

# CRISLINE

No. 1

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Nottingham University Business School

**Newsletter of the  
Centre for Risk and Insurance Studies**  
*enhancing the understanding of risk and insurance*



## RISK-BASED ANNUITY DESIGN

Enhancing annuities by including exposure to equities is a suitable strategy for most people reaching retirement. This was the conclusion of David Blake (Pensions Institute, London), Andrew Cairns (Dept. of Actuarial Mathematics, Heriot-Watt University) and Kevin Dowd (CRIS) in a paper which investigates alternative investment-linked retirement income programs (ILRIPs).

The motivation for the study is historically low annuity rates, reflecting low bond yields and pensioners living longer. The question is whether it is better to have some exposure to equities, which historically generate higher returns than bonds. The study used the authors' PensionMetrics simulation methodology to compare the traditional annuity with various ILRIPs incorporating income drawdown. They carried out stochastic simulations of the returns on the ILRIPs using Monte Carlo

analysis and also the Wilkie model often used by actuaries. Of special interest is the way the authors incorporated individuals' attitude to risk and also their ability to choose between leaving a bequest to their dependants and a 'mortality bonus' (a cross-subsidy favouring those who live longer).

The best ILRIP had 3 features:

- A mortality bonus (a key feature of an annuity);
- A simple use of equities and bonds without derivatives; and
- The lower the individual's risk aversion, the higher the equity exposure, with a traditional bond-based annuity best only for the most risk-averse.

A more sophisticated annuity market is on its way!

## UK INSURANCE ECONOMISTS' CONFERENCE

The new Jubilee Campus in Nottingham was the venue for the 23rd Annual Conference of Insurance Economists hosted by CRIS in April 2001. Those present from both the academic sector and the insurance industry enjoyed the facilities of the £50m state-of-the-art campus opened by Her Majesty the Queen in November 1999. *Details of the papers presented at the conference are on page 7.*

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**WELCOME** to our new-style newsletter. Feedback, and requests for further information on any of the topic in Crisline, should be sent to [christopher.obrien@nottingham.ac.uk](mailto:christopher.obrien@nottingham.ac.uk), phone: 0115 846 6519, or [d.shaw@nottingham.ac.uk](mailto:d.shaw@nottingham.ac.uk), phone 0115 846 6607 (further contact details are on page 8).

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## Innovation in Risk Management Course

As part of an ongoing process of innovation in the insurance and risk management MBA, we have started providing some lectures via videoconferences so that the students can be exposed to experts in selected fields. Professor Richard MacMinn has successfully arranged two videoconferences this semester.

The first presentation was given by Dr Esther Baur from Swiss Re in Zürich. Esther is a leading expert on the state of the insurance industry worldwide and edits the Swiss Re *sigma* issue on that topic. She gave a presentation via a videoconference on current trends and challenges in the global insurance industry. The second presentation was given by Dr David Laster from Swiss Re in New York. David is an expert on

insurance linked securities and is an author of the *sigma* paper on “Capital market innovation in the insurance industry.”

Students and colleagues had the opportunity to discuss the topics and ask questions in each presentation. The second presentation from New York also included a class at the University of Texas at Austin. The students’ feedback was positive and they greatly enjoyed the opportunity to get an introduction to the topics by such experts. Further details on the topics of the presentations can be



Richard MacMinn

found at <http://www.swissre.com> in the *sigma* issues number 2/2000 and 3/2001.

Thanks also for the support by the technicians on all sides! A special thanks also goes to our presenters, Esther Baur and David Laster.

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## NEW CENTRE MEMBERS

We are pleased to announce the following new associate members of the Centre for Risk and Insurance Studies. They are all based at Nottingham University Business School and will strengthen our coverage of risk-related issues.

Alistair Bruce  
*Professor of Decision and Risk Analysis*

Wendy Chapple  
*Lecturer in Industrial Economics*

Scott Goddard  
*Senior Lecturer in Finance*

David Paton  
*Senior Lecturer in Industrial Economics*

Don Siegel  
*Professor of Industrial Economics*

Bob Berry  
*Boots Professor of Accounting and Finance*

Details of David and Don’s work on betting tax are on page 5.



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## WORKSHOP ON MANAGEMENT DEVELOPMENT Thursday, 13 September, 2001

CRIS is sponsoring a one-day workshop at the Nottingham University Business School on management development in the UK insurance industry. Professor Stephen Diacon is organising the workshop, the primary purpose of which is to explore good practice in developing professionalism and quality management in today's rapidly changing financial environment.

Management skill and competence is crucial both for enhancing shareholder value and protecting policyholders. From the business perspective, a company's competitive advantage is based on good systems and controls, sound capital, and the pro-

fessionalism of its staff. Similarly from the regulator's perspective, the traditional concen-



University of Nottingham Jubilee Campus

tration on prudential regulation is being supplemented by an increased focus on management skills and competence. But at the same time, companies are

striving to operate with lower staffing levels and flatter hierarchies. The future thus depends on maintaining and enhancing the quality of management.

Further details will be available in due course, but speakers will include Sandy Scott (Director General, Chartered Insurance Institute) and Sheena Gray (Development Consultant, Financial Services Authority).

The workshop is open to HR directors and management development managers from all sectors of the industry. For further information, contact Deborah Shaw, tel 0115 846 6607; fax 0115 846 6667; e-mail: [d.shaw@nottingham.ac.uk](mailto:d.shaw@nottingham.ac.uk)

## NEW OPPORTUNITY FOR INSURERS?

A win-win situation for general insurance companies, other financial services firms and regulators could be the outcome if a report by Simon Ashby from CRIS and Brendon Young, Head of the Operational Risk Research Forum, is followed up.

The report focuses on the role of insurance as a mitigant for "operational risk", i.e. the risk that failures in people, processes and managers may damage a firm (Barings is a famous example). This is increas-

ingly high-profile because the Basle Committee has proposed that banks' minimum capital re-

quirements should include an amount related to the operational risks they run and how well they manage them.

The report makes a number of suggestions about how insurance can be used to cover banks against losses from operational risk. It also looks at whether capital requirements should be reduced for banks that have insured operational risk losses.



Simon Ashby



## NEW INSURERS: A THREAT TO ESTABLISHED FIRMS?

New insurers joining the UK life market have grown quickly but still had little impact in terms of market share. This was one of the messages in Chris O'Brien's paper to the Annual Conference of Insurance Economists held at Nottingham University Business School in April.

The paper compared the 28 new entrants in the 1990s with the 28 largest firms in 1989 and concluded that the growth rates of the new entrants did tend to be higher.

However, the market shares of the new entrants were still quite low.

Looking at new business in 1999, the new entrants had only 8.19% of the market. And most of this was business written by investment houses which have established specialist life assurance companies: for example, Phillips & Drew Life had the

largest new business with £212m APE (annual premium equivalent). Contrast Direct Line Life with £3m APE, less than 0.3% of the market.

Many of the new entrants paid no commission.

However, total acquisition costs were 96% of APE for the new entrants (excluding investment house life companies) - higher than the 78% figure of the established players.

It is not therefore surprising that around £600m capital was injected into the insurance funds of the new entrants in the 1990s.



Chris O'Brien

Chris concluded: "The challenge to new entrants is to achieve market share without taking so long in terms of time and so much in the way of capital. The 1990s suggests that it is a struggle."

## MANAGERS AT RISK!

What is the most risky industry for injuries? Most studies of workplace risk have focussed on the manufacturing sector, but new work by Simon Ashby and Paul Fenn has extended the coverage to include service industries. They find that the most risky industry is the hotel and restaurant trade; with health, social work and personal services also high-risk.

Establishments with younger workers or a high turnover had a high risk of injury. Also, the more shift work and overtime, the higher the risk.

Managers were the group with the highest risk of illness; scientific, technical and professional employees were the lowest.

A doubling of the number of employees in an es-

tablishment was associated with a 28% reduction in the risk of reported injury, and a 20% reduction in the risk of reported illness. This seems to confirm the view that larger establishments have greater incentives to improve health and safety, perhaps as a result of monitoring by regulators and insurance companies.

Establishments with more union members appear to have more reported injuries and illnesses, holding other factors equal. An increase in union density of 10 percentage points increases the probabilities of

reported injury and illness by 6% and 12% respectively. However, this may be due to better reporting systems in heavily unionised workplaces as unions strive to recover compensation for their members.



Paul Fenn

## ACADEMIC RESEARCH IS A GOOD BET

One of the highlights of Gordon Brown's Budget in March was his decision to replace general betting duty by a tax on the gross profits of betting firms.

Such a move was one of the options examined in a report prepared for Customs and Excise by Professor Don Siegel and Dr Dave Paton of Nottingham University Business

School, and Dr Leighton Vaughan Williams of Nottingham Trent University. Their analysis took into account that the Revenue was about to lose millions of pounds if the bet-



ting industry moved offshore to avoid betting duty. The move to a tax on profits is intended to secure the Revenue's tax-take while producing better terms for those wanting a flutter on the horses.

The team has now won a new contract to advise Customs and Excise on the tax issues on spread betting.

## CONSUMER PERCEPTIONS OF FINANCIAL RISK

A survey of individual savers in the U.K. has thrown new light on the risks which people perceive in different financial services products. The results, in a paper by Professors Stephen Diacon (CRIS) and Christine Ennew (Professor of Marketing, currently at the University of Nottingham in Malaysia), will appear shortly in "The Geneva Papers".

Perceived risk does not relate to one simple concept such as variability of return. The analysis of detailed questionnaire results show that, instead, it is multi-dimensional, with the perceived risk falling into 5 categories:

- Distrust of product &/or provider,
- Seriousness of adverse consequences,
- Volatility of return,
- Poor knowledge &/or observability, and
- Failure of regulation.



Stephen Diacon

Is higher perceived risk associated with higher perceived re-

turn? The study suggests the relationship is complex. For some aspects of risk (the possibility of adverse consequences and poor information), higher perceived risk requires compensation. However, there is little evidence that investors want compensation for volatility of returns. Products with higher levels of mistrust do, however, require a higher perceived return.

Clearly investors will perceive high levels of risk if providers and/or financial advisers do not have a trustworthy reputation. The results suggest a crucial role for regulators in taking measures which result in improved consumer trust in products and providers.

## Insurance Company Finances

Our regular publications use the Centre's unique database of accounting information of UK insurance companies. These are available from Tim Orton, at CRIS, e-mail: [timothy.orton@nottingham.ac.uk](mailto:timothy.orton@nottingham.ac.uk), phone: 0115 951 5269.

### **UK Insurance Premiums 2000** (£60):

- figures from the 1999 accounts of over 200 of the largest UK insurance groups.

### **Insurance company performance 2001:**

- Part I (£135) - from the 1999 accounts of UK insurance companies
- Part II (£135) - from the 1999 regulatory re-

turns of UK insurance companies

- Plus a special article "Guaranteed Annuity Options: Five issues for Resolution" by Chris O'Brien.

Parts I and II together are available at a cost of £245. Cheques should be made payable to "University of Nottingham".



Tim Orton

## CRISLINE EXTRA

### *See us in Birmingham*

CRIS will have an exhibition stand at the annual Conference of ARIMIC, the Association of Insurance and Risk Managers, being held at the International Convention Centre in Birmingham from Monday 4 June to Wednesday 6 June.

### *Long-term care insurance*

The April 2001 issue of "Insurance Trends", available from the Association of British Insurers, contains an article by Paul Fenn with evidence from a longitudinal study of how dependency costs are related to failure to perform Activities of Daily Living (ADLs).

### *Dates for your diary*

CRIS will be hosting the following conferences in 2002:

- April 10-11 UK Insurance Economists
- April 17-18 Insurance Regulation\*
- Sept 16-18 Geneva Association: European Risk & Insurance Economists

\* in London (others in Nottingham)

### *NUBS - the place to be!*

Nottingham University Business School is attracting increasing numbers of undergraduates. Proving that it is such a popular choice, the first-year intake has grown from 200 in 1998 to 253 in 1999 and 363 in 2000.

The Business School's excellent research record was recognised in the recent Financial Times survey, which ranked Nottingham 2nd in the UK for research, and 3rd in Europe.

### *Well done!*

Congratulations to Professor Kevin Dowd who has recently been placed 9th in the UK and 158th out of 55,000 world economists, based on publications in the top 20 journals. Professor Don Siegel was also in the top 2% in the world!

### *Staff news*

Welcome to Cheryl Hewitt, who has joined the Centre on a part-time basis. Best wishes to Uta Feinstein, who is leaving the Centre (and special thanks for her work in designing CRISLINE!).



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## MBA IN INSURANCE MANAGEMENT

*Are you working in insurance?*

*Would you like to enhance your management skills?*

If yes, the answer could be an MBA in Insurance Management from Nottingham University Business School.

This innovative MBA degree is designed specifically to meet the

needs of management in the insurance sector. It develops management skills and potential based on a series of residential one-week intensive blocks spanning a period of 2 to 4 years.

The degree programme provides a thorough introduction to business and management issues in general. It also has specialist modules relating to national and international insurance markets.

All modules are carefully designed for their academic and

practical relevance.

There are also facilities to take the course on a full-time basis over one year.

A second class honours degree or the professional equivalent (such as the ACII) is normally required for admission, with at least 3 years' business experience.

This specialist MBA was designed with support from the Worshipful Company of Insurers.

## CONFERENCE PAPERS AVAILABLE

The following papers were presented at the 23rd Annual Conference of Insurance Economists, held on 4 & 5 April 2001 at Nottingham University Business School.

The set of papers is available, priced at £40, from Deborah Shaw at CRIS (cheques payable to "University of Nottingham"). E-mail address: [d.shaw@nottingham.ac.uk](mailto:d.shaw@nottingham.ac.uk)

"The Performance of Recent Entrants to the UK Life Assurance Market: a Threat to Established Players?"

*Chris O'Brien (Nottingham University Business School)*

"Financial Services in the Virtual World"

*John Ginarlis (Computer Sciences Corporation)*

"The Use of League Tables in UK Financial Services"

*Rob Jones (Newcastle Business School)*

"Corporate Governance - A Mandate for Risk Management?"

*Dr Lynn Drennan and Professor Matthias Beck (Glasgow Caledonian University)*

"The Lessons of Equitable Life"

*Malcolm Oliver (Oliver Small Partnership)*

"Alternative Valuation Models and Association with Insurance Share Prices"

*Dr Paul Klumpes (Warwick Business School)*

"Law and the Demand for Property-Casualty Insurance"

*Dr Damian Ward (University of Bradford Management Centre)*

"The Impact of Bodily Claims on the UK Insurance and Reinsurance Market"

*Pam Byrnes (International Underwriting Association)*

**P.S. The 2002 Conference will be held at Nottingham on April 10 & 11.**



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# CENTRE FOR RISK AND INSURANCE STUDIES



Nottingham University Business School

## Centre for Risk and Insurance Studies

*enhancing the understanding of risk and insurance*

The Centre for Risk and Insurance Studies was founded in 1991, originally as the University of Nottingham Insurance Centre. It is one of the world's leading specialist university centres for risk and insurance.

The Centre is situated within Nottingham University Business School and is based in the award-winning Jubilee Campus, opened in 1999.

The Centre staff are responsible for teaching in risk and insurance at both undergraduate and postgraduate level.

They are also active in researching and maintain close links with the insurance industry and others working in risk management. The research of the Centre reflects public policy priorities as well as those expressed from the insurance industry and covers not only traditional insurance activities but also risk management more generally.

The staff of the Centre are:

**Christopher O'Brien**

*Centre Director*

**Professor Stephen Diacon**

*Worshipful Company of Insurers Chair in Insurance Management*

**Professor Kevin Dowd**

*Professor of Financial Risk Management*

**Professor Paul Fenn**

*Norwich Union Chair of Insurance Studies*

**Professor Richard MacMinn**

*Swiss Re Chair in the Management of Risk*

**Dr Simon Ashby**

*Lecturer in Risk and Insurance*

**Tim Orton**

*Research Officer*

**Deborah Shaw**

*Centre Administrator*

**Uta Feinstein**

*Swiss Re Secretary*

**Cheryl Hewitt**

*Clerical Assistant*



### CRIS Advisory Board

We are delighted to welcome Martin Fessey (FM Global) and Eddie Hester (Zürich Corporate Solutions) to the Centre's Advisory Board. The other Board members are:

**Hywel Bevan**, *Marsh UK*

**Bob Carter**, *Emeritus Professor, University of Nottingham*

**Chris Downs**, *Southampton Institute*

**Douglas Keir**, *Swiss Re Life and Health*

**Terry Sparkes**, *Worshipful Company of Insurers nominee*

**Richard Taylor**, *Association of British Insurers*

**Steve Thompson**, *University of Leicester*

**Chris Worthington**

**Mike Wright**, *Nottingham University Business School*

### How to contact us:

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## CHANGE OF ADDRESS DETAILS, ETC.

Please tick the relevant boxes below and return to :

Deborah Shaw, Centre Administrator  
Centre for Risk and Insurance Studies  
Nottingham University Business School  
Jubilee Campus, Wollaton Road  
Nottingham NG8 1BB

or e-mail us with the information at: [d.shaw@nottingham.ac.uk](mailto:d.shaw@nottingham.ac.uk)

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