

# Making financial *economic* sense of the future?

Neil Brougham, chairman of the CPD Committee, welcomes the new certificate in practical financial economics (CPFE).

**F**INANCIAL ECONOMICS IS DEVELOPING at a blistering pace: the instruments, the technology, the applications, the size of the market – even the jargon. Many actuaries, especially those who qualified ‘in the last century’, have had no grounding in this now fundamental subject which is standard material for current students.

Jeremy Goford was one of the first to recognise that these new techniques could provide substantial assistance to those outside the finance and investment area. In his presidential address in July 2002, he made his message clear: ‘It is vital that actuaries can engage with clients and their advisers who use, implicitly or explicitly, the constantly developing science of financial economics to price transactions and value assets and liabilities.’

A committee was accordingly set up to confirm this need, to establish a syllabus, to develop core reading, to supervise the production of examinations and to communicate progress to the actuarial profession. The CPFE Committee was drawn from different practice areas, from ActEd and from the profession’s staff actuaries. Under the chair of Neil Brougham, the activists were David Dullaway, Niall Franklin, Paul Fulcher, Neil Hilary, Colin McKee, Steve Mills, Hugh Sutherland, Anthony Williams, and James Wintle.

The goal was to produce learning material which would enlighten qualified actuaries in non-investment areas about financial economics – thus typically life, pensions and general insurance. The style was to be descriptive and verbal, with minimal reliance on formulae and calculus. The emphasis was on developing a greater insight into how these new tools might be applied in these practice areas. The aim was not to replace current working meth-

ods, but to offer alternatives, broadening the range of possible financial solutions to actuarial issues.

## Scope and level of the course

The course is aimed at actuaries who have not studied subjects 109 (Financial Economics) or 305 (Finance and Investment) as part of the qualifying examinations and who are in a ‘liability’ practice area – typically those who qualified more than two years ago and who work in life, pensions, or general insurance. The course will provide illustrations of alternatives to present day practices, but the practitioner will be expected to decide which approach is appropriate in given circumstances.

The course will be at a similar level to the current 300 series courses, with an emphasis on practical applications rather than on the mathematical derivation of results.

It is expected that a course of this nature might typically require 200 hours of study in preparation for a successful attempt at the examination. It is, however, expected that many will subscribe to the course without intending to sit the exam; for them, reasonable knowledge of the course can be obtained with considerably less than 200 hours of study.

Specifically, candidates will be expected to demonstrate that they:

- ◆ understand the definition and scope of financial economics;
- ◆ appreciate the use of financial economics in the financial markets today;
- ◆ understand the principles of financial economics and corporate finance;
- ◆ can develop suitable risk management approaches;

- ◆ understand the effects that uses of these techniques could have on actuarial work.

## What does the course actually contain?

So now that the CPFE Committee has produced the syllabus and core reading, what will be found within its 12 units? An introduction to the structure and contents is shown in the box below.

## What about the exam and certificate?

Almost half of the respondents to the CPD survey conducted by the CPD Committee last summer indicated a keen interest in the proposed CPFE course and, of those, about one-third stated their objective of taking the examination as well to get the certificate. Exams will be held annually in April, commencing in 2005, based on the syllabus and core reading. A sample exam paper, with solutions, is now available on the profession’s website, as is the syllabus. Brealey & Myers (*Principles of Corporate Finance*) is the recommended companion textbook and there is an extensive reading list attached to the syllabus for those wishing to study further.

## Is it for you?

Actuaries in the insurance and pensions fields are encouraged by their practice boards and the Councils to seriously consider taking this course, with the possibility of certification thereafter. It is held to be an important facet of CPD, which may well prove a valuable tool in the execution of actuarial daily duties. The syllabus, application forms, and sample exam papers are on the website. □

## CPFE core reading and syllabus

**Unit 1** What is financial economics? Definition and scope of practical financial economics, the subject’s development over time, its use in financial markets today, the basic differences when applying these theories to financial as opposed to manufacturing companies, and its value to the actuarial profession

**Unit 2** Risk, return, and the opportunity cost of capital portfolio risk and market risk, behavioural finance, and utility theory

**Unit 3** Asset pricing models capital asset pricing models, alternatives to CAPM (arbitrage pricing theory and three factor model/Fama-French), theoretical and practical limitations of these models, company cost of capital (including WACC), and risk-adjusted discount rates (including certainty equivalence adjustments)

**Unit 4** Market efficiency and corporate finance

fundamentals of market efficiency, and alternative forms and implications of corporate finance: equity, debt, others

**Unit 5** Financial institutions and markets Interdependencies of financial markets and institutions

**Unit 6** Corporate finance tax, agency theory and other frictional costs, and methods of financing and evaluation

**Unit 7** Contingent claims contingent claims and options (including warrants and convertibles), valuing contingent claims and options, arbitrage-free pricing (including deflators), limitations in methods of pricing contingent claims and options, concept of real options, and differences between the stochastic processes used in ALM/ DFA models and those used in option pricing

**Unit 8** Capital budgeting sensitivity/scenario analysis, Monte Carlo simulation, decision trees, and capital investment processes

**Unit 9** Capital adequacy capital and solvency, risk-based capital, economic capital, and the allocation of capital

**Unit 10** Risk control and performance measurement allowing for risk and the need to hold capital, economic value added, investment and accounting ratios to analyse profitability

**Unit 11** Practical techniques underlying finance in insurance and pensions financial risk, managing risk with financial instruments, different approaches under CAPM and option pricing, differences in application to manufacturing and insurance

**Unit 12** Examples from practice areas, apply the principles to examples from various practice areas