THE LATEST FINDINGS OF HUNGARIAN RISK MANAGEMENT RESEARCH

PRMIA conference summary

A scholarly conference entitled *"The latest findings of Hungarian risk management research"* was organized by the Doctoral School of Regional and Economic Sciences of Széchenyi István University, the Kautz Gyula Economics Faculty and the Hungarian branch of the Professional Risk Managers' International Association (PRMIA) at Széchenyi István University in Győr on 21 October 2016. The goal of the conference was partly to share and discuss the latest Hungarian university research findings related to modern risk management at companies, financial and other organizations, while on the other hand aiming to create a forum where Hungarian PhD students and researchers could present their research on the theme of risk management to a professional and academic audience.

As one of the organizers of the conference, Széchenyi István University has run a workshop for years where it carries out research on the theme of risk management. The first half of the conference primarily saw lectures delivered by speakers associated with this workshop.

The PRMIA Hungary Chapter, as co-organizer of the conference, is a professional NGO whose goal is to maintain high standards in the risk management profession by making available and sharing best professional practices. Besides providing access to international professional qualifications by means of internationally accredited teaching materials and examination opportunities, the organization contributes to the spread of best practices by organizing conferences. In the second half of this conference, the audience mainly had the opportunity to hear lectures from speakers invited by the PRMIA.

In keeping with the above, the conference was divided into two sections: the first part featured industrial and agricultural risk management solutions, while the second part of the conference saw lectures on the theme of financial risk management. Each section featured five lectures.

The series of lectures was opened by associate professor *Dr. József Szabó*, who – in his introductory lecture entitled *"Bookmarks – Directions in risk research"* – provided a brief overview of the results of industrial risk management methodology so far and outlined the possible directions research may take.

In the next lecture, associate professor *Dr. Krisztián Koppány* spoke of the risks to the Hungarian processing industry emerging from input-output model analysis. In his lecture entitled *"Growth opportunities and risks arising from the export performance and sectoral structure of the Hungarian processing*

industry," he examined the structural transformation of the Hungarian economy between 2010 and 2014 and its impact on growth. He looked at the structure of the economy using the input-output model and input-output tables carried further by the RAS technique based on sectoral fringes. Koppány determined what influence is exercised directly on the economy as a whole by changes in exogenous demand for products of the given sector, as well as indirectly through supplier connections. The novelty of the examination method lies in the linking of input-output analysis with portfolio theory, which enables not only changes in the level and internal structure of processing industry exports to be taken into account during the inquiry, but also the expected value and spread of changes in sectoral export volume and correlations thereof, as well as changes in the system of contacts among suppliers and proportions of added value in domestic sectors. The results show that the expected contribution of processing industry exports to growth in the examined period increased; at the same time, its spread also increased, as did the growth risk.

In the morning's third lecture, entitled *"Risk factors in construction industry projects,"* associate professor *Dr. Norbert Kovács* presented a new conceptual framework for risk management in building projects which helps effectively identify risk factors. For this, he examined individual participants in the various phases of a project through the prism of their contractual relationships, identifying the risks in each phase by comparing the obligations and responsibilities of the participants. Listing all the project participants and project phases in the form of a matrix, he reviewed the risks, which he then rendered measureable by assigning numerical values to the time and cost quotas of each given phase. At the end of his lecture, by summarizing the participants, phases, and time and cost requirements of the entire project in a diagram, Kovács provided a visual picture of the significance of each individual risk factor.

The lectures continued with a contribution from university teaching assistant and PhD student *Imre Cserpes*, entitled *"The risks in construction projects – The impact of participants' individual interests,"* in which – similarly to the previous speaker – he spoke about the risks involved in building industry projects, which he likewise analyzed by examining the relationships between participants, but looking at the risks through the impact of their individual interests, rather than through contractual relationships. Cserpes concentrated on internal actors participating in the actual realization of a project, reviewing their interests and cooperation. He examined the nature of their relationships from the specific point of view of risk management, outlining the proprietary, legal, financial and accountability-based relationships between participants and changes occurring in these. By means of the aforementioned factors, he systematized the risk elements inherent in relationships between actors. The speaker also incorporated his own practical experience in project management into his analysis, thereby

presenting a summary of the practically oriented approach to risks.

The morning programme closed with a lecture from associate professor *Dr. Gábor Élő* entitled *"Minimization of risk using IoT and Big Data technologies via an example in agricultural economics"* (an article based on this being included in the current issue of this periodical). The lecture dealt with the possible uses of the aforementioned technologies in risk management by means of an agricultural example. The two budding technologies are not only beating a path in direct technical development, but also permit an examination of the economic and social impacts. Élő showed how the mass of omnipresent data sources connected through networks makes hitherto unknown solutions possible. To extract the information distillable from an extremely large and poorly structured set of databases, a very workable method has been developed within the framework of the Agrodat project. The Information Society Education and Research Group (ITOK) at Széchenyi István University has developed a risk management framework for business models related to the advancement of agricultural production methods. The essence of the risk management solution is that by processing a large amount of sensor column data using supercomputers, we can not only carry out operational technology decisions but also minimize business risks. The speaker presented the theoretical basis for this, detailing both modelling and algorithmic problems and how to handle them during the course of the lecture.

The lectures in the morning's first session were followed by a buffet lunch in front of the lecture hall, where participants had the chance to discuss the freshly absorbed information and gather strength for the series of lectures in the afternoon.

Lunch was followed by a series of lectures in the section on financial risk management, opened by college professor and PhD student *János Ivanyos* with a lecture entitled *"The impact of taking aspects of sustainability into account on the practice of corporate risk management."*

At the start of the lecture, Ivanyos noted that – similarly to state and local government institutions – the controllers and participants in global value chains have been obliged to redefine their roles in alignment with sustainability goals, becoming more open to developing business models closely related to changes in innovation culture. These corporate initiatives have brought a number of new elements to the surface from the point of view of managing environmental, social and economic sustainability and corporate risks.

Ivanyos explained that the benefits for companies are relatively easy to identify with respect to value chain optimization. At the same time, however, quantifying and taking into account the usefulness to society and the environment – which also influences corporate decision-making and is important from the point of view of local social cohesion – is not so simple. "Translating" the viewpoints of

external interested parties (limited resources, environmental awareness, equal opportunities, etc.) into the supplementation and further development of existing, internal motivational factors within the company's operational framework (cost-efficiency, conformity to regulations, etc.) also contributes to improvement in corporate risk management and innovative processes, the successful operation of which can have a reciprocal effect on the reinterpretation of corporate strategy and the successful realization of growth objectives.

One of the most important conclusions was that the appearance of sustainability priorities, through the necessary spread of risk management practices, increases the significance of dealing with local social, environmental and economic externalities, so that risk management and innovation – through adequate "institutionalization" – can contribute to bringing economic peripheries with "cheap" production factors up to speed.

The next lecture was delivered by associate professor *Dr. Edina Berlinger* and *Dr. Barbara Dömötör* from Corvinus University of Budapest. Under the title *"Path dependence in the assumption of risk,"* they summarized the nature of the connection that may exist between the inclination to assume risk and past periodical gains, providing a theoretical explanation for positive, negative and neutral connections alike. The speakers differentiated their explanations depending on whether the starting point was rational or irrational behaviour on the part of given actors. In the light of a theoretical overview, they presented the relevant results of international empirical literature on the subject. Finally, they used a Hungarian corporate database as a basis for examination of whether companies' hedging activity can be linked to profits achieved in the past. They found that decisions to assume risk are often irrational – in an empirically demonstrable way. At the same time, they pointed out that when we look at several historically consecutive decisions, and not at individual decisions independently, an explanation can be found for this seemingly irrational behaviour. Their conclusion was that the analysis of path dependence in the assumption of risk may contribute to understanding the internal dynamics of economic cycles, to more effective risk management at the corporate level and the improvement of regulation.

The last lecture before the afternoon coffee break presented the work of *Marcell Béli* (Professional Risk Manager – PRM) and associate professor Dr. Kata Váradi (Corvinus University of Budapest) under the title *"A possible methodology for the determination of the initial margin."* They outlined a methodology to determine the initial margin requirement which conforms to the European Market Infrastructure Regulation (EMIR) in force since 2012, while taking into account the demands and needs of market participants with respect to the determination of the initial margin. The task of central counterparties operating behind stock exchanges is to take over the partner risk from market players. A

central counterparty operates a system of guarantees on several levels in order to manage risks as they arise, one key element of which is the initial margin. The main requirement from market players' point of view is for the value of the margin to follow market processes, while remaining stable in time if possible. Furthermore, the determination of its value should be objective so that it can be easily reproduced by market players, thus involving as few expert decisions as possible and being standardized for all types of product. Using a number of securities as examples, the lecture explained how a possible methodology can be constructed, and how the individual parameters can be determined so that it conforms to the interests and requirements of every affected party – regulator, market players and central counterparty.

Following the coffee break, adjunct professor *Dr. Gabriella Lamanda* and PhD student *Zsuzsanna Tamásné Vőneki* delivered a lecture on risk appetite. Under the title *"A framework for risk appetite: The situation and challenges in the Hungarian banking sector,"* they spoke about the necessity of determining risk appetite and domestic practice on the basis of a survey in Hungary. Regarding a framework, they noted that risk-conscious behaviour is one of the conditions for the successful operation of banks. A bank must be aware of the risks it has undertaken, and to be capable of evaluating these risks. To obtain an authentic evaluation, however, requires a framework – the so-called risk appetite framework – which reveals the bank's relationship to risk. In the first half of the lecture, the speakers reviewed the theoretical approaches, main concepts and regulatory endeavours related to the topic. They found that currently available guidance with respect to risk appetite is fairly limited, while the role of the risk appetite framework as one of the pillars of risk awareness appears to be increasing in importance from both a supervisory and internal, strategic point of view. Using the results of a questionnaire survey they carried out, the two speakers evaluated domestic practice and enumerated the deficiencies and critical points. Summarizing the responses, they noted that domestic banks typically do not possess a comprehensive framework extending to all risks. Where such a framework exists, risk appetite is primarily expressed in terms of maximum loss, risk capital and management pronouncements. According to Lamanda and Vőneki, obstacles to the creation of a framework include the lack of a uniform taxonomy, the unsolved issue of data retrieval and the difficulty of integration into operative practice. An important observation was that, beyond regulatory conformity, implementation of this framework bears additional fruit, such as increasing risk awareness and greater diversification in risk-taking.

Finally, university student *Eszter Pál* (Budapest Business School) shared the lessons from her award-winning TDK research essay with the audience in a lecture entitled *"Here existence is at stake!"*, which examined the potential consequences of the outcomes of risky decisions. One aim of her presentation

was to outline factors influencing individuals' inclination to assume risk, besides which she made a proposal for the further development of the MiFID questionnaire on this basis. The lecture began with a theoretical summary, where we got the chance to learn more about risk and investment in the context of risk appetite. Through examples from the specialized literature, she presented the factors influencing risk decisions (e.g. age, gender, standard of living etc.), before finishing by presenting the results of her own survey carried out with the help of a questionnaire. This showed that men are more inclined to take risks than women; young people more than seniors; students more than workers; and those with a high standard of living more than those with a low standard of living. On this basis, Pál made a proposal for further areas of development of the MiFID questionnaire, recommending that the above-mentioned variables be included in the questionnaire.

After the lectures, the conference closed with a round of informal conversation, where the audience and speakers were able to discuss their fresh experiences.

In summary, it was a successful conference conducted in a good atmosphere, where we had the chance to hear exciting lectures in both the first (industrial risk management) and second (financial risk management) sections, to get to know researchers on risk management as they appeared with their latest research findings, and to hear the topics most demanding of researchers' attention, sending us home with valuable new ideas on these themes.

Tamás Tóth
Director of PRMIA Hungary