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Automatization of Underwriting and the Future of the Reinsurance Relationship

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Abstract

New technology and artificial intelligence are leading to major changes in the traditional underwriting process. This article discusses how the automatization of underwriting may affect the relationship between reinsured and reinsurer, including the classic reinsurance doctrines of utmost good faith and follow the fortunes.

Unprecedented technological advances in recent years have changed the day-to-day lives of individuals all over the world. Disruptive technology and ever-expanding sources of Big Data are likewise changing the way companies do business in countless industries. Hardly immune to change, the insurance industry has been adopting new technology that offers the potential for optimizing business processes and results, including data analytics, artificial intelligence and digital labor. These technological advances are predicted to have a profound effect on the way insurers interact with their customers: for example, the customer experience, from purchasing insurance to submitting claims, will be streamlined and more consumer-friendly, and policies will be increasingly tailored to a particular insured, as already seen in the InsurTech arena.

At the same time, new technology and processes, particularly in underwriting, may also affect another fundamental industry relationship, that between an insurance company and its reinsurer. The role of the traditional insurance underwriter is evolving, with automatization currently available across the entire underwriting process—intake, segmentation, rating/pricing, quote, bid and policy issuance[1]. As reinsurance partners move toward increasing automatization, a natural question arises: how will these developments affect the reinsurance relationship and certain of its defining traditions and principles, such as the follow the fortunes doctrine and the duty of utmost good faith? Some may view automatization as a way to enhance the reinsurance relationship and improve cooperation between business partners, which will further serve the underlying aims of follow the fortunes and utmost good faith. Others may see automatization, especially as machines continue learning and become "smarter," as a harbinger of a further shift in the reinsurance relationship from the traditional honorable engagement to a more ordinary commercial relationship, as the new technology potentially calls into question the relevance of the old traditions.

FOLLOW THE FORTUNES AND UTMOST GOOD FAITH IN THE TRADITIONAL REINSURANCE RELATIONSHIP

Although the reinsurance relationship has evolved since its beginnings (especially as the result of large APH losses towards the end of the twentieth century), certain time-honored and fundamental tenets are still generally considered to be central to any reinsurance undertaking. These include the duty of utmost good faith and follow the fortunes. While the precise contours of the follow of fortunes doctrine have often been the subject of debate, in its purest and traditional form, follow the fortunes simply means that the reinsurer is bound to follow the underwriting fortunes of its reinsured. This is because the reinsurer "has given up to the reinsured … a large measure of its own discretion and therefore of its 'fortunes,' meaning its 'course of good or bad luck … in some undertaking,' which must follow that of the reinsured."[2] In turn, provided the reinsured acts in utmost good faith, "its losses from underwriting that look improvident or simply unlucky in retrospect will be indemnified within the terms of the reinsurance contract."[3] In its original form, follow the fortunes is also distinguished from "follow the settlements," which mandates the reinsurer accept the settlements paid by its reinsured as long as claims are presented reasonably, paid in good faith, covered by the reinsurance contract and are reasonably within the terms of the underlying policies.

Utmost good faith is likewise often considered an integral part of a reinsurance relationship and requires a higher degree of good faith than imposed in an ordinary commercial relationship. A broad concept, this mutual duty between reinsurance partners has been described in various

ways, including as a requirement that "one party may not place its interests above those of the other party, and at all times and in all of its dealings must be forthright"[4] or as "a commitment to maintain a good working relationship and open candid communication."[5] The duty of utmost good faith applies throughout the duration of the reinsurance relationship and has given rise to disputes such as alleged nondisclosure of risk or loss details.[6] It has thus been described as a fundamental practice used in the reinsurance market to decrease contracting and monitoring costs in order to make reinsurance possible, in other words, for reinsurance premiums to be less than original insurance premiums, reinsurers cannot duplicate the basic tasks of the reinsured when it comes to evaluating risks to underwrite and handling claims.[7]

THE REINSURANCE RELATIONSHIP AND THE AUTOMATIZATION OF UNDERWRITING

Given the many anticipated benefits, automated underwriting could work to strengthen the reinsurance partnership and serve the underlying goals of follow the fortunes and the duty of utmost good faith as the result of improved predictability, consistency and profitability.[8] Among other things, commentators have noted that: Primary underwriters will be better able to customize products according to client needs and demands.[9] Administrative burdens, including time spent on rote, manual tasks, will be reduced, freeing underwriters to focus on strategic and complex risks.[10] Decision-making will be assisted and enhanced by automated systems, with the collection and analysis of Big Data playing a pivotal role.[11] Data-driven underwriting processes are further anticipated to reduce instances of manual failure, and automated solutions are expected to bring more consistency to underlying decisions.[12] Efficiency gains may also be realized with underwriters enabled to make more accurate and informed risk assessments in less time.[13] Some even predict that insurance could evolve from risk protection to risk prevention, as companies use Big Data and analytics to establish claim patterns and reduce losses by anticipating potential liabilities in advance.[14]

The effect of these advances on follow the fortunes could certainly be viewed as positive to the extent automatization offers improved underwriting fortunes, such as significant time and money saved, heightened underwriting consistency, increased profits and less "human error." Similarly, automatization of underwriting processes, particularly the ability to synthesize and analyze large amounts of data rigorously and efficiently, also offers the potential for easing the disclosure burden on a reinsured under its duty of utmost good faith. Others have suggested that the use of artificial intelligence and machine learning might even reduce the incidence of reinsurance disputes over improper underwriting or breaches of underwriting or treaty guidelines, which may also implicate the duty of utmost good faith.[15]

Even if these benefits materialize, however, automated processes will still necessarily bring an additional "player" into the reinsurance partnership, so that new eventualities may need to be anticipated. Traditionally, the principal risk underwritten by a treaty reinsurer has been the reinsured itself—the ability of the insurer, and its people, to successfully underwrite insurance business.[16] In many transactions, the role of an insurance company's people is viewed as so central to the relationship that treaties may include an option for cancellation if there are substantial changes in the management or key personnel of either party.[17] With automated processes effectively becoming part of the reinsured's key underwriting "personnel," significant changes in

these processes, whether the actual programs, algorithms or data sources, may become an issue in a reinsurance relationship. For example, some might argue that the duty of utmost good faith requires at minimum disclosure of, if not consent to, any new or modified automatic processes. Since reinsurers are often seen as effectively underwriting the reinsured's underwriting (and claims) departments, reinsurance partners may want to craft new provisions in their reinsurance agreements regarding changes to automated processes, such as disclosure or consent requirements, or even an option to cancel if material or unilateral changes are made.

Any unintended results, or "mistakes," in automated underwriting could also lead to disputes, including when it comes to follow the fortunes and utmost good faith. While AI technologies, including robotic process automation and machine learning, can be used to extract key information from vast amounts of data (from data sources such as wearables, connected cars, intelligent buildings, government departments and social media sites[18]), the results of automated underwriting are in the end only as good as the input used to create them, including the data from which the AI programs learn.[19] As a result, poor quality data has the potential to undermine risk analysis and insights, and successful underwriting.[20] Some have thus posited that overreliance on AI could lead to underwriting decisions that breach reinsurance terms if an AI software program learns incorrectly and produces inaccurate or suboptimal conclusions.[21] Even where a reinsurance agreement is silent on underwriting standards or requirements, disputes could arise under follow the fortunes and/or utmost good faith if a reinsurer undertook to reinsure risks that were to be (automatically) underwritten with certain expectations, and these expectations were not met because of a failure in machine learning.

On the other hand, if a reinsurer has signed on to a reinsurance program, after full disclosure of the technology the reinsured will be using, it might be hard-pressed to argue that unexpectedly poor underwriting results should release it from its contractual obligations. Another potential issue, especially at the current stage of technological development, is the human aspect that remains. For one, for a machine to learn, it must be taught, often through the input of a "human-in-the-loop" who makes judgments on the accuracy of algorithms and feeds them back to improve results. Second, in many cases, although a machine may produce the analysis, it is still up to humans to make the decisions. In these areas, follow the fortunes and utmost good faith would likely still play a role. As the machines being used by primary insurers become "smarter," however, there is the possibility of their increasingly assuming traditional human roles and decision-making.

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Reinsurers themselves are also moving on to automatization and may use it to optimize their underwriting and monitoring of assumed business.[22] As a result, the safeguards of the old reinsurance traditions could potentially become less relevant. Where reinsurers once had to rely on utmost good faith for the disclosure of information, technological advances may make it available in real time. The need for traditional underwriting and claims audits by a reinsurer could also be obviated by new technology.[23] Assuming a reinsurer signs on to a contract that reinsures policies underwritten according to specified automatic processes, the need for follow the fortunes and utmost good faith, at least to cover the vagaries of the human element, may be decreased. There is also the question, once automated processes become entrenched, whether the collaboration seen between reinsurance partners will still be possible, or even necessary. Historically, reinsurers have offered underwriting and claim expertise in various lines of business, on which reinsureds, particularly smaller operations, rely to improve their underwriting and claims operations.[24] Reinsurance as a contract for the use of certain technology could also reduce or eliminate the need for reinsurer input (and the reinsurer's ability to provide input), making the reinsurance relationship less of a business collaboration and more of a "stake" in a particular technology. ◄

1 KPMG, "Enabling the future of underwriting: A digital road map," available at kpmg.com/us/insurance.

2 Committee and Editors, *Reinsurance: Indemnifying Insurers for Insurance Losses*, REINSURANCE (Strain, Ed.), 1997, p. 25 (internal citation omitted).

3 *Id.*

4 Robert L. Haig, Core Concepts and Doctrines of Reinsurance, 4B N.Y. Prac., Com. Litig. In New York State Courts, § 74:37 (4th Ed.)

5 Lewis H. Paul, "Underwriting the Reinsured," REINSURANCE (Strain, Ed.), 1997, p. 501.

6 *Id.*

7 *Unigard Sec. Ins. Co., Inc. v. North River Ins. Co.*, 4 F.3d 1049, 1054 (2d Cir. 1993).

8 Deloitte, "Insurer of the future: technology is shaping the future of underwriting," available at *https://www2.deloitte.com/global/en/pages/financial-services/articles/insurer-of-the-future.html*.

9 *Id.*

10 *Id.*

11 KPMG, "Enabling the future of underwriting: A digital road map," *available* at *kpmg.com/us/insurance*.

12 *Id.*

13 *Id.*

14 JLT Re Viewpoint, InsurTech: Rebooting (re)insurance, p. 7, available at https://www.jltre.com/our-insights/viewpoints/september-2017.

15 Larry Schiffer, "Insurtech, Disruptive Technologies, and Reinsurance," available at https://www.irmi.com/articles/expert-commentary/insurtech-disruptive-technologies-reinsurance.

16 Committee and Editors, *Reinsurance: Indemnifying Insurers for Insurance Losses*, REINSURANCE (Strain, Ed.), 1997, p. 23.

17 Lewis H. Paul, "Underwriting the Reinsured," REINSURANCE (Strain, Ed.), 1997, p. 505.

18 John Cusano, "Poor Data Can Undermine Insurers' AI Projects," *available at https://insuranceblog.accenture.com/poor-data-can-undermine-insurers-ai-projects.*

19 Larry Schiffer, "Insurtech, Disruptive Technologies, and Reinsurance,"*available at https://www.irmi.com/articles/expert-commentary/insurtech-disruptive-technologies-reinsurance.*

20 *Id.*

21 *Id.*

22 *Id.*

23 *Id.*

24 *Id.*