
# Saumitra Mazumder

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saumitramazumder.com

SAMazumder

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## About Me

Experienced in model development, model validation and model audit. Solid knowledge of a range of quantitative finance, risk management (e.g., VaR/Expected Shortfall for Market Risk, credit portfolio models, stress testing), derivatives models and pricing theory. Interested in the intersection of machine learning, quantitative finance, and climate change.

Thorough and analytical; able to apply logic to solve problems. Excellent verbal and written communication skills. Proven ability to collaborate effectively with diverse individuals and strengthen relationships to achieve well-designed solutions.

## Education

M.Sc. Applied Mathematics
Toronto Metropolitan University
(formerly Ryerson University)
2020-2022
*Ryerson Graduate Fellowship,*
*Graduate Development Award,*
*Mathematics Graduate Award*

B.Sc. Mathematics and Economics
Toronto Metropolitan University
(formerly Ryerson University)
2015-2019
*Dean's List 2016, 2017*
*Ryerson Barbell Club, Ryerson Math Problem Solving Club*

## Knowledge

| | |
|---|---|
| Financial Mathematics | Financial Time Series Analysis, Risk Measures, ASRF modelling, Derivative Pricing, Regression, Monte Carlo/Copulae/Variance-Covariance Methods, Decision Theory. |
| Tools | Python (NumPy, SciPy, PANDAS, XGBoost, SKLearn), SAS, R (Dplyr, QRM, xts, dynlm), MATLAB, LaTeX, SQL. |

## Recent Employment History

**2023-Current** PwC, LLP - Senior Associate

Financial Risk Management Group

Model Validation

Assisted clients in validating their fraud models. Major tasks included validation of fraud models with sparse documentation through the entire model development pipeline.

Project Development

Subject matter specialist in developing models to quantify climate risks (physical risk & transition risk) with respect to credit models. These include, heat map generation, climate-related scenario analysis and climate adjusted credit risk parameters.

Member of team creating PwC thought leadership with respect to OSFI E-23 update, B-15, & SCSE.

Development lead in bringing PwC FRM's GenAI products to market.

**2022-2023** Ernst & Young, LLP - Senior Consultant

Financial Services Risk Management Group

Model Development

Assisted in development/re-development of IFRS9, CECL and stress testing models post M&A by client firm.
Major tasks include end-to-end (re)-development of PD, Prepayment & LGD models.

Model Audit

Assisted clients in auditing their credit risk models (ECL, PD, LGD, EAD) on both the retail and non-retail portfolios.
Major tasks included validating the conceptual soundness of clients credit risk models as well as code replication and corroboration.

**2022-2022** Scotiabank

Model Audit, Credit Risk.

Member of the team auditing ECL models (PD, CCI, EAD, LGD) per IFRS 9 guidance provided by OSFI. Used internal audit methodology to provide independent oversight of models.
Closed audit issues pertaining an end-to-end retail model procedure.

**2020-2022** Toronto Metropolitan University, Department of Mathematics

Graduate Research Assistant under Dr. Foivos Xanthos

Completed research in Functional Analysis and its use in coherent and convex risk measures on $L^p$-spaces.
Developed empirical algorithms to implement general-moment market risk measures using R and Python.
Analysed financial data using non-parametric methods to demonstrate the potential benefits of general-moment models.

Graduate Teaching Assistant

Lead tutorials for graduate and undergraduate courses. Marking and test invigilation for assigned courses.