

# FINTECH AND ARTIFICIAL INTELLIGENCE IN FINANCE TOWARDS A TRANSPARENT FINANCIAL INDUSTRY

COST ACTION 19130

# The Fintech Revolution Is Here. Can It Help Build A Better Economy?



**Jennifer Pryce** Contributor   
Hedge Funds & Private Equity  
*I connect communities and capital markets*

## Preparing Your Business For The Artificial Intelligence Revolution



Fintech is affecting every aspect of the financial industry.  
GETTY

## Transparency — the Future of Finance



Totle

Apr 3, 2019 · 3 min read



Fintech and Artificial Intelligence in Finance  
Towards a transparent financial industry

Cost Action 19130



Source: <https://bit.ly/2HQQcXr>



## Revolution: How IT Startups Are Changing The Rules On Wall Street

# CA19130 - Fintech and Artificial Intelligence in Finance - Towards a transparent financial industry

[Home](#) > [Browse Actions](#) > [Fintech and Artificial Intelligence in Finance - Towards a transparent financial industry](#)

[Downloads](#) [Team](#)

Description

Parties

Management Structure

## Description

The financial sector is the largest user of digital technologies and a major driver in the digital transformation of the economy. Financial technology (FinTech) aims to both compete with and support the established financial industry in the delivery of financial services. Globally, more than \$100 billion of investments have been made into FinTech companies and Artificial Intelligence (AI) since 2010, and continue growing substantially. In early 2018, the European Commission unveiled (a) their action plan for a more competitive and innovative financial market, and (b) an initiative on AI with the aim to harness the opportunities presented by technology-enabled innovations. Europe should become a global hub for FinTech, with the economy being able to benefit from the European Single Market.

# Fintech and Artificial Intelligence in Finance

## - Towards a transparent financial industry -

- **COST Website:**  
<https://www.cost.eu/actions/CA19130/#tabs> | Name:overview
- **Start date:** September 2020
- **Duration:** Four years
- **Participants:** >150 Researchers from 33 European countries and 5 International Partner Countries

### Research Working Groups

- Transparency in FinTech
- Transparent versus Black Box Decision-Support Models in the Financial Industry
- Transparency into Investment Product Performance for Clients

### Key tools

- Short-term Scientific Missions
- Training Schools
- Workshops and Conferences
- Interaction with policy-makers, regulators, industry and the general audience



# Fintech and Artificial Intelligence in Finance

## COST Action Network



# Fintech and Artificial Intelligence in Finance

## - Towards a transparent financial industry -

Aiming to become the largest COST Action in Europe

### Non-ITC (15/16)

**Austria**, Belgium, **Denmark**, Finland, France, **Germany**, **Greece**, Iceland, **Ireland**, **Italy**, **Netherlands**, Norway, **Spain**, Sweden, **Switzerland**, **United Kingdom**

### Cooperating and Partner Members

Israel, South Africa

### International Partner Countries (Selection):

**Australia**, Canada, China, **Hong Kong**, **Macao**, Japan, Singapore, South Korea, Taiwan, **UAE**, **United States**

<sup>1</sup> Bold: Country is already on-board; Underlined Bold: Country has  $\geq 4$  participants

<sup>2</sup> As of May 25, 2020

### Inclusiveness Target Countries (20/22)

**Albania**, Bosnia and Herzegovina, **Bulgaria**, **Croatia**, Cyprus, Czech Republic, **Estonia**, Hungary, Latvia, **Lithuania**, **Luxembourg**, Malta, Republic of Moldova, **Montenegro**, **Poland**, **Portugal**, **Republic of North Macedonia**, **Romania**, **Slovakia**, Slovenia, Serbia, Turkey

### COST Near Neighbour Countries (16)

Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Jordan, Kosovo, Lebanon, Libya, Morocco, **Palestine**, Russia, Syria, Tunisia, Ukraine

179 researchers have already signed up<sup>2</sup>

# Aims and Objective

- Establish a large and interconnected community across academia, public institutions and industry focusing on **Financial Technology** and **Artificial Intelligence**.
- Improve transparency in financial services, especially in FinTech, in financial modelling and investment performance evaluation.
- Improve **transparency of AI supported processes** by **developing policy papers and methods** within the financial industry for risk assessment and decision-making.
- Develop methods to **scrutinize the quality of products** across the asset management, banking and insurance industries.

# Short-term Goals – Scientific Impact

- Novel methodologies for classification and rating of FinTech activities, especially ICOs and crowdfunding/P2P lending platforms
- Policy and methodological guidelines to bring transparency to currently intransparent financial market activities, especially at the intersection of FinTech and shadow banking
- New methods to compare the out-of-sample performance of investment products offered by asset managers, insurances and banks, relying on machine learning and AI
- Publish results in journal articles and scientific/industry volumes



# How can I participate?

- **Get involved in your country activities** -> <https://www.cost.eu/actions/CA19130/#tabs|Name:management-committee>
- **Apply for a Short-Term Scientific Mission** -> <https://e-services.cost.eu/> COST Action CA19130
- **Attend our events:** [https://www.meetup.com/Fintech\\_AI\\_in\\_Finance/](https://www.meetup.com/Fintech_AI_in_Finance/)
- **Next event:** Thursday, October 29, 2020: **Investing with Cryptocurrencies: On the Informative Effects of Experts Sentiment** (Prof. Dr. Simon Trimborn, City University of Hong Kong)

## Contacts:

Prof. Dr. Joerg Osterrieder, Action Chair, [joerg.osterrieder@zhaw.ch](mailto:joerg.osterrieder@zhaw.ch)

Prof. Dr. Valerio Poti, Action Vice Chair, [valerio.poti@ucd.ie](mailto:valerio.poti@ucd.ie)

Prof. Dr. W. Härdle, Leader Working Group 1, [haerdle@hu-berlin.de](mailto:haerdle@hu-berlin.de)

Prof. Dr. Petre Lameski, Leader Working Group 2, [petre.lameski@finki.umki.mk](mailto:petre.lameski@finki.umki.mk)

Prof. Dr. Peter Schwendner, Leader Working Group 3, [peter.schwendner@zhaw.ch](mailto:peter.schwendner@zhaw.ch)

Dr. Sandra Stupar, Grant Holder, [sandra.stupar@zhaw.ch](mailto:sandra.stupar@zhaw.ch)

MC members: <https://www.cost.eu/actions/CA19130/#tabs|Name:management-committee>

# WG3 - Transparency into Investment Product Performance for Clients

Prof. Dr. Peter Schwendner, Zurich University of Applied Sciences

# Investment products are offered across sectors

- Banks: Structured products based on derivatives («payoff products» with a fixed expiry date) and rule-based products
- Asset Managers: Hedge funds, active funds
- Insurances: often marketed as pillar 3 pension investments or linked to a life insurance

MIFID II regulation focuses on «client suitability» and the risk of products, but not on their performance quality or on the R&D process. GIPS standards focus on live performance of portfolios.

Assessment of investment process quality for single products is done by investment consultants for institutional investors. But who does it for retail or private clients?

# A collaborative effort

Please research the market for investment products sold to private clients / retail clients in your country. Who is regulating these products for retail/private clients? What data does the national regulator record?

Who is offering investment products? How are the products sold? Directly from product issuers, or via distribution networks?

How are the products described in the marketing material?

Please collect termsheets, marketing brochures and performance data, ideally as time series.

Later, we can discuss

- how to improve transparency using data-driven analytics
- how we can involve the product issuers
- how we can address our conclusions to the public in the form of policy papers

# WG3 - Transparency into Investment Product Performance for Clients

## Short-term goals:

- Regional studies about product market, transparency pain points and regulation to shape the scope of this WG via STSMs.
- Identify data sources, check legal situation to make data collection and usage within network possible via workshops. We need this to be able to develop data-driven analytics that provides transparency.

## How:

- Use local contacts from our institute to investors and product vendors
- Cross-country: Involve external stakeholders. CFA Institute, a global association of investment professionals, already committed their interest and provided an overview across their GIPS (live) performance presentation standards and their product management viewpoint.
- Cross-network: Encourage participants to reach out to local associations of investment professionals to bring in the viewpoint of the application domain. Meet at workshops.
- Build research consortia for grant applications



# STSM: Short Term Scientific Mission

## What?

- STSMs are exchange visits between researchers involved in a COST Action, allowing scientists to visit an institution or laboratory in another COST Member state. The award usually includes travel and accommodation/subsistence. However, the financial support is a contribution to the costs of an STSM and may not necessarily cover all the costs.

## Why?

- The aim is to foster collaboration in excellent research infrastructures and share new techniques that may not be available in a participant's home institution or laboratory, support individual mobility and strengthen existing networks.

## Who?

- The STSM applicant must be engaged in an official research programme as a PhD Student or postdoctoral fellow or can be employed by, or affiliated to, an institution, organisation or legal entity which has within its remit a clear association with performing research. STSM are intended especially for young researchers and researchers from ITC countries. The selection of STSM applicants is based on the scientific scope of the STSM application that must be in line with the Cost Action CA19130 objectives.

## When?

- STSMs may last up to six months, subject to a per mission budget, in another COST Member/Cooperating Member or Near-Neighbour Country joining the Action.

## How?

- STSM applications for Cost Action CA19130 are received through the e-COST platform in response to twice-a-year specific calls. The grantee should upload the scientific report within 30 days from the end of the mission.

**Apply for a Short-Term Scientific Mission** -> <https://e-services.cost.eu/> COST Action CA19130

# ITC Conference Grants

## What and Why?

- ITC grants help PhD students and early-career investigators from participating Inclusiveness Target Countries attend international science and technology related conferences that are not organised by a COST Action.

## Who?

- The applicant must be engaged in an official research programme as a PhD Student or postdoctoral fellow from Inclusiveness Target Countries. The applicant must make an oral/poster presentation at the conference in question.

## How?

- ITC Conference grant applications for Action CA19130 are received through the e-COST platform in response to twice-a-year specific calls. The grantee should upload the scientific report within 30 days from the end of the mission.

**Apply for an ITC Conference Grant** -> <https://e-services.cost.eu/> COST Action CA19130

# Appendix



Funded by the Horizon 2020 Framework Programme  
of the European Union



# Research goals

- Develop approaches to evaluate innovative financial services and their providers, especially in the FinTech domain, building on Machine Learning methods, focusing on prediction (early warning) of operational fragility, fraudulent and illegal behavior ranging from appropriation of loaned funds to money laundering activities.
- Development of conceptual and methodological tools for establishing when black-box models are admissible and, to the extent possible, making them more transparent
- Receive input from regulators and practitioners' communities and validate results with regard to increasing transparency of artificial intelligence applications.
- Development of methodologies for reducing the false discovery rate in financial research and applied financial investment management.
- Disseminate to the public and share with regulators the results on investment product performance
- Creation of the first European platform comparing the out-of-sample performance of banks' investment products, insurance-linked investment products and asset management products available to the general public.

# Short-term Goals – Socio-economic Impact

- Engagement of stakeholders at the local, regional, national, European levels and internationally
- Training for EU institutions and NGOs that assist in analysing and evaluating the needs of European citizens as users of financial services and of the financial industry, focusing on transparency
- Short-Term-Scientific Missions (STSMs) and training schools that disseminate scientific skills and competencies and strengthen the networking capacity of ECIs and graduate students
- Dissemination among stakeholders of research results and practical tools for assessing and improving transparency of financial services
- Development and attraction of talents in research, in the financial industry and academia



# Short-term Goals – Technological Impact

- Open-source libraries for tackling transparency issues in the industry, that are accessible for researchers, industry practitioners and policy makers
- Rating tools accessible by regular citizens for better understanding the risks and rewards of relatively novel investment opportunities, such as initial coin offerings (ICOs) and P2P lending
- Rating tools accessible by regular citizens to compare investment products offered by asset managers, insurance companies and banks