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Weitere Vorträge wurden von Hans Bühlmann (Trendmodels contra Time Homogenous Models) und Peter Wright (Chairman of General Insurance Board, zur Ausbildung der Aktuare in Grossbritannien) gehalten.

Insgesamt acht Redner meldeten sich im Speaker's Corner zu Wort: John Ryan erklärte die Notwendigkeit des Prozesses der Kapitalzuteilung auf einzelne Branchen mit der Ineffizienz der Versicherungsmärkte verglichen mit den Finanzmärkten. Otto Wojciech sprach über Aggregate Claims Distribution by using compound Poisson and artificial Two Point Severity.

Zum äusserst gelungenen Kolloquium, das von Julian Lowe (Chairman General Insurance Research Organising Committee) und Edward Levay (Chairman of ASTIN) organisiert wurde, trugen wie jedes Jahr verschiedene soziale Anlässe wie der Besuch des Kunstmuseums verbunden mit einem Buffet-Nachessen bei. Mit 1160 Seiten erreichte die zweibändige Kolloquiumsdokumentation der 42 abgedruckten Arbeiten wohl einen neuen Rekord.

Das nächste ASTIN-Kolloquium findet vom 22. bis 25. August 1999 in Japan statt.

*Willi Schürch*

## 8<sup>th</sup> AFIR Colloquium, Cambridge, 14<sup>th</sup> to 17<sup>th</sup> September 1998

The 8<sup>th</sup> International AFIR Colloquium has been held in Cambridge, UK immediately following the 4<sup>th</sup> Faculty and Institute of Actuaries Investment Conference. The two meetings had a joint day meeting on September 15. Of the 108 AFIR participants from 18 countries, 59 registered for both meetings. Compared to previous AFIR colloquia these numbers are modest. Perhaps an explanation is that the registration fee was far from modest: £ 950, and no discount granted to academics (not even for Ph.D. students!).

The Colloquium venue was Robinson College, the newest of the thirty-two colleges in Cambridge. It was founded in 1977 by a local millionaire and is part of the University of Cambridge. The college is set in several acres of attractive wooded gardens yet only a few minutes' walk from the city historic centre and the famous

“Backs”. The accomodation was provided directly in Robinson College, hence student style. Besides the scientific activity, a programme of evening entertainment was arranged for participants. There was an informal dinner on the first day. On Tuesday 15 September, participants were invited to a buffet and drinks reception at the Fitzwilliam museum. The buffet took place amidst paintings by Constable, Cézanne, Gainsborough, Picasso and many others. On Wednesday 16, a formal dinner was held in the Dining Hall of the college.

The joint Investment Conference/AFIR day was mainly devoted to investment management. Paul Thornton, President of the Institute of Actuaries and James Tilley, Chairman of AFIR opened the colloquium. They were followed by the keynote address of Michael Dempster on “Integrated Asset-Liability Management”. Then Malcom Kemp presented proposals for a portfolio risk measurement & reporting standard for the fund industry. John Pemberton and Jeroen Van Bezooyen presented an interesting “Update on Option Pricing Techniques”. Just before lunch a (poor) debate took place. The theme was “This House Believes that Active Management Is in Terminal Decline”. After lunch, a guest speaker, Theodora Zemek advocated investment in the U.K. bond market. She observed that the credit risk premium was quite high compared with the number of observed default occurrences. Two parallel sessions took place in the afternoon. Eric Thorlacius presented the Falcon Asset Model, developed by Falcon Asset Management (a subsidiary of Swiss Re). The model simulates the complete range of investments available in global markets with the intended application of risk analysis and strategic planning. Quite an ambitious program! Then an unusual talk followed: “On Mathematisation: What Actuarial Science Can Learn from Economics and Philosophy” by John Pemberton. In the second session, Malcolm Kemp applied regression techniques to identify the typical investment stances of league table averages. Robert Clarkson presented an investment strategy for successful equity share selection and “validated” it by empirical investigations.

The first lecturers of the second day, Andrew Smith and Cliff Speed, presented gauge transforms, a very interesting new framework for thinking about stochastic investment models. A gauge comprises a deflator and term structure for each quantity modelled. Robert Chadburn compared management strategies for Accumulating with-profits life liabilities, with a view toward solvency and maximisation of policyholders’ return. The same morning, followed three valuation papers. Miguel Usabel assessed zero-coupon bonds in a pure jump interest rate model. Pierre Devolder proposed a stochastic amortization of a debt. Finally Masaaki Kijima and Yukio Muromachi evaluated credit risk of a portfolio with stochastic interest rate and default processes. During the whole of one of the two parallel

sessions of the afternoon, Niklaus Bühlmann and Hans-Fredo List talked on risk arbitrage strategies. That is, they considered quantitative trading or portfolio management strategies in both the traditional assets and derivatives (considered as a class of assets for themselves) that guarantee a limited risk exposure and at the same time achieve a maximum rate of portfolio value appreciation. Maybe an interesting reading for the LTCM fund managers! Applications presented were stock option portfolio management and pricing and hedging dual trigger stop loss treaties. They also provided an implementation guide (for jump diffusion case) for those strategies. No less than seven papers and 245 pages of the proceedings supported their talk! Admittedly this is a hot topic. In the parallel session, papers on guaranteed financial products were presented to the audience. A paper written by Dirk Nonenmacher, but presented by Jochen Russ showed how the fair rate of index participation could be calculated. In a second lecture, Jochen Russ introduced a new class of guaranteed index-linked products, where the payoff function depended on extreme values of the underlying index. He used lookback options results to derive closed-form pricing formulas. Finally, Gérard Pafumi presented a paper (co-authored with Hans U. Gerber) that introduced a dynamic investment fund protection, where the protected level can even be path-dependent. With their proposed contract, at any point in time, the value of the investment is above the protected level. Closed-form formulas were obtained for the price of the different contracts. On the last day, Rob Thomson advocated the use of utility functions to investment channel choice for defined contribution retirement funds. His method was based on an interactive system, which uses the member's answers to a series of questions to derive a utility function that can be used in conjunction with a stochastic investment model. David Wilkie used kinked utility functions to investigate whether an investor would prefer shares, cash or a mixture, over the relevant time period. In a talk entitled "A Fundamental Preference Model of Equity Share Returns", Robert Clarkson challenged modern financial theory by developing a model for equity share returns that was based on share prices changes being due not only to expected future earnings growth but also to specific generic attributes of shares. Selecting an optimal investment portfolio for a pension insurance company was the theme of the last lecture by Markku Kallio. He presented a portfolio management model based on multi-stage stochastic optimization. The stochastic elements included inflation, wage index, interest rates, equity prices, dividend yields, property values and rental yields. Quite a lot of work to optimize the portfolio management process, even for a CRAY computer! The next International AFIR colloquium will be held jointly with the ASTIN colloquium and will take place in Tokyo, Japan, from 22<sup>nd</sup> to 25<sup>th</sup> of August 1999.

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Write to AFIR 1999 Colloquium Secretariat, Mr. Shuji Tanaka, The Institute of Actuaries of Japan, Nihon Seimei Koishikawa Bldg.2F, 1-12-14 Koishikawa, Bunkyo-ku, Tokyo 112-0002, Japan for information (fax: +81-3-3816-4559, E-mail: iaj96@lib.bekkoame.or.jp). The AFIR colloquium in the year 2000 is scheduled to take place north of the Arctic Circle in Tromsø Norway. The address of that “midnight sun colloquium” is AFIR 2000, c/o Den Norske Aktuarforening, P.O. Box 2473 Solli, 0201 Oslo, Norway (fax: 4722485770, E-mail: nlp@norseliv.no).

*Gérard Pafumi*

