Shengyao ZHU

PERSONAL INFO

ADDRESS:	Bagsværd Hovedgade 106, 2880 Bagsværd, Denmark
PHONE:	+0045 50 29 92 79
EMAIL:	shengyao.zhu@gmail.com
LINKEDIN	dk.linkedin.com/in/shengyaozhu

PROFESSIONAL EXPERIENCE

FEB 2015 to CURRENT 2013	Senior Risk Quant at Nordea *Copenhagen, Denmark*
Mandate	FRTB market risk IMA, initial margin forward simulation, collateral model
Achievements	Deliver a few key regulatory capital model changes from methodology to real implementation. Drive the process from beginning to end. Coordinate various internal/external stakeholders in the process.
MAR 2012 to AUG 2013	ALM Manager at Bank of Montreal (BMO Asia) *Beijing, China*
Mandate	Funds Transfer Pricing, liquidity risk and structural interest rate risk
Achievements	Launched and implemented several strategic important projects including FTP, new treasury function and new stress testing model
SEP 2007 to MAR 2012	Manager at KPMG Advisory Financial Risk Management Department (FRM), *Beijing, China*
Focus area	Market risk, complex derivative pricing, ALM
Achievements	Got EP(Excellent performance) rating (top 3%) in three of four year's performance review.

EDUCATION

CURRENT	Master of Science in MATHEMATICAL MODELLING AND COMPUTATION **Technical University of Denmark**, Copenhagen, Denmark Expected graduated time : June 2015 AVERAGE GRADE: 10.5/12 | Detailed List of Passed Course
SEP 2007	Undergraduate Degree in MANAGEMENT INFORMATION SYSTEM **Central University of Finance and Economics**, Beijing, China

Skills

Risk	Traded & non-traded market risk, Counterparty Credit Risk, FTP, VaR & Expected shortfall methodology , liquidity risk
Pricing model	Short rate model, Libor market model, CVA & DVA & FVA
Numerical Method	Numerical solver for PDE (finite difference, finite element, Discontinuous Galerkin) , Monte Carlo Simulation, Reduced order method
Risk model	Initial Margin Simulation Model, Collateral Model, Nomura Method
Programming	Python, R, Matlab, VBA, LaTeX, C++, MongoDB, GIT
Language	English, Mandarin , Danish (Basic)

Certification

2008	Certified Information Systems Auditor (CISA)
2010	Financial Risk Manager (FRM)

Projects

Nov 2016 to Current

FRTB Market Risk IMA Implementation

To meet the tight FRTB deadline, working with another three colleagues as a small quant group to deliver internal model solution for FRTB. Currently responsible for credit products, work closely with more than 10 stakeholders and build a new market risk system platform for the bank under service oriented architecture

Feb 2016 to Nov 2016

Forward initial margin simulation model in Nordea

Develop a forward initial margin simulation model used in counterparty credit exposure for both regulatory capital and MVA purpose. Act as the leading quant from beginning to end, including benchmarking with peers, choosing the working direction, prototyping, testing, seeking internal/external approval. A working paper will published soon about the model.

Apr 2015 to Feb 2016

Large-scale quant system upgrade project in Nordea

The project is to upgrade the quant finance library used for CCR IMM model in Nordea, involve both system and model changes. My role is firstly a tester and later become the driver in risk quant side, make sure all number changes are well communicated through the whole organization.

Jun 2014 to Dec 2014

Numerical solver of PDEs in pricing derivative

This project was under supervision of Allan P. Engsig-Karup (DTU Compute), and explored the possibility of applying advanced numerical partial differential equation solver in Finance area. Two topics have been studied in this project, 1) applying sparse grid method under Libor Market Model framework to resolve the high dimensional issue and 2) applying DG-FEM method to resolve the un-smooth payoff issue in a typical finance problem.

Jan 2013 to Aug 2013

Trading portfolio bifurcation project for BMO Asia

	To support the bifurcation of portfolios in the bank, develop and maintain tools for p&l and exposure reporting using EXCEL VBA.
Jun 2012 to Feb 2013	**Treasury set up project for BMO Singapore** This project is to set up a treasury function in Singapore to support the business expansion of BMO Asia. I was a key member in middle office team and responsible for implementing liquidity risk and market risk management framework to comply with the local regulatory(MAS) and internal requirement.
Feb 2012 to Aug 2013	**Funds Transfer Pricing implementation in BMO Asia** Implement the funds transfer pricing model applied to BMO Asia area. As a key member in the project, I implemented the funds transfer price methodology, policy and process, discuss with funding desk and different Line of Business, and deliver training to all sales department in the bank.
Jan 2011 to Feb 2012	**Interest Rate Risk in Banking Book,Tier-1 Bank in China** Help one of the largest bank in China implement interest rate risk in banking book framework, I was the team leader of the quantitative modelling team which help the bank develop replicating portfolio model to capture the key interest rate risk arising from the balance sheet, and provide solution on hedging these risks under the practical market environment of China.
Dec 2009 to Feb 2011	**Model Validation for complex derivative , Tier-1 Bank in China** Help the market risk department of the bank validate pricing model implemented by Numerix, I was the team leader for the interest rate modelling team. We validated pricing model include Hull White Model and Libor Market Model. Product include Range Accrual Swap (1 factor and 2 factor) and Target Redemption.
Jun 2008 -Feb 2011	**Market risk IMA approach, Tier-1 Bank in China** We helped one large size bank implement Market Risk methodology and system including historical VaR, stress testing, back testing and valuation. First approved market risk IMA (Internal Model Approach) Bank in China. Responsible for the designing and developing the pricing engine and risk metric engine, communicate and coordinate with IT, risk and vendor.