

ANDRÉ B.M. SOUZA

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ESADE Business School, Department of Economics, Finance, and Accounting.
Avinguda de la Torre Blanca, 59, 08172, Sant Cugat, Barcelona, Spain.

RESEARCH INTERESTS: Forecasting, Financial econometrics, Machine learning, Empirical macroeconomics.
LANGUAGES: Fluent in Portuguese, English and Spanish.
CITIZENSHIP: Brazilian and Italian.

Employment

SEP 2021 - PRESENT Assistant Professor, **ESADE Business School, Universitat Ramon Llull.**
Department of Economics, Finance, and Accounting.

Education

SEP 2017 - NOV 2021 (Expected) PhD Candidate in FINANCE AND ECONOMICS,
Universitat Pompeu Fabra, Barcelona
Advisor: Prof. Christian Brownlees

SEP 2016- JUL 2017 Master of Research in FINANCE AND ECONOMICS,
Universitat Pompeu Fabra, Barcelona

SEP 2015-JUL 2016 Master of Science in FINANCE AND ECONOMICS, Finance track
Barcelona Graduate School of Economics, Barcelona

JAN 2011 - JUL 2013 Undergraduate Degree in ECONOMICS
IBMEC, Belo Horizonte, Brazil

JAN 2009 - DEC 2011 Undergraduate Degree in BUSINESS MANAGEMENT
International Business School, Belo Horizonte, Brazil

Teaching

SEP 2021 - Present Financial Modelling, M.Sc. in Finance, **ESADE Business School.**
JUL 2021 Foundations of Data Science, Data Science Summer School, **Barcelona GSE.**
SEP 2018-19 Brush Up in Econometrics, **Barcelona School of Management.**

Research and Teaching Assistantship (Graduate Level)

JUL 2018 - AUG 2021 Research Assistant to Albert Banal-Estañol
JUL 2021 High-Dimensional Time Series Models II: Big Data and Machine Learning
Barcelona GSE Macroeconometrics Summer School

SEP-DEC 2017-18 Financial Modelling - ESADE Business School

SEP-DEC 2017 Investments - ESADE Business School

SEP 2017-19 Brush Up in Statistics - Barcelona GSE

JUL 2017-19 Time Series Methods for Financial Time Series
Barcelona GSE Macroeconometrics Summer School

JAN - MAR 2017-19 Financial Econometrics

SEP - DEC 2016-19 Financial Accounting - Barcelona School Of Management.

Publications

Backtesting Global Growth at Risk, with *Christian Brownlees*.
Journal of Monetary Economics, 2021, 118, 312-330.

We conduct an out-of-sample backtesting exercise of Growth-at-Risk (GaR) predictions for 24 OECD countries. We consider forecasts constructed from quantile regression and GARCH models. The quantile regression forecasts are based on a set of recently proposed measures of downside risks to GDP, including the national financial conditions index. The backtesting results show that quantile regression and GARCH forecasts have a similar performance. If anything, our evidence suggests that standard volatility models such as the GARCH(1,1) are more accurate.

Research In Progress

Composite Absolute Value and Sign Forecasts (Job Market Paper)

This paper introduces composite absolute value and sign (CAVS) forecasts, a nonlinear framework that combines forecasts of the sign and absolute value of a time series into conditional mean forecasts. In contrast to linear models, the proposed framework allows different predictors to impact the sign and absolute value of the target series. Among other results, I show that the conditional mean can be written as a function of mean squared error optimal sign and absolute value forecasts. An empirical application using the FRED-MD dataset shows that CAVS forecasts substantially outperform linear forecasts for series that exhibit persistent volatility dynamics, such as output and interest rates. The empirical application highlights that exploiting nonlinearities in macroeconomic series improves forecast accuracy.

Evaluating Multiple Interval Forecasts, with *Christian Brownlees*.
([Slides](#))

We introduce a framework to evaluate collections of interval forecasts for multiple time series. We propose an evaluation criteria based on the dependence properties of the forecasts. Our criteria assumes that a forecaster prefers, *ceteris paribus*, the collection that minimizes the probability of simultaneous interval forecast violations for a large number of time series. Evaluation of the collections is carried out by means of a simple loss function. We establish that, under mild assumptions, such loss leads to consistent ranking of the forecasts. We apply our framework to evaluate commonly used Value-at-Risk (VaR) forecasting methods for all S&P 500 stocks. We find that methods that take the factor structure of volatility into account substantially reduce dependence across VaR violations.

Conferences and Presentations

JUNE 2021	SoFIE 2021 , <i>Composite Absolute Value and Sign Forecasts</i>
DECEMBER 2020	SAEE 2020 , <i>Composite Absolute Value and Sign Forecasts</i>
OCTOBER 2020	40TH INTERNATIONAL SYMPOSIUM ON FORECASTING , <i>Composite Absolute Value and Sign Forecasts</i>
SEPTEMBER 2020	8TH SIDE WORKSHOP , <i>Composite Absolute Value and Sign Forecasts</i>
NOVEMBER 2019	11TH FRENCH ECONOMETRICS CONFERENCE , <i>Backtesting Global Growth-at-Risk, with Christian Brownlees</i>
APRIL 2019	ZARAGOZA IXt TIME SERIES ECONOMETRICS , <i>Evaluating Multiple Interval Forecasts, with Christian Brownlees</i>
JULY 2018	BARCELONA GSE SUMMER FORUM , <i>Poster</i> <i>Interval Forecasting in Large Panels, with Christian Brownlees</i>

Grants

JUL 2018 - AUG 2021 Spanish Ministry of Science and Technology (FPI Grant BES-2017-080615)