

Press Release, Geneva, Switzerland, 26 November 2018

Research Paper “Empirical Asset Pricing via Machine Learning” Wins Swiss Finance Institute Outstanding Paper Award 2018

Swiss Finance Institute has attributed its Outstanding Paper Award to “Empirical Asset Pricing via Machine Learning”, a research paper by Shihao Gu, University of Chicago, Bryan Kelly, Yale University, AQR Capital Management, and NBER, and Dacheng Xiu, University of Chicago, that investigates the field of machine learning with the canonical problem of empirical asset pricing: measuring asset risk premia.

Geneva, 26 November 2018. The Swiss Finance Institute’s College of chairs has nominated Professor Shihao Gu, University of Chicago, Professor Bryan Kelly, Yale University, AQR Capital Management, and NBER, and Professor Dacheng Xiu, University of Chicago, as winners of the Swiss Finance Institute (SFI) Outstanding Paper Award 2018. This prize distinguishes an unpublished research paper expected to make an outstanding contribution to the field of finance. In their paper, the researchers conduct a comparative analysis of machine learning methods for, what is likely the most studied problem in finance, measuring equity risk premia. Empirical results, covering nearly 30’000 individual US stocks over 60 years, show that machine learning methods can help improve our understanding of expected asset returns, with price trends, volatility, and liquidity acting as the most powerful predictors. The best performing methods—trees and neural nets—trace their predictive gains to the nonlinearities and predictor interactions they contain and that are missed by conventional methods. Machine learning methods establish a new standard for measuring risk premia accurately by increasing Sharpe ratios within the range of a few percentage points to over 30 percentage points. Although machine learning can do a lot, the authors caution that measurements alone cannot inform us about economic mechanisms or equilibria, as machine learning methods do not help identify fundamental associations among asset prices.

The winners of the SFI Outstanding Paper Award 2018 will be invited to present their research during the SFI Research Days in Switzerland in June 2019. The research paper can be accessed at

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3281018.

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Swiss Finance Institute

Swiss Finance Institute (SFI) is the national center for fundamental research, doctoral training, knowledge exchange, and continuing education in the fields of banking and finance. SFI’s mission is to grow knowledge capital for the Swiss financial marketplace. Created in 2006 as a public–private partnership, SFI is a common initiative of the Swiss finance industry, leading Swiss universities, and the Swiss Confederation. For further information about Swiss Finance Institute, please visit

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