

Towers Perrin is a major employer of mathematics graduates and is the commercial sponsor of Parabola (see the advertisement on the back cover). Since most of these mathematicians become involved in actuarial type work we thought it would be worthwhile to explain what that involves. The following article has been written for us by Helen Martin who is a Fellow of the Institute of Actuaries of Australia and who is employed by TPF & C.

## WHAT IS AN ACTUARY?

Helen Martin FIAA

One of the most difficult problems actuaries face is learning how to answer the question "What do you do?". Unfortunately there is no short answer.

An actuary may be described, in a narrow sense, as a financial analyst. We use our background in mathematics, statistics, probability and compound interest to estimate future cash flows and use these to solve complex business problems.

In a broader sense, an actuary's work extends beyond pure financial analysis to providing advice on most aspects of the management and operation of the organisations with which actuaries are involved.

### Types of Work

Actuaries work in a wide range of areas, covering life and general insurance, superannuation, investment, health insurance, public service and financial planning. A brief outline of the range of tasks in the four key areas is set out below.

#### Life Insurance

- advising on financial control and general management
- determining premium scales and testing their profitability
- allocating assets and income to policyholders and shareholders
- designing and developing new types of policies
- advising on marketing strategies

#### General Insurance

- advising on financial control and general management (similar to life insurance in many respects)
- developing and pricing products
- assessing the impact of changing conditions on the profitability of alternative products
- determining reserves to be held for future claims

## Superannuation

- designing the benefit structure of superannuation funds
- monitoring financial position (including determining required contribution levels)
- advising on
  - legislative and taxation matters
  - investment policy (and appropriate investment managers)
  - insurance required, types available
  - general superannuation strategy, for example following takeovers or mergers

## Investment

- analysing financial transactions
- developing financial instruments and their pricing
- advising on alternative financing methods and strategies
- assessing investment risks
- formulating appropriate policy/strategy for various companies

These are just samples. The best way to explain what an actuary is and does is by example, so in later issues there will be short articles which focus on particular people or jobs in the profession.

## Why become an Actuary?

The profession is small and close-knit, with only 500 fully qualified actuaries in Australia and meets regularly to discuss current issues. This provides a supportive and professional environment in which to work.

Actuarial work gives you a chance to use your mathematical (and other) skills to solve challenging problems in the business world.

Actuaries give advice to very senior business executives and can reach senior management level themselves within companies. This is both interesting and rewarding.

The demand for actuaries is, and will always be, very high so that your actuarial career promises excellent job security and a very attractive salary package.

For further information you should contact the Institute of Actuaries of Australia.