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Making a Market for Acts of God: The Practice of Risk-trading in the Global Reinsurance Industry, by P. Jarzabkowski, R. Bednarek & P. Spee

Book review for the *Journal of Risk and Insurance*

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A way of seeing the world necessarily entails a way of un-seeing it. In the pages of *JRI*, we talk about insurance in the allied languages of economics, actuarial science, and statistics. These languages give us the means of articulating our arguments with clarity and rigour. But they also constrain us in what we can say. Then one can ask: what is left out? How much is there in insurance that matters and we find hard to talk about?

"Quite a lot" is the answer, as we learn from Jarzabkowski, Bednarek and Spee's fascinating book on the reinsurance industry. From 2009 to 2012, the authors conducted a global ethnographic study of the reinsurance market, observing practitioners, particularly underwriters, as they went about their business. Their work is a contribution to the burgeoning field of social studies of financial markets. The theoretical focus here is on relations and practices rather than individuals and organisations – on how a global market is made through the common practices and understandings that underwriters enact. In parallel to theoretical arguments, we are treated to a number of captivating vignettes from the authors' observations of underwriters at work, taking us from London to Singapore, from Florida to Bermuda.

Reinsurance is a global and specialized business. Within particular risk types, underwriters form a dense network of personal relations and shared understandings – most people know each other. Market structure underpins this: reinsurance deals are typically taken on by a panel of reinsurers, at a consensus price. The process of obtaining reinsurance quotes by potential panel members and then reaching a consensus price appears initially like an application of game theory: quote too low and you drag down rates, quote too high and you are out of the deal. But much more is going on here. Cedents don't just take the lowest price, as they want to make sure they get enough coverage and encourage a wide panel of good quality reinsurers to participate, with many of whom relationships of trust have been built over several years. Consensus pricing, the practice of applying the same rate for all members of the reinsurance panel, is itself talked about in terms of fairness and equitability – "everybody is in the same boat as me", a cedent says.

Loyalty works both ways. When disaster struck with the Tōhoku earthquake and tsunami in March 2011, many underwriters had already provided their quotes to Japanese insurers for the forthcoming year's reinsurance cover. At the time, rates in Japan were quite low, at a 'soft market' stage, meaning that that the 2011 quotes would in no way recover the actual losses reinsurers were about to suffer. Underwriters agonized about whether they should submit revised quotes. They mostly decided against it, hard though it was to justify to their own bosses that cheap quotes should be offered at a time when huge payouts were about to be made. But underwriters understood the emphasis that Japanese cedents place on long-term relationships and were wary of opportunistically

raising rates in the midst of a difficult time for the Japanese insurance industry. Underwriters shared an understanding that "Japanese reward loyalty" and acted accordingly.

Such considerations also shed more light on the way that market cycles are generated. Cycles are often talked in terms of capital availability: when profits are high, capital floods the market reducing rates etc. But within the world of reinsurance, the concept of 'payback' is ubiquitous. When high losses are experienced, reinsurers will subsequently increase their rates. This is not merely a consequence of reduced reinsurance supply. Reinsurance underwriters explicitly expect that, as part of their long-term relation with cedents, they will be compensated for providing cover in difficult times. The role of uncertainty in this is crucial. It is hard to know what an appropriate price for a deal is, especially if highly specialized risks are traded, which can lead to unpredictable losses. Market cycles are more than simply an economic function; payback enables reinsurers to stabilise their capital flows over time and continue providing cover.

The role of quantitative risk models that are used across the market, particularly catastrophe models, is extensively discussed by the authors. Putting a price on a reinsurance deal makes it a financial object and thus comparable to other deals. The role of models is fundamental for achieving a degree of consistency in calculating quotes across deals, as well as across reinsurers on a panel reaching a consensus price.

To further elucidate the transformation of deals into financial objects, two schemes for classifying risk types and underwriting practices are proposed. On the one hand, *risks types* can be classified according to the extent that they are standardized around given parameters and according to the quality of information that is typically provided as part of a deal. Standardization is often a feature of the line of business, with Property highly standardised, in contrast to specialty lines such as Marine or Credit & Surety, where different deals have unique characteristics. (The difficulty in standardizing such risks bears echoes of Knight's distinction of risk and uncertainty, the latter arising exactly because of the inability to separate exposures into homogenous groups that would allow application of laws of large numbers.) Quality of information is often determined by territory: typically best in developed and less so in emerging markets. On the other hand, *underwriting practice* when calculating quotes consists of two overlapping elements, which the authors term 'technicalizing' (relying on modelling and technical rating tools) and 'contextualizing' (incorporating additional information such as the relationship with the cedent and market dynamics).

The characteristics of traded risks then suggest how technicalizing and contextualizing are blended. For risks that are highly standardized and for which good information exists, such as US property, modelling is used to derive a technical rate, with context providing ex post tailoring and corrections. For specialised risks that are information rich but lack standardization, such as Credit & Surety, technicalizing and contextualizing engage in parallel, with various actuarial tools used and modified according to contextual factors.

Frontier risks for which neither standardization nor good information exists, are principally rated using context: market rates, relation with client, specific information about the client's portfolio, comparison with other deals... In an example of evaluating such frontier risks, we meet Ria, an underwriter working on a Commercial Property deal in Pakistan and a Motor deal in India. The information she has on those deals is summarized in a few pages – a world away from the Gigabytes of information used to evaluate US property deals. But Ria has access to context and tacit knowledge that allows her to take decisions even for such deals. Her way of evaluating reinsurance deals helps us understand how deep uncertainties are tackled with in her market of frontier risks: not by mobilising multiple priors or any such like, but through enacting shared practices.

The blending of technicalizing and contextualizing addresses something fundamental at the core of risk evaluation. A tradable object needs a price, a numerical summary of its characteristics. Modelling, where applicable, helps in generating that level of abstraction, by stripping the context away from specific deals, articulating their properties in statistical terms and creating a framework for evaluation that is acceptable across the market. But, within the practice of evaluation, individual underwriters' specific thinking about context never goes away – it remains fundamental in the generation of quotes. I cannot put it better than the authors: "This relational tension between the standardising effects of models and the variation arising from individual contextual knowledge is at the heart of the evaluation process from which the consensus price on every deal emerges" (p. 88).

So what does the future hold for the global reinsurance market, with its specialized risks and site-specific practices? Jarzabkowski, Bednarek and Spee discuss recent market developments such as the tendency for consolidating ('bundling') diverse risk types, perils and territories into a single deal. This development is tied with insurers' increased ability to quantify diversification effects in their portfolios and their need to demonstrate capital efficiency to their investors. Bundling risk allows cedents to reap the benefits of diversification and cede less business, thereby retaining more profit. This puts pressure on Reinsurance rates. But it also challenges the evaluation practices of underwriters, which have traditionally focused on single risk types, because portfolio effects and capital calculations require heavy use of actuarial and statistical modelling skills.

The pressure on the reinsurance industry is compounded by the growth in the market for Alternative Risk Transfer (ART) instruments. Such products are attractive to investors outside the reinsurance industry, who are seeking to diversify their own exposures to financial markets. The capital providers behind ART do not share the practices of traditional insurance underwriting. The ART market dos not feature consensus pricing and payback, with their associated notions of reciprocity and loyalty. Reinsurance risk becomes abstract and commoditized. As the distance between capital providers behind ART and the risks underwritten increases and as diverse risks are bundled together, the emphasis on models and technicalizing also increases, at the expense of deal-specific contextualizing. The knowledgeable practices of reinsurance underwriters are thus pushed aside.

The authors are concerned about such developments, reminding readers of the subprime mortgage crisis of 2008, which demonstrated the danger of writing products such as CDOs that are abstracted and remote from underlying exposures, the risk of which was ultimately shown to be poorly quantified by models. I have sympathy for this argument, though one would need to examine carefully the different ways in which financial and reinsurance markets generate systemic risk. In both markets reliance on models serves to coordinate market behaviour, though the pattern of endogeneity changes: model-driven decision making can worsen liquidity crises, but not cause earthquakes. It may cause something else though: an undermining of precisely those underwriting practices and understandings that address the very things that, as economists and actuaries, we find so hard to talk about.