

Work Experience and Institutional Assignments

2023-Present Calabria Region, Catanzaro – Italy
Assessor – Environment, Subsidiaries, Financial Planning and Strategic Projects

2023-Present LUISS University, Rome – Italy
Adjunct Professor of ESG and Sustainable Finance

2014-Present Il Sole 24 Ore, Milan – Italy
Economic and financial columnist

2022-Present San Raffaele University, Rome – Italy
Adjunct Professor of Financial Econometrics and Empirical Finance

2022-Present La Sapienza University, Rome – Italy
Adjunct Professor of Theories and Policies of Economic Development

2020-2023 Italian Agency of Excises, Customs and State Monopolies (ADM), Rome – Italy
General Director
Interim General Manager – Antifraud
Interim General Manager – Games Supervision
Interim General Manager – Supervision of Excise duties on Energies and Alcohols
Interim General Manager – Supervision of Excise duties on Tobacco
Interim General Manager – Calabria Region

The Agency operates in over 400 offices with a staff of thirteen thousand employees. ADM is a regulatory and supervisory authority, also with sanctioning powers, in the fields of Energies (mineral oils, electricity, natural gas, LNG, coal), Alcohols, Tobacco and similar, Customs and Public Gaming. In these areas, it takes care of the assessment and collection of taxes and performs customs, tax, currency and judicial inspection functions. The General Director coordinates the police forces for the supervision on illegal gaming through the CoPRReGI (Committee for the Prevention and Repression of Illegal Gaming and the Protection of Minors).

In the three-year period 2020-2023, the Agency was profoundly reorganized, playing a strategic role during Brexit, the pandemic crisis, the energy crisis and the Russian-Ukrainian conflict. The results are measurable and illustrated through new publications: the *Blue Book* and the quarterly *Statistical Bulletin*, the latter presented at the Trento Festival of Economics.

The Agency, through a series of regulatory, inspection and informational supervisory interventions, brought tax revenues to the public purse of 80 billion euros in 2022, sharply up compared to around 60 in 2020. The results achieved include:

- the recovery of almost 2 billion euros in the fight against fuel fraud;
- the closure of more than 150 illegal petrol stations;
- the 100-fold increase in drug seizures in ports;
- the 1000-fold increase in waste seizures in customs areas;
- the 3-fold increase in seizures of counterfeit goods;
- the seizure of over 150 million euros for currency crimes in connection with passenger traffic;
- the shutdown of over 2,500 websites and the 10-fold increase in interdiction interventions on e-commerce platforms;

- a series of interventions on supply chains that have reduced smuggling of tobacco and inhaled liquids by 80%;
- the creation of the new supervised distribution network for inhalation liquids;
- the disposal of over 20 tons of seized tobacco;
- the disposal of over 300 clandestine gambling dens and the imposition of fines of over 10 million euro;
- the start of upgrading the scanner network in ports and airports which also includes innovative portable instruments;
- the modernization of procedures for the management of seized assets which made it possible to make dozens of cars, thousands of liters of fuel and goods of various kinds available to other State Administrations, and to launch innovative online auction procedures which made it possible to dispose of dozens of luxury goods, cars and boats that had been previously seized to the underworld;
- the start of ports' digitalization with the use of remote surveillance.

In the 2020-2023 period, ADM also digitized and modernized its processes, becoming a partner for the development of Italian businesses. In particular, the following should be noted:

- the "zero kilometer customs" project, which brought customs checks to the offices of over 5,000 companies;
- the activation of geo-location systems to create remotely supervised customs fast corridors including the longest railway fast corridor in Europe which connects Gioia Tauro to Bologna;
- the Single Customs Control System (S.U.Do.Co.) to simplify, speed up and make transparent the procedures for checking goods entering and leaving Italy and increase the competitiveness of the national logistics network in ports and airports;
- the disposal of more than 3,000 sea wrecks stranded on the coasts or semi-sunken in the ports (of which a dozen of tonnage exceeding 100 tons);
- the "houses of legality", where counterfeit goods are exhibited, even in comparison with the original ones, in the main ADM offices, trade fairs, squares of Italian cities, as well as in airports and ports;
- the new supervisory procedures to protect the «*Made in Italy*» and to counter the Italian sounding by making the certifications of chemical laboratories available to the national production system through the in-house company *ADM-Qualitalia SpA*;
- the reactivation, after years of inertia, of the Customs Free Zones.

Over the period 2020-2023, ADM also defined new procedures for carrying out competitions for officials and managers on an annual basis after more than ten years of inaction; in just over six months, over 1,000 officials and assistants were selected from over 175,000 candidates with a full digital procedure at 14 national exhibition centers.

As part of the First Sector, the Agency is a regulatory and supervisory authority over 350,000 subjects (I.E., the Second Sector) launched a series of projects to establish a strong link with the Third Sector on topics like disabilities, workplace discrimination, and social policies.

- «*Dimensione Sociale*» is an initiative created to realize a link between the second and third sectors. ADM launched an Open Call to address many social emergencies and received funds from its institutional partners. The following associations participated in the project: the Sant'Egidio community, the "Bambini delle Fate" and the "Lega Filo d'Oro" non-profit organizations, and the Italian Red Cross. For these initiatives, ADM was able to collect more than 500,000 euros during the year 2022.
- Another initiative carried out by ADM is «*Disegniamo la Fortuna*», a national competition dedicated to artists with disabilities. The artworks submitted were evaluated by an exceptional jury (Gianni Letta, Renzo Arbore, Claudio Baglioni, Cesare Bocci, Stefano Boeri, Milly Carlucci, Cristiana Collu, Pierfrancesco Favino, Pino Maddaloni, Giulio Rapetti Mogol, Patrizia Sandretto Re Rebaudengo, Vincenzo Salemme, Marco Tardelli, and Carlo Verdone). The winning artworks were printed on the National Lottery's tickets.
- «*Metamorfoosi*» is a social inclusion project, realized in collaboration with the "Casa dello Spirito e delle Arti" and the Italian Department of Corrections. Thanks to the "Metamorfoosi" project, the scrap wood collected from the ships used by migrants – ships that were recovered and disposed of by the ADM – was made available to the Milano Opera Prison after being released by the Judicial Authority. Inmates of this Correctional Institution used this wood to craft unique musical instruments, a symbol of redemption and rebirth. Among these instruments, a violin has been blessed by the Holy Father. The instruments are played by the «*Orchestra del Mare*» (The Sea Orchestra). Nicola Piovani composed a symphony titled «*Canto del Legno*» (The Wood Song) for the Orchestra del Mare. The

“Metamorfosi” project has been awarded the Medal of Representation of the President of the Republic in recognition of the high social value of the initiative. The initiative has also been documented in a short film, which has been presented at the 79th Venice International Film Festival and the Rome Film Festival.

1996-2020

**Italian Securities and Exchange Commission (CoNSoB), Rome – Italy
Director – Quantitative Analysis and Financial Innovation Unit**

Complex supervisory initiatives aimed at reconstructing the conduct of operators, identifying market abuses and verifying the risk transparency for financial products (structured and derivatives) in relation to their representation in the prospectus and in the financial statements.

Design and development of the probabilistic approach for risk transparency in structured finance; the approach was the basis of numerous supervisory measures, including international regulations, as well as decisions of the Judicial Authorities in disputes regarding derivatives between local authorities and banks.

Development of supervisory models through the definition of regulations, quantitative methods, and IT solutions with highly automated processes. This area includes the conception and development, also at the IT level, of:

- a Market Abuse Detection model based on systems of stochastic differential equations;
- a model for calculating penalties according to a graduation based on a system of partial differential equations;
- a model for calculating sanctions for insider trading crimes based on a probabilistic approach of event studies;
- a surveillance system of illegal acts on the web based on neural networks;
- a supervisory model of transparency on non-equity products which identifies any risk misrepresentation phenomena through probabilistic alerts.

Member of national and international working groups on:

- risk measurement (credit spread, CVA, DVA, FVA, etc.),
- stability regulation (Basel 3 and Solvency)
- OTC derivatives regulation (EMIR)
- transparency and correctness regulation (UCITS, PRIIPS, MIFID)

2020

**Sant’Anna University School of Superior Studies, Pisa – Italy
Adjunct Professor of the Course «*The Evolution of the Morphology of Eurozone’s Risks*»**

2006-2020

**Bocconi University, Milan – Italy
Adjunct Professor of Topics in Quantitative Finance**

2015-2020

**London Graduate School of Mathematical Finance, London – UK
Adjunct Professor of Advanced derivative pricing and calibration via quadrature**

2019

**Côte d’Azur University, Nice – France
Adjunct Professor of the Course «*The Evolution of the Morphology of Eurozone’s Risks*»**

2018

**European Securities and Markets Authority (ESMA), Paris – France
Chairman of the MiFID 2 Task Force established within the Committee of Economic and Markets’ Analysis (CEMA)**

Review and update of the MiFID2 investment services regulation.

2018	<p>La Repubblica, Rome – Italy Economic and financial columnist</p>
2017-2018	<p>Italian Ministry of Justice, Rome – Italy Member of the General States of the fight against organized crime Development of statistical methodologies for the fight against organized crime in relation to Distributed Ledger Technology (DLT), blockchain and crypto-currencies.</p>
2014-2018	<p>Corriere della Sera, Milan – Italy Economic and financial columnist</p>
2016	<p>City of Rome, Rome – Italy Assessor - Budget, Real Estate, Subsidiaries, Public Housing and Spending Review Member of the Technical Secretariat of the Extraordinary Commissioner of Rome Capital in charge of economic and financial matters</p> <p>Rationalization of the balance sheet items and verification of the regularity of the rents of the real estate assets (“Affittopoli” investigation) gaining expenditure room for over € 200 million.</p> <p>Subsidiary companies: definition of new organizational structures with sole director for AMA and ATAC and launch of the “<i>super-utility</i>” project in synergy with ACEA.</p> <p>Earthquake in central Italy: the Councilor structure supported relief efforts by making more than 50 vehicles from AMA, ACEA, ATAC and the Car Fleet of Rome Capital available to civil protection.</p> <p>Housing policies: launch of a survey of illegally occupied buildings and a timetable for evictions by defining a new discipline for the assignment of housing to needy families in coordination with the Region and in synergy with the National Agency for Confiscated Assets.</p> <p>The functions performed included, for various reasons, the coordination of around 150 executives who employed over 20,000 employees.</p>
2005-2012	<p>Risk Training Courses, London – UK Lecturer in Stochastic Finance for advanced courses reserved for financial practitioners</p> <p><i>Practical Calibration and Implementation Techniques for Interest Rates</i> (2005 – New York, London) <i>Equity Derivatives and Structured Equity Products – Advanced Techniques for Pricing, Hedging & Trading</i> (2007 – New York, London, Singapore) <i>Valuation and Pricing of Structured Financial Products</i> (2008 – Milan) <i>Advanced Derivative Pricing and Model Calibration</i> (2010-2012 – New York, London, Sidney, Singapore)</p>
2006-2010	<p>Italian Treasury, Rome – Italy Member of the Working Group for the Risk Measurement of Derivative Products</p> <p>Development of a new regulation of risk transparency using probabilistic scenarios relating to derivative transactions entered into by the Government and local authorities.</p>
2001-2008	<p>University of Milano-Bicocca, Milan – Italy Adjunct Professor</p> <p>Course on Derivatives Valuation: 2001-2002 Course on Derivatives: 2002-2008 Course on Mathematical Models for Finance: 2003-2004 Course on Management of Derivatives Portfolios: 2007-2008</p>

- 2002-2004 European Commission, Belgium – Bruxelles**
Coordinator of the project «FFPoirot»
- Development of web spidering procedures for the detection of abusive phenomena on the web with artificial intelligence techniques.
- 2002-2003 University of Rome-Tor Vergata, Rome – Italy**
Adjunct Professor of the course on Derivatives
- 1995-1996 Procter & Gamble, Rome – Italy**
Market Research Analyst
- Carrying out statistical market surveys aimed at maximizing company objectives by exploiting the relationships between the variables of the marketing mix.
- 1994-1995 Italian Navy, Ministry of Defence of the Italian Republic, Livorno, Rome – Italy**
Officer
- Guard and control services for the Institutional Bodies of the State.

Education

- 1997-2001 Statal University of Brescia, Brescia – Italy**
Ph.D in Mathematics for the Analysis of Financial Markets (2nd classified)
- Main topics: Quantitative Finance, Measure Theory, Probability Theory, Quantitative theories and methods for estimating the value of information in the context of insider trading supervision.
- 1998-1999 Columbia University, New York – USA**
Master of Arts in Mathematics of Finance – GPA: 3.9 out of 4
- Main Topics: Stochastic and Numerical Methods for Finance, Pricing of structured products and derivatives, Non-linear Programming, Advanced Econometrics, Programming and Data Structure in C
- 1989-1993 Bocconi University, Milan – Italy**
Degree in Economics – 110/110 cum laude (1st classified)
- Main Topics: Macroeconomics, Microeconomics, Accounting and Financial Statements, Monetary Economics, Econometrics, Differential Equations and Dynamical Systems, Financial Mathematics, Foreign Languages (English and French)

Further Information

Representation medal of the President of the Italian Republic for the project «*Metamorphosis*»: the timber obtained from boats abandoned by migrants on the coasts was made available to the inmates of the prisons to create goods including stringed musical instruments that were used to make the so-called «*Sea Orchestra*».

Economic Advisor of the Anti-Mafia Inquiry Commission (2020)

Economic Advisor of the Inquiry Commission on the Banking and Financial System (2020)

National Scientific Qualification for 1st Level University Professor in Economics of Financial Intermediaries and Corporate Finance (2021)

National Scientific Qualification for 2nd Level University Professor in:

- Political Economy (2021)
- Economics of Financial Intermediaries and Corporate Finance (2018)
- Mathematical Methods of Economics and Actuarial and Financial Sciences (2018)

Special Merit – Mauritian Noble International Academy (2022)

Knight Officer of Merit of the Sacred Military Constantinian Order of Saint George (2022)

Official of the Italian Republic (2020)

Knight of the Italian Republic (2009)

Gold Medal - Luigi Bocconi University of Milan (1995)

Seminars for Master and PhD students concerning various areas of Quantitative Finance and International Economics at various Italian and foreign universities including:

- Columbia University
- Sant'Anna School of Advanced Studies (Pisa)
- Bocconi University (Milan)
- Scuola Normale Superiore of Pisa
- University of Milano-Bicocca
- Catholic University of the Sacred Heart (Milan)
- La Sapienza University of Rome
- University of Rome – Tor Vergata
- LUISS University (Rome)
- University of Pisa
- Cass Business School, City University of London
- Imperial College of London
- London School of Economics

Habitual Rapporteur of the Parliamentary Committees of the Italian Chamber of Deputies and the Italian Senate about legislation and fact-finding surveys in finance and economics.

Regular speaker during training courses in finance and economics organized by:

- the Italian Higher School of the Judiciary
- the National School of the Italian Public Administration
- the Economic and Financial Police School of the “Guardia di Finanza”

Speaker at the main conferences on stochastic finance and financial and international economics on a national and international basis.

Columnist at several Italian and foreign newspapers including: Il Sole 24 Ore, Corriere della Sera, Repubblica, Wall Street Journal, RISK, Financial Times, Social Europe, Omif commentary

Guest in Italian and foreign television broadcast as an expert in finance and economics including: CNBC, Rai Economics, Sky Economics, Bloomberg Surveillance

Member of the Economic Forum of the Italian General Confederation of Labour (CGIL)

Chartered Accountant (“Revisore Ufficiale dei Conti”) (1998)

Chartered Tax Advisor Accountant (“Dottore Commercialista”) (1994)

Publications

Author of over 100 publication, including:

Books

The Incomplete Currency, Wiley, (2016)

A Quantitative Framework to Assess the Risk-Return Profile of Non-Equity Products, Risk Books, (2011)

A Guide to Quantitative Finance - Tools and Techniques for Understanding and Implementing Financial Analytics, Risk Books, (2006), Best Seller

Papers

The challenges for the post-pandemic Chinese economy, Law and Economics Yearly Review, Vol. 10, Part 2, (2021)

Target2 determinants: The role of Balance of Payments imbalances in the long run. Journal of Banking & Finance, (2021)

A Look at EU-UK Trade Relations in Light of Brexit, Pandemic and the Trade and Cooperation Agreement. Law and Economics Yearly Review, Vol. 9, Part 2, (2020)

A market-based analysis of Italy's redenomination risk: between EMU limits and Eurosceptic sentiments. Law and Economics Yearly Review, Vol. 9, Part 1 Supplement, (2020)

The New Eurozone Risk Morphology, Open Review of Management, Banking and Finance, (2020)

Making the Eurozone works: a risk-sharing reform of the European Stability Mechanism, Annals of Operations Research, J. No. 10479; Article No. 3325, (2019), Co-authored

A revised European Stability Mechanism to realize risk sharing on public debts at market conditions and realign economic cycles in the Euro area. Economic Notes, vol. 3, ISSN: 0391-5026 (2018), Co-authored

ECB monetary expansions and euro area TARGET2 imbalances: a balance-of-payment based decomposition. European Journal of Economics and Economic Policies, ISSN: 2052-7764, (2018), Co-authored

ECB's euro-exit redenomination hedge. Risk Magazine, ISSN: 0952-8776, (2017)

Fed data dependency backfires. Risk Magazine, ISSN: 0952-8776, (2016)

The European Public Debt Refinancing Program. Rivista di Politica Economica, ISSN: 0035-6468, (2015)

Why Europe's QE resembles a CDS trade. Risk Magazine, ISSN: 0952-8776, (2015)

Control the spread. Risk Magazine, ISSN: 0952-8776, (2014)

Curing the Eurozone. Risk Magazine, ISSN: 0952-8776, (2013)

A revisited and stable Fourier transform method for affine jump diffusion models. Journal of Banking & Finance, ISSN: 0378-4266, (2008)

Detecting Market Abuse, Risk Magazine, ISSN: 0952-8776, (2004)

Insider trading, abnormal return and preferential information: Supervising through a probabilistic model. Journal of Banking & Finance, ISSN: 0378-4266, (2003)

Inside insider trading. Risk Magazine, ISSN: 0952-8776, (2002)

The Primary Market of Structured Bonds, Italian Review of Economic Policy, ISSN: 0035-6468, (2001)