

Ferdinando M. Ametrano

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- ❖ Ferdinando teaches "Bitcoin and Blockchain Technologies" at Politecnico di Milano and Milano-Bicocca University. Former Head of Blockchain and Virtual Currencies in Intesa Sanpaolo bank, he is member of the Scaling Bitcoin Planning Committee and has been Chairman of Scaling Bitcoin 2016 in Milan.
 - ❖ Author of scientific publications, contributors to multiple media outlets, appreciated speaker and lecturer, he has been invited to talk about bitcoin at central banks, parliaments, universities, conferences, and workshops. His academic research focuses on price stability, advocating automated non-discretionary elastic monetary policy for a new generation of cryptocurrencies (Hayek Money).
 - ❖ He is also founder and co-administrator of the QuantLib project, a comprehensive free/open-source software framework for quantitative finance. Interest Rate Derivatives Adjunct professor at the Milano-Bicocca University, he has relevant publications on this subject and has headed trading, quantitative, and risk-management teams in Banca IMI (Intesa Sanpaolo), Banca Caboto and Monte Paschi Asset Management; he has also been co-founder and managing partner of RiskMap (now StatPro Italia).
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PROFESSIONAL EXPERIENCE

JULY 2016	Banca IMI (Intesa Sanpaolo Group).
PRESENT	Cash digitization projects.
OCTOBER 2016	Politecnico di Milano - Master Program in Mathematical Engineering.
PRESENT	Milano-Bicocca University - Master Program in Economics & Finance. Adjunct professor: "Bitcoin & Blockchain Technologies".
OCTOBER 2013	Milano-Bicocca University - Master Program in Economics & Finance.
PRESENT	Adjunct professor: "Interest-Rate Derivatives".
JANUARY 2016	Intesa Sanpaolo Group - Chief Innovation Office.
JUNE 2016	Head of Blockchain and Virtual Currencies.
NOVEMBER 2007	Banca IMI (Intesa Sanpaolo Group) - Financial Engineering Team.
DECEMBER 2015	Executive managing director. Head of Rate Curves and Clearing Tools.
JANUARY 2006	Banca Caboto (now Intesa Sanpaolo) - Financial Engineering Team.
OCTOBER 2007	Executive managing director, Head of Front Office Quantitative R&D. Gradually reshaped existing office with additional internal resources and prestigious external consultants, resulting in a small (5+2) international (Italy, France, Belgium, UK, Australia) team strongly focused on fixed income.
JANUARY 2004	Monte Paschi Asset Management SGR - Head of special projects.
DECEMBER 2005	Reporting to CEO. Lead the development of web-apps for tactical/strategic asset allocation, personal financial planning, and risk management. The 16 people international team built the data layer, developed the optimization engines, and designed the UI.
FEBRUARY 2002	Monte Paschi Asset Management SGR - Risk Management Office.
DECEMBER 2003	Valuation of derivative and structured products.
MAY 2000	RiskMap (now StatPro Italia) - Co-founder, managing partner.
JANUARY 2002	Head of R&D team (7 people). Managed personnel selections, coached junior team members, supervised system development, and set up application-level user support.
JUNE 1999	Banca Caboto (now Intesa Sanpaolo) - Interest rate junior trader.
MAY 2000	Interest rate option desk: risk analysis, pricing, hedging, sales support.
NOVEMBER 1996	Banca Caboto (now Intesa Sanpaolo) - Front Office Quantitative Analyst.
MAY 1999	Progressed up to Head of Fixed-Income team. Focused on real-life trading floor model usage, developed numerical tools for exotics pricing/hedging.

PROJECT MANAGEMENT

- 2015-2016, Intesa Sanpaolo: acquainted the bank group with bitcoin and blockchain technology. Started the blockchain internal practice. Joined the just created Innovation Office, then moved back to business.
- 2015-2016, Banca IMI: pioneered the rate curve basis modelling, with effective and parsimonious abcd parameterization. Jumps and ON idiosyncratic peculiarities were properly taken into account.
- 2012-2014, Banca IMI: led the development of a web-app for the clearing brokerage business, starting with LCH interest rate products. Managed small international team of exceptional professionals.
- 2010-2011, Banca IMI: implemented tools for structuring and pricing basis-spread driven bond portfolio managed funds. This was a new business line with large volumes.

- 2008-2009, Banca IMI: reviewed and assessed EUR rate curves bootstrapping after summer 2007 credit/liquidity crisis. Devised basis spread approach for sound estimation of smooth forward EONIA and Euribor rates and developed discounting framework. Deployed the solution in a constrained IT/Trading environment. Conference speaker, consultant and trainer for Banca IMI top clients.
- 2006-2007, Banca Caboto: coordinated Market Model framework development, in cooperation with Mark Joshi. Implemented displaced log-normal Libor, co-terminal swap, and CMS market models. Callable product valuation using LS, Anderson, Amin-Joshi schemes. Greek calculation with Joshi-Fries partial proxy schemes. Smooth simultaneous calibration to caplets and co-terminal swaptions. Published paper.
- 2006, Banca Caboto: implemented Hagan swaption-replica approach for CMS valuation. Performed vega-weighted SABR calibration, with beta calibrated to CMS market prices.
- 2006, Banca Caboto: built Fixed Income analytic library from scratch extending QuantLib code base. Created object-oriented QuantLibXL Excel addin using ObjectHandler; automated deployment using the QuantLibXL Launcher. Adopted efficient software development practices.
- 2004-2005, Monte Paschi Asset Management SGR: development of a web *Advisory Tool* platform for asset allocation, risk management, and commercial strategy: investor risk profiling, strategic & tactical asset allocation (Black-Litterman model), risk & value management. Originally created for Institutional Investors, and then extended to Private Banking and Upper Affluent clients.
- 2002-2003, Monte Paschi Asset Management SGR: assessment of derivative and structured product usage, development of pricing and risk management tools, compliance and reporting procedures.
- 2000-2001, RiskMap: developed on-line trading/banking option pricing, risk management (VAR), and asset allocation systems for Dresdner Kleinwort Wasserstein, Monte Paschi Finance, et al.
- 1999, Banca Caboto: leading role for the integration of the Numerix library into Caboto's own proprietary systems. Managed international consultants, recruitment of additional internal resources. Complete C++ re-writing of existing legacy code. Worked closely with trading desks, risk management, and IT functions.
- 1997-1998, Banca Caboto: developed proprietary IRD risk and pricing system: more than €10B managed with this system. Developed algorithmic trading system for the Government Bond and Strips.

SKILLS

- Bitcoin and blockchain technologies. Technical leadership on financial projects; academic research on crypto-economics price stability, advocating automated non-discretionary elastic monetary policy for a new generation of cryptocurrencies (Hayek Money).
- Interest Rate Derivatives: state-of-the-art bootstrapped ibor/ON curves, fitted Treasury curves. Linear and non-linear products; margining, collateralization and clearing; rate and volatility modelling.
- Equity Derivatives: exotic options, local volatility, fair knowledge of stochastic volatility models.
- Value at Risk, Average Shortfall, and risk measures; Asset Allocation: MPT, CAPM.
- Numerical Methods: PDE, finite differences, trees. Monte Carlo and (Randomized) Quasi MC.
- Programming and development tools: C++ (STL/Boost), Excel/VBA, Unit Test, git, Subversion, etc.

PAPERS

- Ametrano, Ferdinando M. and Ballabio, Luigi and Mazzocchi, Paolo, "The ABCD of Interest Rate Basis Spreads" (2015). <http://ssrn.com/abstract=2696743>
- Ametrano, Ferdinando M., "Hayek Money: The Cryptocurrency Price Stability Solution" (2014). <http://ssrn.com/abstract=2425270>
- Ametrano, Ferdinando M. and Bianchetti, Marco, "Bootstrapping the Illiquidity: Multiple Yield Curves Construction for Market Coherent Forward Rates Estimation". INTEREST RATE MODELLING AFTER THE FINANCIAL CRISIS, Massimo Morini and Marco Bianchetti, ed., Risk Books, Incisive Media, June 2013. <http://ssrn.com/abstract=1371311>
- Ametrano, Ferdinando M. and Bianchetti, Marco, "Everything You Always Wanted to Know About Multiple Interest Rate Curve Bootstrapping but Were Afraid to Ask". April 2013. ssrn.com/abstract=2219548
- Ametrano, Ferdinando M. and Joshi, Mark S. "Smooth simultaneous calibration of the LMM to caplets and co-terminal swaptions" (2008), Quantitative Finance, vol.11 (4), pp.547-558. ssrn.com/abstract=1092665
- Ametrano, Ferdinando M. and Bianchetti, Marco, "Bootstrapping the Illiquidity: Multiple Yield Curves Construction for Market Coherent Forward Rates Estimation". MODELING INTEREST RATES, F. Mercurio, ed., Risk Books, Incisive Media, May 2009. <http://ssrn.com/abstract=1371311>

EDUCATION

- Ansaldo Energie fellowship: superconducting magnets simulation at INFN Milan and CERN Geneva.
- Physics Laurea: Università degli Studi di Milano, **110/110 cum laude**.
- Classical Maturità: Liceo Classico "M. Morelli" in Vibo Valentia, **60/60**.

Autorizzo al trattamento dei miei dati personali ai sensi della legge 196/03 ai sensi dell'art .47 D.P.R. 445/2000 consapevole delle sanzioni penali richiamate dall'art. 76 del D.P.R. 28.12.2000 n. 445, in caso di dichiarazioni mendaci e di formazione o uso di atti falsi, DICHIARO che tutte le informazioni all'interno del presente Curriculum Vitae corrispondono a verità.