



New technologies are disrupting the financial sector

The Paris-based Institut Louis Bachelier (ILB) presents the first **ILB FaIR Advances Report**.

“ILB FaIR Advances Report 2021” provides a unique and comprehensive state-of-the-art of the most **revolutionary current transformations of the financial and insurance industry from robo-advisors to blockchain**.

Pierre-Louis Lions, professor of applied mathematics at College de France, Fields medalist and chairman of the Institut Louis Bachelier International Scientific Committee presents the report in the following way:

“This new report addresses the impact of recent digital technologies on industry with a focus on the financial and insurance sector. It is based on the expertise and research achievements of leading applied mathematics teams at ILB and among their worldwide collaborators.”

The “ILB FaIR Advances Report 2021” includes **29 expert contributors** from the **Turing Institute** in London to researchers from leading universities such as **Stanford, MIT, University of Chicago** and **NYU** plus **Institut Louis Bachelier research programs** like “Good in Tech”, founded as a collaboration between ILB, Sciences Po, Institut Mines-Télécom Business School and Telecom Paris (Institut Polytechnique de Paris).

These 29 experts associated to the ILB FaIR research program share their point of view on the current finance and insurance landscape, how it will evolve - and be impacted by new technologies. As such this elaborate publication offers valuable insights to regulators as well as finance, insurance and FinTech professionals.

From robo-advisors to machine learning and blockchain, the “ILB FaIR Advances Report 2021” explores revolutions currently reshaping:

- **Distribution of financial products**
- **Intermediation of risk**
- **How the financial sector gets insights from the real economy.**

Among “ILB FaIR Advances Report 2021” conclusions:

- “ILB FaIR Advances Report 2021” sheds light on the fact that technologies like **Artificial Intelligence and Blockchains are “generic technologies” that need investments to generate “secondary innovations”** (p. 3).
- Retail investors are getting increasingly important through their use of e.g. automated investment advices and tax management (p.13). But **automated technologies like raise ethical concerns** like explicability, transparency and non-discrimination (p. 22).
- Competition induced by new technologies have different effects on different industries: **Insurances started earlier** but now follow a more low-paced process of innovation while **banks are trying to catch-up** by stimulating innovation (p. 27).
- Having interoperable payment systems are and will continue to be an important determinant of economic development. **The new Central Bank Digital Currency (CBDC) is a way to increase interoperability**, but improving the current system is also an option (p. 40).
- **Stable coins hold great promise** and are a way towards ensuring world-wide financial stability and inclusion (p. 43).
- **More and more decision-making will be driven by data and powered by algorithms**. New engineering disciplines will emerge that will require strong understanding of data analysis as well as powerful computational models. Academic institutions will have to adapt their curriculum to account for those new needs (p. 48).
- **Alternative data (social media data, satellite images, etc.)** are the newcomers in the landscape. They provide insight on the current health of the real economy. Nowcasting (“prediction of the present”) is more and more reliable thanks to these alternative data (p. 92).
- **Improving explicability is the next great challenge of AI** and the academic community is currently investigating strongly in this direction (p. 88).

About the ILB FaIR program:

The “ILB FaIR Advances Report 2021” is the first publication by the public-private-academic interdisciplinary research program **Finance and Insurance Reloaded (FaIR)**. The FaIR program was launched by Institut Louis Bachelier in 2019 with Charles-Albert Lehalle as Scientific Director. FaIR focuses on the impact of new technologies (from machine learning to blockchain) on the finance and insurance landscape. Like many other, the finance and insurance sectors are currently subject to deep transformative revolutions. The goal of FaIR is to foster discussions and exchange between internationally recognized academic experts, professionals, and regulators. The “ILB FaIR Advances Report 2021” is the first outcome of these discussions. Institut Louis Bachelier and the FaIR program firmly believe that having public and open discussions, in particular with regulatory agencies, helps everyone understand the pros and the cons, the value and the risks, of these transformative technologies.

About Institut Louis Bachelier:

Institut Louis Bachelier is an independent, partner-driven research network in Economics and Finance. We were founded in 2008 and carry a name that refers to Louis Bachelier, precursor in 1900 of the application of mathematics to financial markets. Our scope has been extended beyond Economics and Finance and we currently host more than 60 programs within four societal transitions: environmental, digital, demographic, and financial. The Institut Louis Bachelier promotes sustainable development through collaborations between public, private and academic partners. Approximately 400 researchers (equivalent of 150 FTEs) from 32 academic institutions are active in the ILB Network. We partner with 80 French and foreign companies, primarily from the banking and insurance industries. The Chairman of the board is André Lévy-Lang, former CEO of Paribas (today BNP Paribas) and the executive director of the institute is Jean-Michel Beacco.

Institut Louis Bachelier: Together, we seek answers for a world in transition.

For more information please contact:

Louis Bertucci, editor-in-chief “ILB FaIR Advances Report 2021”: louis.bertucci@institutlouisbachelier.org, +33(0)6 69 55 03 07.
Stine Hansen, director ILB Communication & Engagement : stine.hansen@institutlouisbachelier.org
Christelle Thomas, Communication & Events Manager : christelle.thomas@institutlouisbachelier.org 01 73 01 93 40

We also invite you to visit:

Web: institutlouisbachelier.org
Twitter: [@LouisBachelier](https://twitter.com/LouisBachelier)
LinkedIn: [@Institut Louis Bachelier](https://www.linkedin.com/company/institut-louis-bachelier)
YouTube: [@Institut Louis Bachelier](https://www.youtube.com/channel/UC...)