

FEBEA Research Paper #1

May 2023

The role of Artificial Intelligence in Social Finance

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FÉDÉRATION EUROPÉENNE DES FINANCES
ET BANQUES ÉTHIQUES ET ALTERNATIVES
EUROPEAN FEDERATION OF ETHICAL AND
ALTERNATIVE BANKS AND FINANCIERS



**EUROPEAN CENTER
FOR SOCIAL FINANCE**

The role of Artificial Intelligence in Social Finance

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The paper is based on a workshop that took place on April 28, 2023 with FEBEA members and the book "Artificial Intelligence and Blockchain for Social Impact". We thank the participants for providing their valuable insights.

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Co-funded by
the European Union

Co-funded by the European Union under Grant Agreement number 10110198. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or European Commission. Neither the European Union nor the granting authority can be held responsible for them.

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FEBEA Position on Artificial Intelligence

FEBEA remains dedicated to fostering innovation in both ethical banking and the broader banking industry. Ethical banks play a crucial role in democratising finance, fostering inclusivity, and supplying capital to social sectors that are often overlooked by traditional banks.

We are excited about the opportunities to enhance the way ethical banks contribute to the social economy and support social economy organisations in developing better services for their target demographics.

Nevertheless, we emphasise a few concerns:

1. Diminishing transparency: While banking regulations remain satisfactory, there are numerous instances outside of the banking industry where decision-making relies on AI-based tools. These are often not transparent, and it becomes problematic when clients are left unaware of the reasons behind their acceptance or, worse, rejection.
2. Big data concerns: Fintech companies are notorious for their appetite for data, incorporating thousands of data points into their analyses. This raises concerns about privacy and the perpetuation of biases, such as penalising users with older smartphones or those who apply in another than their first language.
3. Widening technology gap: It is clear that larger organisations with more resources will implement new tools faster, exacerbating an existing technology gap seen in various sectors.

This paper was developed as part of a workshop that took place on April 28, 2023. FEBEA members participated in the discussion and shared their views on the topic.

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1. Introduction

In today's world, conversations, news stories, and political commentary about artificial intelligence are difficult to avoid. However, these discussions frequently obscure the fundamental processes at work.

Traditional programming utilises rules (code) and input data to produce output data. In contrast, machine learning operates differently: an algorithm is given input and output data and must generate the rules that explain the steps required to transform the input into the output(1). This relationship is shown in the figure below.

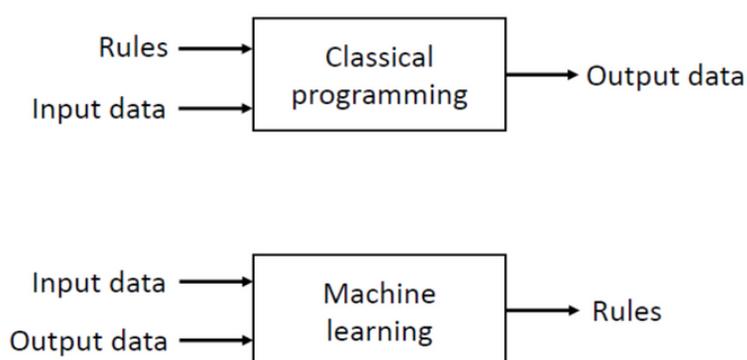


Figure 1: The difference between classical programming and machine learning

Source: Spiess-Knafl (2022)

There are two different levels which are interesting in this context.

For banks, it is mainly about allocating funding to organisations. Using AI-based tools can translate into a larger emphasis on the impact dimension or new ways to include underserved segments of the population. For social economy organisations, it is mainly about delivering services and creating value for society.

(1) There are many good sources to understand the mechanics of AI systems such as online videos, blogs or courses or books such as as Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, 4th ed. (London: Pearson, 2020) or Pedro Domingos, *The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World*, 1st ed. (London: Penguin, 2017).

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These aspects are outlined in the table below.

Aspects	Social finance intermediary	Social economy organisations
Main aim	Allocate funding to organisations	Deliver services and create social value
Potential Tools	Default predictions, alternative credit scores, ESG analysis	Recommendations, matching, predictions, pattern recognition, image or language creation

Table 1: Different levels

Source: Own illustration

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2. Relevance for social finance

Digital footprints are increasingly being used in various sectors, including finance. A research group has investigated the predictive power of digital footprints on loan defaults(2). Their findings indicate that users with Hotmail or Yahoo email addresses have higher default rates compared to those using paid providers. Customers who place orders in the afternoon have lower default rates than those who order in the evening or morning. Additionally, Apple users have lower default rates than Android users.

It is easy to envision how such systems could negatively impact disadvantaged individuals who may not have the time order in the afternoon or own an Apple device.

The table below offers a summary of the volume of data used by companies in the financial sector. Again, users with Hotmail email addresses face higher charges compared to other users.

Company	Main region	Digital footprint usage
Klarna	Europe	Uses time-of-the-day in its scoring model, states that it collects e-mail host, device type, browser settings, operating system, and screen resolution to evaluate which payment methods to make available
Admiral Insurance Group	UK	Drivers applying with a "Hotmail" e-mail address are charged higher insurance fees, as the company finds that some e-mail domain names are associated with more accidents than others
Sesame Credit	China	Sesame Credit gives users a score based on five dimensions of information: personal information, payment ability, credit history, social networks and online behaviours.
LenddoEFL	Emerging markets	Uses variables, such as smartphone data, form-filling analytics, text length, browser data, mouse data, Wi-Fi networks used, or, even, phone battery life.

(2) Tobias Berg et al., "On the Rise of FinTechs: Credit Scoring Using Digital Footprints," *The Review of Financial Studies* 33, no. 7 (July 1, 2020): 2845-97, <https://doi.org/10.1093/rfs/hhz099>.

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Company	Main region	Digital footprint usage
ZestFinance	United States	Applies machine learning and “Google-like math to credit decisions” on thousands of potential credit variables including proper spelling and capitalisation in online application forms, time of day making online purchases.
Branch International	Africa	Uses mobile phone data, including grammar and punctuation in text messaging, time of day of calls to evaluate potential borrowers.
Cignifi	Emerging markets	Partnering with leading global Telco brands, including Telefónica, AT&T, Globe Telecom, and Cignifi, uses mobile phone data, call duration, time calls are made, numbers frequently called, who initiates calls, or the frequency of adding airtime credit on prepaid phones.
KrediTech	Emerging markets	Uses artificial intelligence and machine learning, processing up to 20,000 data points per application. Simple variables, such as device data and operating systems, are used. Also, different behavioral analytics (movement and duration on the Web page), or even the font installed on the computer, the time spent filling out the online application or whether the customer copy and pastes input data play a role in the scoring model.

Table 2: Use of digital footprints for credit-related decisions

Based on Berg et al. (2020)

Table 3 gives an overview of the data that is being used at a fintech company analysing the credit score.

It also becomes evident that the development of these tools can generate significant economic benefits but they also require significant investments. Many ethical banks or social economy organisations may not have the financial resources or willingness to deploy data-driven strategies, which could result in a widening gap between those who use AI and those who do not.

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Ethical banks focus on financing projects, businesses, and organisations that create social value. They can employ artificial intelligence to enhance their support for social enterprises in various ways:

- Using natural language processing (NLP): Social impact is often communicated through narratives. Companies such as Truvalue Labs recently acquired by FactSet or Arabesque use news articles to determine ESG scores for publicly listed companies⁽³⁾. Although FEBEA bank clients may not be publicly listed, they also share information about their activities. NLP tools could assess their impact and detect potential issues.
- Assisting underserved population segments: Some parts of the population still lack access to banking services. Developing alternative credit scores could showcase their creditworthiness and help address this problem⁽⁴⁾.

We remain sceptical about the use of AI in the credit decision process but AI algorithms can surely be used to identify patterns to better comprehend the needs of their beneficiaries and stakeholders. In the case of ethical financial organisations, AI algorithms can analyse financial reports, impact assessments, and other data to evaluate potential returns and risks of social investments.

AI can also help ethical banks identify and mitigate risks, allowing them to operate more effectively and sustainably. AI-based models can assist banks in recognising potential hazards and devising strategies to mitigate them. Specifically, for ethical finance organisations, AI can identify and mitigate risks related to social investments.

⁽³⁾ See for more information <https://www.factset.com/solutions/esg-investing> or <https://www.arabesque.com/ai/>.

⁽⁴⁾ Examples are usually found outside of the European Union as the unbanked population is proportionally much larger. Impact fintechs create alternative credit scores or use revenue and income streams for credit decisions.

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Income Analysis	Cash Flow Analysis	Spend Analysis	Behavioural analysis	Transaction pattern analysis
Average Salary	Total Credit Turnover	Average recurring expenses	Inflow to Outflow rate	Last date of credit
Expected Salary Day	Total Debit Turnover	Monthly value of outbound transfers	Loan amount	Last date of credit
Salary Frequency	Average Balance	Expense categories	Loan repayments	Highest month and week of credit
Median Income	Net Average Monthly Earnings	ATM withdrawals	Loan to inflow rate	Highest month and week of debit
Latest Salary Date	Account Activity	Internet purchases	Loan repayment to inflow rate	Month and week with zero balance in account
Number of Salary Payments	Duration in Statement	Spend on point of sales	Top transfer recipient account	Recurring expenses
Number of other Income Payments	The period in Statement	USSD transactions	Top incoming transfer account	Transaction categories
Confidence Intervals on Salary Detection	First and Last Day of bank statement	International transactions	Gambling rate	Most frequent balance range
	Balance at statement end	Total expenses	Account sweep	Most frequent transaction range

Table 3: Range of variables used for credit modelling

Source: Indicina (2022)

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3. Relevance for the social economy

Artificial intelligence, initially discussed in the 1950s, has become viable since the 2010s due to the availability of large amounts of data as well as increased computing power. AI has found use cases in various sectors, such as law, engineering, retail businesses or transport planning among others. AI-based tools can help social economy organisations in different domains.

AI can help social economy organisations increase their impact and reach by identifying new intervention opportunities and optimising their programs and services. For example, AI can pinpoint underserved populations and design tailored interventions for their specific needs⁽⁵⁾. There are also initiatives which use new approaches to evaluate the social outcomes of investments or social impact projects and potentially advocate for policy changes that promote⁽⁶⁾.

AI can enable social economy organisations to personalise their services and interventions, catering to individual beneficiaries' unique needs and preferences. This is especially relevant for educational and health-related environments.

Healthcare is an ideal sector for AI implementation due to vast data generation and numerous repetitive tasks. AI can revolutionise healthcare through predictive, personalised, preventive, and participatory medicine. Challenges include healthcare data diversity and multimodality, along with ethical considerations. Education, often affected by Baumol's cost disease, can greatly benefit from new approaches. AI-based tools can address individual learning paces and paths by utilising generated data.

(5) It can also be used to facilitate collaboration between social economy organizations and other stakeholders like government agencies and private sector firms through platforms to connect organizations with volunteers and donors, enabling more effective cooperation towards shared goals.

(6) There is some interesting research conducted in this area. For example, these papers use different approaches to predict poverty indices Adeline Decuyper et al., "Estimating Food Consumption and Poverty Indices with Mobile Phone Data," *ArXiv Preprint ArXiv:1412.2595*, 2014; Aziza Usmanova et al., "Utilities of Artificial Intelligence in Poverty Prediction: A Review," *Sustainability* 14, no. 21 (January 2022): 14238, <https://doi.org/10.3390/su142114238>.

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The labour market is an ideal environment for AI to address unclear definitions and the importance of various skills. AI's natural language processing and semantic similarity tools can identify and classify different skills and match them to appropriate occupations. Despite inclusivity and potential bias concerns, AI-integrated performance evaluation systems aim to improve diversity and inclusion.

AI in public settings is a widely debated topic, encompassing human rights, legal frameworks, political preferences, and business opportunities. While certain AI applications, like disaster risk management, are uncontroversial, facial recognition and surveillance technology usage raises privacy and data misuse concerns. The Covid-19 pandemic exposed data management and contact tracing shortcomings in data management and contract tracing, but initiatives like AI Registers aim to regulate and limit data usage. Low-risk use cases include chatbots and library operations, but serious concerns about potential harm from AI in other contexts persist.

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4. What are potential ways forward?

The proliferation of AI-based tools is inevitable, as many of these tools are already open source or have been leaked to the public.

It is thus prudent to focus on developing robust data infrastructures to keep pace with this technological advancement. There are significant benefits to be gained by transitioning to more efficient systems that enable instantaneous and automated data exchange. This shift can help organisations better harness the potential of AI and improve their overall performance.

However, there are many issues which ethical banks need to keep in mind. Social finance organisations must ensure that their systems are transparent and explainable which is mostly impossible using machine learning models. Organisations should also be held accountable for their actions.

There are many examples which show problematic areas around privatisation of public content, IP protection and safety concerns⁽⁷⁾.

The OECD has proposed a framework to classify AI systems according to five dimensions:

- People & Planet: The impact of the system on individuals, society and the environment.
- Economic Context: The sector, market and business model where the system operates.
- Data & Input: The data the system uses and the kinds of input it receives.
- AI Model: The underlying particularities that make up the AI system – is it, for instance, a neural network, or a linear model?
- Task & Output: The purpose and function of the system and the kinds of output it produces.

(7) To give an example, OpenAI, the non-profit developer behind ChatGPT, has seen its for-profit arm, OpenAI Limited Partnership increase in importance and becoming the main tool to attract more capital to fund the development of its products. This is compounded by the fact that its practice of sharing its model was changed, becoming more and more secretive, due to both the “competitive landscape” and “safety implications”. It needs to be seen what this shift towards more closed-door dealings and profit maximising, alongside the fact that its training data are not shared and OpenAI’s recently-failed attempt at trademarking “GPT” means for the long-term development of the technology.

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This is a positive first step to understand the different AI systems as there are thousands of different models and applications.

We can also expect an AI Act at EU level to be introduced in 2024⁽⁸⁾. The High-Level Expert Group on Artificial Intelligence (2019) defines AI in the following way:

“Artificial intelligence (AI) systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions.”

As a scientific discipline, AI includes several approaches and techniques, such as machine learning (of which deep learning and reinforcement learning are specific examples), machine reasoning (which includes planning, scheduling, knowledge representation and reasoning, search, and optimization), and robotics (which includes control, perception, sensors and actuators, as well as the integration of all other techniques into cyber-physical systems).”

⁽⁸⁾ Italy temporarily blocked and later reinstated ChatGPT due to privacy concerns, highlighting challenges in regulating AI. The situation emphasises the difficulty in blocking services without international coordination, the sensitivity of privacy issues in Europe, and the potential lack of full understanding of AI challenges by regulators.

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5. Outlook

Having described what Artificial Intelligence (AI) is and how it can be relevant for the social economy, in this section we delve deeper into the long-term potential impacts, challenges and opportunities that both SE and ethical finance face. It is important to note that these are some initial concerns that may change as we learn more about this technology(9).

We would emphasise three main points:

- The ethical implications of AI
- The impact of AI on social interactions
- The impact on jobs

There is a growing concern over the potential misuse of AI, especially in terms of privacy and security. With the increasing use of AI, there is a risk that personal information could be collected and used without consent. Additionally, there is a risk of bias in AI algorithms, which could lead to discrimination against certain groups of people(10).

One of the main challenges of AI in social finance is related to data privacy and security. Social finance organisations must ensure that the data they use for AI is collected and managed in a responsible and ethical manner and that it is protected from unauthorised access or misuse.

Digital technologies in general change the way people interact with each other, leading to a reduction in face-to-face interactions and an increase in online interactions. This could result in a reduction in social cohesion and a weakening of social networks, which are important for the functioning of the social economy.

(9) See for a discussion of the opportunities and risks El Bachir Boukherouaa et al., *Powering the Digital Economy: Opportunities and Risks of Artificial Intelligence in Finance* (International Monetary Fund, 2021).

(10) There is a large body of literature analyzing ethical issues. For example Abeba Birhane, Vinay Uday Prabhu, and Emmanuel Kahembwe, "Multimodal Datasets: Misogyny, Pornography, and Malignant Stereotypes," *ArXiv Preprint ArXiv:2110.01963*, 2021; Emily M. Bender et al., "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? 🦜," in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, FAccT '21 (New York, NY, USA: Association for Computing Machinery, 2021), 610-23, <https://doi.org/10.1145/3442188.3445922>; Joy Buolamwini and Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification," in *Conference on Fairness, Accountability and Transparency*, 2018, 77-91.

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In conclusion, while AI has the potential to change the social economy, it also poses significant challenges. Addressing these challenges will require a concerted effort by all stakeholders, including policymakers, businesses, and civil society organisations. AI has the potential to transform social finance, but it also presents a number of challenges related to data privacy and security, bias and fairness, transparency and explainability, technical complexity, and employment. By addressing these challenges, social finance organisations can leverage the benefits of AI to achieve greater impact and reach a wider range of investors, while ensuring that AI is used in a responsible and ethical manner that benefits everyone.

At the time of writing, we are at the beginning of this process of AI development. Solid evidence is still scarce and only early indications can be inferred, however as Lu and Zhou argue, compared to previous technological leaps - such as railways, motorised transport and, more recently, the gradual integration of computers into all aspects of our lives - AI can spread much faster with much lower capital investment⁽¹¹⁾.

This is because the application of AI is largely a revolution in software computing power. Much of the infrastructure it requires, such as computing devices, networks and cloud services, is already in place and people can access tools with their phones.

Usually, there is a tendency to see that technology leads to an increase in jobs in the long-term with losses in the short-term⁽¹²⁾. Even if more jobs are created in the future, it impacts society as some population groups are losing their jobs resulting in a significant negative societal impact. The benefits of AI are thus not shared equally.

(11) Yingying Lu and Yixiao Zhou, "A Review on the Economics of Artificial Intelligence," *Journal of Economic Surveys* 35, no. 4 (2021): 1045-72, <https://doi.org/10.1111/joes.12422>.

(12) Some interesting articles include Robert D. Atkinson and J. John Wu, "False Alarmism: Technological Disruption and the US Labor Market, 1850-2015," *Information Technology & Innovation Foundation ITIF*, May, 2017; Carl Benedikt Frey and Michael A. Osborne, "The Future of Employment: How Susceptible Are Jobs to Computerisation?," *Technological Forecasting and Social Change* 114 (2017): 254-80.

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References

- Atkinson, Robert D., and J. John Wu. "False Alarmism: Technological Disruption and the US Labor Market, 1850–2015." Information Technology & Innovation Foundation ITIF, May, 2017.
- Bender, Emily M., Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell. "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? 🦜" In Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, 610–23. FAccT '21. New York, NY, USA: Association for Computing Machinery, 2021. <https://doi.org/10.1145/3442188.3445922>.
- Berg, Tobias, Valentin Burg, Ana Gombović, and Manju Puri. "On the Rise of FinTechs: Credit Scoring Using Digital Footprints." The Review of Financial Studies 33, no. 7 (July 1, 2020): 2845–97. <https://doi.org/10.1093/rfs/hhz099>.
- Birhane, Abeba, Vinay Uday Prabhu, and Emmanuel Kahembwe. "Multimodal Datasets: Misogyny, Pornography, and Malignant Stereotypes." ArXiv Preprint ArXiv:2110.01963, 2021.
- Boukherouaa, El Bachir, Mr Ghiath Shabsigh, Khaled AlAjmi, Jose Deodoro, Aquiles Farias, Ebru S. Iskender, Mr Alin T. Mirestean, and Rangachary Ravikumar. Powering the Digital Economy: Opportunities and Risks of Artificial Intelligence in Finance. International Monetary Fund, 2021.
- Buolamwini, Joy, and Timnit Gebru. "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification." In Conference on Fairness, Accountability and Transparency, 77–91, 2018.
- Decuyper, Adeline, Alex Rutherford, Amit Wadhwa, Jean-Martin Bauer, Gautier Krings, Thoralf Gutierrez, Vincent D. Blondel, and Miguel A. Luengo-Oroz. "Estimating Food Consumption and Poverty Indices with Mobile Phone Data." ArXiv Preprint ArXiv:1412.2595, 2014.
- Domingos, Pedro. The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World. 1st ed. London: Penguin, 2017.
- Frey, Carl Benedikt, and Michael A. Osborne. "The Future of Employment: How Susceptible Are Jobs to Computerisation?" Technological Forecasting and Social Change 114 (2017): 254–80.

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- High-Level Expert Group on Artificial Intelligence, AI. "A Definition of AI: Main Capabilities and Scientific Disciplines," 2019.
- Indicina. "API Platform Documentation." Indicina Technologies Limited, 2023. <https://developers.indicina.co/docs>.
- Lu, Yingying, and Yixiao Zhou. "A Review on the Economics of Artificial Intelligence." *Journal of Economic Surveys* 35, no. 4 (2021): 1045-72. <https://doi.org/10.1111/joes.12422>.
- Russell, Stuart, and Peter Norvig. *Artificial Intelligence: A Modern Approach*. 4th ed. London: Pearson, 2020.
- Spiess-Knafl, Wolfgang. *Artificial Intelligence and Blockchain for Social Impact: Social Business Models and Impact Finance*. New York, NY: Taylor & Francis Ltd, 2022.
- Usmanova, Aziza, Ahmed Aziz, Dilshodjon Rakhmonov, and Walid Osamy. "Utilities of Artificial Intelligence in Poverty Prediction: A Review." *Sustainability* 14, no. 21 (January 2022): 14238. <https://doi.org/10.3390/su142114238>.

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FEBEA - the European Federation of Ethical and Alternative Banks and Financiers - is a non-profit association based in Brussels. It gathers 33 financial institutions whose aim is to finance social and solidarity economy (SSE) and projects with social, environmental and cultural value in 17 European countries, serving more than 700,000 people.

Its objective is to support the exchange of experiences and promote cooperation between social economy and social finance practitioners.

Each FEBEA member is integrated in the SSE Sector in its country, focusing on mobilising savings and equity from responsible citizens and using these funds to finance sustainable development and local communities. FEBEA is member of GECES, the European Commission's expert Group on Social Economy and Social Entrepreneurship and of Social Economy Europe, the main European network of social economy practitioners.

FEBEA members finance:

- The creation of jobs, social employment in particular;
- Social enterprises and social economy;
- The non-profit sector and participatory economics;
- New forms of social entrepreneurship
- People or groups of people who are victims of social or professional exclusion or are unbanked;
- Sustainable development: renewable sources of energy, organic farming, biodiversity, etc.;
- International solidarity and fair trade.

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