Unit MTH220 (U16978) Mathematics for Finance

This unit deals with the operations of stock markets, the types of securities quoted on them, how they may be compared, valued, and combined into portfolios.

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Simply put, the money markets are big business, with billions of pounds changing hands every year in the form of commodities, equities, options, and other financial instruments.

This unit will provide an introduction to stock exchanges and the liquidity of stocks. Other important introductory concepts are various interest rate structures, including multiple and continuous compounding, and methods to compute the present day (discounted) value of future capital.

Among the financial instruments that we will study are bonds and gilt-edged securities, and derivative securities including stock options.

The true power of investments comes from combining a number of financial instruments into a portfolio and we will spend some time developing techniques to construct and analyse portfolios.

Mathematics is not a spectator sport: In addition to the lectures and handouts, you will gain the most from this unit by looking at the literature, including the recommended books, by attempting to derive for yourself all computations and proofs seen in the lectures, and by attempting any suggested exercises

Printed notes will be distributed, but most students do better when they create their own notes, perhaps in summary form.

Further information
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