

Applications of the DTS in the Pharmaceutical Sector

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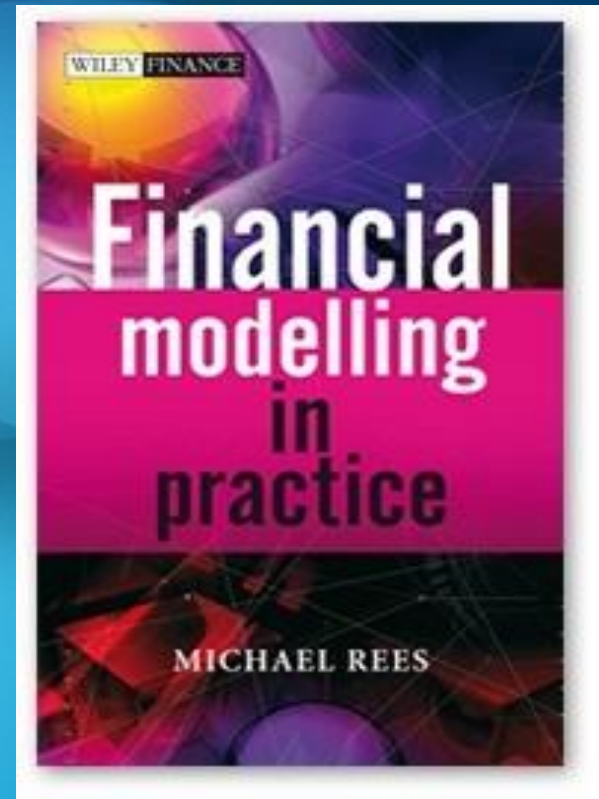
Michael Rees

Professional Experience

- » 20 years
 - Strategy consultant
 - Equity analyst
 - Independent consultant
- » Palisade Director of Training and Consulting

Qualifications

- » B.A. in Mathematics and D.Phil. in Mathematical Modeling from Oxford
- » MBA from INSEAD
- » Certificate in Quantitative Finance
- » *Financial Modelling in Practice* (John Wiley & Sons, Octobe) [see Wiley.com for free .pdf of Ch 1; without the models]



Example Models

- » General business planning
 - Cost modelling (e.g. development project with “chance chain”)
 - Cash flow modelling
 - Valuation: NPV and real options
- » Individual drug development decisions
 - Basic decision (decision tree, “chance chain”)
 - Value of phasing, testing, and real options
- » Project portfolios
 - Basic aggregation
 - Time axis uncertainty (e.g. revenue modelling)
- » Optimisation
 - Project schedule optimisation
 - Facility optimisation

Why use decision tree software?

Pragmatic reasons

- » Provides visual representation
 - Shows explicitly all those factors that are considered relevant/important (and implicitly those that are not)
 - Improves decision structuring
 - Aids communication
- » (PrecisionTree) facilitates rapid changes to structure of model
 - Addition/deletion of more choices
 - Addition/deletion of more outcomes
 - Forcing of branches, inbuilt sensitivity analysis

Quantitative reasons

- » Implement (implicitly) optimal decision-making using forward and backward calculation paths



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