ICIR Digital Insurance Forum
Satellite data, Blockchain, Parametric Insurance: How we can use technology to protect subsistence farmers from climate risks

Helmut Gründl opened the discussion with a mention of the war in Ukraine, explaining that the threat of famine resulting from the impacts of such a war is closely linked to micro-insurance, which – with blockchain technology – could open up a myriad of opportunities. Dr. Stefan Sperlich of Hannover Re explained that the insurance group is involved in Lemonade's micro insurance project not because of the profit potential, but because of the real potential to innovate. Dr. Lorenz Kemper, also from Hannover Re, emphasised the untapped potential of blockchain in the insurance industry. He pointed out the undeniable impacts of climate change, noting that the most extreme weather phenomena will hit developing countries with weaker insurance systems the hardest.

Traditional insurance in developing countries is not economical for subsistence farmers, and so something radically more automated is necessary: this is the backbone of the coalition's project. Blockchain can be used to achieve this as the infrastructure to bring parametric insurance to life. The measurement of rainfall through satellite imagery, for example, could be transformed into data; an insurance contract (stating that a certain amount of rainfall in a certain amount of days would result in a certain automatic pay-out) could then be created. The right for a certain pay-out once a certain trigger is hit could be written on the blockchain ledger, making the process instant and transparent to the entire world.

Dr Kemper admitted that the initial risk would be poorly diversified as the project would only start in a couple of countries. Other issues included regulatory issues, which would require a long-term learning process in order to make sure the project would be compliant with regulatory requirements. The project is also still in early stages and so various questions remain unanswered, such as who is in charge of updating pricing over time and peer-to-peer investment. However, the project's potential lies in the use of blockchain. In developing countries, trust between insurers and people is low. Blockchain changes this relationship, allowing for all rules to be predefined in code, for total transparency and for global participation in insurance.

The project's coalition combines different skills to make this possible. Pula is experienced in insuring African countries, and would act as the intermediary between the insurers providing insurance and providing this insurance to the end users. Mobile phones can be used to write code and interact with blockchain, so the infrastructure to transfer crypto already exists. Dr. Kemper also highlighted the currency used would not have a high CO^2 footprint, and that some currencies are less volatile, being pegged to real currency.

Dr. Sperlich explained that all founding members of Lemonade's micro insurance project would be allocated tokens to give stablility to the whole system regarding who are owners and members, and that the majority of these tokens should never leave the founding member consortium. Equally, members would respect business ethics and regulation. Dr. Kemper responded to disillusionment with blockchain, saying that it requires detailed understanding to really draw out its advantages and find the sweet spot, something that other projects have so far failed in.