

# MD MOSTAFA KAMAL

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## PROFILE SUMMARY

Quantitative Risk Analyst with 3+ years of experience at major financial institutions, specializing in risk model development and validation. Proven expertise in applying Python for capital planning (Basel III/IV), stress testing, derivatives pricing and risk management, consistently enhancing model accuracy and automating complex workflows.

## EDUCATION

<b>WorldQuant University, USA (Online)</b> Master of Science (M.Sc.) in Financial Engineering	<b>Sep 2023 – Current</b> Current GPA: 83/100
<b>Goethe University, Germany</b> Master of Science (M.Sc.) in Money and Finance	<b>Sep 2021 – Sep 2024</b> Overall GPA: 1.8 (Good)
<b>Northwestern Polytechnical University, China</b> Master of Management Science (MMS) Business Administration	<b>Sep 2018 – Mar 2021</b> Overall GPA: 90.05/100.00 Class Rank – 1 <sup>st</sup> out of 28 students
<b>Jahangirnagar University, Bangladesh</b> Bachelor of Business Administration (BBA) Finance & Banking	<b>Jan 2011 – Dec 2014</b> Overall GPA: 3.84/4.00 Class Rank – 4 <sup>th</sup> out of 68 students

## PROFESSIONAL EXPERIENCE

<b>EUREX Clearing AG</b> <i>Analyst   Clearing Data Control</i>	<b>Aug 2024 – Current</b> <i>Frankfurt, Germany</i>
<ul style="list-style-type: none"><li>• Maintaining accurate exposures, margins, and clearing eligibility, boosting data reliability by 15%.</li><li>• Ensuring high-quality ETD, OTC, and cash-market data for risk assessment, cutting data breaks by 20%.</li><li>• Monitoring credit, market, and operational risk drivers across clearing workflows and exposure feeds.</li><li>• Validating valuations, pricing inputs, and volatility measures for cleared instruments with 98% accuracy.</li><li>• Supporting margin, stress-testing, and exposure processes by ensuring upstream data completeness.</li><li>• Reviewing model inputs for IM (VaR, Prisma), scenario generation, and sensitivity-based margin components.</li><li>• Automating risk-relevant pipelines and valuation checks using Python and SQL, cutting manual work by 30%.</li><li>• Partnering with model teams to improve data lineage, model performance, and risk methodology alignment.</li></ul>	
<b>Deutsche Börse AG</b> <i>Working Student   Capital Planning Unit</i>	<b>Jan 2023 – Aug 2024</b> <i>Frankfurt, Germany</i>
<ul style="list-style-type: none"><li>• Modelled regulatory and economic capital, RWAs, and stress scenarios for 6+ DBG entities using Python.</li><li>• Evaluated CRR/CRD, Basel III/IV and macro impacts on capital buffers and solvency metrics.</li><li>• Built Python-based risk modeling tools for exposure estimation, Monte Carlo simulation, and scenario analysis.</li><li>• Automated reporting workflows, reducing monitoring time by 30%.</li><li>• Modelled credit and market risk to assess the capital impact of M&amp;A transactions.</li></ul>	
<b>Index Intelligence GmbH</b> <i>Working Student &amp; Internship   Fixed Income Index</i>	<b>Sep 2022 – Jan 2023</b> <i>Frankfurt, Germany</i>
<ul style="list-style-type: none"><li>• Processed and validated government bond auctions, yield curves, and duration metrics for index accuracy.</li><li>• Modeled yield curves via bootstrapping, PCA, and simulation to improve index construction.</li><li>• Performed market risk sensitivity checks including DV01 and convexity during rebalancing.</li><li>• Built and optimized Python pricing models and backtesting frameworks to stabilize tracking error.</li><li>• Implemented data validation procedures reducing yield curve anomalies.</li></ul>	

## Dextro Group GmbH

Working Student | Financial Analyst

Mar 2022 – Aug 2022

Darmstadt, Germany

- Performed detailed creditworthiness assessments and ESG risk modeling for structured products.
- Developed financial models to quantify operational, market, and ESG risks, guiding investment decisions.
- Managed a €170K ESA-funded project, including risk modeling, budgeting, and exposure assessment.
- Conducted scenario analysis, stress testing, and portfolio risk reporting for informed decision-making.

## Union Capital Limited

Quantitative Analyst | Credit Risk Management

Oct 2016 – Aug 2018

Dhaka, Bangladesh

- Conducted credit risk analysis on 20+ corporate clients, modeling PD, LGD, EAD, and internal credit scores.
- Evaluated borrower financials, cash flows, collateral, and sector risks for credit decisions exceeding €10M.
- Applied credit risk models and stress-testing to quantify potential losses under adverse scenarios.
- Reduced NPL exposures, recovering 16% of delinquent loans within 3 quarters via structured credit strategies.
- Monitored market risk exposures and assessed interest rate, FX, and liquidity risks affecting credit portfolios.
- Prepared risk memos, scenario analysis, and reports to support risk-adjusted decision-making.

## SKILLS & EXPERTISE

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- **Technical Skills :** Python (*Pandas, NumPy, Scikit-learn, SciPy, Statsmodels*), OOP, R, SQL, MATLAB, STATA, SPSS, Power BI, MS Excel, PowerAutomate, and VBA
- **Financial Platforms :** Bloomberg, Refinitiv Eikon, WRDS Database
- **Languages :** Bengali (Native), English (Fluent), German (Basic), Chinese (Basic)

## PROJECTS

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- **VaR Backtesting Engine:** Built backtesting engine multiple VaR models with Kupiec & Christoffersen tests.
- **Stress Testing Engine:** Curated a multi-asset (both full and partial revaluations) portfolio stress testing framework.
- **Credit Risk Models:** Developed PD/LGD/EAD models using structural, reduced-form and IRB models.
- **Yield Curve Modeling:** Bootstrapped curves, ran PCA on curve shifts, computed DV01 & convexity.
- **Derivative Pricing Models:** Implemented Black–Scholes, Heston, SABR, and local volatility models.

## CERTIFICATES & COURSES

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- **Financial Risk Manager (FRM)** –GARP | *Part I Candidate (May 9, 2026)*
- **Investment Foundations Certificate** –CFA Institute | *Issued 2022*
- **Audited Coursework :** ° Mathematical Methods for Quantitative Finance–MIT MicroMaster (2023); ° Derivatives Markets: Advanced Modeling and Strategies–MIT MicroMaster (2023)
- **Data Science :** ° Applied Data Science Lab –WorldQuant University (Ongoing); ° Data Science Job Simulation –BCG (2024); ° Data Science Specialization with R–DataCamp (2020)

## RESEARCH & PUBLICATION

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- **Md Mostafa Kamal**, Eduardo Roca, Bin Li, Chen Lin, Rajibur Reza, (2025). Price Contagion and Risk Spillover in the Global Commodities Market: COVID-19 Pandemic vs. Global Financial Crisis. Published in *Resources Policy*.
- **Md Mostafa Kamal**, (2024). Empirical Testing of Value-at-Risk (VaR) Models. *Graduate Thesis for M.Sc. in Money and Finance – Supervised by Professor Holger Kraft*.

## AWARDS & SCHOLARSHIPS

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- Awarded **Deutschlandstipendium** for studying master's at Goethe University in **Germany, 2021-2022**.
- Awarded **Chinese Government Scholarship** for studying Master Degree at NPU in **China, 2018**.
- Secured **Top Achiever Award** at Jahangirnagar University for achieving top scores **from 2011 to 2014**.