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1. INTRODUCTION

“Yesterday is not ours to recover, but tomorrow is ours to win or to lose.”

Lyndon B Johnson

We are at the end of our centenary year, an eventful year at the beginning of which my immediate predecessor as President, Trevor Matthews, adopted the theme Shaping the Next Century. Should I look for a new theme? Perhaps not ... the challenge to influence the future is entirely appropriate, continuity is important and in just one year we have not yet changed the shape of the next century.

At the same time, it is not obvious how we convert the vision and the potential into reality. It is valuable to be optimistic yet important to be realistic about what we can do to shape the future. The challenge is not only to describe our preferred future, through our vision and our aims, but also to determine how we get there. Hence the theme for 1998 Pathways to the Future.

This theme actually contains several messages –

- it is unambiguously about the future, and that fits with the primary role of the actuary which is to consider the future and to make financial sense of it
- it is about being pro-active and optimistic regarding future events, about influencing them rather than waiting for them to happen
- it concerns both the future of the profession itself and the profession’s influence on the financial future of the community
- it is about actuaries engaging in forecasting and modelling and monitoring, which means it is about the actuarial control cycle

- it is about our traditional work: a re-assessment of our role in life insurance and superannuation has become part of our fate in the 1990's and a different future must be embraced
- it is about the 'wider field', about extending the frontier because, although much has been promised over the last decade, most of the potential is yet to be realised
- it is inevitably about the culture of the profession, and
- it is about understanding and forging our place in the professional world of the future, noting that we are increasingly sharing with other professionals rather than dominating our main areas of activity.

All of these ideas are traversed in this address, which is my opportunity to outline not only the direction of Council and the Institute for the year ahead but also to develop further the vision and objectives of my predecessor Presidents.

A Personal Tribute

It is an honour to take up the office of President of our Institute. For me it means, among other things, an opportunity to pay tribute to a great profession and to a great many individual actuaries, in Australia and elsewhere, who have assisted me in various ways during my career. Much of what I have to offer as your President, however, is due to the influence of two special friends and mentors.

One is Sid Caffin, who gave me my first actuarial job in 1970. I learned from his profound sense of professionalism, steadiness of purpose and actuarial thoroughness.

The other is the late James C H Anderson, with whom I was privileged to work closely for five years in the 1980s. Jim stands as a giant in our profession, perhaps a genius,. He changed the life insurance industry and actuarial consulting around the world, Australia included. He was a great intellect, a great orator and a great leader. He opened my eyes.

2. OUR CENTENARY

"That in the interests of Actuarial Science in Sydney it is desirable that an Actuarial Society be formed."

Motion carried unanimously at a preliminary meeting

on 12 August 1897, confirmed at the inaugural meeting on 19 October 1897.

We have come a very long way from this first meeting of seventeen members in October 1897 to an Institute today with 1,000 Fellows and another 800 students and associate members. The quotation, incidentally, is recorded in *The Future—Managers*, which is Clare Bellis' painstaking work on the history of the profession in Australia. It is a superb reference and a fascinating story for all members of our profession. Its launch was one of the major events of our centenary year.

The primary event to celebrate our centenary was the Centenary Convention held in August at the Gold Coast. It was an extraordinary success locally and internationally. The Convention will be remembered tangibly in two ways: by the many beautiful gifts made to the Institute by our international brethren, and by a special centenary report in what will be the last edition of the Institute Transactions in their current form.

Other important events for the Institute during 1997 were –

- appointment of our first Executive Director
- preparation and release of our first IAA Strategic Plan

- the first pair of overlapping ASTIN and AFIR meetings and the first such meetings in Australia, held in Cairns in August
- the presentation of our first ever Gold Medal (to Greg Taylor for his magnificent contributions, recognised internationally, primarily in the field of general insurance)
- full operation of our web site on the Internet, and
- major advances in the scope and presentation of Actuary Australia.

These events have given us both a stronger infrastructure and a stronger identity. And they have launched us headlong into our own second century.

3. MANAGING THE INSTITUTE

“Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!”

Lewis Carroll

A major innovation for the Institute in 1997 was the appointment by Council of our first ever Executive Director.

Jock Rankin is not an actuary but he is a professional in the role of Executive Director. He is beginning to carry us where we have not been before, into places where we want to go. As a result, the President and the Executive Director can more readily offer leadership and concentrate on advancing the Institute and the profession rather than simply ‘keeping the wheels turning’. And that is also my challenge as President, especially in a period of great change in the career patterns of actuaries.

The appointment of an Executive Director marks a new era for the role of President and Councillors, for the President can now operate more like a chairman than a managing director, with a greater opportunity to consider strategy, direction and structure of the Institute and the profession, and less need to dedicate time to matters of administration and management. The role of Council and the work of Councillors, who legally have the responsibilities of directors, can be lifted to a higher level. Institute committees can be better briefed and can interact better with Council. In short, the President, Council and Institute can operate on a higher plane.

There is a price of course. Greater promotion, greater participation in public affairs and a generally more ambitious agenda put greater pressure on the quality of Institute activities and especially the work of Council and our committees.

Overall, the management of the Institute has taken a great step forward in 1997.

The Institute’s Committee System

Our committee system and the enormous amount of honorary work done each year by so many members is immensely valuable to the profession. But it is more: it is the life blood of the Institute and a part of the culture of the profession that binds us together into a genuine and influential profession.

Each year the incoming President tackles the difficult task of reviewing the structure and membership of committees. There are more than fifty committees and some increase in importance over time while others decline. To respond better to needs which are not permanent, we are making more use of task forces which have a limited and specific brief. When its brief is fulfilled, the task force ceases to exist.

Our committee system has included since 1990 a set of Council Committees which form links between Council and the Practice Committees. Council Committees are like board committees and as such include one or more Councillors. Their role is to propose and formulate policy for consideration by Council and to ensure Council policies are communicated effectively to the Practice Committees and are being followed. They are also expected to ensure that the right issues are being considered by and communicated between Council and the Practice Committees.

I am a supporter of this system. Some of the Council Committees are effective but others have operated as mailboxes only. Further efforts are needed, therefore, to ensure the vitality of all committees and effective relationships between Council, Council Committees and the Practice Committees.

The Presidency

One of the debates about Institute structure is whether we should have a presidential term of more than one year. I wish to record my satisfaction with the current system of Vice President, Senior Vice President and President over three years. Among other things, the system leads to each President working with four other previous or subsequent Presidents during his or her own three years in office.

The Presidential group has worked as a strong team during my term of office. I wish to thank Geoff Burgess for giving me a valuable year's apprenticeship in 1996, Trevor Matthews for a year of close co-operation and excellent leadership in 1997, and Richard Mitchell for his contribution in 1997 and his offers of substantial assistance for 1998. I also congratulate David Knox on his recent election as Vice President and look forward to welcoming him into the Presidential group.

4. PURSUING A STRATEGY FOR THE PROFESSION

“Amateurs talk strategy, generals execute it”

Napoleon Bonaparte

The IAA Strategic Plan was presented at the Centenary Convention and is to be debated and acted upon into the future. It is not intended to be static and will be refined and reviewed regularly. Its Executive Summary is reproduced in Appendix A.

Its articulation is of great significance to current and future Presidents of the Institute:

- it represents a framework for the direction of the Institute which endures beyond each President's term of office
- rather than proscribing the liberty of each President to set his or her own agenda, it releases the President from setting the whole agenda, allowing concentration on emphasis, priorities and modifications of the agenda.

The strategic plan now becomes a primary focus for the President and the Executive Director and, through the President, for Council as well.

The strategic plan was developed following an audit of the profession undertaken by the Institute's Marketing Committee for the 1995 Biennial Convention. Its elements were discussed in 'brainstorming' fashion by Council and Committee chairmen in 1996. The plan makes strong reference to developing an outward focus for the profession and its members, and concerns itself primarily with six issues (some of which are expressed in marketing parlance). The paper goes on to nominate many initiatives that might be taken

or should be taken in relation to each of these issues. They are too numerous to mention here but it is useful to nominate the six issues and outline the objectives for each –

- 1 Customer focus of the profession and the Institute:
 - the profession to build an outward focus and work on external perceptions
 - the Institute to concentrate on being relevant and valuable to all members
- 2 Market penetration (in existing avenues of employment):
 - members to promote their utility in traditional fields beyond narrow professional roles
- 3 Market development (for non-traditional employment):
 - numerous members to gain employment outside traditional areas
 - more members to be employed overseas
- 4 ‘Product’ development (a broadening of the education and skills of actuaries):
 - the Institute to work on matching training and development to needs of target employers
 - all actuaries to become competent and effective in communication and in business generally
- 5 Role of the Institute:
 - the Institute to –
 - assess its internal operations and structure itself to be able to respond to its major objectives
 - increase the involvement of members, especially younger actuaries and ‘lost members’
 - encourage efforts to raise the self-image of the profession
- 6 Extending the profession’s influence:
 - the Institute to influence actively the policies of governments, regulators, industry bodies and other professional bodies.

These objectives are recorded and also endorsed as describing the direction of Institute affairs. As will be evident on reading them, however, the Institute itself can take responsibility for some of the objectives only. Others are primarily in the hands of individual members or the profession as a whole. As an example, while the Institute might encourage employment outside traditional areas, it is individual members who will respond to job advertisements or approach employers or clients, not the Institute.

On the question of division of responsibility between individual members and the Institute, my version of the division is:

the institute	the individual
education	initiative
Custodian of the profession	opportunity
voice of the profession	personal characteristics
public policy	career strategy
like-minded support	pioneering
general promotion	employment

The role of the President and Council is to see that these Institute responsibilities are fulfilled. Effective work by the Institute then encourages and facilitates the success of individual members.

Conclusion

The strategic plan and the objectives are consistent with the Institute's mission statement as developed by Council in 1995 and recorded in Appendix B.

I look forward to Council debating the plan and to the membership at large having a greater involvement than previously in the affairs and direction of the Institute.

5. POSITIONING THE PROFESSION

“Marketing is not a battle of products, it's a battle of perceptions.”

Ries and Trout

Perception and Reputation

We are being constrained by our history and our past successes -

- internally, we are accustomed to being not only experts in certain fields but the dominant experts in these fields (especially in life insurance and superannuation, which have been great triumphs for us historically)
- externally, we are seen as having a narrow perspective and narrow experience (precisely because of our dominance in specialist areas).

We have an ambiguous position both within our traditional areas of engagement and outside those areas. The ambiguity is that we are widely respected for our numeracy and our intellectual capabilities, and also for our expertise in certain specialist areas. At the same time we are often regarded as academic and impractical, as obscure and indecisive. We can be seen as obsessed with detail without appreciating the 'big picture'.

Hence our positioning, as represented by our image and reputation, is not conducive to extending our activities beyond our traditional areas.

Furthermore, increasingly with advances in technology (especially software) and the diversification of educational courses and of careers that have both mathematical and financial content, we find ourselves just one of several professional groups of experts in some fields.

We need to become accustomed to sharing responsibility in many areas while still asserting our credentials and demonstrating our capabilities. An illustration of our territory appearing to be usurped by others is the currently fashionable EVA (Economic Value Added) techniques which depend heavily on discounted cash flow analysis. Another fashion is 'data mining' which should be fertile ground for actuaries but which appears to be a field dominated by others.

The challenge is to be realistic about the limits and the scope of our professional role and at the same time to promote ourselves in such a way as to avoid being 'out-sold' by other interest groups, especially those whose skills, understanding and techniques are less expert than our own.

What, then, is the realistic role and place of our profession in commercial and government affairs in the next 20 to 30 years?

Our Strengths

In all of the frequent exhortations for us to extend our frontiers, one cannot avoid noticing the great confidence and strong belief that we have in ourselves as a profession. It is worth examining what is behind this confidence and self-belief.

In the periods of development of the actuarial science of life insurance, general insurance and pension funds, actuaries were widely seen as researchers, calculators and thinkers. We

developed and applied techniques in such areas as probability and financial risk (especially insurance), discounted cash flows, demography, financial equity, longer term financial affairs and the actuarial process we have come to call the control cycle.

We need not be restricted, of course, to these fields and in any event their evolution is forcing us to expand our horizons. Today, however, when the life insurance and pensions industries, and the associated actuarial activity, are mature –

1 much of the essential research has been done, techniques are generally well established and application is often more or less routine except during periods following regulatory change

2 many others besides actuaries do some of the calculating, especially now that there is clever computer software and there are graduates in many disciplines who can use the software

3 we remain thinkers but the scope and value to be added for good thinking may have diminished as a result of accumulated research and experience along with the maturing of these industries.

In fact our strengths go well beyond these perceptions. The philosophical foundations of actuarial work are both profound and practical. They revolve around the study of probability, which is a difficult subject conceptually beyond its mathematical aspects, and scientific inference. They also include some of the statistician's armoury in the form of data collection and analysis together with hypothesis formulation and testing.

We are often engaged in careful consideration of cause and effect vis-à-vis statistical correlation. This point is worth emphasising. It differentiates actuaries not only from many statisticians but also from many management consultants. It is also a particularly important aspect of financial modelling and is now systematised through the actuarial control cycle. By adding ideas of finance and the time value of money to probability and data analysis, we create much of the modelling and related work which is at the heart of 'actuaryness'. Making one further crucial addition, the existence of a profession (so that one can be held accountable professionally for advice offered) establishes the actuary as indeed a capable and expert professional.

Financial Risks and Risk Management

It is notable that financial risk is now seen to include not just insurance and related risks, but also a wide range of risks associated with credit, banking, investments, derivatives and other activities in the financial services industry.

Are actuaries the best professionals to assess financial risks?

We are undoubtedly the best at mortality, morbidity and other contingencies of life. We are probably also the best at assessing general insurance risks on a statistical or portfolio basis. We are the best in these areas because we have made it our business to be so.

We cannot, however, claim a pre-eminent position on investments, derivatives, credit, banking and other risks in the financial sector. Nevertheless, there are some actuaries who are experts in these areas.

It is to be hoped that more actuaries will be involved in these areas in the future, and will make their marks there. Furthermore, there is every reason for actuaries in these fields to be proud to be actuaries and to be happy to work in a multi-disciplinary environment.

They can use their actuarial skills and professionalism without needing either to deny association with the profession or to be overtly recognised as actuaries.

Risk management is a crowded field today, including for example finance and investment professionals, insurance broker specialist employees, economists and econometricians, and some accountants.

What do we have that is unique? What is as good as or better than others? What are our limitations? How do we best contribute?

In my experience, which includes working on occasions with a wide range of other professionals (for example accountants, merchant banking staff, econometricians, management consultants), the actuary has a better understanding of risk and is generally more disciplined and more effective commercially in building and using financial models. I attribute this success to the actuary's combination of mathematical skills, actuarial techniques and professional accountability.

Is this claim to superior modelling work valid, and is this explanation valid? If so, we have some good clues as to where future energy might be put in extending the frontier.

Limitations

A flaw in the thinking of many actuaries, and indeed many other professionals too, is a belief that the quality of what they do will be both visible and recognised by all potential audiences: if the intellectual position is a strong one or the correct one, it will triumph. Marketing history says no: there has to be awareness, acceptance and recognition. Image and reputation depend not only on facts but on perceptions. Promotion and persuasion are important.

The 'Wider Field'

Every Presidential Address for the last fifteen years has talked of actuaries entering the 'wider field'. The subject is popular and interest has escalated in recent years because of both the increased supply of young actuaries and an impending decline in demand in Australia for life insurance and superannuation actuaries.

Progress in the 'wider field' has been slow, although it is difficult to measure. The Institute's Annual Reports disclose the following -

Principal Activity	1992	1997
life insurance	224	317
superannuation	178	218
general insurance	31	94
investment	32	73
banking	3	31
health insurance	3	5
software	5	5
education	10	13
management	63	67
'other'	58	47
total non-retired	607	870

These statistics give very limited information. They refer only to each Fellow's principal activity and the classifications are not really adequate for understanding well the range of activities of our Fellows. Nor do they cover university graduates, Associates and other non-Fellows. Nevertheless they show some interesting features –

- continuing strong and steady growth in life insurance, despite predictions of gloom
- superannuation static (in 1994, the recorded number was 219)
- general insurance and investment growing rapidly
- banking curious: the numbers recorded in the intervening years were 1, 1, 1 and 0, so 31 in 1997 suggests inconsistent recording (previously or now? – I suspect previously)
- 'other' declining.

Even if we add banking and 'other' to indicate the 'wider field', the numbers have moved from 61 to 78, a growth rate of only 5% per annum, compared with 7% per annum and more than 90 new actuaries in life insurance! Adding management and software would translate to an even lower growth rate.

Even if the figures are not entirely accurate, it is very hard to see a serious 'wider field'. If there is one and it is represented by some of our younger members, we need to extend the scope and quality of our information to understand it.

The real debate, however, should be about extending the frontier rather than the 'wider field'.

To extend the frontier, the profession has to be re-positioned. It is no easy task and it has both individual member components and Institute components.

The next section on extending the frontier seeks to explain some of the conditions for repositioning and is mainly concerned with the efforts required of individuals. A later section on influencing public policy is aimed, among other things, at the Institute's playing its part in contributing to a higher and wider profile and thereby to a better positioning of the profession.

6. EXTENDING THE FRONTIER

"To get others to come into our ways of thinking, we must go over to theirs; and it is necessary to follow in order to lead."

William Hazlitt

Extending the frontier means not only doing things which are actuarial in a non-traditional field. It also means extending the scope or range of activities of individual members in traditional and related fields.

Looked upon in this way, there are some important statements to be made:

- 1 Life insurance is coalescing with other financial services including funds management and investment –
 - for a very long time there have been actuaries in life companies who have been extending the frontier into management, marketing, IT, funds management, investment and other areas
 - there are now increasing numbers of actuaries working in bank-owned insurance companies, banks themselves, merchant banks and fund management companies, some as actuaries and some in management and other activities

- there are increasing numbers of consultants spending some or all of their time with clients in financial services on matters other than actuarial aspects of life insurance. Hence our profession has enormous potential for extending the frontier within the financial services industry, while continuing to be very active and influential in life insurance!

2 The general insurance industry is making increasing use of actuaries in both technical matters and non-technical matters, including management. The frontier is being extended continually as more actuaries try their hand at more aspects of the industry. That is one of the reasons that our involvement in general insurance and reinsurance is growing. There is likely to be considerable extension yet into the future.

3 In funds management, investment and finance, the frontier is unclear to many of us. In terms of formal professional advice, the frontier seems narrow but the influence of executives who are actuaries suggests a much wider frontier. The field is recorded as already taking nearly 10% of our members and there is destined to be much growth yet in actuarial employment here as demands for numeracy and mathematical understanding increase.

4 Health insurance can be thought of as a traditional field where our penetration has been very low, partly because of the very highly regulated nature of the industry. Extension of the frontier is now occurring quickly and further extension into non-insurance financial aspects of health care and long term care are open to us.

5 Asia represents an extended geographical frontier where there is considerable and growing demand for traditional actuarial expertise and as yet low penetration. Hence there has been and is much extending of the frontier from our traditional bases. There are also other extensions that can be and should be made. The discussion on this subject at the Centenary Convention elicited some very interesting ideas including, among others –

- the idea of the suburban actuary, built on a financial planning base
- an increased role for the Government Actuary and other public sector employment
- the likelihood of ‘osmosis’ within organisations who take on actuarial staff
- the claim that we can take our place amongst other professionals in providing business solutions.

Some advice was also forthcoming –

- “to penetrate new areas, actuaries need to show humility”
- “we should be more creative and interesting when advising our clients, perhaps even including cartoons in our reports”
- “participation in a new business can add excitement, sparkle and enjoyment”.

In all of this enthusiasm about the wider field, we need to take note of three things: our lack of serious progress, the advice on humility and the importance of realism.

We have all heard it said around the profession that we are clever people, perhaps the smartest profession, that our skills are widely applicable and that we can do almost anything. But is it not what we can do but what we actually do that matters? We risk being seen as arrogant, and we are also demanding: we seem to expect not only to be invited to participate in the affairs of others but to be influential and well paid ... so let us be more humble yet pro-active and positive, let us plan realistically what we can do and what we want to do, and let us then persevere with enthusiasm and optimism.

I was struck recently by the spirit of successful entry into a new field which shone out of a short article in the June 1997 edition of *The Actuary* (from the London Institute). It was an interview with Michael Clark, a young actuary who switched from a life insurance career to one in project finance. The interview, reproduced at Appendix C, illustrates well the optimism, skills and approach needed to enter a new field.

Market Entry

One could also ask: what are the criteria for success in a new field? I wish to suggest that entry into a new field is successful when –

- the pioneers are being paid at commercial prices for their work (whether as employees on market salaries or as consultants on market fee rates) – this is a very important test: it is a measure of the degree of recognition by any user of actuarial services
- there is opportunity for other actuaries to follow or support the pioneers in expanding the profession's involvement
- the actuaries involved are having a positive influence on the affairs of their employers or clients
- there is some form of advice being given which is being signed by the actuary in a professional capacity – this test is clearly not passed by an actuary who works in a management role but it is also not passed by an actuary who does not aspire to be seen in a professional role and/or who does not complete his or her work with a written report of some kind which includes findings or conclusions or recommendations which might be recognised as actuarial advice.

The last test here is the professional test. It clearly goes beyond the preceding positive influence test. Those of us who believe in the actuarial field being a profession and not just an education have a responsibility to encourage actuaries in newer fields to operate as professional actuaries and to give them guidance and leadership on how to do so.

In most areas of consulting practice and in full-time employment in traditional fields (for example life insurance), there are usually role models and opportunities to learn through working with actuaries experienced in giving professional advice. This is clearly not so in areas of full-time employment where there is no tradition or history of giving formal professional advice. This situation appears to occur widely in funds management, investment, finance, banking and merchant banking.

If we are to prepare new actuaries for professional careers in areas where actuarial advice is not yet recognised, perhaps we need to extend our Professionalism Course or take other initiatives to assist new actuaries to look for and take professional responsibility.

There will be debate over whether it is appropriate for actuaries in newer areas to try to present their work as actuarial advice. This is a matter for the actuaries concerned, but I wish to suggest that, for those actuaries, it is often a question of their own aspirations and confidence, and also their identification with the profession.

Market Development and the 'Pioneers'

The strategic plan proposes, as one tactic for broadening the employment of actuaries, that we “leverage off ‘pioneers’ who have moved into new areas of actuarial work”.

The history in general insurance can be seen as a success in doing just this. In the mid seventies, there was a small band of pioneers who, by a combination of their own individual efforts and of drawing on the support of the Institute, have led us into an era where actuarial involvement is taken for granted.

Undoubtedly we need pioneers. The Institute itself cannot actually lead the profession into new areas of employment. We rely on the individuals who will be seen as pioneers to –

- establish their own personal positions in areas not well recognised for the use of actuaries
- be accepted in such a way that other actuaries gain employment in the same area
- be recognised as being actuaries and thereby contribute to the positioning and image of the profession in this area of activity.

History tells us, of course, that entering new fields is difficult. In the beginning, recognition and acceptance may be slow and it may not be financially rewarding.

The pioneer is therefore bound to be something of a risk taker and an enthusiast. The pioneer will also need faith and self-confidence to pursue a path that is not well understood or recognised.

What can we learn from the general insurance story? The opportunity arose because the industry had certain difficulties to which the profession could make a contribution. The early opportunities to contribute appear to have arisen mainly through life company owners of general insurance companies asking their actuaries to try their hand at general insurance. In time, the role developed and became a specialised one.

From the profession's viewpoint, general insurance developed nicely because it became a genuine practice area, where professional actuarial advice was being given as a matter of course. As the field became established, conventions and other inter-action with non-actuaries obliged us to demonstrate our contribution continuously and practically, without retreating too often into an 'actuarial corner'. Professional standards were eventually produced, regulatory recognition has emerged and, with increasing competitiveness and sophistication in the industry, the profession is now a part of the industry.

The diligent and energetic efforts of the pioneers gave vitality and momentum in an environment that was often sceptical and occasionally hostile. The conditions and the success factors belong largely to the time. Nevertheless the lessons should be distilled for the benefit of our new pioneers.

One might well ask: who and where are today's pioneers?

Are they in funds management, investment and finance, or are they the life insurance actuaries who are extending their reach across other financial services?

Are they the financial planners who may become the suburban actuaries of the future, recognised alongside suburban accountants and lawyers as an accepted and valuable part of the professional landscape in Australia?

Are they the actuaries now working with merchant banks and stockbrokers?

Are they the superannuation actuaries who consult widely on employee benefits, remuneration and other corporate employment questions?

Are they the actuaries doing financial modelling and forecasting, or risk analysis, for organisations who are not financial services businesses (for example infrastructure, privatisations and utilities)?

Let us encourage the pioneers, let them emerge and succeed!

7. RIDING THE CONTROL CYCLE

“As far as the laws of mathematics refer to reality, they are not certain, and as far as they are certain, they do not refer to reality.”

Albert Einstein

Modern day financial graduates, accountants, MBA's and econometricians all know much about discounted cash flows, risk analysis and financial modelling. The actuary will observe that we have been using these techniques for a very long time. So what is new?

Answer: the use by other professionals who are discovering, promoting and applying techniques that we have tended to regard as our own.

These techniques are no longer the exclusive preserve of the actuary and we are competing for recognition and influence in many ways. Nevertheless, we still understand more about these techniques and their underlying theory than any other professional group. Furthermore, we understand their application in terms of the control cycle.

An actuary who qualified before 1995 will ask, in respect of the control cycle, "so what is new?". Answer: in substance, nothing, but in presentation, everything. Articulation of the control cycle leads to recognition that it is the fundamental actuarial process. It is a very disciplined form of forecasting, learning and understanding the future as it unfolds.

Arguably it was invented by John Graunt in the seventeenth century when he created the first life table. He set up a basis for expected against which actual could be compared. It has been used extensively in the field of life insurance and pensions ever since.

The conceptual basis of the control cycle is not unique. Indeed it is well developed in engineering. Our control cycle is a slow and interventionist form of engineering control system.

Engineering control theory and control systems are characterised by –

- measurable input
- measurable output
- a feedback loop from output to input which modifies the next cycle of input in order to obtain a more accurate output
- processes which are reproducible and governed by unchanging laws, thereby enabling automatic feedback.

A simplified comparison might be –

engineering control system actuarial control cycle

System is usually a mechanical or electrical process System is usually a financial model of a social or commercial process

Process reproducible under unchanging laws Process not fundamentally reproducible

Feedback leads to automatic adjustment of input Feedback leads to actuarial intervention

in model input

Cycle time is usually less than a day – hours is long, could be nanoseconds Cycle time is usually more than a month – quarterly and annual are common

Now that we have articulated the actuarial control cycle and can compare it with engineering control systems, the latter may well provide fertile ground for further development of the theory, practice and language of the actuarial control cycle.

Forecasting and the Control Cycle

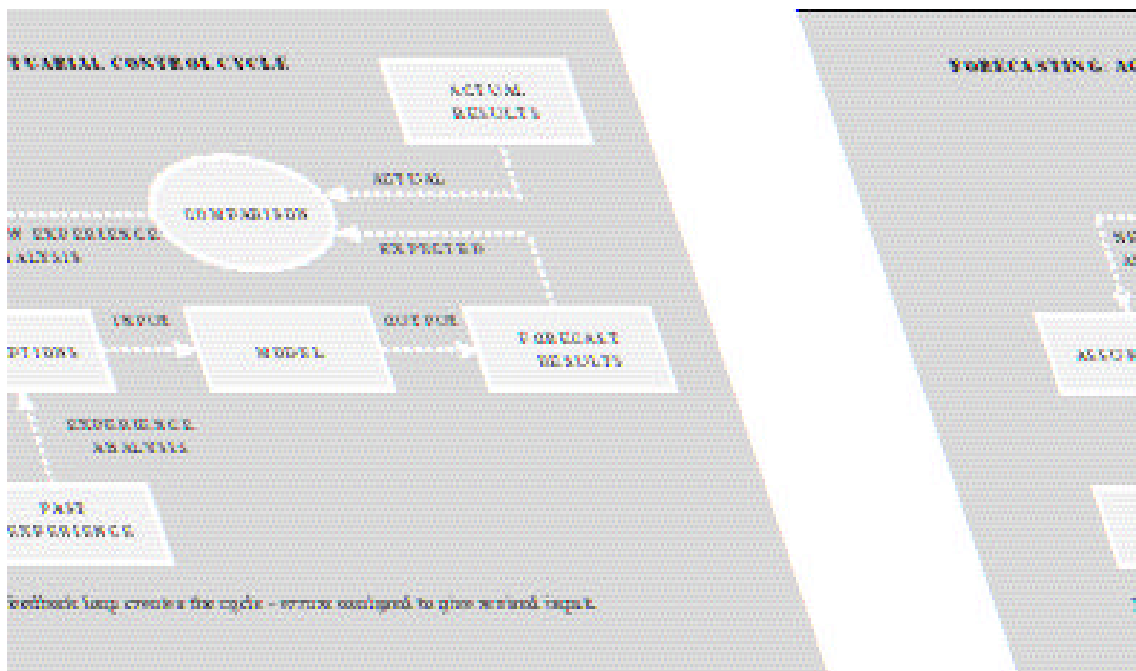
It is interesting to consider a little of the history of the field of forecasting. Bernstein, in a recent interesting book on the history of risk, notes that "... forecasting – long denigrated as a waste of time at best and a sin at worst – became an absolute necessity in the course of the seventeenth century for adventuresome entrepreneurs who were willing to take the

risk of shaping the future according to their own design.” Perhaps one looks ahead less when the normal life span is more like 40 years than 80 years!

Today, forecasting is widespread and in some ways appears routine. We have forecasting of weather, election results, economic conditions, investment performance, sporting contests and financial results of corporations.

Many forecasts are very short term – weather, sport, elections – and some are longer term. Professional forecasters are few – meteorologists, some economists and econometricians, corporate planners, some investment analysts and merchant bankers, and actuaries.

In relation to the techniques of business and economic forecasting, I believe the actuarial control cycle to be unique because it uses a feedback loop to compare the actual with the expected. It can be depicted as follows –



The analysis and the learning that take place through comparing actual with expected and revising the assumptions, through separating experience analysis from 'valuation' (i.e. from calculations within a model), at each cycle can be profound. Furthermore, the technique allows actuaries to be accountable for their forecasts, through applying actual vs expected comparisons at each cycle. Therein also lies the opportunity for professional advice.

Being 'wrong' is an occupational hazard for the forecaster. Yet we need to be fearless about being wrong – difficult as that may be because the actuary's whole psyche is built around being right! – and about demonstrating the deviations through some form of 'analysis of surplus'.

Without an explicit feedback loop, models tend to become 'black boxes'. In my experience, many non-actuarial forecasting models use assumptions which are not explicit or are hidden inside an extrapolation formula. Differences between actual and expected are not analysed and often cannot be analysed against assumptions or understood systematically. As a result, the only feedback is an empirical adjustment to the model. Extrapolation and model details may mask assumptions. In particular, cause and effect will not be well understood.

This form of 'black box' modelling can be contrasted with the control cycle as follows –

management, investment, finance, banking, health and risk management. We also have some 'lost members' who tend to be at a distance from the Institute and the profession. We have some major current challenges in each of these areas –

Life Insurance

This industry is changing quickly and profoundly, both in its internal operations and its market position –

The actuary and the accountant: for decades the actuary dominated financial management so much that the concept of Chief Financial Officer did not really exist and accounting in life offices was very much in the background. The advent of the new Margin on Services (MoS) financial reporting standards has elevated financial control of life companies to a level commensurate with other industries and is bringing actuaries and accountants much closer together. There are three challenges –

- to work constructively with the accounting profession in exercising effective financial control
- to co-operate effectively with the profession and the industry in New Zealand to create a common form of MoS to apply in both countries
- to build the credibility of MoS in the eyes of fund managers, bankers and others in financial services in Australia, and also in the eyes of the life insurance industry outside Australia – can we go further and have MoS embraced by international accounting standards?

Actuaries in management: the decline in the fortunes of the life industry has been accompanied, for better or for worse, by a decline in the employment of actuaries in the senior management ranks of the industry. The challenge is to retain credibility in a period when the profession is being held responsible in some quarters, at least in part, for the industry's decline.

Superannuation

The profession in Australia prospered greatly from the 1950's to the 1980's in the field of superannuation. It is remarkable, however, how much employment has been generated on matters of small detail, on responding to tax and other regulatory matters. Due to an excess of demand over supply, we have been able to command good incomes and good fee levels while increasingly advising on compliance issues, when our preferred emphasis must be on adding lasting value for our clients.

While this kind of employment of actuaries is still prevalent, the transition to accumulation plans is changing the landscape. The transition is being accelerated by the superannuation surcharge and an unsympathetic Government as well as general trends in employment relationships and remuneration. Superannuation is being 'packaged' more and becoming 'commoditised' through accumulation plans, master trusts, third party administrators and fund managers. More professionals of other kinds, especially lawyers and accountants, have become superannuation specialists and the exclusive actuarial needs are declining. The challenge is to emerge from the depths of detail to do justice to our capabilities, our clientele and the community by applying ourselves to questions and problems that utilise well our abilities and our training.

The superannuation field will continue to be of very high interest to our profession and, for current practitioners and those who choose to enter the field in future, there are three kinds of opportunity –

- to re-assert the importance of financial management (target benefits and the like for fund members, remuneration and employment planning for the employer) even though the quantum of exclusively actuarial work is reduced
- to retain and perhaps extend the role of expert adviser to employers on superannuation and related matters (and in doing so to stay above the minutiae), on both the liability side and the asset side
- to become influential as a profession in simplifying and demystifying the business of superannuation.

General Insurance

The actuary's role continues to evolve and expand in pricing, reinsurance asset/liability management and other areas. In our largest field, however, namely long tail business, we have a dilemma. Whenever claims provisions are re-assessed upwards by the actuary or prices are seen with hindsight to have been unprofitable, actuaries suffer criticism.

The general problem is not new. It was very visible in the 1980's in private sector workers' compensation and again in the 1990's in private sector CTP (compulsory third party motor insurance) in NSW. The main elements are –

- The estimation of liabilities for outstanding claims is inherently difficult and uncertain, due partly to systemic risk arising from the human behaviour component and the legal system dependency of the claims experience.
- Accounting principles and the Accounting Standard AASB1023 do not allow any smoothing. Any changes in valuation basis are fully reflected in the profit and loss account each year, as are changes in market values of assets (for realised and unrealised gains and losses).
- Although prudential margins are accepted, there is heavy emphasis on an explicit central estimate of liabilities.
- International accounting standards are quite different from Australia's.
- Pricing issues are intertwined with claims measurement issues.

Insurers, the ISC and the Tax Office all rely very heavily on actuaries for the assessment of claims provisions and many insurers also use actuarial advice in doing their pricing.

The problem was examined by the Institute's 'Long Tail Working Group' in 1996. The next phase has begun with the ISC setting up a joint working party with the Institute in 1997 on 'the Consistency and Reliability of Outstanding Claims Provisions'. The terms of reference are reproduced in Appendix D.

Part of the dilemma is that every interested party has a different 'holy grail': the insurers want freedom and flexibility in setting claims reserves, actuaries want to use their own judgement, accountants want precision and no smoothing, management wants certainty and no surprises. The actuary is almost certain to disappoint management whenever adverse claims experience is seen to occur.

We do not have good answers, even though we are better than any alternative!

The challenge is to do better, even if it means changes to the accounting standard.

Investment, Funds Management and Finance

It is clearly more difficult to establish a clear and differentiated role for the actuary in the investment, funds management and finance fields than it is in the traditional liability fields. We share these fields with many other experts and professional actuarial advice is rarely if ever given.

There is a dilemma here: do we provide only educational services for the investment and finance professional who chooses to do actuarial studies (a lesser aim than at present), or do we try harder to improve the relevance of the profession and the Institute to members who work in investment, funds management and finance?

The challenge is threefold –

- Recognition: we do not need a position of actuary within an investment or funds management or finance business but we do need more employers in these fields nominating actuarial training as a preferred or desirable qualification for certain types of employment.
- Education: investment professionals often complete a full set of SIA (Securities Institute of Australia) exams or they sit for the American CFA (Certified Financial Analyst) exams. These courses contain a wider range of investment knowledge than do the actuarial courses. Should actuarial students forsake their Institute exams for a specialist investment course? Should the Fellowship Investment course be modified to be a substitute for the SIA and CFA courses? Or should we continue to rely on actuarial standards and training to supplement these other courses with our own special layer of expertise?

– if our current direction is right, we need to confirm it unambiguously and to direct our efforts accordingly

- Professional relevance: Institute members who work in investment or finance often claim that they do not give actuarial advice and also that, if constrained by Institute professional standards which non-actuarial investment or finance people do not have to meet, their work may be compromised.

The task therefore is to identify a meaningful position for the Institute, its educational courses and its professional activities in the careers of investment, funds management and finance professionals who pursue actuarial qualifications.

Banking

The boundaries between banking, life insurance and other financial services will continue to blur and dissolve. The regulatory environment post Wallis will likely hasten and facilitate the process.

At present in Australia there are numerous actuaries working in banking. As with funds management, investment and finance, however, these actuaries are generally not operating in professional actuarial roles.

The banking challenge is a major one for our profession –

- The competitive environment for banks is such that the next few years are propitious for actuarial involvement.
- The Wallis aftermath could become a major opportunity: with prudential regulation of all financial institutions to come under the one regulator, the opportunity for the profession is to continue in its existing role with insurers and friendly societies and to take on a new role contributing to the prudential financial management of banks, credit unions and fund managers.

There is also a threat: Although the status quo could simply continue, the other possibility is that actuaries come to have a lesser role in the capital adequacy and solvency of insurers and friendly societies.

- Our role in banking could well include professional actuarial advice in such areas as pricing, management of credit and other risks, profit measurement, asset/liability management, modelling and forecasting.

Health

Health insurance in Australia is in crisis at present and the health care financing debate is in full flight. Related events of the last year include further declines in private health fund membership and further increases in their rates, an investigation and report by the Industry Commission, including its advocacy of unfunded lifetime community rating, high political interest, tax incentives, funding controversies in private hospitals and long waiting lists in public hospitals.

Our profession has a relatively minor position in health insurance, due largely to the highly regulated nature of the industry, and we also have a minor position in other aspects of the financing of health care and long term care.

The community desperately needs reform and good financial management of health care. It is a huge and growing industry (around \$40bn annually or around 9% of GDP, compared with about \$20bn for the whole of the general insurance industry and just \$1bn for the risk classes of life insurance).

One of the financial pressures in the system arises from the Commonwealth Government's efforts to reduce its own risk. In principle it is no longer simply meeting costs but forcing State governments, the hospital system and other parts of the industry to operate to fixed budgets. These participants are therefore being obliged progressively to accept and therefore manage more risk.

The profession's challenge is to grasp firmly the opportunity to bring health care and long term care under good actuarial financial management.

The 'Lost Members'

The 'lost members' are mostly those who do not work in traditional fields and who have little contact with the profession and the Institute. In many cases these members are successful and influential in their own careers but are working in fields where formal professional recognition does not exist or is not seen to be important. The most prominent areas are funds management and investment, where actuarially trained people are prevalent but where it is primarily the actuarial education and the capability of understanding actuarial studies which are relevant to employers and practitioners alike, rather than holding and using a professional qualification.

I believe it is very important to the reputation and influence of the profession that we locate and 'bring into the fold' the lost members. More easily said than done, of course, but I urge the following on all members with an interest in funds management, investment, finance, banking and other areas of employment where full professional recognition is not generally seen as important:

please make a contribution to the profession by assisting the Institute to promote the benefits of an actuarial education, to enhance the benefits of membership of the Institute and to generate opportunities for offering professional actuarial advice.

These members are important for it is in the interests of all actuaries for our profession to be well regarded in these fields. Our challenge is to increase the relevance of the Institute to these members.

9. INFLUENCING PUBLIC AFFAIRS

“The important thing for Government is not to do things which individuals are doing already, and to do them a little better or a little worse; but to do those things which at present are not done at all.”

John Maynard Keynes

The characteristic of our professional work which is uniquely relevant to public affairs is our interest in the longer term. To play our part –

1 We should continue to look at the long term.

The mentality of the community has changed over the last century: everyone used to look at the long term and to regard thrift as a virtue. It was a cultural phenomenon borne out of our religious heritage from an era when individuals were obliged to prepare financially for old age and infirmity because social welfare could not be relied upon.

The ‘long term’ used to be decades but now it is just five years or even three years in many people’s minds.

We need to keep looking 10 to 50 years out (a little too long for people to envisage) in order to make sense of the needs of the next 5 to 10 years.

2 We should interest ourselves in the financial and other quantifiable aspects of –

- demography (especially the ageing of the population)
- retirement incomes
- finances of health care and long term care
- accident compensation
- other social security
- life and disability insurance
- stability of our financial institutions including their prudential financial management.

These are the aspects of public affairs in which our profession has a great interest and where we have more expertise than others. They are primarily matters affecting the financial future of the community.

3 We should participate in the public debate and, to do so, work actively to undertake the research, analysis and synthesis that enable us to offer relevant advice.

4 We should work actively to promote the role and the significance of the office of the Government Actuary.

We have an interest and, due to our expertise, arguably a public responsibility to take an interest in the financial management of government-sponsored activities where risks and long term financial issues are involved. Indeed these fields are our ‘natural’ public agenda –

- we want to see rational debate built on sound information
- generally we will aim for advance funding
- we are not policy makers but we are the suppliers of advice to enable the policy makers to make soundly based decisions.

Our first public statement in this direction was the press release issued by the Institute on 13 May, the night of the 1997 Budget. Among other things, it advocated that the Government “develop a long term vision to address the significant financial problems arising from an ageing population, increased health costs and low rates of savings.” It

went on to say “The Institute of Actuaries of Australia believes that the Government should develop a national savings strategy which provides genuine incentives for medium and long term savings, integrates superannuation, the age pension and the taxation regime fully and encourages more rapid progression to income streams in retirement.”

These statements can be regarded, I believe, as the first expression of a manifesto for the profession in public affairs in Australia.

We have already, however, gone beyond just a statement. In 1997 we have responded actively to three government initiatives which are momentous for the profession –

- release of the Productivity Commission’s report on health insurance: a ‘Pandora’s box’ on health care financing has been prised open and an era of inexorable reform has commenced
- release of the Wallis report and the Government’s substantial endorsement of it: as already noted, the profession’s role in prudential regulation will not remain static but will eventually be either more prominent or less prominent, and we can influence the direction
- the superannuation surcharge: among other things, it accentuates the interest in and the shift to defined contribution plans

On health insurance, an Institute task force has issued a public discussion paper on unfunded lifetime community rating, in response to a request from the Minister for Health. On the superannuation surcharge, the Institute made strenuous efforts to have the surcharge withdrawn or modified, including presenting a well designed alternative to the Prime Minister. Ultimately we have assisted the Government to implement its legislation while steadfastly insisting that the terms of its implementation be the responsibility of the Government and not of our members.

Prudential regulation issues arising from Wallis are yet to emerge.

There is a fourth 1997 government initiative which is relevant to our members and that is tax reform. A task force, led by Ian Salmon, is being established to consider how the Institute might influence the tax debate, especially in relation to our traditional practice areas.

We have also begun to work on the manifesto referred to above. A working party was established in 1997 to begin examining retirement income and health financing options which recognise the ageing of the population. This working party will be formalised in 1998 and will most likely produce, among other things, a successor to our RIP (Retirement Incomes Policy) 1.

1 The RIP has served the Institute superbly, notwithstanding that it was controversial in some quarters both inside and outside the profession, due not only to its content but also to its very existence (as a statement of policy which would inevitably not be supported unanimously within the profession). Developments since its preparation in 1992, however, especially the superannuation guarantee charge, dictate that it be reviewed.

10. RECRUITMENT AND EDUCATION: MAINTAINING THE QUALITY

“The direction in which education starts a man will determine his future life.”

Plato

Supply and Demand

The debate on whether the Institute should attempt to control the supply of new entrants is over. Despite expected falling demand in life insurance and superannuation, there has

been consensus at Institute discussions that the supply of new actuaries should not be artificially limited.

There are indeed views that the supply should be expanded. For example, Duncan Ferguson, in his 1996 Presidential Address to the London Institute, appealed to the profession to “launch new recruits with an actuarial training and qualification in large numbers” and to “welcome into the profession respected applied mathematicians who will embrace our creed”. Trevor Matthews in his Presidential Address for 1997 referred to ways “we can broaden our membership and our influence”.

Our profession is limited in recognition and influence because it is so small. The message that I wish to reiterate, in the belief that we have much to offer the community, is that we should make strenuous efforts to expand the membership.

Maintaining and Building the Supply

The challenges are –

- to maintain standards, educational and professional
- to give suitable professional recognition to members with increasingly diverse skills and training, including our ‘unqualified successes’, selected non-members and actuaries qualified in other countries
- to attract new entrants of the right calibre into the profession.

Education and Professionalism

Education is one of the Institute’s largest and most important activities. The Institute has been moving progressively towards more out-sourcing of education, as evidenced for example by the control cycle which is being taught only through universities. The Institute offers exemptions according to standards that are discussed and agreed with the professors of the actuarial schools.

The Professionalism Course has been operating very effectively and evolving for 9 years now. It has become an integral part of our professional education.

CPD (continuing professional development) was launched in 1992. The requirements are specified by the Institute and the Institute provides many direct opportunities for CPD credits (e.g. sessional meetings, seminars, Educational Topical Discussion Groups). CPD operates, however, on an honour system.

... is there a need to monitor CPD activities in the interests of promoting continuing education and maintaining standards among qualified and experienced actuaries?

This question is not readily answered but should be explored. The CPD programme has been operating long enough to warrant a review of its success to date and its potential future value to the profession and members.

Education finance has taken a decided turn for the better in 1997. An Education Finance Task Force led by Steve Miles was established this year to investigate and report on the complexities and uncertainties that have plagued this aspect of our affairs (as explained extensively in Trevor Matthews’ Presidential Address).

The Task Force has proposed simplified and more transparent accounting. The primary outcome, however, is that, provided the universities keep up their side of the agreements regarding sharing of salary supplementation for actuarial staff, and provided Institute subscriptions continue to contain the current contributions ear-marked for education, we can continue to support the universities according to past plans and agreements.

Professional Recognition without FIAA

If we are serious about broadening our membership, we will need to re-assess our treatment of the ‘unqualified successes’, selected applied mathematicians and others, and those who have qualified through other actuarial bodies.

The ‘unqualified successes’ are those who are not fully qualified, in many cases Associates of the Institute, and who have successful careers, professional or otherwise, despite lacking full professional recognition. Some are also ‘lost members’.

There are difficult issues to be faced here. The most tractable is the international one – see next section. Nevertheless, to make progress on the ‘unqualified successes’ and selected non-members is a strategic objective of the Institute. A new task force on membership, chaired by Geoff Burgess, will examine this issue in 1998.

New Entrants

We need, as in the past, new entrants of high calibre. Macquarie and Melbourne Universities, and also ANU, are attracting and training them.

University education is now an essential feature of our education system. The support we have had over 30 years from Macquarie University (yes, three full decades) and more recently from Melbourne University has been spectacular.

Interestingly, there also continue to be many capable graduates of other universities, graduates usually in mathematics or statistics, who are entering the profession in the time-honoured manner of correspondence study.

Hence, it is the universities, both with and without actuarial departments, who represent the ‘breeding ground’ of the profession.

Statistics continue to show that, while the minimum entrance standards to university actuarial courses have declined to some extent, especially at Macquarie, there remains a high correlation between capability as measured by university entrance exam results and success in actuarial studies.

The establishment of Melbourne University School of Actuarial Studies has added a valuable dimension to university support. There are some elements of competition between it and Macquarie, and that is not unhealthy, but perhaps more important is the opportunity created by this modest diversity to learn and compare from a wider experience.

Given the growing competition the profession is encountering for mathematics and other students, important strategic questions for us are –

- are single degree undergraduate courses the best entry point for our best recruits?
- the trend towards double degrees and more masters degrees by the more capable students is visible and growing
- are Macquarie and Melbourne universities the most appropriate institutions to cater for the profession’s future recruitment aspirations?
- is the formula that served us so admirably for the last 30 years the right one for the next 30 years?

11. THE INTERNATIONAL DIMENSION

“Peace, commerce and honest friendship with all nations – entangling alliances with none.”

Thomas Jefferson

Our Institute has, as I see it, four components to its international interests –

- 1 participating actively in the globalisation of the profession, by supporting the initiatives and the objectives of the IFAA (International Forum of Actuarial Associations)
- 2 continuing the very strong links that have existed for many years with our professional colleagues in the UK, USA, Canada and New Zealand
- 3 building closer links and increasing understanding with actuarial associations in Asia and with our own members working in Asia
- 4 developing our own individual links with actuarial bodies in other countries.

Globalisation of the Profession

The IFAA (International Forum of Actuarial Associations), which was formed in 1995, is a vehicle for international co-operation on numerous topics of interest to our Institute and our members.

A major breakthrough would be an international educational qualification. We continue to support this initiative and to promote the Control Cycle, otherwise known as Principles of Actuarial Management, as the standard.

Areas of co-operation in which we have an interest are education, mutual recognition, promotion of the profession, accounting standards and solvency requirements, especially in life insurance, general insurance and pensions.

There are also discussions taking place about coalescing the IFAA and the IAA (International Actuarial Association), the latter comprising as members individual actuaries only. The potential benefits include stronger co-operation and cohesion within the profession around the world.

Globalisation of the profession is a little more real each year. No longer is it enough for us to consider ourselves to be closely linked only with the Institute in London, the Faculty and the Society. Yet extending the list, for example, to the Casualty Actuarial Society and the Canadian Institute would be only a modest move. It is the efforts of the IFAA together with various opportunities to meet our international friends, as occurred at our Centenary Convention, which broaden our relationships and our horizons.

We have also begun attempts to be closer to our good friends in New Zealand. With recognition by the London Institute of the FIAA after a year of residence and practice, a major barrier to New Zealand students selecting FIAA as their qualification has been removed. Hence our links with New Zealand can now fully embrace education.

Recognition of International Qualifications

The issue of professional recognition in Australia is at this stage largely confined to other actuarial bodies which conduct their own examinations. As Canada, New Zealand and South Africa do not, and nor do any Asian countries, the debate for us in these countries is their recognition of our qualification.

Although we have been a 'republic' for some time, arguably since we introduced our own fellowship examinations in 1980, our links with the London Institute and the Faculty are very close. The relationship has been enhanced through recognition by the Institute, since 1995, of an FIAA as an FIA after twelve months of residence and practice in the UK. But even the debate is changing. Reciprocal recognition is desirable in principle but not always achievable.

The IFAA may contribute a partial solution: it is now looking for an international minimum qualification (will it be the control cycle?). Such a qualification would have

immense value, especially in Asia where as yet no actuarial association is setting its own examinations. It would also be of great value in other countries where at present our own Institute is offering no recognition of local qualifications through a belief that these qualifications do not match our own.

We also need, however, mutual international acceptance at Fellowship level. An international minimum qualification would undoubtedly facilitate such recognition. We need not wait for the IFAA, however, and the Institute in London has shown the way with its rules for accepting FIAA's.

Will our own views of our own standards act as barriers to recognition of other countries' actuarial qualifications? ... almost certainly yes. Let us, however, take the question forward case by case (and top down from a professional viewpoint) and simultaneously support the IFAA in its international education ambitions (which are bottom up in relation to qualifications).

Links in Asia

The profession is growing quickly in Asia. There are increasing numbers of actuaries going to Asia who have qualified and worked elsewhere. There are increasing numbers of students studying the exams of the London Institute, the Society in the US and our own Institute.

There is much to be gained for everyone through co-operation between our Institute and each of the actuarial associations in Asian countries. There is also great benefit in co-operating, particularly in education, between the Institute, the Society, and our own Institute. In conjunction with the IFAA initiatives and the emergence of full professional actuarial associations in several Asian countries, one can readily foresee a maturing of the profession in Asia and a strengthening local role for each country's association.

We will continue to encourage and support the development of the profession in countries where we can make a contribution. At present, these countries are Singapore, Hong Kong, Malaysia and Indonesia. The list is certain to expand in the next few years as the profession and its role grow in these and other countries.

12. CONCLUSION

"Never let the future disturb you. You will meet it, if you have to, with the same weapons of reason which today arm you against the present."

Marcus Aurelius

By this Address my aims are to encourage members to –

- be proud of our heritage and our achievements as a profession during our first century
- think more widely about our position in the professional community and our contribution to society
- generate opportunities for offering professional actuarial advice in non-traditional fields
- continue to support the recruitment of high calibre young people into the profession
- contribute to the globalisation of the profession, and
- encourage members either to be or to support our pioneers, our risk-takers and our leaders, in seeking to broaden and strengthen the profession.

I have also introduced the idea of a manifesto for the Institute in public affairs, building on public statements we made in 1997 on the ageing of the population and the financing of retirement incomes, health care and long term care.

If there had to be just one message from this address, it would be that the great opportunities to extend the frontier, both in our traditional fields and in other areas where we are not currently prominent, are there for all to see. The Institute will promote and follow and support, but it takes a special effort of initiative, risk-taking, faith and self-confidence by individual members to capitalise on these opportunities.

Recent events, including development of an IAA Strategic Plan and the appointment of a very capable Executive Director, give the Institute a greater ability than ever before to shape the next century (as was our theme in 1997) and to make financial sense of the future (the by-line of the London Institute), as we select and embark upon our pathways to the future.

References

- 1 Past Presidential Addresses (various).
- 2 IAA Strategic Plan: paper at IAA Centenary Convention 1997.
- 3 Institute of Actuaries of Australia Annual Reports 1992-1996.
- 4 Clare Bellis: The Future-Managers: Actuaries in Australia 1853–1997
- 5 Peter L Bernstein: Against the Gods – The Remarkable Story of Risk.
- 6 Morrisson and Crossland: An Introduction to the Mechanics of Machines.
- 7 Ries and Trout: The 22 Immutable Laws of Marketing

Appendix A

IAA Strategic Plan: Executive Summary

Extract from paper presented to the Centenary Convention, Gold Coast, 1997.

The actuarial profession operates in an increasingly dynamic environment. The industries we serve and emerging areas of opportunity are being reshaped by major forces of change – technology development, the ageing of the population, globalisation, industry convergence, legislative development, privatisation and so on. Many of these changes are very positive developments but they do affect (and some will reduce) traditional areas of actuarial endeavour.

Simultaneously, the profession is growing at a healthy rate.

In this dynamic environment, emerging areas of opportunity will be best exploited if we do what we do best contemplate and model the future and translate into present day implications, required strategies and action. The role of the Strategic Plan is to set out the framework under which we address our development into the future.

The Strategic Plan is structured around six key issues:

- Customer Focus of the Institute and the profession
- Market Penetration of existing markets – ie more of our services to existing customers
- Market Development (‘non traditional employment’) – ie applying our services and contribution in a wider range of industries and fields of endeavour

- ‘Product’ Development – where the actuary is the product, and skill development enhances our marketability
- Role of the Profession represented by the Institute and its Members
- Role of the Institute in extending our influence – there are significant public affairs where we have a valuable, and in some cases unique contribution to make.

Strategic plans are dynamic and evolving – this is Version 1 for the Institute. Discussion of this document and unresolved issues will be reflected in enhanced later versions. So too will debate of the Vision for the Institute and the profession, to complement the Mission developed by the Institute two years ago. Continued evolution of the forces shaping our operating environment will also require annual updates to the Strategic Plan.

The intended process to ensure that this Strategic Plan is relevant and representative for the profession is:

- Centenary Convention presentation and discussion by members
- Post Convention workshops
- Council adoption of Strategic Plan (incorporating feedback from Convention discussion and subsequent workshops)
- Confirmation of key themes and resourcing in Presidential Address.

All members of the profession are responsible for creating our future – the Strategic Plan is intended as a guide for us all to give direction to our shaping of the profession and shaping of the future.

Appendix B

The Institute of Actuaries of Australia

Mission Statement

(prepared in 1995)

The Institute represents the actuarial profession in Australia. It is committed to promoting the profession and creating, expanding and maintaining an environment where the skills of actuaries are widely used and valued.

The profession has expertise in life, general and health insurance, superannuation, investment and finance.

In these, and increasingly in other fields, actuaries produce practical solutions to problems involving the impact of uncertain events, often in the distant future, on assets, liabilities or revenue flows.

Actuaries’ uniqueness lies in their use of judgement and a combination of mathematical, statistical, demographic, economic, financial, analytical and modelling skills.

The Institute:

- provides education, encourages continuing professional development, promotes research and fosters the advancement of actuarial science;
- sets and enforces professional standards and a code of conduct which embody integrity, expertise and relevance;
- provides professional accreditation for the protection of the public; and
- provides advice on the development and implementation of public policy.

Appendix C

Extending the Frontier – An Interview

This Interview with Michael Clark is reproduced from the London Institute's The Actuary of June 1997

Michael Clark is an actuary who quit his job at Scottish Life to work as a project financier for Hambros Bank. He spoke to Zaki Khorasaneh about his new career.

Q What kind of work were you doing at Scottish Life?

A Having started my career at JA Carson & Partners in Johannesburg, I moved to Edinburgh and joined Scottish Life where I spent most of my time in the marketing department. My role covered product development, competitor analysis, and sales staff support as well as managerial responsibilities.

Q Why did you decide to seek employment in a field in which actuaries have not so far made so much of an impact?

A Actuaries are highly respected in their traditional fields, but I was always curious as to how we would succeed in areas where there is no perceived advantage associated with the professional qualification. The capital projects conferences run by the profession sparked my interest in project finance. The more I discovered, the more I realised that non-retail financial services offered me more exciting challenges.

Q How did you convince your current employer that you, an actuary, were the right person for the job?

A When seeking employment opportunities I chose to contact only those individuals who had at least some appreciation of actuarial skills. While the question is best answered by my employer, I would advise others to stress their ability to work within someone else's framework, show a willingness to learn and, most important, express their enthusiasm that can make up for a lack of experience.

Q What techniques have traditionally been used in project evaluation?

A The defining principle of project finance is that it is limited recourse. In other words the finance is not fully secured against the sponsors, contractors, or operators, but primarily by means of a charge over all future cashflows from the project. Discounted cashflow (DCF) techniques have therefore been the obvious basis of evaluation. In most instances a spreadsheet model is used to test the sensitivity of the internal rate of return (IRR) and debt coverage ratios to assumptions regarding inflation, cost overruns, delays and so on.

Q Most people involved in project evaluation are not actuaries. Has it been easy to convince them that actuarial techniques might add value?

A Much of the work is based on precedent and, while actuarial techniques can add value, there is greater scope for actuaries to apply the professionalism of the actuarial methodology to what are often sound evaluation techniques. For instance, checking sources of data, stating assumptions, checking for consistency, and interpreting results are actuarial skills which can be immediately applied with great effect. I believe that actuaries' unique grounding in the principles of compound interest gives them the ability to add real value.

Q Actuaries who work in traditional areas can consult professional guidance or ask experienced colleagues for advice when they are uncertain of what to do. How easy has it been to cope without these forms of support?

A This has been a greater issue than envisaged and I am grateful for Chris Lewin's advice on a number of technical and professional issues. As a general rule I try to imagine myself being called to account for my actions by some of the senior actuaries for whom I have worked, which usually provides clarity as to the right course of action.

Q How does your current work environment compare to what most actuaries are used to?

A Actuaries in this field often work in small multidisciplinary teams, on projects which involve co-ordinating inputs from many areas, producing proposals, undertaking contract negotiations, and obtaining board approval. In this dynamic environment one could be working on two or three such projects, requiring a fairly detailed understanding of such diverse areas as the operating risks for rolling stock, the basis of traffic projections, and the operation of the capital markets. This requires greater flexibility, speed of response, and initiative than in the traditional areas of actuarial employment. Most significantly, one is closer to the decision-making process on a regular basis at a much earlier stage in one's career.

Q Do you believe that many actuaries could compete in this and other potentially lucrative areas of finance currently dominated by other professions?

A Yes. There will always be individuals who will infiltrate these areas – for instance, there are actuaries in the cross-border leasing team at Hambros. As for consultancies with no experience, I think it would probably be necessary to bring in experienced individuals to work with actuaries so as to develop the all-important track record.

Appendix D

Consistency and Reliability of Outstanding Claims Provisions

A working party was established in 1997 by the Institute's General Insurance Practice Committee at the request of the Insurance and Superannuation Commission.

Terms of Reference

1. To determine the degree of consistency among insurers which is provided by current practice in the establishment of provisions for outstanding claims, and the reliability, over time, of the provisions so established.
2. To examine whether actuarial estimation of outstanding claims liabilities improves the consistency and reliability of outstanding claim provision of general insurers.
3. To assess whether material improvements in the levels of consistency and reliability of outstanding claims provisions are necessary, and the extent to which these could be achieved by:
 - (i) alterations to actuarial and/or accounting standards, and/or
 - (ii) further requirements on the general insurance industry.

Appendix E

1997 News Releases

Date Headline

28 February 1997 Medicare likely to collapse without strong private health insurance industry

18 March 1997 High demand for actuaries

7 April 1997 Key to Wallis is in detailed implementation

- 10 April 1997 Government must adopt age at entry lifetime community rating
- 27 April 1997 Wallis presents opportunity to strengthen investor protection through consistent capital adequacy
- 6 May 1997 Government urged to reconsider surcharge
- 13 May 1997 Budget Savings Measures Lack Long Term Focus
- 18 June 1997 IAA study tips new directions for friendly societies
- 13 August 1997 Dr Gregory Taylor wins actuarial Gold Medal
- 15 August 1997 Preparing For The Future - Actuarially Speaking
- 19 August 1997 Faster, smaller and smarter: the world by the year 2097
- 20 August 1997 Bob Glading named Actuary of the Year
- 20 August 1997 Institute of Actuaries puts health insurance options to Government