EDITORIAL

According to many investors, financial institutions, finance experts and business enterprises, fintech is about reinventing the financial sector. It is about opening new markets, involving new customers and changing the services for existing customers. Fintech is the intersection of finance and technology that seeks to improve and automate financial services, and is rapidly transforming the entire financial services sector. New types of services as mobile banking apps, robo-advisors, peer-to-peer lending services, crowdfunding models and cryptocurrencies are all fintech innovations. Financial institutions and other financial companies are particularly interested in fintech's potential to improve financial inclusion and the quality of life.

Efficient use of the new fintech technologies are made possible through effective use of data and information technology. The use of alternative “big data” sources helps to better understand customers and tailor products to individual needs, for example providing financial services relevant to a life event, or the specific situation of the customer. However, data efficiency can have adverse effects on the customers as well, better understanding their life situations might actually support exploiting them, primarily the financially less savvy ones. Fintech has a tremendous potential, but there is no guarantee that this potential will be harnessed for good. Fintech innovators and regulators have to ensure they are providing value to the new customers of the financial sector.

According to many financial experts, digital is the greatest accelerator in the history of financial services. People access financial services from a variety of electronic devices, they use artificial intelligence many times when they request information, and they are “always on”, connected to the web and interconnected with each other. All these factors create new opportunities and forces in society, and we do not exactly know yet how society will react to the new opportunities. Perhaps digitalization is evolving too fast for a seamless acceptance by all participants in the financial services, including people, financial institutions and regulators. At the same time, new financial technology supports the economy in

the creation of more transparent, faster, more reliable and less expensive services, available even for those people who had no access to these services in the traditional way.

Artificial intelligence and robotics equipped with cognitive automation will pose challenges to businesses and the workforce. The best ways for applying AI and robotics ensure that these augment and empower today's workforce, rather than replace it. In reality one can expect the replacement of lower-skilled jobs and the creation of new jobs with higher professional knowledge. At the same time, financial technology will have a progressive impact on society through the creation of highly qualified jobs and by the financial inclusion of those who had not used financial services before. It will drive competition, giving customers greater choice and by forcing faster implementation of innovative technologies and services.

The articles in this thematic issue of *Society and Economy* describe various aspects of the new financial technology in a broad sense, each one aimed at a related socio-economic problem.

The first paper, by Péter Fehér and Krisztián Varga, examines the possibilities of the digital transformation of the Hungarian banking industry, using the "One Week Sprint" method derived from general Design Thinking methodology. The authors of the paper developed a case study with two Hungarian financial institutions focusing on real estate related opportunities and SME offerings. The methodological focus was on the use of carefully designed customer journeys and creating properly selected user personas for supporting digital efforts.

In the second contribution, Andrea Kő and her co-authors investigate the role of information and communication technologies in supporting knowledge creation patterns of companies operating in the Székesfehérvár Region of Hungary. The authors used the well-established Socialization – Externalization – Combination – Internalization (SECI) method for knowledge creation and examined the problem of knowledge management and knowledge functions. They describe possible ways of conversions between these categories. Generally accepted models and methods are very important in the rapidly evolving fintech area, generally accepted knowledge and application of knowledge is one of the basic factors of successful cooperation with stakeholders.

As one of the most prominent examples of the application of information technology, artificial intelligence and contemporary banking practices are robo-advisors. In the third paper, Michael Puhle gives a short description of the emergence of robo-advisors and an overview of how they manage other people's money, then evaluates the performance of five German robo-advisors. He presents the results of generally recognized performance tests and examines the exposure of robo-advisors to different non-overlapping asset classes. One of the most interesting

finding is that no robo-advisor was able to beat the benchmark after considering fees, and their performance is not constant.

Blockchain technology is one of the great promises of the future financial technology. Bitcoin and other cryptocurrencies play a well-known role in the financial market and hold great promises in other areas of society and the economy. The fourth paper, by Péter Racskó, gives a detailed analysis of the potential role of blockchain technology in voting systems, as one of the application areas frequently cited in scientific papers. The author proves that before blockchain technology could be successfully applied in voting systems, a series of theoretical and practical problems have to be addressed and solved.

Life insurance is one of the financial areas where new technology can bring a substantial renewal. The fifth paper, by László Kovács, analyses the problem of calculating the earnings of a life insurance company, and particularly one of its most important factors, the value of new business, or VNB for short. In order to calculate VNB, the insurance company needs to know the probability that the policy is still in force at any given time, i.e. the survival function of the policy. The author applies new model selection algorithms in order to determine the relevant parameters for the accurate estimation of the function. The accurate estimation of the survival function has its own potential business value: if the exact effects of the policy parameters for the survival function can be determined, the insurance company can focus its marketing strategy in a more efficient way.

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Guest editor

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