

“Land of Midnight Sun” Hosts AFIR Meeting

by Gary G. Venter

“**T**here are strange things done in the midnight sun,” declares Robert W. Service, and this was before the late June meeting of the actuaries of AFIR in Tromsø, “the uncrowned capital of northern Norway,” which at 70° north, 4° above the Arctic Circle, has two months of midnight sun each year.

AFIR, a section of the International Actuarial Association (and almost but not quite exactly an acronym for Actuarial Approach for Financial Risks), was designed to provide a forum for “actuaries of the third kind,” in other words, financially oriented actuaries from any of the traditional actuarial disciplines. With life and pension actuaries now addressing the impacts of variable interest rates, casualty actuaries looking at financial risk as a part of DFA, and both using financial reinsurance products that credit earnings from any selected investment vehicle, the quantification of financial risk is a growing topic that overlaps all of the actuarial areas.

Like ASTIN, AFIR meetings include discussion of a mix of theoretical and applied papers. Three papers presented at the June meeting seem particularly relevant to the financial risks of casualty insurers.

One was the invited lecture “Pricing Risk Transfer Transactions,” by Morton Lane of Lane Financial. Lane looked at the pricing of catastrophe bonds, and was able to approximate the prices of all the bond deals done to date by finding the best fits for the probability of a loss to the cover and the expected severity. He then showed that this same function could be used to reconcile the differences across industries in pricing corporate bonds with similar agency ratings. His approach was similar to one method recommended

for insurance pricing (see Shaun Wang’s paper on proportional hazards transforms, 1998 *PCAS*). A somewhat controversial paper, “Arbitrage in Asset Modeling for Integrated Risk Management,” was presented by one of the

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few attendees working on U.S. casualty applications, Eric Thorlacius of Swiss Re. His challenge to the need for arbitrage-free methods in DFA-like applications was a surprise to many, but there are important issues that support his case. This matter will be debated further in the new CAS Advisory Committee on Asset/Liability Management.

Also of potential application is the paper by James Maitland, “Interpolating the South African Yield Curve.” He uses principal component analysis to express 99 percent of the historical variability of that yield curve with just two or three components. This could provide a fairly quick algorithm to generate a realistic collection of yield curves. One application might use this to add muni and corporate curves to a set of simulated treasury curves. Even the short-term muni and corporate rates

have a fairly complex relationship to treasury rates.

The AFIR and ASTIN colloquia usually have an interesting social program, and Tromsø was no exception. The opening reception started at an aquarium for Arctic sea life, including seals. The gourmet Arctic buffet also included seal, which is a very heavy, rich meat, whale marinated in cognac, and reindeer.

The second night was sunny, and at midnight a group took a gondola up a mountain and followed Morton Lane from there to a peak well above. Even in the midnight sun the valleys are in shadow at some point, as the sun slowly revolves around the horizon. Not so the peaks, where we could stand in the sun and watch the shadow creep across Tromsø. By 2 a.m. we were back at the hotel bar sun deck, shadows gone, enjoying what felt like late afternoon. During the trip, some attendees were also able to visit Tromsø’s planetarium and northern lights show, and a botanical garden of Arctic and high-altitude plants, many flowering.

After the colloquium, a few of the participants headed even further north, to the Norwegian island of Svalgard, formerly known as Spitsbergen. At over 80° north latitude, this is the north-north of Norway. It is, however, slightly southerly compared to Alert (82.5° N), at the top of Canada, the country hosting next year’s AFIR colloquium. Following successful meetings in Tokyo and Tromsø, another “T”—Toronto—is the site of AFIR’s 2001 meeting, set for September 6-7. This will be a good opportunity for more North American actuaries to experience an AFIR colloquium. Mark your calendars and watch for an announcement of the registration procedures. ■