

CRIS

Newsletter of the Centre for Risk and Insurance Studies

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CRIS

How long do people think they will live?

People are failing to understand how long they are likely to live to, and this looks to be a factor in helping explain low take-up of pensions.

A new research study carried out at CRIS, with financial assistance from the Actuarial Profession, involved asking nearly 4,000 people how long they expected to live. They tended to underestimate the true figure (in comparison with Government Actuary's Department estimates) by 4.62 years (men) 5.95 years (women).

Even in their 60s, men underestimate their longevity by 2.83 years and females by 4.62 years. So people may well under-estimate how long their pension is likely to be payable.

However, they were optimistic in the sense that, on average, they thought they would live longer than other people of the same age and sex as themselves: by 1.19 years (men), 0.76 years (women).

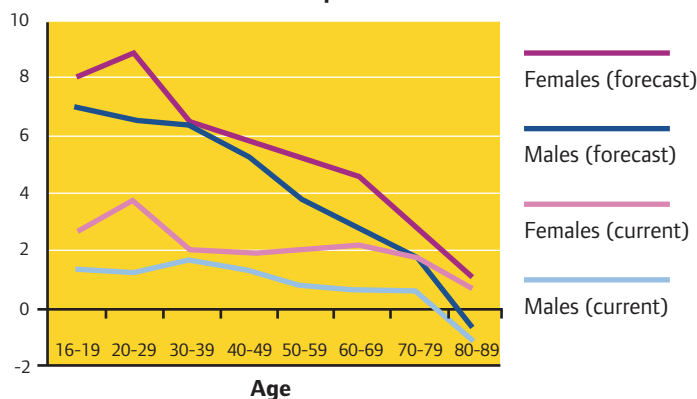
These discrepancies are significant because we also found that expectations of longevity significantly affect people's decision about buying personal/stakeholder pensions. About 1.3% of the sample had brought such a pension in the past 5 years. The study found that every 1-year of higher longevity estimate increases the proportion buying pensions by about 0.15%. So if this effect can be extrapolated, a correction of the 5-year underestimate would enhance voluntary pension take-up by 0.75% to over 2%: a dramatic increase of 50%.

There are a number of major implications that arise from these findings. It certainly looks that if the population had a better understanding of how long they were likely to live, they would be more likely to buy pensions than they are now. Perhaps the Financial Services Authority, with its financial education responsibilities, has a role here.

Similarly, insurance companies may wish to develop a way of highlighting the value-for-money that annuities provide. And employers may wish to use life expectancy data to highlight the value of the occupational pensions they are providing.

The research report is available on our website www.nottingham.ac.uk/business/cris/ and also www.actuaries.org.uk

Shortfall in estimate of expectation of life



The chart shows the average difference between how long people think they will live, and the Government Actuary's Department projections, based on either "current" mortality rates, or "forecast" mortality rates that incorporate projected future mortality reductions.

Smokers don't understand risks

How did smokers and ex-smokers estimate their life expectancy?

Our survey finds some "errors" in their risk perceptions. Turn to page 2 for further details.

Conference time

The annual meeting of insurance practitioners and academics, the UK Insurance Economists' Conference, takes place at Nottingham University Business School on April 13 and 14. See page 7 for further information.

Smokers understate risks

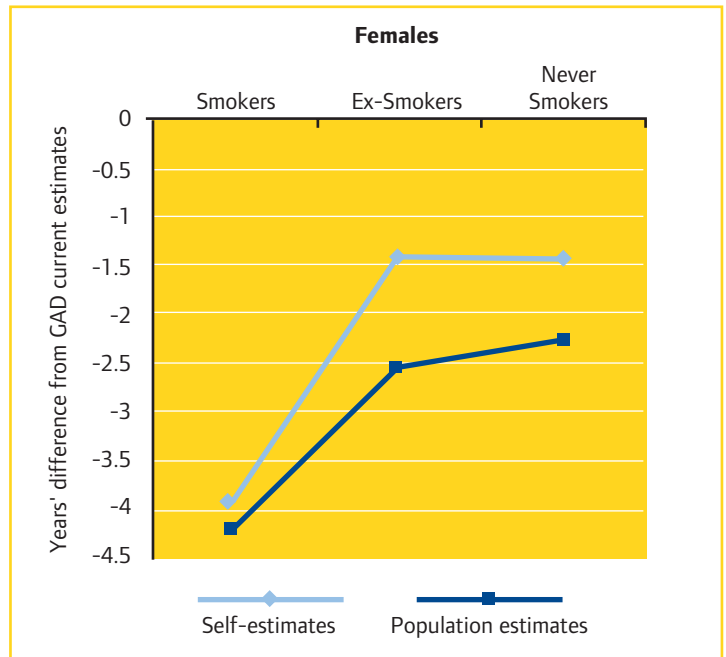
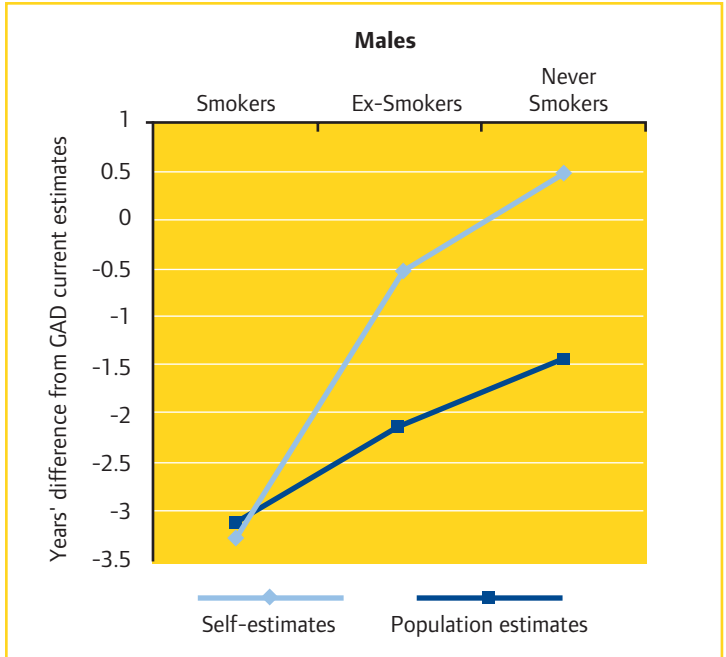
Some problems about smokers' risk perceptions were revealed by our longevity survey (see page 1).

Smokers do expect to live less long than never-smokers. We found that male smokers expected on average, to live 3.25 years fewer than the corresponding Government Actuary's Department figure based on the same age (using current mortality rates rather than those incorporating expected future mortality reductions). For never-smokers the figure was 0.53 years more than the GAD data.

However, this difference of 3.78 years between smokers and never-smokers is significantly less than the reality suggested by the medical evidence. For example, the survey of British male doctors suggests a difference of 10 years longevity between lifelong smokers and never-smokers, although this figure reduces at older ages.

The survey responses showed that former smokers fail to recognise that they should expect to live less long than never-smokers.

We also found that most of the difference between smokers' perceptions and those of never-smokers is as a result of smokers thinking that the population tends to live less long; they do not perceive a significant difference between themselves and the population. The charts show the perceptions of smokers, ex-smokers and never-smokers, both as regards their self-estimates and their "population" estimates (i.e. their estimate for people of the same age and sex as themselves). In each case the estimates are expressed as the difference from the GAD life expectancy figures based on current mortality rates.



Woolf: More costs, more delay?

Litigation involves substantial costs and can take a long time, and Lord Woolf's solution to these problems was a detailed re-writing of the rules of civil procedure. The new rules came into force in 1999.

However, the overall effect of the Woolf reforms appears to have been an increase, not a decrease, in costs. In addition, delays may have become somewhat worse for non-litigated claims.

The results are contained in a report to the Department of Constitutional Affairs by Paul Fenn, Neil Rickman (University of Surrey) and Dev Vencappa.

The Woolf reforms included protocols designed to provide some structure for the pre-action stage of claims and to prevent litigation being started without the grounds for doing so having been clearly understood.

It is therefore likely that costs and the time involved at the outset will have increased. But the outcome of better information at the early stage should be the later stages being completed more quickly and with reduced cost. What, therefore, is the overall effect?

The authors used a database of 35,910 closed employer's liability accident claims over 1997-2003. They looked at claims not using conditional fee agreements in order to produce a consistent series over time.

Their analysis shows that as the proportion of cases closed which started after the Woolf reforms were implemented, there was a significant increase in costs. There also appeared to have been a reduction in delays in litigated cases, but at the expense of some increase in delays in non-litigated cases, which are the majority.

General Insurance: How valuable?

The role of general insurance in the economy is the subject of a report produced for the Association of British Insurers.

Stephen Diacon introduced the report at the ABI's Annual Conference in London, on 9 March. Chris O'Brien and Adam Blake (Lecturer, Travel and Tourism Research Institute at Nottingham University Business School) also contributed to the report.

Insurance is one of the pillars of a modern economy, the authors explain. Without it, the complex industrial society as we know it would be impossible. The report contains an illustrative model of the way in which insurance permits entrepreneurs to take risks that they would otherwise not pursue.

The way in which insurers pool risks means that they can provide security in a way that is cost-effective for both their individual and corporate customers.

The research computes the value of general insurance in the national income accounts. The output of the industry in 2003 was £18.374 billion and, after deducting the cost of bought-in goods and services, and tax, the "value added" was £2.905 billion.

The report also describes an exploratory model of the UK economy, especially adapted to show the interactions between the general insurance industry and each other sector in the economy. The model predicts that every extra 1% in households' demand for insurance roughly equates to £11 million extra in GDP. On the other hand, an increase in the rate of insurance premium tax would reduce GDP.

The report will be available on www.abi.org.uk and www.nottingham.ac.uk

Why the underwriting cycle?

A new CRIS Discussion Paper by Paul Fenn and Dev Vencappa examines the cycle in the UK motor market over 1985-2002.

The chart shows clearly the variation in the economic loss ratio, i.e. the ratio of expected claims to premium income. Premium income, net of expenses, appears to follow claims after a 1-2 year lag. The paper also charts the underwriting cycle of individual insurers, which mostly have the same turning points as the industry level cycle.

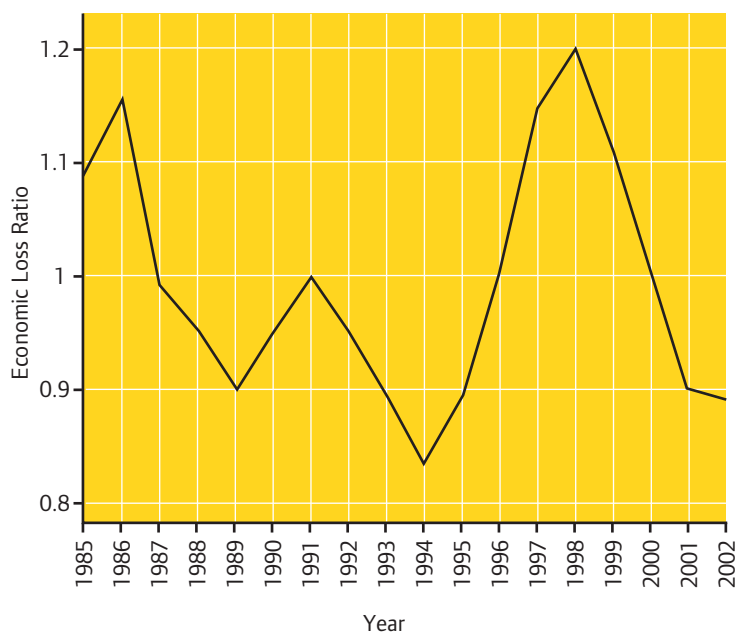
The research examines several hypotheses put forward to explain the cycle. Perhaps the most important is the simple presence of adjustment lags inherent in the pricing of insurance, which can generate a cycle in profitability even in a competitive market. Data from the UK motor market seem to confirm the hypothesis.

The authors assess the impact on the cycle of the degree of competitiveness in the market by using a number of indicators, including the number of firms operating in the industry. They find that when competition increases, there is a reduction in subsequent profits. The authors concluded that market structure is a significant short-run determinant of underwriting profits. However, there is good reason to suspect that profit variations themselves are to some extent responsible for entry to and exit from the market. Hence they cannot be the prime cause of the cycle although they may contribute to its amplitude.

In addition, a higher level of surplus assets in the industry, relative to trend, tended to reduce profits. This tends to confirm the capacity constraint hypothesis: unexpected high levels of surplus, commonly experienced by insurers in a given year, will have the effect of reducing underwriting profits in the next year.

The paper can be downloaded from www.nottingham.ac.uk/business/cris

UK Motor Insurance Economic Loss Ratio



Longevity Bonds: An innovative solution to pension risk?

Pension providers have seen the cost of their liabilities increasing as estimates of life expectancy have increased, but a new approach to bearing this risk – through the capital markets – has emerged.

The first International Conference on Longevity Risk and Capital Market Solutions was held at Cass Business School, London, on February 18, before a packed audience. The conference was hosted by The Pensions Institute, the American Risk and Insurance Association, and the Centre for Risk and Insurance Studies.

David Blake, Director of The Pensions Institute, chaired the morning session, which began with an analysis of the problem, co-incidentally on the day when a consultancy had re-estimated public sector pension liabilities at £690 billion, over 50% more than the latest published official figure of £425 billion (from March 2003).

Both life insurers and self-administered pension funds have had to increase their provisions as a result of the higher expectation of life, although the extent of pension funds' problems is unclear because there is only limited disclosure of the mortality assumptions that they make.

One way to address the mortality risk in pensions is the "longevity bond" issued by the European Investment Bank, managed by BNP Paribas, and with longevity risk taken by Partner Re. Mark Azzopardi explained that the annual payments under the bond, which continue for 25 years, depend on mortality rates of the elderly in England and Wales. If life expectancy increases faster than expected, the bond pays out more, to (broadly) match pension providers' liabilities. Managing longevity risk is not a core skill for most firms, so why not buy a longevity bond to help hedge it? However, some basis risk remains, as the membership of a pension fund will not be a precise replica of the overall population.

Richard MacMinn, representing ARIA, chaired the afternoon session, and began by introducing Adrian Gallop, of the Government Actuary's Department. Adrian explained the issues involved in calculating mortality rates – for example, there are often revisions to the estimates of population that are needed to derive the rates.



The Debt Management Office has been consulting on whether the UK government should issue longevity bonds, as explained by Arnaud Marès. However, as a number of speakers said, the government already has substantial longevity risk from state and public sector occupational pensions, so why should it want more? On the other hand, there seem to be few natural hedges for longevity risk so if government is effectively insurer of last resort perhaps it should offer this facility.

Andrew Cairns introduced work that aims to develop a robust way of pricing longevity bonds (this is in conjunction with David Blake, Paul Dawson and Kevin Dowd). A U.S. perspective was given by Sam Cox and Shaun Wang. Understanding the real costs of carrying longevity risk is critical to development of the market.

Michael Johnson highlighted the different perspectives of a life insurer (for whom managing mortality risk is a core skill) and pension funds (risk-averse and seeking to avoid earnings volatility). There is clearly a high level of interest in how capital markets could address the longevity issue, but there may be a number of solutions tried, in order to address the different risks and risk tolerances of the several stakeholders.

The presentations can be downloaded from:
www.pensionsinstitute.org

Student numbers up

2005 has seen further increases in numbers of undergraduates studying risk and insurance at Nottingham.

The Business School offers three main undergraduate degrees, in Industrial Economics; Management Studies; and Finance, Accounting and Management. Each degree course involves students taking a number of compulsory modules and choosing some others from a range of options. Those optional modules include four that cover risk and insurance.

Our modules running in the second semester of the 2004/05 academic year have yet again seen increases in the number of students.

"Risk Management Processes" is a module being taken by 137 students this year. The module covers subjects such as how firms identify and control risks, and the reasons for health and safety legislation. It also looks at crises: why they happen, and how firms manage them. (Continued at bottom of page 5)

How to cope with risk in the FTSE 100

Risk management has jumped up the corporate agenda in recent years, but there remain considerable disparities between top companies in their approach to risk management.

Margaret Woods (a CRIS Research Associate at Nottingham University Business School) is carrying out research on risk management in FTSE100 companies, with funding assistance from the Chartered Institute of Management Accountants, and some of her initial findings were reported in *Insight*.

What is clear is the growing consciousness, at Board level, of the need to be pro-active in risk management and aware of the risks to which the business is exposed. This links in with the Turnbull report on corporate governance.

Frequent communication of results of risk monitoring and the state of control systems is an essential part of the ongoing review process. One example is the practice at one major UK bank whereby the Executive Board receive a 9am daily briefing from the Head of Risk about current financial risk exposures and any relevant areas of concern. In the same way that management accountants are used to generating flash reports on particular issues, risk managers are now producing similar reports with a frequency and content that reflects the field in which they work, e.g. market risk versus audit risk exposure.

The relationship between risk management and the internal audit function can take several forms. In some companies the two functions are independent; in others, risk management staff work within the internal audit department. A third arrangement is one in which there are no designated risk management staff except within the operational sections of the business.

Margaret concludes, "one might take the view that all of this increased attention being given to risk is beneficial but unfortunately, despite Turnbull, an information gap remains because there is no requirement on directors to disclose information on their risk management systems or the effectiveness of internal controls. All that can be hoped is that better awareness serves to lower risks, but this may be a big assumption".

(Student numbers up - Continued from page 4)

The numbers studying "Insurance Firms and Markets" have increased to 67. The module looks at how insurance markets operate, and issues in the management of insurers. For example, how do they price their products, why do they reinsure, how meaningful are insurance company accounts, and what are the principles of insurance industry regulation?

For firms in the insurance sector that have vacancies for new graduates, the University Careers Service has an Employer Liaison Officer, Geraldine Tonks, who can be contacted on 0115 951 4694 or www.nottingham.ac.uk/careers



Mutuals: Some governance issues

The review, by Paul Myners on the governance of life mutuals, published by HM Treasury in December, included much of its statistical material from the CRIS study on mutuals, prepared with funding assistance from the Financial Services Research Forum.

We compared mutuals and proprietary life offices writing with profit business. Mutuals are, on average, much smaller. We also noted that the expense ratios of friendly societies tended to be high, especially the (small) mutuals not subject to European Union Directives.

Many proprietaries have shares listed and are subject to the Combined Code. However, the Code is not strictly applicable to mutuals, although several have adopted the main points of the Code that can be applied to them. However many have not: we found that only 52% had an audit committee, 41% had a remuneration committee.

There have been marked changes in status of appointed actuaries in mutuals. In 1995, 51% were employees (rather than consultants), but this had reduced to 28% in 2003. Over the same period, the proportion of appointed actuaries who were directors fell from 44% to 9%.

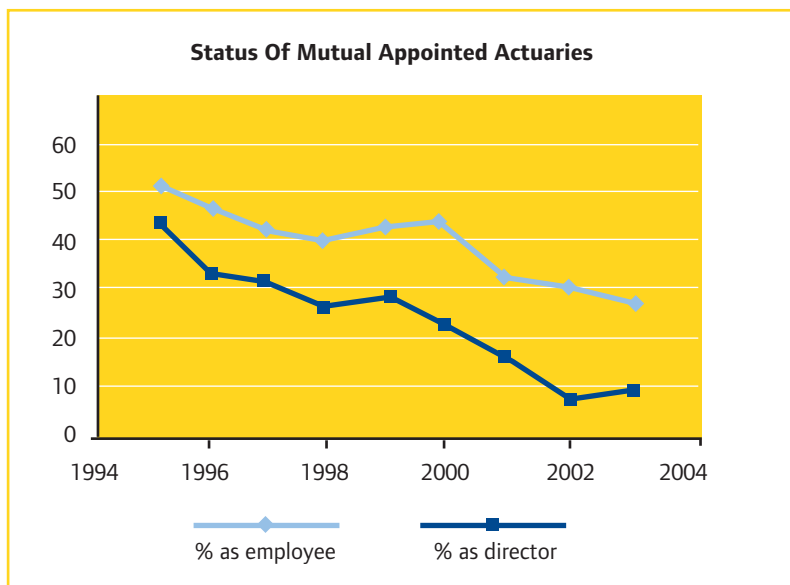
There was no clear trend in the proportion of mutuals' directors who were non-executive, which was 71% in 2003. However, we did find that a high proportion of a mutual's directors being non-executive was associated with lower growth of new business, and a lower increase in in-force premiums.

Our research report, "Mutual life offices: a contribution to the governance debate", by Stephen Diacon, Chris O'Brien, Leigh Drake and Noël O'Sullivan, is available from our website.

The 27th annual UK Insurance Economists' Conference takes place on 13th and 14th April, at Nottingham University Business School. As usual, there are papers by academics and practitioners and there will be plentiful time for discussion.

The charge for the Conference is £290, which includes the Conference dinner (at the Council Dining Room, Trent Building) and overnight accommodation at the Jubilee Campus. (Special rates are available to academics on application).

Further details are on www.nottingham.ac.uk/business/cris



UK Insurance Economists' Conference

Wednesday 13 April 2005

12.30 - 1.15pm	Lunch
1.30 - 1.35pm	Start: Welcome and Introduction
1.35 - 2.35pm	<p>Regulating Insurance Companies: Theory and Practice <i>Philip Booth (Cass Business School, City University) & Alan Morrison (University of Oxford)</i></p> <p>Insurance companies are extensively regulated, but life insurance regulation is currently perceived to be ineffective. The paper develops a new rationale for insurance regulation and discusses current regulatory developments in the UK and EU.</p>
2.35 - 3.35pm	<p>The 'Operating Financial Review' and UK Corporate Reporting <i>Alasdair Marshall (Glasgow Caledonian University)</i></p> <p>Government plans to require large firms to issue an 'operating and financial review' have led to controversy and have been delayed. This paper considers the background to and rationale for the plans and the controversy.</p>
4.00 - 5.00pm	<p>The Value of Risk Reporting <i>Margaret Woods, Kevin Dowd & Chris Humphrey (University of Nottingham)</i></p> <p>Reporting risk in companies' accounts can, in principle, help markets function effectively. Value at Risk (VaR) is one approach used in banks: but the paper identifies major concerns about VaR disclosures and the problems in auditing them.</p>
5.00 - 6.00pm	<p>National Fire Costs and Fire Risk Management <i>Tony Paish (World Fire Statistics Centre)</i></p> <p>Fire costs in many economies are coming down. However, the data suggests that differences in countries' approaches to managing fire risk can influence the make-up of the fire cost burden. Indeed in some countries the number of fire deaths is increasing, and the lack of national strategies for tackling fire may be partly to blame.</p>
7.30 - 9.30pm	Conference Dinner

Thursday 14 April 2005

9.00 -10.00am	<p>Genetic Testing in the Republic of Ireland <i>Louise Morris (University of Limerick)</i></p> <p>The paper assesses life insurers' management of risk in using genetic tests, and analyses public opinion about such tests. It argues that Irish government policy on genetic testing in life assurance may not deliver its objectives.</p>
10.00 -11.00am	<p>Individual Mortality Perceptions, Insurance and Pensions <i>Chris O'Brien, Paul Fenn, Stephen Diacon (University of Nottingham)</i></p> <p>Life expectancy has increased, but have people recognised this? The paper reports results from a survey of nearly 4000 individuals: are people's perceptions consistent with actuarial tables? Are relevant risk factors (e.g. smoking) taken into account? How does this affect pension and insurance provision?</p>
11.30 -12.30pm	<p>Pensions for Low Income Households: A Case of Market Failure? <i>Laurie Edmans (AEGON UK)</i></p> <p>This paper analyses a key issue being addressed by the Pension Commission: whether, given the costs likely to the involved, there are a large number of people to whom a free market will never be able to sell pension products except at charging levels which make saving unattractive.</p>
12.45 -1.30pm	Lunch
1.45 - 2.45pm	<p>Personal Injury Claims and the PIAB in the Republic of Ireland <i>Brian Greenford (University of Limerick)</i></p> <p>High compensation costs and legal fees have meant that personal injury claims have dogged the Irish political agenda. The government's response was to form a Personal Injuries Assessment Board (PIAB), operating with no solicitor involvement. Is it working? And why are insurers and solicitors complaining?</p>
2.45 - 3.45pm	<p>The Impact of the Woolf Reforms on Litigation Outcomes <i>Paul Fenn, Dev Vencappa (University of Nottingham) & Neil Rickman (University of Surrey)</i></p> <p>The Woolf reforms of 1999 were meant to address the problems of cost, delay and uncertainty in civil justice. This paper looks at evidence from over 75,000 insurance cases to find out if the reforms have indeed led to reduced cost and/or delay in personal injury cases.</p>
3.45pm	Close: Afternoon Tea

Paul Fenn and **Neil Rickman** (University of Surrey) have been awarded £45,000 from the Economic and Social Research Council for research on "Public services: liability, risk pooling and health care quality". This will look at whether the combination of tort liability rules and insurance arrangements made by the NHS have a positive effect on outcomes of patient care.

The Department of Constitutional Affairs are funding research on evaluating mandatory attendance at mediation for personal injury and other claims. The research is to be carried out by Paul Fenn and by Hazel Genn (UCL).

Leigh Drake will be a Visiting Professor in the Hong Kong Institute for Monetary Research (HKIMR) in April. He will be working on a research project analysing "The Efficiency and Performance of the Hong Kong Banking System".

Paul Fenn was invited to present "NHS and its move to a no-fault system" at the International Conference on Cost Containment in the Thai National Health Insurance System, in Thailand on 24-25 February 2005.

The papers from the CRIS London Seminar, held in November 2004 at the offices of the Association of British Insurers, are available price £15, from Jennifer Howis, Director's Secretary, Centre for Risk and Insurance Studies, Nottingham University Business School, Jubilee Campus, Wollaton Road, Nottingham NG8 1BB. The papers are on our work on mortality perceptions, governance in mutual life offices, and message framing and investment fund choice.

"Insurance Company Performance 2005", published by the Centre for Risk and Insurance Studies, is now available. It gives extensive information on the financial data of over 250 life and general insurance group accounts for the year 2003. It costs £270 and is available from Tim Orton, 0115 951 5269, timothy.orton@nottingham.ac.uk



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 of 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
Professor of Insurance Management*

Professor Kevin Dowd
*Professor of Financial
Risk Management*

Professor Leigh Drake
*Professor of the
Management of Risk*

Professor Paul Fenn
*Norwich Union Professor of
Insurance Studies*

Aoife Hanley
Lecturer in Managerial Economics

Dev Vencappa
Teaching Fellow

Tim Orton
Research Support Officer

Jennifer Howis
Director's Secretary

Kerry Lambert
Centre Secretary

Lecturer in Accounting & Risk

We are looking to recruit a Lecturer, this being a full-time permanent position. Full details will be on the University website, <http://www.nottingham.ac.uk/hr/vacancies/vacancies.html>

This is an excellent opportunity to contribute to teaching (undergraduate and postgraduate) and research.

An MBA Opportunity

The MBA in Risk and Insurance Management is a unique course, designed specifically for managers working in insurance.

The course can be taken either full-time over a year or part-time over up to 4 years.

For further information, contact **Chris O'Brien, 0115 846 6519**

Commissioning Research

If you would like to consider commissioning research from CRIS, please contact **Chris O'Brien, 0115 846 6519**

Feedback, and requests for further information on any of the topics in Crisline, should be sent to **Christopher.obrien@nottingham.ac.uk**, or to **jennifer.howis@nottingham.ac.uk**, phone **0115 846 6607**

