Ali- Broma SIDIBE

Clamart, 92, CFA & FRM Candidate

QUANT

06 95 16 04 13 bromasidibe@gmail.com researchgate.net/profile/Ali_Sidibe/publications

Core skills

- Strong background in Mathematics (Stochastic calculus, Dynamic programming, interest rate model).
- Strong background in financial assets (derivatives, fixed-income, rate, fx, exotics and structured products)
- Experience with building advanced hedging and pricing strategy on derivatives contracts (digital, barrier, irs..)
- Impact investing, Islamic finance, ESG
- Proficient programming skills in Python, C, Java,, MATLAB, R, VBA and SQL
- Expert level at Stochastic Calculus, Brownian Motion, PDE, ODE, Monte Carlo Simulations, Finite Difference Methods.
- Market Risk modeling, Value at Risk, Expect Shortfall, estimation with historical data and monte-carlo
- Experience with building advanced statistical methods in a big data environment
- Research in developing risk and valuation models
- Strong organizational skills; good time management, capable under pressure and to responsibly manage to tight deadlines
- Bloomberg certificated and CFA candidate

Work experience

Quant, BNP Paribas, Global Market, Paris France **Since Jan 2020**

- Create multiple hedging strategies for interest rate and fx books using linear and non-linear combination of interest rate swaps and cross currency swaps.
- Update and improve existing risk pricing models following the switch from EONIA to ESTER rate curve.
- Dynamic calibrations using market data
- Market Risk with VaR (VaR scenarios, Stress test, ES) computation with monte-carlo, explanation and contribution.
- Pricing derivatives and exoctics assets
- Validation of the stability and consistency of pricing models
- Numerical implementation using monte-carlo, finite-difference, methods, finite element method, stencil methods…language tools : python
- Counterparty and default Risk modeling;
- Language tools : Sql, python, VBA and Matlab, Java
- Financial products: Structured products, exoctics options, vanilla, irs, bondoption, swapotions…

Assistant Gerant, Aviva Investors, Paris France

- Building a strategy of re-allocation of bond short term cash flow
- Quantitative method to compute optimal size of order following new issue (r
- Introduce the score ESG in Risk measure
- Evaluation of bond market Risk (interest rate risk, liquidity risk, duration, sensibility)
- Econometrics analysis to show the impacts score ESG on the risk of portfolio of the algorithm
- Financial products: bonds, convertible bond, term contracts and derivatives on bond
- Tools : bloomberg, aladdin, vba, python and excel.

Lecturer, Master 1 Finance, Université Panthéon Sorbonne **Since Oct 2019**

- Title : Numerical method applied in finance.
- Price derivative and structured products with monte-carlo
- Discretize interest rate model (Hull White, Ho & Lee, HJM) with finite method
- Implementation with python and VBA

R&D, Viamichelin, Boulogne Billancourt, France **2012-2018**

- Provide tools and models for analysis of marketing data, optimization of road costs and traffic management decisions, implementation of assisted guidance algorithms.
- Technical tools : R, Python, Matlab, data analysis, econometrics models.

Research project, University Paris 1

- **Term structure models**: applied trinomial tree on Hull-White one-factor model and LIBOR market model (LMM) to price and calibrate a range of interest rate products such as European swaption, multi-look trigger swap, caption, Bermudan swaption, constant maturity swap (CMS), and a real world CMS derivative; results show that the LMM in general leads to better estimation of derivative prices than the Hull-White one-factor model (https://researchgate.net/profile/Ali_Sidibe/publications)
- **Impact of ESG on corporate bond liquidity :** Using bond issue data provided by MSCI, empirically analyze the impact of the ESG score on bond liquidity, and split the effect of each component of ESG, using econometrics tools and python (https://researchgate.net/profile/Ali_Sidibe/publications)
- **Pricing with finite method**: Discretize the black-school model with finite difference methods and implemented in python (see https://researchgate.net/profile/Ali_Sidibe/publications)
- **Market Risk**: Comparison of different method of computation of VaR and ES (monte-carlo, parametric, historical)

Formations

Sept 2019 : Master 2 in Quantitative Finance and Risk Management, Panthéon Sorbonne
Octo 2010 : Engineering degree, Computer and data Science, Ecole National de Sciences Appliquées, Tanger
Jul 2007 : Bac + 3 in Applied Mathematics, University Cadi Ayyad, Marrakech, Maroc

Divers

- **Language:** French(native), English (advanced).
- **Computer science tools**: Python, R, VBA, Java, Sql, Excel (advanced)
- **Financial tools** : Aladdin and Bloomberg.
- **Sport:** Taekwondo, football and running.
- **Financial risk** : Default Risk, Market Risk and Liquidity Risk
- **Financial products** : Equity, options, derivatives, exotics products, bonds, commodity security.
- **Sustainability** : Impact investing, Islamic finance, ESG