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Marija R. Koprivica, PhD¹

SYMPOSIUM REVIEW

THE 17TH INTERNATIONAL INSURANCE SYMPOSIUM

The 17th International Insurance Symposium was held from 16 to 10 of May 2019 at Mona hotel in Zlatibor and was organized by the Serbian Actuarial Association and the Faculty of Economics of the Belgrade University. A large number of renowned Serbian and foreign experts, representatives of academic community, insurance and reinsurance companies, actuarial profession, audit agencies and supervisory bodies from several countries gathered again around a burning issue of *Insurance on the Eve of the 4th Industrial Revolution*. This Symposium, already well-known for importance of the topics it addresses, renowned lecturers, diversity of their lectures and interest they attract, this year raised the bar again.

The welcoming speeches were held by the Professor Branislav Boričić, PhD, the Dean of the Belgrade Faculty of Economics, Professor Jelena Kočović, PhD, the President of the Programme Board, Professor Milo Tomašević, the Dean of the Belgrade Faculty of Electrical Engineering, Željko Jović, PhD, the Vice-Governor of the National Bank of Serbia and Branko Pavlović, the President of the Serbian Actuarial Association. It was pointed out that successful operations of insurance sector in the digital world depend on the awareness of the potentials of modern information technologies. As in the previous years, the general sponsor of the Symposium was Dunav Insurance Company. **Dragica Janković, PhD**, a member of the Executive Board of this largest and oldest Serbian insurance Company which, this year, celebrates 45 years of its business operations under the name of Dunav, stressed in her welcoming speech that by supporting this international insurance Symposium, this Company proved that it recognises the importance of staff education as one of the prerequisites for good results of the company. The Symposium continued with more than 25 lectures of eminent theoreticians and practitioners who analysed the impact of digital transformation on insurance sector and highlighted the advantages and related challenges of new technologies.

In light of the Fourth Industrial Revolution, a new paradigm of global economic development is based on information and telecommunications technologies that are inseparable from a daily life of a modern man and represent necessary technological platform of contemporary business models. The convergence of

¹ Assistant Professor at the Faculty of Economics of the University of Belgrade
e-mail: marijajovovic@ekof.bg.ac.rs

physical, digital and biological spheres inevitably brings about changes that will affect all segments of economic life, and the insurance sector will be among the first to adapt. **Jelena Kočović, PhD**, a full professor at the Faculty of Economics, University of Belgrade, identified in her plenary the opportunities and threats that the Fourth Industrial Revolution brings to the insurance sector. Sophisticated technologies provide multiple opportunities to improve the performance of the insurance sector. They pave the way for innovations geared toward meeting new needs of policyholders, developing new products, and increasing the efficiency of business processes. On the other hand, these technologies force insurers to make the most of these opportunities if they want to survive in the new world. Since the insurers cannot focus on all digitalisation areas at once, they were recommended to establish priorities in implementing digital transition. The focus can be placed on improving customer experience, digitizing distribution channels, automating business processes or introducing new and modifying the existing products. To be successful, digital transformation requires a consistent adaptation of the entire organization and culture, at the level of both individual companies and the entire insurance sector.

Gordana Bukumirić, the President of the Executive Board of Uniq Insurance, pointed out in her speech that the Fourth Industrial Revolution brought the changes to the business operations of insurance companies. Emphasis was placed on new models of customer behaviour, which insist on transparency and availability of information. Under the influence of increasingly available, various, advanced, digitized services, customer expectations are getting higher, imposing new imperatives on insurers such as the improvement of insurance products and changes to the organization. **Professor Evica Petrović, PhD** and **Jelena Z. Stanković, PhD** from the Faculty of Economics in Niš devoted their lecture to the sale of insurance services and the impact of technological revolution on the choice of sales channels. The results of the empirical research have shown that competition among insurance companies is what largely determines the adoption of e-commerce in the Serbian insurance market.

Siegbert Baldauf, a representative of the German Association of Actuaries (*Deutsche Aktuarvereinigung e. V. - DAV*) presented the novelties brought to the actuarial profession by the Fourth Industrial Revolution. In the digital age, a new, "fifth" type of actuaries is developing, successfully implementing computer technology and big and unstructured data analytics. To successfully use these tools in actuarial assessment and reporting, technologies such as artificial intelligence, machine learning and neural networks are required. Professor Valery Baskakov, PhD, the Director of the Moscow International Actuarial Advisory Company (IAAC), has just introduced a genuine cash flow model based on machine learning. Non-life insurers operating in the Russian Federation served as an example of the model used to determine the amount of insurance premiums and claims reserves. Relevant statistical tests have confirmed the satisfactory accuracy of the obtained results.

New technologies are expanding the scope of catastrophic risk modelling of (re) insurance companies. The presentation of **Jelena Doganjić, PhD**, a representative of *Europa Re*, was dedicated to agricultural insurance and contemporary trends in risk management, with a focus on yield index-based crop insurance. The following advantages of this type of insurance were highlighted: coverage of almost all causes of reduced yields, absence of moral hazard and negative selection (poor selection), low underwriting costs, transparency, and reinsurance benefits. The hypothetical example was employed to present the calculation of premium rate using stochastic simulations. **Stefano Ellero**, a representative of *Zavarovalnica Triglav* from Slovenia, explained in his presentation the valuation fundamentals of catastrophic risk models, including standard Solvency II approach, internal models of insurers, and developed commercial models. Real-time access to new and extensive catastrophe data sources, combined with advanced processing technologies, contributes to more accurate prediction of catastrophic events. However, it was pointed out that one of the key challenges is how to choose among the multitude of available cat risk models the one that produces the most reliable results, and define the relevant criteria to be used for such purposes in actuarial practice.

Within the presentation of **Safet Kozarević, PhD**, a Full Professor at the Faculty of Economics in Tuzla, together with **Jovanka Četković, MA** and **Raduška Cupać, MA**, the representatives of the United Nations Development Program (UNDP), the project results were presented in relation to flood risk reduction in Bosnia and Herzegovina, including the schemes of index-based and traditional crop and fruit insurance and insurance of buildings against floods. Within the project, the insurance tariffs were differentiated according to hazard maps, based on hydrological and hydraulic models. It was pointed out that there is a great need, but also a potential, for the development of an insurance package against a large number of natural hazards, with necessary changes to the legal framework and a promotional campaign in order to raise awareness of the role of insurance in managing these risks. In the context of the analysis of citizens' knowledge of, and confidence in the insurance industry, **Vladimir Kaščelan, PhD**, a Full Professor at the Faculty of Economics in Podgorica, presented the results of the research conducted on the example of the Montenegrin insurance market, using computer methods. A logistic regression model was evaluated to test whether, based on basic socio-demographic characteristics, the reasons for distrust in insurance institutions could be predicted. The results of this research can help to create educational campaigns that would bring insurance culture to a higher level. [Show more](#) [Show less](#)

Among the conclusions of the 17th International Insurance Symposium, it was pointed out that robotic process automation, the Internet of Things, Blockchain technology and artificial intelligence are the potential for modernizing and improving the processes in insurance industry and lowering the operating costs of insurance companies. At the same time, Big Data analysis, together with new software solutions, enable more accurate forecasting of claims and determination of adequate insurance premiums, as well as the development of new products and

business models of insurance companies. Considering the research results which indicate a low level of citizens' trust in insurance companies operating in the region, the education of potential policyholders about the characteristics and importance of insurance is a prerequisite for developing insurance in this area. In addition, to meet the growing expectations of current and potential policyholders, the insurers will need to implement intelligent computing methods. Finally, it was emphasized that digitalization in insurance is not an end in itself, but rather a method used to meet the expectations of policyholders and advance the insurers' performance.

Translated by: Zorica Simović