

The Next Revolution in the Digital Transformation of the Finance Industry

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The focus will be on the digitization and transformation of the finance industry. In recent years, Fintech companies, defined as organizations that combine innovative business models and technology to enable, enhance and disrupt financial services, have gained substantial funding and are the main drivers of innovation and digitization. Projections show that Fintech companies are expected to take away up to 60% of the revenues of the traditional banking sector within the next ten years. This topic is particularly relevant for Switzerland as one of the main global financial centers. Worldwide Venture Capital (VC) investment in Fintech ventures tripled in 2014 to more than \$12 billion, while the Swiss banking industry is substantially lacking behind compared to other global financial centers. As a reaction, the Swiss government has now set Fintech as a top priority on their agenda.

Our research will help in the transformation of the Swiss finance industry by laying the academic and mathematical foundations for the use of Fintech in the area of algorithmic strategies, risk management and investment banking. The focus will be on the use of the ACTUS methodology powering a universal infrastructural layer that will form the fulcrum for the automated straight-through processing of financial contracts, including transaction and all kind of financial analytics, in particular risk assessment and stress testing. Application to automated regulatory reporting (RegTech) and the integration of ACTUS into existing global standards will be discussed.

The new technology will have important implications on the structure of financial institutions in the medium and long term future. The academic concepts and conclusions can also be used in a more general context and applied to a larger range of industries. In particular, the methods developed can also be applied in the context of Industry 4.0.