-3-2022.pdf">https://en.ufm.edu/wp-content/uploads/2022/05/AYALA-BLAZSEK-LICHT-2022-GESG-WP-3-2022.pdf</a>
- 3) Ayala, A., Blazsek, S., and Licht A. (2022) Score-driven equity plus gold portfolios before and during the COVID-19 pandemic. Discussion Paper 1/2022, Francisco Marroquin University, School of Business. https://en.ufm.edu/wp-content/uploads/2022/05/16-AYALA-BLAZSEK-LICHT-2022-GESG-WP.pdf
- 4) Ayala, A., Blazsek, S., and Licht, A. (2021) Volatility forecasting for the coronavirus pandemic using quasi-score-driven models. Discussion Paper 2/2021, Francisco Marroquin University, School of Business. https://en.ufm.edu/wp-content/uploads/2022/05/14-AYALA-BLAZSEK-LICHT-2021-GESG-WP-2-2021.pdf

- 5) Ayala, A., Blazsek, S., and Licht, A. (2021) Optimal signal extraction for score-driven models. Discussion Paper 1/2021, Francisco Marroquin University, School of Business. <a href="https://en.ufm.edu/wp-content/uploads/2022/05/13-AYALA-BLAZSEK-LICHT-2021-GESG-WP-2021-01.pdf">https://en.ufm.edu/wp-content/uploads/2022/05/13-AYALA-BLAZSEK-LICHT-2021-GESG-WP-2021-01.pdf</a>
- 6) Blazsek, S., Escribano, A., and Licht, A. (2020). Prediction accuracy of bivariate score-driven risk premium and volatility filters: a illustration for the Dow Jones. Working Paper 2020-10, University Carlos III of Madrid, Department of Economics, 2020. <a href="http://hdl.handle.net/10016/31339">http://hdl.handle.net/10016/31339</a>
- 7) Blazsek, S., and Licht, A. (2020). Robust score-driven inference of stochastic seasonality of the Russian rouble for different currency exchange rate regimes from 1999 to 2020 Discussion Paper 4/2020. Francisco Marroquin University, School of Business, 2020. <a href="https://en.ufm.edu/wp-content/uploads/2022/05/12-BLAZSEK-LICHT-2020-GESG-WP-1.pdf">https://en.ufm.edu/wp-content/uploads/2022/05/12-BLAZSEK-LICHT-2020-GESG-WP-1.pdf</a>
- 8) Blazsek, S., Escribano, A., and Licht. A. (2020). Dynamic stochastic general equilibrium inference using a score-driven approach. Working Paper 20-05, University Carlos III of Madrid, Department of Economics, 2020. http://hdl.handle.net/10016/30347
- 9) Blazsek, S., Escribano, A., and Licht, A. (2020). Nonlinear common trends for the global crude oil market: Markov-switching score-driven models of the multivariate t-distribution. Working Paper 20-04, University Carlos III of Madrid, Department of Economics, 2020. http://hdl.handle.net/10016/30346
- 10) Blazsek, S., Escribano, A., and Licht, A. (2019). Markov-switching score-driven multivariate models: outlier-robust measurement of the relationships between world crude oil production and US industrial production. Working Paper 19-16, University Carlos III of Madrid, Department of Economics, 2019. <a href="https://e-archivo.uc3m.es/handle/10016/29030">https://e-archivo.uc3m.es/handle/10016/29030</a>
- 11) Blazsek, S., Escribano, A., and Licht, A. (2019). Co-integration and common trends analysis with score-driven models: an application to the Federal Funds effective rate and the US inflation rate Working Paper 19-08, University Carlos III of Madrid, Department of Economics, 2019. https://e-archivo.uc3m.es/bitstream/handle/10016/28451/we1908.pdf
- 12) Blazsek, S., and Licht, A. (2019). Robustness of score-driven location and scale models to extreme observations: an application to the Chinese stock market. Discussion Paper 1/2019, Francisco Marroquin University, School of Business, 2019. <a href="https://en.ufm.edu/wp-content/uploads/2022/05/7-BLAZSEK-LICHT-2019">https://en.ufm.edu/wp-content/uploads/2022/05/7-BLAZSEK-LICHT-2019</a> 1.pdf
- 13) Blazsek, S., and Licht, A. (2019). Dynamic conditional score models: a review. Discussion Paper 2/2019, Francisco Marroquin University, School of Business, 2019. https://en.ufm.edu/wp-content/uploads/2022/05/8-BLAZSEK-LICHT-2019 2.pdf
- 14) Blazsek, S., Escribano, A., and Licht, A. (2018). Seasonality detection in small samples using score-driven nonlinear multivariate dynamic location models. Working Paper 18-09, University Carlos III of Madrid, Department of Economics, 2018. <a href="http://hdl.handle.net/10016/27483">http://hdl.handle.net/10016/27483</a>
- 15) Blazsek, S., Escribano, A., and Licht, A. (2018). Seasonal quasi-vector autoregressive models with an application to crude oil production and economic activity in the United States and Canada, Working Paper 18-10, University Carlos III of Madrid, Department of Economics, 2018. <a href="https://hdl.handle.net/10016/27484">https://hdl.handle.net/10016/27484</a>
- 16) Blazsek, S., Escribano, A., and Licht, A. (2018). Seasonal quasi-vector autoregressive models for macroeconomic data. Working Paper 18-03, University Carlos III of Madrid, Department of Economics, 2018. https://e-archivo.uc3m.es/handle/10016/26316
- 17) Blazsek, S., Escribano, A., and Licht, A. (2017). Score-driven nonlinear multivariate dynamic location models, Working Paper 17-14, University Carlos III of Madrid, Department of Economics, 2017. https://e-archivo.uc3m.es/handle/10016/25739

# Conferences, Workshops, Seminars:

- 1) Ayala, A., Blazsek, S., and Licht, A. Score-driven equity plus gold portfolios before and during the COVID-19 pandemic, World Finance Conference, Turin (Italy), August 2022 (online).
- 2) Blazsek, S., A. Escribano and A. Licht. Score-driven location plus scale models: asymptotic theory and an application to forecasting Dow Jones volatility, Society of Financial Econometrics, 14th annual meeting, University of Cambridge (UK), June 2022.
- 3) Ayala, A., Blazsek, S., and Licht, A. Volatility forecasting for the coronavirus pandemic using quasi-score-driven models, World Finance Banking Symposium, Budapest, December 2021 (online).
- 4) Ayala, A., Blazsek, S., and Licht, A. Volatility forecasting for the coronavirus pandemic using quasi-score-driven models. Vietnam Symposium in Banking and Finance, Hanoi, October 2021 (online).
- 5) Ayala, A., Blazsek, S., and Licht, A. Volatility forecasting for the coronavirus pandemic using quasi-score-driven models. 24th Dynamic Econometrics Conference, Timberlake, September 2021 (online).
- 6) Blazsek, S., A. Escribano and Licht A. Score-driven ABC(D) of dynamic stochastic general equilibrium. Summer Workshop in Economics of the Hungarian Academy of Sciences, August 2021 (online).
- 7) Ayala, A., Blazsek, S., and Licht, A. Optimal signal extraction for score-driven models. 23rd Dynamic Econometrics Conference (online), March 2021.
- 8) Blazsek, S., Escribano, A., and Licht, A. Dynamic stochastic general equilibrium inference using a score-driven approach. Annual Economic Research Conference (SIEG) (online), Bank of Guatemala, Guatemala City, January 2021.
- 9) Blazsek, S., Escribano, A., and Licht, A. Prediction accuracy of bivariate score-driven risk premium and volatility filters: a illustration for the Dow Jones. Hungarian Economic Society Annual Conference (online), December 2020.
- 10) Blazsek, S., Escribano, A., and Licht, A. Markov-switching score-driven multivariate models: outlier-robust measurement of the relationships between world crude oil production and US industrial production. Guatemalan Econometric Study Group (GESG) research seminar presentations at Francisco Marroquin University. Seminar 46, October 31, 2019. <a href="https://en.ufm.edu/wp-content/uploads/2019/11/MS-Seasonal-QVAR-GESG-SEMINAR-31-OCT-2019-v8-compressed.pdf">https://en.ufm.edu/wp-content/uploads/2019/11/MS-Seasonal-QVAR-GESG-SEMINAR-31-OCT-2019-v8-compressed.pdf</a>
- 11) Blazsek, S., Escribano, A., and Licht, A. Co-integration and common trends analysis with score-driven models: an application to U.S. macroeconomic data. GESG research seminar presentations at Francisco Marroquin University, Seminar 45, June 20, 2019. <a href="https://en.ufm.edu/wp-content/uploads/2017/04/GESG-SEMINAR-20-JUN-2019">https://en.ufm.edu/wp-content/uploads/2017/04/GESG-SEMINAR-20-JUN-2019</a> compressed.pdf
- 11) Blazsek, S., and Licht, A. Robustness of score-driven location and scale models to extreme observations: an application to the Chinese stock market. GESG research seminar presentations at Francisco Marroquin University, Seminar 34, June 7, 2018. https://en.ufm.edu/wp-content/uploads/2017/04/GESG-SEMINAR-7-JUNE-2018.pdf
- 12) Blazsek, S., and Licht, A. Dynamic conditional score models: a review. GESG research seminar presentations at Francisco Marroquin University, Seminar 33, May 17, 2018. https://en.ufm.edu/wpcontent/uploads/2017/04/GESG-SEMINAR-17-MAY-2018-v8.pdf
- 13) Blazsek, S., Escribano, A., and Licht, A. Seasonal quasi-vector autoregressive models for macroeconomic data. GESG research seminar presentations at Francisco Marroquin University, Seminar 31, December 7, 2017. https://en.ufm.edu/wp-content/uploads/2017/04/GESG-SEMINAR-7-DEC-2017.pdf

14) Blazsek, S., Escribano, A., and Licht, A. Score-driven non-linear multivariate dynamic location models. GESG research seminar presentations at Francisco Marroquin University, Seminar 30, November 9, 2017. https://en.ufm.edu/wp-content/uploads/2017/04/GESG-SEMINAR-9-NOV-2017.pdf

Reviewing for academic journals: Applied Economic Letters, Applied economics and Finance.

# **Teaching:**

- 1) Francisco Marroquin University:
  - Portfolio Management (Master's level)
  - Capital Markets (Master's level)
  - Wealth Management (Master's level)
  - Fixed and Variable Income Instruments (Master's level)
  - Project Evaluation (Master's level)
  - Investment Portfolios (Master's level)
  - Data Structures Laboratory (Undergraduate level)
- 2) Universidad del Valle de Guatemala:
  - Forecasting Models (Master's level)
  - International Corporate Finance (Master's level)
  - International Corporate Finance (Undergraduate level)
  - Investment Theory (Undergraduate level)
  - Financial Management (Undergraduate level)
  - Analytical Functions (Undergraduate level)
  - Linear Algebra I (Undergraduate level)
  - Linear Algebra II (Undergraduate level)
  - Linear Algebra III (Undergraduate level)
  - Numerical Analysis I (Undergraduate level)
  - Numerical Analysis II (Undergraduate level)
  - Numerical Analysis III (Undergraduate level)
  - General Relativity I (Undergraduate level)
  - General Relativity II (Undergraduate level)
  - Advanced Topics in Physics: General Relativity (Undergraduate level)
  - Advanced Topics in Physics: String Theory (Undergraduate level)
  - Analytical Mechanics (Undergraduate level)
  - Electrodynamics I (Undergraduate level)
  - Electrodynamics II (Undergraduate level)
  - Mechanics II (Undergraduate level)
  - Modern Physics (Undergraduate level)
  - Physics II (Undergraduate level)
  - Data Networks (Undergraduate level)
  - Operations Research I (Undergraduate level)
  - Introduction to Computer Science (Undergraduate level)