

Twitter Thread by Risk Manager(Banks,Asset Management,Insurance)



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What is the difference between financial econometrics, econometrics and quantitative finance?

@GARP_Risk @CQFInstitute @SOActuaries

Financial Econometrics basically utilizes Financial Market Data to build mathematical and statistical financial models and later analyze the statistical significance and make predictions.

It is generally used by risk managers and economists to predict(forecast) and study the return market characteristics. GARCH models and other Time Series Models are used to study the pattern of Return Volatility Clusters, Tail Dependence Events, Covariances,

Heavy Tails Phenomenon, Serial Correlations, Mean Reversions, Random Walks, White Noise Disturbances, Risk Migrations, Contingent Claim Volatility Smiles, Probability of Defaults, Credit Rating Matrix Volatility, Value at Risk, Deviations from Normality and other prices of assets

Model Validation, Cross-Validation and Selection are also topics of interest that fall within the domain of Financial Econometrics. It is a field which is more dependent on Time Series (inter-temporal) Analysis using data spread over a lookback period.

Simulation models such as Monte Carlo Simulations are also an integral part of the Financial Econometrics Curriculum.

Econometrics is Economics, Maths and Statistics combined.

A much broader field which covers all areas of measurement and investigation within the area of Economic Science.

Each Branch of Economics has now developed its own Econometric Methods and Applications, which adds to the literature review.

However, lines between Econometrics and Data Sciences are now getting blurred.

Most of the Econometricians are also appreciating Data Science Mining Methods, which previously was unheard of in the world of economics.

Machine Learning will be the next step forward to integrate the world of economics with the universe of software programming and Robotic AI - Artificial intelligence codes, especially in the Banking, Risk Finance and FCC - Financial Crimes Compliance(AML.KYC Analytics) domains.

Quantitative Finance is an admixture of various subjects. It is an application of Quantitative Financial Methods in the fields of Investment Banking, Retail Banking, Corporate Finance, Enterprise and Financial Risk Management, Insurance, Asset Management, Model Development, etc.

Many QF degrees teach both Econometric Methods and Financial Econometrics distinctly. But it also focuses more on the Stochastic processes, and the computing and programming methods executed with special reference to derivative pricing and hedging models.

It is a broad area which now covers four main bodies of knowledge within the much larger skill set of Financial #Economics
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- #Actuarial Finance Models

- #Insurance Models

- #Risk Finance Models

- #Derivatives and Structured Products Pricing,

- Structuring and #Hedging Models

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