Serdar SEN
French, 26 years old
141 avenue du Général de Gaulle 77270 VILLEPARISIS
☎ +33 6.17.95.70.65
E-mail : senserdar87@gmail.com
Personal website : http://www.serdarsen.somee.com

Mathematical and Financial Engineer

EDUCATION

2010-2013 **ESILV – Ecole Supérieure d'Ingénieurs Léonard de Vinci, La Défense**
French engineering school certified by the "Comission des Titres d'Ingénieur"
Major : Mathematics and Financial Engineering

2008-2010 **Lycée Pierre de Coubertin, Meaux**
Engineering Schools Preparatory School
Intensive preparation in Mathematics, Physics and Engineering Science for admission to French Engineering schools

2007 **Lycée Pierre de Coubertin, Meaux**
Scientific baccalaureate equivalent to A-level (GB) or High School Diploma (US)

WORK EXPERIENCE

2014 **Société Générale, Market Risk Analyst**
Production of Daily VaR and Stress test analysis on Fixed Income perimeter.
Development of risk analysis and monitoring tool (VBA).

2013 **Schelcher Prince Gestion, Credit Quantitative Analyst (internship - 6 months)**
Development of a quantitative screening tool on credit risk
- **Econometric modelling of spread risk by sector**

Decomposition of the default risk of a given issuer based on different risk vectors
Forecasting models (by sector) of CDS spread with the risk vectors
Stress-testing the models in order to determine the impact of each risk factor
Simulation of Monte Carlo trajectories on models so as to capture the spread variation distribution
- **Comparative study of an issuer in its sector**

Tool which enables to study financial health (credit level) of an issuer in its sector. It compares the financial ratios of an issuer relative to the sector. Comparison of debt against equity (Merton model). Screening arbitrage opportunities between CDS spread and bond z-spread for a given issuer.
- **Comparative study of a sector (banking, energy, automotive…) in the total universe.**

Tool composed mainly of graphs which summarize the CDS spreads variations
Modelling bond z-spread curve by rating for each different sectors
- **Programming a database management tool connected to Bloomberg.**

Required Computer Skills : **R, VBA/Excel, SQL.**

2011-2012 **HSBC Global Banking & Markets, Paris Branch, Front Office Commando (internship - 6 months)**
Internship in the Structured Equity Derivatives team as Commando Developer.
Working on a trading platform for equity derivatives.
I have developed a trading platform for equity derivative. The platform is composed of three tools : a pricing tool of options strategies, a monitoring tool of strategies, and a scenarios simulation tool.
- Integration of pricing libraries and Bloomberg connection in the platform.
- Development of a monitoring tool for the portfolios of options strategies.
- Development of a scenarios tool which enables to simulate the Greeks graph.
- Assist the trader at operational level. Training users on Front Office applications.

Required Computer Skills : **VBA/Excel, SQL.**

PROJECTS

2012-2013 Model calibration and Products Valorisation (C# - ASP.NET : http://www.serdarsen.somee.com) :
- Constant Elasticity of Variance (CEV) model : pricing, analysis of volatility smile.
- Stochastic Alpha Beta Rho (SABR) model : calibration of pricing parameters.

Automated trading platform for Hedge Fund manager (VBA/Excel)
Financial Modelling with Jump-Diffusion Process (C#)
Implementation of a Credit Value at Risk by Monte Carlo method (VBA)

2011-2012 Pricing of complex derivatives (C++) : Asian, Digital, Lookback, Basket.
Delta-hedging of Digital Option and Bull Spread approach (C++)

2010-2011 Valuation of options : binomial model, Black & Scholes (VBA), Monte Carlo simulation (C++), Finite Difference Method
Yield Curve project : Build zero-coupon yield curve from available governmental bonds (C++)

COMPETENCES

Finance : Econometrics and time series, stochastic process, empirical finance with R, Fixed Income, equity derivatives, credit derivatives, risk management (market, rate, credit), hedge funds, Advanced Fixed Income with Bloomberg, Value at Risk, computational methods for quantitative finance.

Statistic : Sampling and Estimation, generalized and multiple linear model, data analysis

Computer Skills : Programing in C++, C# (ASP, WPF), VBA, SQL, R-project.
Microsoft Office (Word, Excel, Power Point, Access). **Bloomberg Certification**.

Language ability : English (Professional), Turkish (mother tongue), French (mother tongue)

INTEREST

Leisure : Football, travel, movies, volunteered teaching in an underprivileged school.