Interpretation of Big Data by InsurTechs

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Technology shows its transformative and disruptive impact on virtually every economic field. The insurance market is no exception and can no longer remain closely reliant on its conventional operational tools. Data sets that are in large volumes and that are hard to process using traditional data processing methods ('Big Data') are frequently argued to have the potential to replace these traditional tools by providing efficacious equivalents.

As a reflection of the conventional operation, Insurance Chapter of Turkish Commercial Code gives utmost importance to questions posed by insurers and the answers provided by the insured, in order to ascertain the foundation of an insurance contract. Accordingly, written or verbal questions directed to the prospective insured and the information given in response are deemed to concern substantial issues which affect the insurer's decision when providing coverage and calculating the corresponding premium. A prospective insured's duty to give accurate and true information is not restricted within the four corners of the insurer's questions. If there are issues which the prospective insured can be reasonably expected to know that would be regarded substantial by the insurer, the prospective insured is under a duty to proactively disclose these issues without waiting for the insurer's questions. Failure to give accurate and true information to the insurer on substantial issues has serious consequences, which would include an adjustment of the premium and avoidance by the insurer of the insurance contract.

Questions used as a means of assessing the associated risks by the insurers seem to have already been affected by the revolutionary impact Big Data has had on the sector. Indeed, insurers have used questions to understand the risks and draw the limits of the coverage but now this trend has started to give way to the ever-growing usage of Big Data for the same goal. Now insurers are looking into the collected data to find the answers to the potential questions. This saves time and provides convenience to all market players. Think of an insurer whose database provides a positive correlation between the people who purchase coverage against fire risk for their apartments and the increasing tendency of these people to be or become smokers at some point. If utilised correctly, this piece of information would also provide a better chance for the insurer to assess the risks in selling health insurances to those who have already bought fire insurance. The similar links between the risks detected in relation to differing areas of insurance have been increasingly drawn by insurers. As the databases enlarge and the methods to draw conclusions based on the data develop, the questions will inevitably become less necessary. Undoubtedly, this makes finding the right insurance less time-consuming for insureds and helps insurers to more accurately quote to their consumers by assessing the risks accurately.

On the other hand, there may be shortcomings in the statistics backed by Big Data. Indeed, one can try to analyse and understand why smokers are more likely to purchase fire insurance than non-smokers, yet the conclusions may not fit for all potential customers. This

may lead to higher premiums for those who are exceptions to the rule. At this point, technology can come to help with striking the right balance between the risk and the applicable premium. Taking health insurance as an example, there are many factors which affect how frequently an insured uses his health insurance, such as how often they exercise and if they have a healthy diet. Assuming that people would be willing to share their personal data as to how often they exercise in exchange for lower premiums, there are many wearable technology products that could provide reliable data to insurers as to the exercise routines of the insureds. With new innovative ways to interpret Big Data, all market participants would be served better.

Interpreting the data correctly is not the only way that technology can be used. These tools also provide better tracking of the insureds' patterns, which closely relate to the risks. For car insurance policies, kilometres driven and the number of instances of overtaking the driver makes are perceived as increasing the chances for them to be involved in accidents. One can also add to the list how aggressive the driver is based on the average gas consumption of the car. These variables can be tracked and sent to insurers to closely monitor the risk and adjust the premium.

Usage of technology to capture data and artificial intelligence to draw conclusions based on these also provide opportunities to develop new insurance products. Being able to monitor the activities of the insureds creates incentives to limit the insurance to only when there is an activity which involves the risk in question. While this option seems to have been realised by some start-ups, who provide pay-as-you-go insurance policies such as car insurance that can be purchased for periods as short as an hour via smart phone apps, this seems an area ripe for development.

Technological developments seem to have already revolutionised the methods of risk assessment in the insurance sector. It would not be surprising to see, in the near future, the invention of new tools that will become part of our lives and provide better economic terms to both insurers and insureds. The law may further evolve in the long run in a way that would decrease the importance attributed to the prospective insured's duty to disclose accurate and true information to the extent that the required information in the assessment of risk and corresponding premium would already be known to the insurers.