

Press Release, Geneva, Switzerland, 5 October 2017

«The Blockchain Folk Theorem» Wins SFI Outstanding Paper Award 2017

The Swiss Finance Institute (SFI) has attributed its Outstanding Paper Award to «The blockchain folk theorem,» a research paper by Bruno Biais, Toulouse School of Economics, Christophe Bisière, Toulouse School of Economics, Matthieu Bouvard, McGill University, and Catherine Casamatta, Toulouse School of Economics, that investigates the stability of the blockchain protocol in a game-theoretic approach.

Geneva, 5 October 2017. At Swiss Finance Institute's Annual Meeting held in Zurich on 4 October 2017, the SFI College of chairs has nominated Professor Bruno Biais, Toulouse School of Economics, Professor Christophe Bisière, Toulouse School of Economics, Professor Matthieu Bouvard, McGill University, and Professor Catherine Casamatta, Toulouse School of Economics, as winners of the SFI Outstanding Paper Award 2017. This prize distinguishes an unpublished research paper expected to make an outstanding contribution to the field of finance. In their paper which investigates the stability of the blockchain protocol, the researchers show that there exists a Markov perfect equilibrium in which all miners mine the longest chain. The authors further show that the blockchain game is a coordination one in which multiple equilibria may occur. The fact that multiple equilibria may exist opens the possibility for forks to appear in the mining process, of which either orphaned blocks or persistent divergences may stem, which weakens the reliability and stability of the blockchain environment. The researchers' results raise an important issue regarding the consequences of the decentralized functioning of blockchains as well as the implications of the way transactions are recorded and assets are stored.

The winners of the SFI Outstanding Paper Award 2017 will be invited to present their research at a prize-giving ceremony in Switzerland in 2018.

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Swiss Finance Institute

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