

IFIN 2017 Research Papers

IFIN 2017 Preface

The main purpose of IFIN 2017 was to open a multidisciplinary dialogue on how we could use the Internet to promote financial awareness and capability among citizens. More specifically, the new socio-economic landscape that has prevailed in the post-crisis world brought changes in the financial, labor, and pension markets along with changes in the public finance decisions and the political sphere. However, the volume of information coming from the Web, the existence of often ad hoc sources, the documented existence of cognitive limitations by individuals when it comes to the processing of large volumes of information, and the documented widespread financial illiteracy even within developed economies, including those of the European Union, all identify the need for appropriate methods and tools to extract and process such information, create new knowledge, and present it to the users.

This year, IFIN consisted of two parts: (a) presentation of the PROFIT project and platform, and (b) presentation of related work and discussion with the participants. In the first part, the PROFIT project and the PROFIT platform demo were presented to the participants, who had the opportunity to test it and provide their feedback. Afterwards, the participants were encouraged to offer their opinion and suggestions regarding the platform features and services in a discussion led by the project coordinator. In the second part, contributions from the wider scientific community focused on the particular field were presented upon acceptance through an open call for papers. The particular workshop helped to initiate a fruitful and interdisciplinary discussion on various issues, including the use of the Internet and Web 2.0 tools for promoting financial literacy, technology adoption by the wider public, the use of recent technological developments (e.g., bitcoin, artificial intelligence, cryptocurrencies) and their applications in financial markets, as well as the current and future functionalities and services of the PROFIT platform.

The following multidisciplinary research works that were presented at the IFIN workshop address many of the aforementioned important issues and are presented in the following sections of this book

- “Technology Adoption and Social Innovation: Assessing an Online Financial Awareness Platform.” The purpose of this paper is to present the factors that should be taken into consideration when assessing the level of acceptance of an ICT solution by the general public, as well as the innovating impact that such solution is expected to have at the level of society in the European Union. This involves the integration of social and technical skills and expertise, in order to gather the necessary feedback from the users in a clear and concise way.
- “On the Educational Curriculum in Finance and Technology.” This paper presents an initial inquiry into the educational curriculum in finance and technology, aiming to inform the fintech educational agenda. The particular paper is focused on skills shortages, as identified by firms and experts, and examines the state of the art by some of the first educational programs in fintech.

- “A Novel Lexicon-Based Approach in Determining Sentiment in Financial Data Using Learning Automata.” In this paper, a new lexicon-based approach is presented, which is based on supervised learning. The introduced model is able to create a new lexicon based on annotated textual data and then apply that lexicon to determine the sentiment in new, not-annotated data. The proposed method is able to work well with financial data while supporting accurate decisions.
- “A Hybrid Recommendation System Based on Density-Based Clustering.” This work presents a hybrid recommender system that combines collaborative filtering and a content-based approach for Top-N item recommendation. To address the data sparsity problem, density-based and graph-based clustering approaches are applied so as to identify groups of similar entities (users and/or items). The proposed method exploits the formed clusters to identify the most relevant features and uses them to perform item recommendation. Evaluation experiments are performed using MovieLens datasets and the experimental results indicate improvements in the performance over non-cluster-based recommendation approaches.
- “Aalto Observatory on Digital Valuation Systems.” In this paper the authors propose a series of empirical experiments, entailing a search for deeper understandings of functions in monetary systems, based on their involvement in the formation of the Aalto Observatory on Digital Valuation Systems that aims at taking relevant actions to investigate, imagine, and foster novel ways for value creation.

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We hope that these proceedings will be a source and reference for further fruitful discussions and research work in the area of financial awareness.

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PROFIT

Promoting Financial Awareness and Stability