

# Annual Research Report 2002

# **CONTENTS**

			Page
1	LIST	OF ALL RESEARCH GROUPS AND WORKING PARTIES ACTIVE IN 2002	1
2	THE	ORGANISATION OF UK ACTUARIAL RESEARCH	5
	2.1	The Research Committees	
	2.2	Practice Boards	
	2.3	. 100041511 01411	
	2.4	Research Funding	
3	RES	EARCH GRANTS	8
	3.1	Research Grants Awarded in 2002	
	3.2	Previous Grants Awarded Between 1996 and 2001	
4	FAC	ULTY RESEARCH GROUPS	11
5	FINA	NCE AND INVESTMENT BOARD WORKING PARTIES	13
6	GEN	ERAL INSURANCE BOARD WORKING PARTIES	19
7	LIFE	BOARD WORKING PARTIES	26
8	PEN	SIONS BOARD WORKING PARTIES	30
9	soc	IAL POLICY BOARD WORKING PARTIES	32
10	UNIV	FRSITY RESEARCH CONTACTS	41

# 1 LIST OF ALL RESEARCH GROUPS AND WORKING PARTIES ACTIVE IN 2002

#### **FACULTY RESEARCH GROUPS**

Contact: David Hare (tel: 0131 245 0632, email: David\_Hare@standardlife.com)

# **On-going Working Parties**

Health and Care Research Group Investment Research Group Mortality Statistics Research Group Pensions Research Group

#### **Completed Working Parties**

Corporate diversity and the provision of financial services

#### FINANCE AND INVESTMENT BOARD WORKING PARTIES

Contact: Peter Dingwall (tel: 020 7632 2136, email: peterd@actuaries.org.uk)

#### **On-going Working Parties**

Applications of Defined Contribution Pension Scheme Strategy

Applications of Investment and Taxation

Autoregression and other artefacts in stochastic models

Modelling corporate bonds for ALM work

The future demands of equities

Value Measurement Steering Group

# **Completed Working Parties**

Advances in portfolio risk management

Applications of Derivatives

Commercial real estate indices

Measuring and monitoring the effectiveness of asset allocation in the life and pension industries

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Quantitative Techniques

Really Long term investment products

The effects of buybacks on investment trust discounts

Value measurement investment

# Discontinued

Applications of Equity Portfolio Management

Indexation

**Investment Management Selection** 

Risk mitigation for pension funds / SIP and under-funding

Sterling Corporate Bond Index

The role of hedge funds

#### **GENERAL INSURANCE BOARD WORKING PARTIES**

Contact: Richard Winter (tel: 020 7311 5848, email: richard.winter@kpmg.co.uk)

#### **On-going Working Parties**

Breaking the Reserving Cycle

Definition and interpretation of terminology in common use

Developing Relationships with Underwriters

Fair value accounting

IAS and the Effects of General Insurance Accounting

Investment strategies for general insurance companies

Marine Exposure to Natural Catastrophes

Operational Risk

Pricing and management of extreme events

Pricing, management and control of extreme events

Reliance on advice from other professionals

Reserving issues in Ireland

Translating Actuarialese

US professional indemnity

#### **Completed Working Parties**

APH Update and Issues

Aviation insurance

Cost of the compensation culture

**European Weather Derivatives** 

House insurance

Measuring Customer Value

Professional Indemnity and D&O - Pricing and Current Issues

Portfolio transfers

Update claims reserving model

Why insurers fail

# **Discontinued Working Parties**

Applying the new tax regulations in practice

Draft GN15 equivalent

Financial condition reporting

Political risk insurance

Reinsurance Commutations

State of the Art Pricing

Stochastic Reserving Methods

## LIFE BOARD WORKING PARTIES

Contact: Maria Singleton (tel: 020 7632 2173, email: marias@actuaries.org.uk)

#### **Planned**

Comparisons of With-Profits Business in Other Countries

Investment strategy for with-profits and non-profit long-term business

Mortality and Longevity Risk on Older Lives

Principles and Practices of Financial Management

#### **On-going Working Parties**

Life Office Taxation

Management of Closed Funds

**Product Reviews** 

Selection in the Annuity Market

Use of Derivatives in Life Assurance

### **Completed Working Parties**

Customer Value

Customers' Interests

Life Assurance Value Measurement

#### **PENSIONS BOARD WORKING PARTIES**

Contact: Georgina Warren (tel: 01865 268235, email: georginw@actuaries.org.uk)

# **Planned Working Parties**

Benefit design

#### **On-going Working Parties**

Retirement income reform

Risk benefits

Stochastic Pensions Valuations and the Assessment of Funding Risk

The management of the discontinuance of large defined benefit scheme

#### SOCIAL POLICY BOARD WORKING PARTIES

Contact: Martin Hewitt (tel: 020 7632 2185, email: martinh@actuaries.org.uk)

# **Planned Working Parties**

Equity Release Study Group

The interface between the public and private sectors in healthcare

The potential for insurance companies developing provisions in care rather than cash

# **On-going Working Parties**

Consumer risk

Environmental Research Group

Family Policy Research Group

Genetics and insurance - issues for social policy

Medical Advances

Pension Provision Taskforce

**Retirement Options** 

Size of Market

# **Discontinued Working Parties**

The role of actuaries in healthcare

#### HEALTH AND CARE COMMITTEE - Health Services Group (leader: John Coss)

#### **On-going Working Parties**

UK Vaccination Programme - Risk and Reward

#### **HEALTH AND CARE COMMITTEE – IP/CI** (leader: Sue Elliott)

# **Planned Working Parties**

IP - Trends

# **On-going Working Parties**

CI - Robustness of Definition

IP - Internal Risk Factors

IP - Trends by Cause (Terminations)

# HEALTH AND CARE COMMITTEE - Long Term Care Group (leader: lan Sissions)

# **On-going Working Parties**

Reserving Valuation

# **HEALTH AND CARE COMMITTEE – Multi-disciplinary Group**

# **Planned Working Parties**

Healthcare – Related Employee Benefits

# **HEALTH AND CARE COMMITTEE** – PMI Group (leader: Neil Hilary)

# **Planned Working Parties**

Health Inflation Index Pricing Small Group PMI

# **On-going Working Parties**

Health Data

# 2 THE ORGANISATION OF UK ACTUARIAL RESEARCH

This section describes how research is currently organised within the UK actuarial profession. In addition to the research described below, the Continuous Mortality Investigation Bureau conducts and publishes research in respect of its work on the preparation of standard mortality and morbidity tables. Further information about any aspect of actuarial research can be obtained from the Secretary to the Research Steering Committee, at Napier House.

# 2.1 The Research Committees

#### 2.1.1 Research Steering Committee

The Research Steering Committee co-ordinates research activity on behalf of the Faculty and Institute, reporting through the ECPD Board. Key roles of the Research Steering Committee are:

- to encourage and commission further research with an emphasis on research of a practical nature that is expected to be of value to a significant proportion of the profession;
- to provide practical support for researchers, including advice on publication;
- to assist researchers and others by ensuring an adequate exchange of information between those involved in research activities and/or those interested in the results of such research;
- to co-ordinate research and to try to avoid duplication of effort and to highlight gaps;
- to ensure that the resources available for research are used effectively;
- to liaise with overseas actuarial societies, professional bodies, research funding organisations and others on research matters;
- to administer and monitor funding through the profession's annual research grants awards programme and the Memorial Education and Research Fund.

#### 2.1.2 The Faculty Research Committee

The Faculty Research Committee also reports to the ECPD Board as well as to the Faculty Council and oversees the operation of a number of standing Research Groups based in Scotland. The Committee sets the broad terms of reference for these groups and monitors their progress and can form further groups. The Research Groups provide a vehicle to allow individual members to participate in research projects which they could not undertake individually. Each Group aims to produce work which can eventually be published for discussion at a Faculty Sessional meeting, Student Society Meeting or other forum. Participation in these Groups is a valuable part of the continuing education of members, particularly younger Fellows. Further details of these Groups are given in Section 4.

#### 2.2 Practice Boards

Identifying potential areas of research and instigating research activity is primarily the responsibility of the Practice Boards. Currently those responsible for research by subject area are:

- Finance and Investment Board;
- General Insurance Research Organising Committee (GIRO);
- Life Research Committee;
- Pensions Technical Support and Research Committee;
- Social Policy Board.

#### **Voluntary Support**

Research working parties established by the Practice Boards have historically relied on the voluntary efforts of individual members of the profession. In some cases this means that there is considerable support from the member's firm whereas in other cases the work is carried out in the member's own time. In either case, the role of volunteers is vital to both the organisation of research and in its undertaking.

# 2.3 Research Staff

Staff support for the profession's research activities is provided by the Chief Education Executive's (CEE) Department and through the Board secretaries. During the last six years more staff time has been allocated to research in recognition of its growing importance for the profession.

The role of the Secretary to the Research Steering Committee is to assist the Committee in the formulation of an effective policy for the promotion, co-ordination and promulgation of research and to help to ensure that the policy is put into practice. In addition the Secretary oversees the annual research grants programme, the maintenance of the on-line research database and the production of an annual research report. This work is supported by a 40% time allocation from one of the CEE Department's Administrators.

Secretaries to the Practice Boards' Research Committees assist these committees to implement their research programmes and also work with the Secretary to the Research Steering Committee to co-ordinate research activities. Contact details are included in the relevant sections of this report.

Some of the time of the Staff Actuaries is also allocated to the co-ordination of research activities. Staff members do not undertake research in this role.

This structure has been devised to provide links with the range of activities carried out, both within the Practice Boards and across the profession through the ECPD Board.

# 2.4 Research Funding

Funding for research within the UK actuarial profession is currently provided through the annual research grants programme and the Memorial Education and Research Fund (MERF). From 2002 the profession has been collaborating with the Engineering and Physical Sciences Research Council (EPSRC) on grants under their programme for financial mathematics.

There are currently two other sources of funding for research. The Memorial Education and Research Fund, which is an amalgamation of various endowments and other grants, has a capital value of around £110,000. Details of awards made from the Memorial Educational and Research Fund since 1998 are given in Section 3.

Since 1996 the Education and CPD Board, with the agreement of FIMC, has allocated part of its annual budget to the funding of actuarial research. The responsibility for recommending applications for funding of projects to the ECPD Board lies with the Research Steering Committee, which administers the grants programme on behalf of both the Faculty and Institute of Actuaries.

The principal criteria applied by the Research Steering Committee in awarding grants are:

- the research is of practical relevance and likely to be of value to a significant proportion of the profession;
- the proposal provides value for money;
- the research results in a paper or other deliverable that will be promulgated widely.

It is the aim of the Research Steering Committee to encourage Practice Boards to sponsor applications for funds in order to ensure that a proportion of research is driven directly by the needs of practising actuaries. The Committee is keen to encourage research in the application of existing actuarial techniques to new areas as well as the development of new ideas in mainstream actuarial work.

Funds totalling approximately £355,000 have been awarded since 1996, enabling the profession to support 44 small short-term projects of actuarial relevance. Details of the projects supported are set out in Section 3. The vast majority of the funding has been directed at universities and those engaged primarily in more theoretical work. In its policy for awarding research grants the Research Steering Committee aims to encourage an effective bridge between the development of theoretical techniques and their application to solve practical problems.

A similar level of funds is available for awards during the 2003/2004 Session although some of the funding has already been committed to the collaboration with the EPSRC.

Further information can be obtained from the Secretary to the Research Steering Committee, at Napier House.

# 3 RESEARCH GRANTS

# 3.1 Research Grants Awarded In 2002

2002		
Project title	Applicant(s)	Award (£)
Coherent risk measures: context and applications	Evangelia Desli	9,400
Evaluating the financing of long term care systems in other countries and applying the lessons to the UK market for long term care	Leslie Mayhew	13,000
Ex-post analysis of reserving decisions in U.K. general insurance businesses	Christopher O'Brien	6,880
The estimation of risks of investment of company's pension fund in it's own securities	Semyen Spivak	10,200
Consumer Risk	Nick Chater	20,000

# **Memorial Education and Research Fund (MERF)**

Some small awards were made from this fund.

# 3.2 Previous Grants Awarded Between 1996 and 2001

The following tables summarise the projects which have received funding from the Faculty and Institute since the establishment of the research grants programme in 1996.

2001		
Project title	Applicant(s)	Award (£)
Appraisal of the methodology and accuracy of commercial property indices	Prof P M Booth	11,500
Risk equalisation in Irish private health insurance	Mr G Colgan	5,000
New approaches to annuitisation: Optimal asset allocation strategies in defined contribution pensions post-retirement and comparisons with investment-linked annuities	Prof S Haberman	7,500
Incorporating risk in the analysis of PFI/PPP projects	Mr W Rodney	12,500
Compilation of a database of UK gilt prices	Prof A D Wilkie	4,350

2000		
Project title	Applicant(s)	Award (£)
Bayesian networks for classification in insurance	Dr R Cowell	11,000
Modelling risk by postcode area in general insurance: further research including the consideration of extreme events	Dr M J Dixon, Prof R Verrall	11,500
Penalised goodness of fit functions for inference	Prof D Hand, Ms V Vinciotti	6,500
Stochastic pension valuations and the assessment of the	Prof S Haberman	7,440

funding risk		
Interest rate modelling using genetic programming	Dr G Kennedy	10,000
Asset-liability matching in complete and incomplete market	Dr R K Parchure	5,000
situations		
Reserving for Guaranteed Annuity Options: A Stochastic	Miss S Yang,	8,180
Simulation Approach	Prof H Waters, Prof D Wilkie	
General Insurance Working Parties	General Insurance Board	1,000

1999		
Project title	Applicant(s)	Award (£)
Regulation of Pension Provision in the European Union	D Cooper	11,400
Rating by Postcode Area in General Insurance	M J Dixon, R Verrall	11,400
An assessment of the suitability of the MFR using deterministic and stochastic scenario testing techniques	I D Wright, S Haberman, Z Khorasanee	11,400
Financial Companies in the Stock Market, 1825-1962: A Quantitative Study	C Green, P Maggioni	4,000
An integrated approach to aspects of the Wilkie Model	A D Wilkie, M Omram, A S Macdonald	10,000
Charting the Frontier Between Actuarial Science and Mathematical Finance	S Jacka, J E Kennedy, H P Wynn	9,202
General Insurance Working Parties	General Insurance Board	2,000

1998		
Project title	Applicant(s)	Award (£)
Frailty models and the age and time dynamics of mortality	S Haberman	9,000
An investigation of the solvency risks of insurers with health insurance	R G Chadburn, B Rickayzen, S	9,000
liabilities specifically PHI using a stochastic simulation approach	Haberman	
Development of market valuation techniques for pension funds	A J Cairns	9,000
Actuarial Applications of Econometric Tools	S F Whelan	4,000
General Insurance Working Parties	General Insurance Board	1,000

1997		
Project Title	Applicant(s)	Award (£)
Underwriting and Alzheimer's Disease	A S Macdonald, H R Waters	10,000
Designing a practical model to examine Long-Term costs in Great Britain	B Rickayzen, S Haberman, P M Booth	8,000
Applying actuarial techniques to the valuation of implicit options in freehold property	P M Booth, R Gerrard	8,500
Testing the Sensitivity of Model Life office simulation results to variations in asset model structure	R G Chadburn, P P Huber	7,000
Improvements in mortality at higher ages: prospects and financial implications	R G Thomas, J Presnell, N G Rhodes	5,000
To investigate the analysis of claims on an individual claim basis, using Bayesian methods	R Verrall	5,500
The Construction of International Bond Yield Indices	A J G Cairns	6,000

1996		
Project title	Applicant(s)	Award (£)
Investment strategy for defined contribution pension schemes	Z Khorasanee	10,000
Optimal funding of defined benefit pension schemes	S Haberman	10,000

1996		
Project title	Applicant(s)	Award (£)
Non-linear time series models for actuarial use	R G Thomas, H Tong	7,480
Statistical analysis of individual offices' phi data and some financial consequences of these analyses	H R Waters, A A Korabinski, I D Currie	7,000
Analysis of credit and default risk on bank lending and mortgages	P M Booth, R Verrall, I Allan	7,000
Investigation of models for the term structure of interest rates	A J G Cairns	6,000
Reducing the resilience reserve of a life office	G Kennedy, M Kerr	3,000

# 4 FACULTY RESEARCH GROUPS

There are several standing research groups within the Faculty Research Committee.

If you are interested in participating in one of these research groups, or have another topic to suggest, please contact the Chairman of the Faculty Research Committee; David Hare (tel: 0131 245 0632, e-mail: <a href="mailto:David Hare@standardlife.com">David Hare@standardlife.com</a>).

#### Health and Care Research Group - On-going

#### **Objectives**

Aim of project: To identify the balance between the provision of public and private healthcare in Europe and throughout the rest of the world.

Terms of reference: Research health and care areas including health insurance, income protection, critical illness and long term care insurance.

#### **Expected outcome**

A short research paper for presentation at a Faculty sessional meeting.

# Progress to date

The group has been doing a survey of academic work in the field of Health Care.

#### Membership

Chairman: Smart, Fraser (fsmart@btinternet.com)

Other members: McCarthy, Rod; Jack, Martin; Paton, Brian; Walker, Alistair; Meldrum, Neil

#### Investment Research Group - On-going

#### **Objectives**

Aim of project: Investigating the effects of buybacks on investment trust discounts.

Terms of reference: To summarize the various behavioral finance theories, outline their potential practical applications and their relevance to actuaries working in Investment.

# **Expected outcome**

A paper for the Investment Conference, July 2002. Paper for Publication.

#### Progress to date

Paper presented to the Investment Conference 2002.

# Paper can be found at

http://www.actuaries.org.uk/files/pdf/library/proceedings/fin\_inv/2002/Moretta.pdf

#### Membership

Chairman: Moretta, Brian (brian@scottish-value.co.uk)

Other members: Adams, Andy; Bowie, David; Cresswell, Phil; Devlin, Frank; Macpherson,

Roddy

# Mortality Statistics Research Group - On-going

# **Objectives**

Aim of project: The group have decided not to continue their planned Review of Health Economics due to a lack of knowledge in this area amongst the revised membership

Terms of reference: Instead it has been agreed that there is a considerable amount of research needed to aid the understanding of mortality trends. The initial work in this area has involved investigating existing areas of research by the profession in this field to ensure that the group's work is complementary.

#### **Expected outcome**

As a result the Group are involved in two separate initiatives - some members are forming part of a wider group aiming to produce a Faculty/Institute sessional paper on Mortality in 2004.

#### Progress to date

A paper on comparative mortality trends was discussed at International Congress and has been published in BAJ. The group has withdrawn its paper on lapse rates from BAJ, as it has lost its topicality during the four years of the refereeing process.

#### Membership

Chairman: Miller, Keith (a.s.macdonald@ma.hw.ac.uk)

Other members: Cairns, Andrew; Gwilt, Philip; Miller, Keith; Pollock, John

#### Pensions Research Group - On-going

#### **Objectives**

Terms of reference: This group is considering various areas of potential research; including the ambition of stripping away the mumbo-jumbo that exists in the pensions arena.

#### Progress to date

Paper presented at Sessional Meeting in February 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/sessional/fac\_sm1102\_notice.pdf

#### Membership

Chairman: Fleming, Donald

Other members: Bell, Colin; Gourlay, Keith; Taylor, Ronnie

# Corporate diversity and the provision of financial services - Completed 2002

#### **Expected outcome**

Paper to be presented to the Faculty, Feb 2002 and to the Institute, May 2002.

#### Progress to date

Paper presented.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/sessional/sm0205.pdf

# Membership

Chairman: Hare, David (David\_Hare@standardlife.com)

Other members: Guijarro, Philippe

# 5 FINANCE AND INVESTMENT BOARD WORKING PARTIES

If you are interested in participating in one of the on-going working parties, or have another topic to suggest, please contact the Secretary to the Finance and Investment Board - Peter Dingwall (tel: 020 7632 2136, e-mail: peterd@actuaries.org.uk).

#### Applications of Defined Contribution Pension Scheme Strategy - On-going

No update on the 2001 information has been received for the 2002 Report.

A paper 'Investment strategies for Defined Contribution Pension Schemes' presented at Investment Conference 1998

A paper 'Defined Contribution Pension Schemes' presented at Investment Conference 1999 **Membership** 

Chairman: van Bezooyen, Jeroen

Other members: Exley, Jon; Mehta, Shyam; Smith, Andrew

#### Applications of Investment and Taxation - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: To investigate applications of investment and taxation.

#### **Expected outcome**

A paper 'Taxation - allowing for tax in modern statistical models' to be presented at the Finance and Investment Conference 2001

#### Progress to date

A paper 'Taxation and Investment' was presented at the Investment Conference, September 1998.A further paper, 'Taxation effects on Cost of Capital' was presented at the 2000 Investment Conference.

#### Membership

Chairman: Exley, Jon (jon.exley@uk.wmmercer.com)

Other members: Armitage, Seth; van Bezooyen, Jeroen; Mehta, Shyam; Smith, Andrew;

Wilson, Robert

#### Autoregression and other artefacts in stochastic models - On-going

#### Objectives

Terms of reference: Use actuarial techniques to prove that even a random walk is likely to show mean reversion as defined by actuaries. Demonstrate alternative calibration tools which avoid this bias.

#### Membership

Chairman: Smith, Andrew

Other members: Exley, John; Wright, Tom

#### Modeling corporate bonds for ALM work - On-going

#### **Objectives**

Terms of reference: What models are currently in use? Is it possible to model corporate bonds stochastically without introducing arbitrage? How big are tax and liquidity effects?

#### Membership

Chairman: Exley, John

Other members: Smith, Andrew

#### The future demands of equities - On Going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: To produce a paper from a UK view but taking into account the global perspective which addresses: where demand has come from in the past and why; where the supply has come from in the past and why; future demand from institutions e.g.pension funds, life offices; future demand for individuals.

# Progress to date

Draft abstract submitted.

#### Membership

Chairman: Mcelvanney, Robert (robert.i.mcelvanney@uk.pwcglobal.com) Other members: Delvin, Peter; Hurt, Andy; McLean, Derek; Mollan, Marcus

#### Value Measurement Steering Group - On-going

#### **Objectives**

Terms of reference: To explore and make recommendations upon the opportunities for the use of Value Based Methods within the actuarial profession and for further investigation. To establish, oversee and co-ordinate Practice Board Working parties and evaluate their work.

#### **Expected outcome**

Some sort of 'understanding' paper explaining terminology and what actuaries do differently. Write-ups of one or more field studies looking at problems and why methodologies achieve different outcomes. A discussion paper including critiques and criticisms of what actuaries/others do. Suggestions as to areas of further work/changes to the Education syllabus and appropriate CPD. Interim report to the Finance and Investment Board by August 2001.

# Progress to date

Initial survey undertaken of Value Approaches. Practice Boards asked to undertake research into the way EVA-type Value Measurement Methods might be used within specific practice areas. SIAS paper, 'Do actuaries know how to measure value?' February 2001.

#### Membership

Chairman: McLean, Colin (colin@scottish-value.co.uk)

Other members: Dixon, Sally; Massey, Chris; Pemberton, John; Pike, Martin; Sheldon, Tim;

Silverman, Tony; Waites, Chris; Wilson, Colin

# Advances in portfolio risk management - Completed 2002

# **Objectives**

Terms of reference: To build on the work of the 2000 working party on 'Predicted Tracking Errors: Fact or Fantasy?'

#### Progress to date

Abstract submitted

# Paper can be found at:

http://www.actuaries.org.uk/files/pdf/fin\_inv\_2002/Brooks.pdf

#### Membership

Chairman: Brooks, Mike (mike.brooks@bailliegifford.com)
Other members: Beukes, Leon; Gardner, Dan; Hibbert, John

#### **Applications of Derivatives** - Completed 2002

#### Progress to date

Paper 'Applications of Derivatives in Life Insurance' presented at Investment Conference 2000 Paper can be found at:

http://www.actuaries.org.uk/files/pdf/library/proceedings/investment/2000conf/appderivpap.pdf **Membership** 

Chairman: Wilson, Colin

Other members: Cairns, Andrew: Derbyshire, Gareth: Jelicic, Dan; Kemp, Malcolm: Ludvik,

Peter; McLean, Derek; O'Sullivan, Nigel; Race, Patrick; Sandford, Chris

#### Commercial real estate indices - Completed 2002

#### **Objectives**

Terms of reference: Analyse published UK real estate indices, of the problems in their construction and characteristics of real estates data.

#### Progress to date

Abstract submitted

# Paper can be found at:

http://www.actuaries.org.uk/files/pdf/fin\_inv\_2002/Booth.pdf

#### Membership

Chairman: Booth, Philip (p.booth@city.ac.uk)

Other members: Marcato, Gian Luca; Matysiak, George; Cumberworth, Martin; Blundell, Gerald;

Morrell, Guy; Pugh, Russell; Ashurst, Robert; Brown, Stephen; Waites, Chris

# Measuring and monitoring the effectiveness of asset allocation in the life and pension industries - Completed 2002

#### **Objectives**

Terms of reference: 1)Compare/contrast the approaches to asset allocation decisions in the life and pension industries. 2)Document the issues regarding measuring and monitoring the effectiveness of asset allocation advice. 3)Suggest possible ways in which the effectiveness of asset allocation can be monitored.

## Progress to date

Abstract submitted in the form of the TORs.

# Paper can be found at:

http://www.actuaries.org.uk/files/pdf/library/proceedings/fin\_inv/2002/Slater.pdf

#### Membership

Chairman: Slater, Andrew (aslater@seic.com)

Other members: Riddaway, Bobby; Gillespie, Craig; Burke, Aidan; Bowie, David; Howie,

Robert; Yakoubov, Yakoub; Wilson, Colin

# **Quantitative Techniques** - Completed 2002

#### **Objectives**

Terms of reference: To investigate the quantitative techniques used in investment today, with the aim of looking behind the smokescreens of complicated mathematics and jargon to assess whether the methods are theoretically sound and appropriately applied.

# Progress to date

A preliminary paper on factor modeling techniques was presented to the Investment Conference, June 1996. A paper entitled "Actuaries take note: the yield curve is not flat", was presented to the Investment Conference, June 1997. A paper "Strategic Currency Hedging" was presented to the Investment Conference, September 1998. Three papers, 'Demystifying Active Quant', 'Relative importance of Industry and country influences' and 'Market neutral investing' were presented at the 2000 Investment Conference.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/library/proceedings/investment/2000conf/demystifppap.pdf http://www.actuaries.org.uk/files/pdf/library/proceedings/investment/2000conf/marketneutpap.pdf http://www.actuaries.org.uk/files/pdf/library/proceedings/investment/2000conf/relimportpap.pdf **Membership** 

Chairman: Jelicic, Dan (dan.jelicic@abnamro.com)

Other members: Brooks, Mike; Griffiths, Julie; Holt, Stephen; Jagger, Simon; Kemp, Malcolm; Lavin, Paul; Munro, Joanna; Sandford, Chris; Wilson, Colin

#### Really long term investment products - Completed 2002

#### Objectives

Terms of reference: To review the arguments why DB pension funds might be considered long term (long duration liabilities) and why in practice they may not be (trustees and employers manage them on a short or medium term basis, corporate activity means they change nature and form regularly, accounting measures such as FRS17/IAS19 mean shareholders see short term volatility): a)Are DB pensions long term investments? b)Does the investment term affect strategy decisions? c)A review of the rationale and evidence for DC life styling strategies.

#### Progress to date

Draft abstract submitted.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/fin\_inv\_2002/Howie.pdf

#### Membership

Chairman: Howie, Robert (robert.howie@uk.wmmercer.com)

#### The effects of buybacks on investment trust discounts - Completed 2002

#### Objectives

Terms of reference: To describe the buybacks made over the study period and try to assess the circumstances where this has lead to sustainable discount reductions and to investigate the effect on discount volatility.

#### Progress to date

Abstract submitted

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/library/proceedings/fin\_inv/2002/Moretta.pdf

#### Membership

Chairman: Moretta, Brian (brian@scottish-value.co.uk) Other members: Adams, Andy; MacPherson, Roddy

#### Value measurement investment - Completed 2002

#### **Objectives**

Terms of reference: To investigate common measures of value used outside life assurance, and analyse the potential for improving these by applying actuarial principles and risk concepts, illustrating this with worked examples.

#### Progress to date

Draft abstract submitted

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/fin inv 2002/McLean.pdf

# Membership

Chairman: McLean, Colin (colin@scottish-value.co.uk)

Other members: Board, Jeremy; Keane, Stephen; Louw, Wynand; Rodriguez, Richard; Waites,

Chris; White, Martin

# **Applications of Equity Portfolio Management** - Discontinued 2002 **Membership**

Chairman: Richardson, Mark (m\_richardson@btinternet.com)

Other members: Ahluwalia, Manraj

#### Indexation - Discontinued 2002

# Membership

Chairman: Hitchin, Chris (chris.hitchen@railpeninvestments.co.uk)

Other members: Charters, Graeme; Holt, Stephen; Jagger, Simon; McLean, Derek; Wilcock,

Alan

# **Investment Management Selection** - Discontinued 2002

#### Progress to date

Paper 'Can retail investors exploit techniques used by Investment Consultants to financial institutions in the selection of Investment Managers?' at Investment Conference 2000.

#### Membership

Chairman: Charters, Graeme (g.charters@ukonline.co.uk) Other members: Cutler, Hugh; Rains, Peter; Riddaway, Bobby

Risk mitigation for pension funds / SIP and under-funding - Discontinued 2002

#### **Objectives**

Terms of reference: 1) Within the context of investment strategies for institutional funds, to establish a framework in which to analyse financial strength and changes in financial strength across multiple stakeholders. 2) Provide some insights into how risks and returns can be (re)collateralised so that unrewarded risks are mitigated with respect to each stakeholder.

#### Progress to date

Draft abstract submitted.

#### Membership

Chairman: Speed, Cliff (cliff.speed@bacon-woodrow.com)

Sterling Corporate Bond Index - Discontinued 2002

#### **Objectives**

Terms of reference: To review Indices relative to MFR and FRED 20 needs with a view to presenting a short report.

#### **Expected outcome**

Agreement with Index providers as to the creation of an appropriate specification 'approved' Sterling Corporate Bond Index.

# Progress to date

The specification has been agreed, potential providers have been identified and negotiations are underway.

#### Membership

Chairman: Rains, Peter (peter.rains@morleyfm.com)

Other members: Ayers, Ken; Cumberworth, Martin; Nowell, Peter; Tomlinson, Lindsay

The role of hedge funds - Discontinued 2002

#### Objectives

Terms of reference: To consider the practicalities of integrating hedge funds with traditional institutional investment approaches.

# **Progress to date** Abstract awaited.

# Membership

Chairman: Jung, Graham (Graham.Jung@gs.com)
Other members: Gillespie, Craig; Holt, Stephen; Howie, Robert; Lawrence, Adrian; Wales, Paul

# 6 GENERAL INSURANCE BOARD WORKING PARTIES

If you are interested in participating in one of the on-going working parties, or have another topic to suggest, please contact the Secretary to the General Insurance Research Organising Committee (GIRO): Chairman - Richard Winter (tel: 020 7311 5848, e-mail: richard.winter@kpmg.co.uk).

# Breaking the Reserving Cycle - On-going Membership

Chairman: Line, Nicholas (nicholas.line@markelintl.com)

#### Definition and interpretation of terminology in common use - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: Identifying situations where the same words are used to mean different things. How do actuaries justify the terms that they use. What problems can this cause in practice. Should the profession develop clear definitions, or is it up to individual actuaries to explain what they mean better? What insight can we get from other countries.

#### Membership

Chairman: Cresswell, Catherine (catherine.cresswell@eu.watsonwyatt.com)

#### Developing Relationships with Underwriters - On-going

#### **ObjectiveS**

Aim of project: To produce paper for GIRO

Terms of reference: To consider the current relationships between actuaries and underwriters.

To explore reasons why these are important.

To suggest actions actuaries can take to improve these relationships.

#### **Expected outcome**

Paper for GIRO 2003 meeting

#### Progress to date

Four meetings have been held, a structure has been agreed and a questionnaire devised for distribution to both actuaries and underwriters during April.

# Membership

Chairman: Wrenn, Stuart (Stuartwrenn@hotmail.com)

Other members: Couper, Andrew; Harris, Tom; Hart, David; Grealy, Patrick; Ley, Susan

#### Fair value accounting - On-going

#### **Objectives**

Aim of project: To consider implications and implementation of IASC proposals for Insurance Accounting as it relates to General Insurance.

Terms of reference: Increase awareness of the IASB's proposals within the actuarial profession. Consider how proposals will effect the GI accounts. Suggest how proposals could be implemented. Consider how actuaries can contribute to preparing accounts. Give practical examples of accounts.

#### **Expected outcome**

Paper for GIRO 2002.

#### Progress to date

Paper presented to GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Cresswell.pdf

Membership

Chairman: Clark, Peter (peter.k.clark@uk.pwcglobal.com)

Other members: Brockman, Michael; Cresswell, Catherine; Hinton, Peter; Monk, Richard;

Nicholson, Erica; Silverman, Tony; Storey, Liam; Wells, Gary; White, Martin

IAS and the Effects of General Insurance Accounting - On-going

Membership

Chairman: White, Martin (martin.g.white@equitas.co.uk)

Investment strategies for general insurance companies - On-going

#### **Objectives**

Terms of reference: Is there an optimal theoretical strategy? What do companies do in practice? What are the reasons for the differences?

Membership

Chairman: Eabry, Michael (michael.d.eabry@uk.pwcglobal.com)

Marine Exposure to Natural Catastrophes - On-going

**Expected outcome** 

Paper for GISG 2003

Membership

Chairman: Pettengell, Craig (Cpettengell@platinumre.com)

Operational risk - On-going

#### **Objectives**

Aim of project: To develop a more detailed understanding of operational risk and the actuarial role (particularly as it applies to general insurance companies)

Terms of reference: We believe that Operational Risk is capable of the same rigorous treatment (quantitative and qualitative) as other forms of risk (ref Bank of International Settlements July 2002) and with this in mind we aim to advance the depth of thinking and provide an illustrative structure that companies could use. In particular we will: 1) Complete a case study: to explore data issues and requirements. To find an example data set. To explore methods listed, their applicability and the implications and limitations of any results. To set out a typical report (headings, content and caveats). To consider lesson learned and linkages between Operational and other forms of risk. 2) Continue developing our understanding of related work: to map out approaches taken in other financial services organizations to consider what other professions operate in this area, their skills and how we can work together.

#### **Expected outcome**

A report (paper) for GIRO 2003, and potential for SIAS/Institute thereafter

# Progress to date

Contact list and interview programme developed; initial contacts made; causal modeling investigated; case study started; soft issues discussed; general methodology discussed; outline report discussed.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Orr.pdf

Membership

Chairman: Tripp, Micheal (michael.tripp@eu.watsonwyatt.com)

#### Pricing and management of extreme events - On-going

#### **Expected outcome**

The working party expects to put on one or two workshops, expanding on certain parts of their paper.

#### Membership

Chairman: Sanders, David

#### Pricing, management and control of extreme events - On-going

#### **Objectives**

Terms of reference: Events and realistic disaster scenarios. Extreme Value Theory (and applications). Catastrophe Models. Pricing/Reserve assessment/Management.

#### Progress to date

Paper presented to GIRO 2002. On-going in 2003, looking at financial extreme events.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Sanders.pdf

#### Membership

Chairman: Sanders, David (david.sanders@millimanuk.com)

#### Reliance on advice from other professionals - On-going

#### **Objectives**

Terms of reference: Draft guidance for consideration as advisory note.

#### Progress to date

Presentation to GIRO 2002; presentation to Professional Standards and Guidance Committee of the General Insurance Board on 2 April 2003.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Newman.pdf

#### Membership

Chairman: Newman, Andrew (andrew.newman@aleagroup.com)

# Reserving issues in Ireland - On-going

# Membership

Chairman: To be confirmed

#### Translating Actuarialese - On-going

#### Membership

Chairman: Cresswell, Catherine (catherine.cresswell@eu.watsonwyatt.com)

# US professional indemnity - On-going

#### Membership

Chairman: McPherson, James (james.mcpherson@uk.pwcglobal.com)

#### APH Update and Issues - Completed 2002

# Progress to date

Paper presented at GIRO 2001

#### Paper can be found at:

http://www.actuaries.org.uk/library/proceedings/gen\_ins/2001gic/Michaels.pdf

#### Membership

Chairman: Slater, David (david.slater@eu.watsonwyatt.com)

Other members: Kirk, Jerome; Macnair, Andrew; Sanders, David; Sheaf, Simon; White,

Martin

Aviation insurance - Completed 2002

# **Objectives**

Terms of reference: Update on market since the 2000 paper. What does the future of the market look like. What role should actuaries be playing in molding the market.

#### Progress to date

Paper presented to GIRO 2002

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Harding.pdf

Membership

Chairman: Harding, Justyn (Justyn.Harding@resolutemanagement.com)

#### Cost of the compensation culture - Completed 2002

#### **Objectives**

Terms of reference: Review the 'macro' costs of compensation in the UK. Current practice for reserving/pricing for different types of insured compensation. Compare internationally relative levels of different types of compensation. Survey the public's attitude to compensation and consider mutually beneficial underwriting approaches that insurers might adopt. Review the relative levels of different types of compensation in the UK.

#### Progress to date

Paper presented to GIRO 2002

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Lowe.pdf

Membership

Chairman: Lowe, Julian (julianlowe@norwich-union.co.uk)

## European Weather Derivatives - Completed 2002

# **Objectives**

Terms of reference: Why is there more of a market in the US than Europe? Could insurance companies use them to diversify risk? Identify potential UK markets (size, industry etc.) What underlying indicators could be used? Differences between the UK and US markets. El Nino: effect on pricing methods and data.

#### **Expected outcome**

Aim to present a paper in 2002 building on the work completed in 2001 on weather derivatives.

#### Progress to date

Paper presented at GIRO 2002.

# Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Ross.pdf

#### Membership

Chairman: Ross, Nick (rossn@norwich-union.co.uk)

Other members: Bain, Derek; Bains, Talbir; Eabry, Michael; Eagle, Matthew; Johal, Baldeep;

Mackie, Fergus; Perry, Geoff; Tippin, Philip; Walker, Stephen

#### House insurance - Completed 2002

#### **Objectives**

Terms of reference: Recent experience, in particular claims inflation. Changing weather patterns and flood experience. Has the increasing consumption of recent years led to systematic under insurance? The likely effects of changing economic circumstances. Building a reserving index that models daily claims experience at postcode level using published/proprietary weather information.

#### Progress to date

Obtained data on household claim costs/numbers by occurrence month and peril and summarised trends. Obtained Met Office daily weather data by locaiton. Obtained individual claims data by postcode and peril for occurrence dates back to 1997. Merged daily cliams and weather data for gust speed on day vs storm claims. Paper presented to GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Cowley.pdf

Membership

Chairman: Cowley, Rob (cowler1@norwich-union.co.uk)

#### Measuring Customer Value - Completed 2002

#### **Objectives**

Terms of reference: Identify organizations that already measure customer value. See how they do it (and how successful they are). See how they use those values. See what lessons they have learned. Identify organizations that have chosen not to measure customer value and why they have followed that course.

#### Progress to date

Paper presented at GIRO 2001 and GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Brown.pdf

#### Membership

Chairman: Brown, David

Other members: Bijl, Peter; Branch, Vincent; Hill, Stephen; Hillon, James; Michaels, Darren;

Van Delm, Rudi; Newton, Derek

# Professional Indemnity and D&O - Pricing and Current Issues - Completed 2002 Progress to date

Presented to GIRO 2001 Conference and 2002 Workshop

#### Paper can be found at:

No Paper

#### Membership

Chairman: Johnson, Henry (henry.johnson@lloyds.com)

Other members: Johal, Baldeep; Lyons, Graham; McConnell, Bill; McPherson, James; Moss,

Gaynore; Shepley, Stuart; Slater, David; Waite, Jez

#### Portfolio transfers - Completed 2002

#### **Objectives**

Terms of reference: Reasons for buying and selling portfolios. Loss portfolios v premium portfolios. Pricing aspects: risk premium, discount, risk margin. Policyholder/regulatory issues. Legal requirements. Reinsurance considerations. Market data frequency typical examples. Accounting issues, including fair value accounting. US v UK differences. Contrast between portfolio transfer and outward reinsurance. Contrast between portfolio transfer and commutation.

## **Expected outcome**

Intend to cover the topics agreed and produce a paper for GIRO, in time for publication in the 2002 GIRO book.

#### Progress to date

Paper presented to GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Macnair.pdf

#### Membership

Chairman: MacNair, Andrew (andy.macnair@fsa.gov.uk)

Other members: Bruce, Neil Harrar, Sukie; Perry, Geoff; Quane, Alessa; Russell, Cheryl;

Townley, Lawrence

#### Update claims reserving model - Completed 2002

#### **Objectives**

Terms of reference: Review and describe new methods. Present practical chain ladder variations. Provision of ranges using stochastic or other methods. Provide working guide to the execution of reserving. APH reserving methodology. Consider provision of soft-ware versions of basic methods.

#### Progress to date

Paper presented to GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Lyons.pdf

#### Membership

Chairman: Lyons, Graham (lyonsg@towers.com)

#### Why insurers fail - Completed 2002

#### **Objectives**

Aim of project: To identify the key reasons behind the failure of general insurance companies. Terms of reference: To summarize previous research on the subject, investigate individual case studies and identify the lessons which can be learnt from past failures. The paper will also consider the role the regulator plays in creating the environment that leads to failure and provide an insight into how rating agencies grade individual insurer's claims paying ability.

#### **Expected outcome**

A paper that will provide insight into why insurers have failed in the past with the aim of identifying reasons why companies may fail in the future.

# Progress to date

Research complete, a database of past failures compiled. Paper presented to GIRO 2002.

#### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/giro2002/Massey.pdf

#### Membership

Chairman: Massey, Roger (roger.massey@churchill-insurance.co.uk)

Other members: Harris, Simon; Hart, David; Harrar, Sukphal; Hawes, Wendy; Law, Debbie;

Mackie, Fergus; Niven, Clive; Westrip, Alan; Widdows, James

# Applying the new tax regulations in practice - Discontinued 2002 Membership

Chairman: Hindley, David (dhindley@bw-deloitte.com)

Draft GN15 equivalent - Discontinued 2002

#### Financial condition reporting - Discontinued 2002

#### **Objectives**

Terms of reference: Building on the work in the sessional paper, what would a financial condition report look like in practice? Case study to be presented at a seminar 2002.

#### Membership

Chairman: Aghadiuno, Chika (chika\_aghadiuno@cgnu.net)

#### Political risk insurance - Discontinued 2002

#### **Objectives**

Aim of project: Educational Paper - introduction to issues around Political Risk Insurance, along with an exploration of the risks involved and how these may be priced and/or reserved for. Terms of reference: Overview of cover for acts such as terrorism, political unrest, kidnap etc. How the commercial insurance market can provide this coverage, and the existence (or not) of 'insurers of last resort'. Predict market changes given current world situation. Pricing considerations. Reserving issues.

#### **Expected outcome**

Production of paper for GIRO 2002.

#### Progress to date

Initial meetings taken place - gathering information.

#### Membership

Chairman: Tippin, Philip (philip.tippin@kpmg.co.uk)

Other members: Alington, Nigel; Bennett, Camilla; Couper, Andrew; Eabry, Michael; Harding, Justyn; Johal, Gurpreet; McConnell, Bill; Moss, Gaynore

#### Reinsurance Commutations - Discontinued 2002

#### **Objectives**

Aim of project: To produce a sessional paper updating the profession on various aspects of commutations including pricing and the relevant margin for uncertainty.

Terms of reference: 1) Review the existing material. 2) Document current actuarial practice and involvement. 3) Produce a paper covering best practice and approaches.

# **Expected outcome**

Sessional paper either for discussion at institute or publication in BAJ without a sessional meeting.

#### Progress to date

Sessional paper submitted for review.

#### Membership

Chairman: Joseph, Bryan (bryan.r.joseph@uk.pwcglobal.com)

Other members: Collins, Jon; Jarman, Lucy; Johnson, Henry; Lyons, Graham; Piper, Jonathan; Newbury, Karen

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# State of the Art Pricing - Discontinued 2002

#### Membership

Chairman: Coughlan, Dave (david.coughlan@zurich.com)

Other members: Angell, Kate; Dore, Marian; Mackie, Fergus; Mehta, Shyam; Mitchell, Grant; Plowman, Ed

# Stochastic Reserving Methods - Discontinued 2002

#### Progress to date

Initial presentation to GIRO 2000

#### Membership

Chairman: Fagnoni, Hervé (herve.j.fagnoni@uk.pwcglobal.com)

Other members: Bain, Derek; Leifar, Andrew; Line, Nick; Monk, Joe; Skinner, Justin

# 7 LIFE BOARD WORKING PARTIES

If you are interested in participating in one of the planned or on-going working parties, or have another topic to suggest, please contact the Secretary to the Life Board - Maria Singleton (tel: 020 7632 2173, e-mail: marias@actuaries.org.uk).

Comparisons of With-Profits Business in Other Countries - Planned

Progress to date

A draft report framework has been produced, report to be produced towards the middle of 2003.

Paper can be found at:

Not yet available

Membership

Chairman: Bradshaw, Paul (brdshwpl@aol.com)

Investment strategy for with-profits and non-profit long-term business - Planned

Paper can be found at:

Not yet available

Membership

Chairman: Spires, Tony (tony.spiers@norwich-union-life.co.uk)

Mortality and Longevity Risk on Older Lives - Planned

Paper can be found at:

Not yet available **Membership** 

Chairman: Nowell, Peter (peter@pnowell.freeserve.co.uk)

Principles and Practices of Financial Management - Planned

Paper can be found at:

Not yet available **Membership** 

Chairman: Kerry, Rob

Life Office Taxation - On-going

No update on the 2001 information has been received for the 2002 Report.

**Objectives** 

Aim of project: To keep the profession informed of developments in the field of Life Office Taxation

Terms of reference: 1) To keep abreast of new developments 2) To analyse their impact 3) To inform the profession as appropriate 4) As a subsidiary objective, to consider the impact of some of the more complex aspects of UK life office taxation on actuarial work.

**Expected outcome** 

Articles on different aspects of life office taxation in The Actuary magazine.

Progress to date

Sessions at 2000 & 2001 Life Conventions; a number of articles and columns published in The Actuary.

Membership

Chairman: Allan, Graham (grahamjallan@aol.com)

Other members: Forbes, Morris; Taylor, Matthew; Turnbull, Paul; Wild, Keith

#### Management of Closed Funds - On-going

#### **Objectives**

Aim of project: To identify risk areas and issues relating to the management of closed funds and to identify some possible solutions.

Terms of reference: In progress.

#### **Expected outcome**

Currently drafting report with intention of publishing later in 2003.

#### Progress to date

Presentation given on progress to date at the Life Convention in November 2002.

#### Membership

Chairman: Pallister, Juile (juliepallister@centurylife.plc.uk)

Other members: Burke, Andy: Holtham, Andrew: Morris, Peter: Pindar, Tim: Ross, Geoff:

Smith, Alastair; Walton, Andrew; Wells, Andrew; Wilkinson, Stuart

#### Product Reviews - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Aim of project: To review current practice with regard to product reviews and, to the extent considered appropriate, to make recommendations as to best practice.

Terms of reference: The objective of the Working Party is to review current practice with regard to product reviews and, to the extent considered appropriate, to make recommendations as to best practice. The scope of the Working Party's review is to include consideration of: 1) individual life and pensions products where either the original premium was chosen with the intention of achieving a certain target level of benefits on maturity or retirement or for a period of time and/or the terms of the product (e.g. expense or risk charges) can be varied 2) the timing of reviews 3) assumptions made regarding future experience 4) policyholders' reasonable expectations 5) policyholder communications 6) remedial action taken or offered to policyholders.

#### **Expected outcome**

Report to CILA or similar Faculty/Institute event.

# Progress to date

Session at Life Convention 2000.

# Membership

Chairman: Turnball, Paul (paul.turnbull@watsonwyatt.com)

Other members: Foster, Simon; Gracie, Stewart; Karlcut, Harpal; Smith, David; Snow, Harold;

Telford, Peter

# Selection in the Annuity Market - On-going

No update on the 2001 information has been received for the 2002 Report.

# **Objectives**

Aim of project: To consider the implications for life offices and policyholders of recent developments in the annuity market regarding impaired life annuities and income drawdown. Terms of reference: To investigate the impact of changes in the annuity market on reserving and life company profitability (specifically, impaired life annuities and income drawdown schemes) and to develop a model to measure profitability under different scenarios.

#### **Expected outcome**

Sessional meeting paper.

# Progress to date

Session at 2000 Life Convention, Session at 2001 Life Convention.

#### Paper can be found at:

http://www.actuaries.org.uk/library/proceedings/life/life2000/mpoul-

http://www.actuaries.org.uk/library/proceedings/life/life2000/slides-c02.pdf

#### Membership

Chairman: Poulding, Michael (mike.poulding@talk21.com)

Other members: Burgess, Stephen; Jackson, Lawrence; Latto, Phillip; O'Regan, Kevin;

Summerfield, Andrew; Willetts, Richard

#### Use of Derivatives in Life Assurance - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Aim of project: To analyze examples of derivatives use.

Terms of reference: The aim of the working party is to consider examples where life assurance companies are currently utilizing derivatives, or might like to use derivatives, and to establish if companies believe their use of derivatives is constrained.

#### **Expected outcome**

Second phase will carry this work forward once the Chairman has been appointed.

# Progress to date

Session at 2000 Life Convention. First phase complete.

#### Membership

Chairman: Muir, Martin (martin.muir@eu.watsonwyatt.com)

Other members: Brindley, Rupert; Cooper, Paul; Finkelstein, Gary; Pearson, Jeff; Rear, Andy;

Turley, Frank

#### Customer Value - Completed 2002

#### **Objectives**

Aim of project: To examine the role that Customer Value can play in improving the performance of life insurance offices.

Terms of reference: To examine the usefulness of customer value techniques to life insurers, both in the short and long term and to determine suitable measures of customer value for short and long term practical use. To define the role of actuaries in this area and demonstrate how that role might be carried out. To consider how life insurers should change their strategy or behavior to maximize the advantages from customer value initiatives.

#### **Expected outcome**

Article published in the September 2002 issue of 'The Actuary'.

#### Progress to date

Session at 2000 Life Convention and 2001 Life Convention.

# Paper can be found at:

www.the-actuary.org.uk

# Membership

Chairman: Gott, David (dmynott@cc.ernsty.co.uk)

Other members: Desai, Amish; Ford, Matthew; Pond, David; Thornham, Tim; Whitworth, John

# Customers' Interests - Completed 2002

#### **Objectives**

Aim of project: To consider the relationship between the concepts of "policyholders' reasonable expectations" (PRE) and "customers' interests" (CI).

Terms of reference: To consider the proposal to replace the concept of PRE as set out in the Insurance Companies Act by that of CI as defined by FSA Principle 6. In particular to consider: 1) The relation between PRE and CI. 2) The implications for the life insurance industry and the actuarial profession. 3) The implications for the role of the appointed actuary as adviser to the company. The work should include discussion with officials of the FSA and GAD, liaising with the FSA Co-ordination Committee, and monitoring developments, for example, in further FSA documents. The intention is to produce a report to stimulate discussion within the profession for the 2000 Life Convention.

#### **Expected outcome**

Brief report followed by watching brief over developments.

#### Progress to date

Report to Life Conventions 2000, 2001 and conference 3/2001. Met with FSA on WP Review.

### Paper can be found at:

http://www.actuaries.org.uk/files/pdf/life\_insurance/customerinterestsrep.pdf

#### Membership

Chairman: Thompson, Stuart (Thompss@tillinghast.com) Other members: Bright, Doug; Cummings, John; Shah, Rajeev

#### Life Assurance Value Measurement - Completed 2002

#### **Objectives**

Terms of reference: To summarise what Value Measurement models are currently being used by life offices. To study the ways in which Value Measurement models might be used in practice To consider the practical issues involved in using Value Measurement models To compare and contrast the various Value Measurement models To consider how actuaries and the profession could best contribute to the use and development of Value Measurement techniques To illustrate various Value Measurement methods using worked examples or case studies To consider what material might be suitable for the profession's CPD scheme

#### **Expected outcome**

Paper on life aspects of Value Measurement.

## Progress to date

Interim presentation life aspects of Value Measurement at 2000 Life Convention; some input into imminent student society paper on general aspects of Value Measurement; additional paper being drafted to cover life aspects

#### Paper can be found at:

www.sias.org.uk/papers/lifevalues.pdf

#### Membership

Chairman: Sheard, Michael (Michael.Sheard@Prudential.co.uk)

Other members: Gentry, Lee; Howell, David; Mason, Alan; Mehta, Shyam; Purves, Brian;

Sharp, Andy; Stevens, Anthony; Wilson, Colin

# 8 PENSIONS BOARD WORKING PARTIES

If you are interested in participating in one of the planned or on-going working parties, or have another topic to suggest, please contact the Secretary to the Pensions Boards Research and Technical Support Committee - Georgina Ivers (tel: 01865 268235, e-mail: <a href="mailto:georgini@actuaries.org.uk">georgini@actuaries.org.uk</a>)

#### Benefit design - Planned

No update on the 2001 information has been received for the 2002 report.

#### **Objectives**

Terms of reference: To consider alternatives for benefit design in the light of the changes taking place in the pensions industry. To consider the implications for members and sponsors.

#### Membership

Chairman: Hammer, Mike (hammerm@towers.com)

Other members: Claringbold, Andrew

#### Retirement income reform - On-going

#### **Objectives**

Terms of reference: 1)To consider what obstacles need to be removed to give the annuities market the flexibility to design a range of products of the type covered in Extending Choices distinguishing between those parts which are fundamental to legislation and those to Inland Revenue practice. 2)To consider how those buying annuities could obtain information. 3)To consider the need for education and advice on annuities and whether this would be helped through the provision of decision tress or a clearing house. 4)To provide simple modeling illustrations of the effect of alternative annuity scenarios over the past thirty years. 5)To illustrate how the introduction of a new annuity regime could be designed to be tax neutral. 6)To consider the implications of removing the age-related compulsory buying of an annuity. 7)To consider the implications of inheritability. 8)To recommend to the Pensions Board practical ways forward and to discuss these where appropriate with the Faculty and Institute advisers.

#### **Expected outcome**

To report to the Technical Support Committee by 14th February so that the Committee can report to the Pensions Board on 1st March 2002.

#### Progress to date

Report presented to Pensions Board at it 8 October 2002 meeting.

# Membership

Chairman: Riddington, David (riddind@norwich-union.co.uk)

Other members: Boardman, Tom; Bodie, Nigel; Challis, Paul; Gray, Leslie; Poulding, Mike; Wadsworth, Mike

#### Risk benefits - On-going

#### **Objectives**

Terms of reference: To determine the extent of self-insurance of risk benefits of occupational pension schemes. To analyse schemes that self insurer by: a)size of scheme b)size and rating of employer. To determine types of risk benefit insurance effected by schemes, analysed by: a)size of scheme b)size and rating of employer. To determine optimal risk-benefit insurance strategy for schemes differentiating by size of scheme, size of employer and rating of employer.

#### Membership

Chairman: Cowell, John (John.Cowell@mercer.com)

Other members: Cowell, Deborah; Gilling, Martin; Mailander, Suzanne; Mittal, Vijay; Wilson, Brian

Stochastic Pensions Valuations and the Assessment of Funding Risk - On-going

#### **Objectives**

Aim of project: To investigate the use of Stochastic Processes in the provision of advice to pension funds. To find common ground on the approaches adopted and to disseminate information to a wider audience.

Terms of reference: To investigate the application of stochastic processes to the provision of advice on the valuation of pension funds. To address the ways in which actuaries can and should communicate degrees of funding risk to the sponsors of schemes. To find common ground on the approaches adopted and to disseminate ideas to a wider audience. To make recommendations about the assumptions which should be included in reports to clients on valuations which have adopted a stochastic approach in their assessment.

#### **Expected outcome**

Paper for consideration by the Pensions Board.

#### Progress to date

The working party has met and been awarded research funding from the Education and CPD Paper is due to be presented in January 2003.

# Membership

Chairman: Haberman, Steve (s.haberman@city.ac.uk)

Other members: Day, Christopher; Fogarty, David; Khorasanee, Zaki; Lawrence, Adrian; McWhirter, Martin; Nash, Nichola; Speed, Cliff; Wright, Douglas; Yakoubov, Yakoub

# The management of the discontinuance of large defined benefit schemes -On-going

#### **Objectives**

Terms of reference: To consider the issues faced on the discontinuance of large defined benefit schemes.

#### Progress to date

First meeting held on 20 November 2002. Reporting deadline 30 April 2003.

#### Paper can be found at:

Not yet available

#### Membership

Chairman: Booth, Geoff

Other members: Agius, Russell; Canham, Dennis; Frankland, Ralph; Jackson, Lawrence; Miller,

James; Wharmby, Neil; Wilson, Brian; Yiasoumi, Costas

# 9 SOCIAL POLICY BOARD WORKING PARTIES

If you are interested in participating in one of the planned or on-going working parties, or have another topic to suggest, please contact the Secretary to the Social Policy Board - Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk).

## Equity Release Study Group - Planned

# **Objectives**

Terms of reference: 1) To review the recommendations of the profession's Equity Release Mechanisms Report, 2001

- 2) To assess developments in the equity release market since 2001
- 3) To assess government interest in equity release since 2001
- 4) To plan the next stage in the equity release research project

#### Paper can be found at:

Not yet available

#### Membership

Chairman: Le Grys, Des (deslegrys@aol.com)

Other members: Hewitt, Martin; Hosty, Ged; Lewis, David; Smith, Aidan

# The interface between the public and private sectors in healthcare - Planned

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: To explore long term financial forecasting for the NHS in context of recommendations of Wanless Interim Report 2001. To develop the work of actuaries working as consultants. To develop the role of actuaries in the NHS, using their expertise.

#### Membership

Chairman: Coss, John

# The potential for insurance companies developing provisions in care rather than cash - Planned

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: To develop the work of actuaries working as consultants. To develop the role of actuaries in the NHS, using their expertise.

#### Membership

Chairman: Sissons, Ian (isissons@munichre.com)

#### Consumer risk - On-going

#### **Objectives**

Terms of reference: To examine the nature and extent of consumer knowledge about financial planning. To identify factors contributing to risk averse and risk-venturing behavior among consumers of financial products.

#### **Expected outcome**

This project is part of the Personal Financial planning Committee's brief following the Banham Lecture on Consumer financial education. The research has been commissioned from Professor Nick Chator, Professor of Psychology, Warwick University.

#### Progress to date

Four reports in July, October, Decemebr, March 2002-03. Final report to be sent to government officials, Treasury, FSA, ABI and media.

Membership

Chairman: Goodwin, Alan

Other members: Knox-Johnson, Richard; Marray, Brian; Taylor, John

#### Environmental Research Group - On-going

#### **Objectives**

Terms of reference: 1) To identify and research areas in which actuaries can become, or will need to become, involved in environmental issues.

2) To identify environmental factors connected to fields in which actuaries are already engaged, the potential of environmental change on these areas, and the factors that actuaries should consider when giving advice.

#### Paper can be found at:

not yet available

#### Membership

Chairman: Czapiewski, Colin (colin.czapiewski@lcp-actuaries.co.uk)

Other members: Cornall, Monica; Dickinson, Paul; Hewitt, Martin; Jackson, Lawrence; Manning,

Keith; Silver, Nicholas; Warren, Paul

# Family Policy Research Group - On-going

#### **Objectives**

Terms of reference: 1) Produce leaflet for public on family policy options, fertility and longevity

2) Produce longer paper

3) Establish profession's authority on family policy

# Progress to date

Second meeting held in January 2003. First Draft of the leaflet completed for next meeting in March 2003.

#### Paper can be found at:

Not yet available

#### Membership

Chairman: Lewis, David (david.lewis@gad.gov.uk)

Other members: Coleman, David; Gresham, Dermot; Hobro, Clare; Lewin, Chris

# Genetics and insurance - issues for social policy - On-gong

#### Objectives

Terms of reference: Drawing on expertise of the Group to inform the profession of: current knowledge about actuarial research, social policy issues, issues on pooling, philosophical issues on equity, fairness, moral hazards and so forth, and future implications.

#### Progress to date

The Genetics Group has written a Sessional Paper to be presented to the Institute on 24 February 2003 and the Faculty on 17 March.

#### Membership

Chairman: Daykin, Chris (chris.daykin@gad.gov.uk)

Other members: Akers, Debbie; Brett, Paul; Brown, Geoff; Hewitt, Martin; McGleenan, Tony;

Macdonald, Angus; Paul, David; Turvey, Peter

#### Medical Advances - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Terms of reference: 1)To collect data on the mortality and the morbidity of elderly people and secular trends in the UK and other developed countries. Explore differences in experience according to sex, social economic group and other factors.

- 2)To identify major medical advances or changes in the environment or habits that have altered health needs and mortality and to gauge how much these advances and changes have altered mortality and morbidity.
- 3)To identify current and future medical advances and changes in environment or habits that may affect future levels of mortality and health needs and the possible extent of the effect.
- 4)To determine a model to show the likely changes in mortality and health needs in the future and to project changes in life expectation and healthy life expectation.
- 5)To organise the work into several interlocking projects and update the Social Policy Board on
- 6)To report findings at appropriate stages to the Actuarial Profession and externally to other professional bodies and the public.

## Progress to date

Meeting to discuss aims, objectives etc, held on 17 Jan 2001.

#### Membership

Chairman: Seymour, Paul (paul.seymour@mathon-lodge.fsnet.co.uk)

Other members: Bailey, Bill; Cornall, Monica; Gallop, Adrian; Hangartner, Robert; Langkjaer, Martin; Le Grys, Des; Leader, Scott; Macdonald, Angus; Mayhew, Les; Metz, David; Paul, David; Robjohn, Neil; Shah, Rajeev; Spreeuw, Jaap; Van-Beek, Maria; Willets, Richard;

Wittenberg, Raphael

#### Pension Provision Taskforce - On-going

Terms of reference: 1) To produce papers on the age of state retirement. 2) To contribute a distinctive actuarial view to the debate on what the State Pension Age should be and what needs to be changed before it can be raised.

#### **Expected outcome**

In addition to above and earlier projects, the Task Force has, together with the Pensions Board, contributed to submissions to the House of Commons Committee on Work & Pensions Inquiry on the Future of UK Pensions and the DWP Pension Green Paper, and, in its own capacity, to the House of Lords Economic Affairs Committee Inquiry on the economics of the UK's ageing population.

#### Progress to date

Delivery date: Sep 2003

Membership

Chairman: Lewis, David

Other members: Cooper, Deborah; Smith, Aidan

#### Retirement Options - On-going

No update on the 2001 information has been received for the 2002 Report.

#### **Objectives**

Aim of project: To consider advice the Profession might offer to members of the public as they conclude their working life and commence retirement.

Terms of reference: To be decided.

**Expected outcome** 

To be decided.

#### Progress to date

First meeting held on 18.01.2001

#### Membership

Chairman: Shallis, Paul (paul.shallis@landg.com)

Other members: Armstrong, Kirsten; Binns, Martin; Cizdyn, Roman; Goodman, Alan; Hindle, Joanne; Owen, Robert; Reilly, Stuart; Roberts, John; Smith, Ewan; Smith, Jo; Taylor, John

#### Size of Market - On-going

#### **Objectives**

Terms of reference: To examine the potential size of the market and the question of insurance product design (including the cash vs care issue)

# Progress to date

Presentation at 2003 Healthcare Conference

#### Paper can be found at:

Not yet available

# Membership

Chairman: Sissons, Ian (isissons@munichre.com)

Other members: Orros, George

#### The role of actuaries in healthcare - Discontinued 2002

# **Objectives**

Terms of reference: To develop the work of actuaries working as consultants. To develop the role of actuaries in the NHS, using their expertise.

#### Membership

Chairman: Le Grys, Des

# **Health and Care Committee - Health Services Group**

**Leader: John Coss** 

Contact: Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk).

# UK Vaccination Programme - Risk and Reward - On-going

#### **Objectives**

Aim of project: To identify what actuaries can contribute to the study of the balance of risks (probability of experiencing adverse effect of vaccination versus risk of contracting illness by refusing vaccination) associated with vaccination programmes.

#### Progress to date

Delivered paper at 2001 Healthcare Conference. Project transferred to APMA.

#### Paper can be found at:

www.actuaries.org.uk/library/proceedings/health2001/Cornall.pdf

#### Membership

Chairman: Cornall, Monica (monica.cornall@kpmg.co.uk)

# **Health and Care Committee - IP/CI Group**

Leader: Sue Elliott

Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk).

#### IP - Trends - Planned

#### **Objectives**

Terms of reference: To examine underlying trends in the factors influencing UK Insured Critical Illness claim rates, and from these to assess: 1)the historic trend in incidence an death rates for the major Cl's. 2)any pointers for future trend in Standalone Cl, Mortality and hence Accelerated Cl.

#### **Expected outcome**

To seek new information and a broader base on medical specialists and claims and underwriting experts etc. To form links with other groups such as APMA, ABI CI definitions group. Funding for data sets etc. To publish papers.

## Membership

Chairman: Robjohns, Neil (nrobjohns@munichre.com)

Other members: Morris, Richard

#### CI - Robustness of definition - On-going

#### **Objectives**

Aim of project: To review the long-term robustness of CI and occupation definitions.

#### **Expected outcome**

Planned SIAS paper in Spring 2001 and paper for the Healthcare Conference 2001.

#### Progress to date

Paper presented at Healthcare Conference 2001.

#### Membership

Chairman: Bradshaw, Nigel (nigelb@scotprov.co.uk)

Other members: Hanks, Chris; Macdonald, Alisdair; Payne, Stephen

# IP - Internal Risk Factors - On-going

## **Objectives**

Aim of project: To produce guidance on risks associated with IP portfolios.

Terms of reference: To produce a ready-reference document to assist actuaries new to IP to understand the risk factors facing the portfolio. To attempt to quantify the effectiveness of different companies' approaches to controlling these risks.

#### **Expected outcome**

Workshop at 2000 Healthcare Conference.

# Progress to date

Risk factors associated with Income Protection were identified and rated.

# Membership

Chairman: Pindar, Tim (tfpp@msas.co.uk)

Other members: Hilary, Neil; Howe, Andrew; Pipe, Julian; Shirley, Ailish

# IP - Trends by Cause (Terminations) - On-going

#### Objectives

Aim of project: Investigate trends in inception and recovery experience by cause of disability (1975-1994).

# Progress to date

Presented at Healthcare Conference 2001.

#### Paper can be found at:

www.actuaries.org.uk/library/proceedings/health2001/wilkie.zip

#### Membership

Chairman: Wilkie, David

Other members: Coulthard, Terry; Moran, Ian; Northover, Carl

# **Health and Care Committee - Long Term Care Group**

Leader: Ian Sissons

Contact: Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk).

# Reserving/Valuation - On-going

# **Objectives**

Aim of project: To make recommendations on the statutory valuation basis for long term care business in the UK.

Terms of reference: In particular to consider the sources and credibility of data; methods of modelling; changes in demographic assumptions; valuation issues arising from guarantees and policy reviews; PRE issues.

# Progress to date

Presentation at 2001 Healthcare Conference.

# Membership

Chairman: Laurie, Stephen (100336.3635@compuserve.com)

Other members: Baxter, David; Cook, Andy; Kipling, Robert; Smith, Martin

# **Health and Care Committee – Multi-Disciplinary Group**

Contact: Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk).

Healthcare - Related Employee Benefits - Planned

# **Health and Care Committee – PMI Group**

Leader: Neil Hilary

Contact: Martin Hewitt (tel: 020 7632 2185, e-mail: martinh@actuaries.org.uk

#### Health Inflation Index - Planned

# Membership

Chairman: Hilary, Neil (neil@actuaries.org.uk)

Other members: Sissons, lan

# Pricing Small Group PMI - Planned

# Membership

Chairman: Evans, Stephen

# Health Data - On-going

# **Objectives**

Aim of project: To consider health data relevant to PMI.

Terms of reference: To work on data relevant to PMI in particular: Health data sources; Potential health data analysis for third party administrator; keep abreast of developments on industry data (if any).

### Progress to date

Workshop at 2000 Healthcare Conference

#### Membership

Chairman: Plum, Robert (Robert. plumb@vectorrisk.com)

Other members: Fisher, Hamish; Levay, Edward; McGurk, Peter, McIntosh, Steve

# 10 UNIVERSITY RESEARCH CONTACTS

Details of actuarial research activities in the following universities can be obtained from the addresses given.

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