

Quant Job Interview Questions And Answers

Second Edition

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The quant job market has never been tougher. Extensive preparation is essential. Expanding on the successful first edition, this second edition has been updated to reflect the latest questions asked. It now provides over 300 interview questions taken from actual interviews in the City and Wall Street. Each question comes with a full detailed solution, discussion of what the interviewer is seeking and possible follow-up questions. Topics covered include option pricing, probability, mathematics, numerical algorithms and C++, as well as a discussion of the interview process and the non-technical interview. All three authors have worked as quants and they have done many interviews from both sides of the desk. Mark Joshi has written many papers and books including the very successful introductory textbook, "The Concepts and Practice of Mathematical Finance."



Finančné deriváty - teoretické príklady

Časť 1: Menové deriváty

Výmenný kurz EUR/JPY (označme ho C) sa riadi geometrickým Brownovým pohybom. Úrokovú mieru EUR označme r , úrokovú mieru JPY označme u . Odvodte cenu európskej call opcie na výmenný kurz, teda derivátu, ktorého payoff je $\max(C - K, 0)$, kde K je dohodnutá hodnota.

Návod: Premyslite si, v čom je táto situácia podobná oceňovaniu derivátov akcií, ktoré vyplácajú dividendy.

Časť 2: Quant job interview

- Develop a formula for the price of a derivative paying $\max(S \times (S - K), 0)$ in the Black-Scholes model.
- What happens to the price of a vanilla call option as volatility tends to infinity?
- In the pricing of options, why doesn't it matter if the stock price exhibits mean reversion?
- Prove that the price of a call option is a convex function of the strike price.
- What is a butterfly?
- Suppose an option pays zero if spot is less than 100, or pays spot minus 100 for spot between 100 and 120 and 20 otherwise. Synthetise the option from vanilla options.