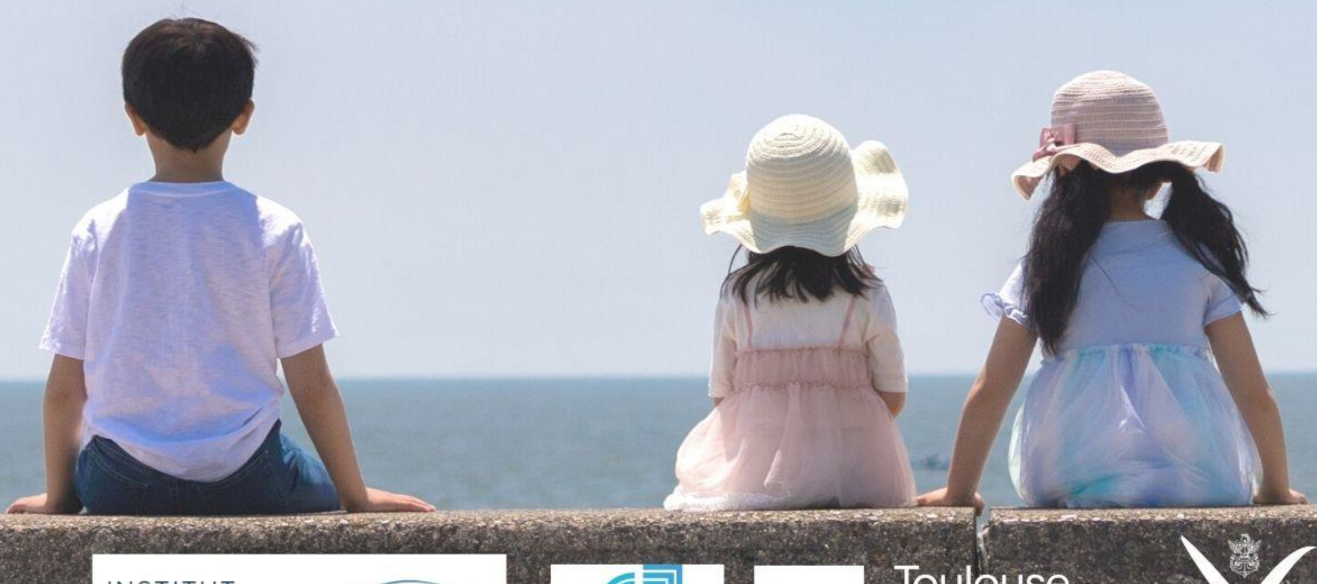
Finance Durable et Investissement Responsable

Activity report 2022



INSTITUT Louis Bachelier

AFG

TSE Toulouse School of Economics

l'X ÉCOLE POLYTECHNIQUE

Introduction

The research projects of the Research Initiative on Sustainable Finance and Responsible Investment[1] (hereafter Research Initiative FDIR) are run by the Toulouse School of Economics and the Economics department at Ecole Polytechnique. At the initiative of the AFG, the Research Initiative FDIR was made possible for 2022 thanks to the financial support of the following 9 members:

- ABN AMRO IS
- Amundi AM
- Caisse des dépôts
- Candriam Institute for Sustainable Development
- Edmond de Rothschild AM
- Fonds de Réserve pour les Retraites (FRR)
- HSBC Global AM (France)
- La Banque Postale AM
- Square management

Scientific Orientation Committee

Projects undertaken by the Research Initiative FDIR are supervised by a scientific orientation committee chaired by Claude Jouven (ex-chairman of the Fondation HEC), and composed of internationally-renowned researchers, including Rob Bauer (University of Maastricht), Marcel Boyer (Université de Montréal), Jean-Pascal Gond (Cass Business School, City University, London) and Henri Tulkens (Université Catholique de Louvain), a representative of the SRI industry, Isabelle Laudier (Institut CDC pour la Recherche), as well as representatives of the partners of the Research Initiative FDIR.

The insights and guidance of the members of the orientation committee is gratefully acknowledged.

[1] Initiative de Recherche Finance Durable et Investissement Responsable (Initiative de Recherche FDIR)

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I. Research team

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II. Main research activity

The Research Initiative FDIR was launched in 2007, at the initiative of the French Asset Management Association AFG, Christian Gollier from Toulouse School of Economics and Jean-Pierre Ponssard from Ecole Polytechnique. Now co-directed by Catherine Casamatta and Sébastien Pouget from Toulouse School of Economics and Patricia Crifo from Ecole Polytechnique, the Research Initiative FDIR has been running for fifteen years with about twenty internationally renowned scholars and has produced numerous scientific contributions to help our understanding of responsible finance.

The Research Initiative FDIR in a few numbers

- Started in 2007
- 20+ researchers
- 2 academic institutions: Toulouse School of Economics & Ecole Polytechnique
- 9 current partners: Association Française de la Gestion Financière (AFG), ABN AMRO IS, Amundi AM, Caisse des dépôts, Candriam France, Edmond de Rothschild AM, Fonds de Réserve pour les Retraites, HSBC Global AM (France), La Banque Postale AM, Square management

Research since 2007

- 3 fields of practical implications for the design, management, and marketing of SRI funds
  - Long-term risk valuation
  - Governance, CSR and financial performance
  - Engagement and dialogue
- 50+ academic workshops with partners
- 10+ bilateral scientific meetings with partners
- 125+ scientific studies published
- 140+ presentations in scientific conferences
- 5 books on responsible finance
- 10+ scientific conferences organized

Teaching

- 10+ PhD students in 2022
- 10+ courses every year on responsible finance topics (Master Level)

Visibility

- 50+ articles in popular press (Le Monde, Les Echos, La Tribune, Libération, Financial Times, L'opinion)
- 5 Best PhD Thesis awards from FIR-PRI
- 1 Nobel prize in Economic Science for Jean Tirole (TSE)
- 1 Peace Nobel prize for Christian Gollier as a member of the IPCC
- 4 Cahiers de l'Institut Louis Bachelier dedicated to FDIR

The main objectives of the research Initiative FDIR are to:

- Contribute to the development and dissemination of theory and practice in the field of responsible investment, both through research and training programs;
- Facilitate direct contact between the academic partners and the members of the initiative, to their mutual benefit.

Increase and consolidate the level of excellence of the academic partners and members by organizing an activity of reflection, training and research of international dimension around a theme of general interest.
To achieve these objectives, FDIR carries out research around three main topics:

- Long-term ESG performance and risk evaluation,
- Corporate Governance,
- Shareholder engagement.

For the period 2022-2025, the General Assembly meeting of the Research Initiative FDIR, the researchers involved in the Initiative, in conjunction with the sponsors, have defined six high-priority research projects that pertain the three main topics of the Research Initiative FDIR. The achievements on these six high-priority projects for the final year (2025) are detailed below.

A. The six high priority research projects

The following section presents the current achievements of the six high priority projects defined for the period 2022-2025. These projects have been selected by the sponsors and presented at the Scientific Committee meeting of May 17, 2022. The achievements of these high priority projects are presented at workshops with sponsors and discussed in the Research Initiative FDIR final reports.

1. *Social performance indicators, by Patricia Crifo (Polytechnique)*

Objectives

To mitigate the socio-economic impact of the transition in regions and sectors that will be most affected due to their dependence on fossil fuels or energy-intensive industrial activities, it is necessary to define relevant economic and social criteria beyond employment levels in carbon-intensive regions. This project aims at answering the following questions. At the company level, how is extra-financial performance defined, and particularly social performance? What are the interactions between social performance and environmental performance?
To answer these questions, several types of data can be mobilized: qualitative assessments of social and environmental performance by financial and extra-financial data providers (Moody's, Bloomberg, etc.), quantitative data on the practices adopted, apprehended via public statistics surveys (for example, produced by the Ministry of Labor, Industry or Ecology), or experimental data produced by researchers themselves. Public survey data have the advantage of being based on practices implemented by companies and can question both managers' and employees' practices. The objective here is to analyze how social performance, based on indicators related notably to human capital formation, employability, remuneration, careers, or employee participation, interact with environmental performance.

Methodology

In fact, reconciling energy transition and social impact is a difficult challenge requiring taking into account social and environmental issues in a simultaneous and integrated manner (Robins et al 2019). On the one hand, environmental risks are not distributed equitably, which raises the issue of "distributive justice"; on the other hand, the various stakeholders do not have the same opportunities to influence decisions concerning their immediate environment, which raises the issue of "procedural justice" (Crifo, 2023).
We propose to address these two challenges by focusing on the firm level.

Results

Regarding the *distributional justice issues*, results obtained on OECD data (900 biggest capitalization between 2004-2012) based on ESG ratings from VigeoEiris Moody's, show that overall environmental and social performance may seem roughly complementary, suggesting synergies, rather distributional conflict. When considering subcriteria of social performance, it is the management of skills, careers and working conditions that tend to have a joint positive effect on company's performance on the one hand, and the subcriteria of integrity of the business and its interaction with product safety that has a positive impact on company's performance on the other hand. The subcriteria of respect for human rights and labor would however rather generate distributional issues (Cavaco and Crifo 2016).

Practice data measured in official statistics surveys allow capturing more detailed organizational and managerial devices, and thus provide social performance indicators meaured in a more granular way. For instance, the Survey on organizational change and computerization covers various domains that can help identify firms with more responsible practices on a large set of social performance: employee and customers and suppliers relations and skills, training, learning, delivery to a fixed deadline, integrated IT-CRM, quality standards, management and control, long term relationships etc. Using this database, covering a sample of more than 10,000 French firms, we have shown that distributional conflicts (substitutability) arise among the various indicators of social performance. Similarly, the profitability of ESG investments seems to rely on a specific qualitative mix of different social dimensions rather than a pure quantitative approach accumulating practices without designing a consistent set of interactions among them (Crifo Diaye, Pekovic, 2016).

In terms of wage outcome, we have examined the relationship between wages and social performance, to examine how firms use wages and bonus to attract employees via ethical concerns and corporate culture, or rather rely on social entrenchment strategies. Using simultaneous equation models on a French data set that includes 13,186 employees, we show that the link between social performance and corporate wage policy depends on the type of monetary incentives and employee's occupation considered. High social performance and high wage premiums are observed for managers, but the results reverse for nonmanagers, suggesting segmentation and sorting, that is inequality between skills in generating corporate social performance (Crifo, Diaye, Pekovic, 2023).

Regarding the issues of procedural justice, the question that arises is how to give exposed stakeholders a role, i.e., a capacity to influence decisions concerning their environment, particularly within the company? This question can be studied through the prism of employee participation in the company's strategic decisions, and therefore in its governance. The aim here is to examine the role that governance, and employee participation in it, can play in the integration of environmental and social issues.

France only recently strengthened employee representation on the boards of private companies, with the law on securing employment enacted in June 2013 (Ayrault/Sapin law), followed by two other laws in 2015 (Rebsamen law) and in 2019 (Pacte law). An important economic justification of board level employee representation (BLER) lies in the recognition that shareholders are not the only ones to invest at risk in the company, employees are too: human capital investments are not fully redeployable, and therefore represent a risky asset, which challenges the supremacy of shareholders and legitimizes the presence of employees in the company's governance bodies. Yet, there is no consensus in the literature concerning the impact of BLER on firm performance. The impact would be negative on stock price, but positive on innovation and productivity, and ambiguous on wages (Jaeger et al 2020, 2022). We address this issue by analyzing the role of executive remuneration as a mediating factor between BLER and firm outcomes. We examine the integration of ESG issues in executive remuneration policies, a practice that is developing fast over the past decade in all OECD countries, and that is meant to encourage executives to sacrifice short-term payoffs for long-term gains and stakeholder engagement (Flammer, Hong, and Minor 2019). Whereas there is a large literature on executive financial compensation programs (traditional "pay for financial performance plans"), little is known regarding the use and performance effects of ESG bonus ("pay for extra-financial performance plans"), especially at the empirical level. Using a database on 3400 large companies from OECD countries for the period 2004-2018 from VigeoEiris Moody's, we show that ESG bonus seems to have a positive impact on all ESG factors. But when endogeneity of the adoption of ESG bonus is accounted for it has a large positive impact on all dimensions of extra-financial performance only for firms with a stakeholder governance structure (Cavaco, Crifo and Guidoux, 2020, 2022). We are currently extending this analysis to examine the role of shared governance and BLER in this relationship. Preliminary results show a positive effect of BLER on the adoption of ESG bonuses driven by companies where employee directors are present on the compensation committee (Cavaco, Crifo, Reberioux, 2023).

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Cavaco S., Crifo P., Rebérioux A. 2023. Codetermination and the bonus culture: Does shared governance increase corporate sustainability? Work in Progress.

Cavaco S., Crifo P., Guidoux A. 2022. Les "contrats RSE" indexant la rémunération des dirigeants sur l'atteinte d'objectifs RSE ont-ils un réel impact ? Institut des Politiques Publiques n° 85.

2. *The Value of Green Innovation: Evidence from Climate-Related Patents, by Ulrich Hege, Sébastien Pouget, and Yifei Zhang (TSE)*

Objective

Climate change is one of the major environmental and social challenges of our time, to which firms are playing an important role via their greenhouse gas (GHG) emissions. Some firms decide to take climate action in order to mitigate their impact. What are the consequences of such climate action? How to make sure that this is not greenwashing? Are these firms recognized as green by Environmental, Social and Governance (ESG) rating agencies? Do these firms attract more (responsible) investors? Do they offer higher returns to their shareholders? Do they emit less GHG than their peers? The objective of this project is to provide answers to these questions.

Methodology

Answering these questions is challenging in terms of scientific methodology. Indeed, establishing a causal link between corporate climate action and its consequences is plagued by two issues: reverse causality and omitted variables. To cope with these issues, we propose to use an instrumental variable approach, based on two-stage least square regressions, that enables us to better establish causality. Our identification strategy relies on the granting of climate change mitigation patents in the US. Focusing on patents enables us to mitigate the risk that firms engage in greenwashing and to address an important topic in corporate climate action, namely green innovation. The literature demonstrates that some patent examiners, although they deal with the same field, are more lenient than others, for idiosyncratic reasons, and grant patents more easily. This offers us the opportunity to study firms that applied for climate change mitigation patents and differentiate them, not on the basis of whether they were actually granted a patent, but on whether they were (quasi-randomly) assigned to a more or less lenient examiner. We can then verify, in a first-stage regression, that firms that are assigned to a more lenient examiner are indeed more likely to receive a green patent. We then use the predicted probability to receive a green patent as an explanatory variable in second-stage regressions aiming at studying whether climate action impacts firms' financial and environmental outcomes (ratings, returns, emissions…).

Results

We provide here the main results of the empirical analysis carried out so far. The first set of results relates to the financial performance of firms which obtain such green patents, while the second set of results relates to the real climate change mitigation effects of such patents.

Regarding realized stock returns, we find that companies that are granted climate-related patents by luck in the patent examiner "lottery" benefit from a significant cumulative abnormal return of about 10% over the next 12 months, which translates into an approximately 2% 12-month abnormal return per climate patent. Such large abnormal returns could be generated by a permanent improvement in perceived corporate performance or risk or be a financial market reaction to the information contained in the green patent approval. The second interpretation appears plausible in light of our subsequent findings on the effect of attention to climate change and on the changes in ESG-minded investors' stock holdings. Indeed, we consider the effect of changes in public attention to climate change, using a daily index of the coverage and negativity of climate topics in leading US newspapers. We find that abnormal returns after random shocks in patent approvals are substantially higher in periods of high climate change attention. They are less than 8% and insignificant in periods of lower climate change attention. This result suggests that positive abnormal returns realized after lucky climate-related patent draws are related to climate change issues and not to a general tendency for financial markets to react positively to the granting of patents.

After analyzing realized returns, we turn to their counterparts, expected returns. We use implied cost of capital (ICC) to measure expected returns and find that a one standard deviation increase in the number of newly issued climate patents leads to an approximately 0.9% drop in ICC over the subsequent 12 months. Thus, the positive abnormal returns are accompanied by a concomitant reduction in the ICC over roughly the same horizon. Importantly, further analysis confirms that the drop is most pronounced (and only consistently significant) when patents are granted during top-tercile periods of public attention to climate change. This finding is in line with the idea that the temporary change in ICC is mainly the effect of the financial market reaction, not an anticipation of any decrease in future risks that could reduce the cost of capital.

We then turn to real climate change mitigation effects of climate-related patents. We investigate whether firms with climate-related patents use these technologies to reduce their CO2 emissions. When we look at random variations in patent approvals, we find no significant effects of climate-related patent grant shocks on CO2 emissions or on total energy used. This is in line with the idea that firms that have been unlucky in the climate patent lottery still have access to new climate change mitigation technologies that are on average as effective as those of firms with lucky patent draws.

The more interesting question is about the real impact of the climate-related technologies that all of these firms are developing, i.e., of the underlying innovations that the inventors can use even if no patent protection is granted. We thus conduct OLS regressions of the effects of increased climate-related innovation. We find significant reductions in direct (Scope 1) emission intensity starting in year 3 after the climate-related patent application year. Thus, climate-related patents are associated with significant improvements in patent holders' carbon efficiency, but the effect appears to be slow and to be entirely linked to the underlying technology and not to it being granted patent protection.

Reference
The Impact of Corporate Climate Action on Financial Markets: Evidence from Climate-Related Patents, Ulrich Hege, Sébastien Pouget and Yifei Zhang, TSE Working Paper 23-1400
https://www.tse-fr.eu/fr/publications/impact-corporate-climate-action-financial-markets-evidence-climate-related-patents

3. The economics of biodiversity and food systems, by Nicolas Treich (TSE, INRAE)

Objective
Biodiversity loss is considered as a major environmental threat. The global food system is the main cause of this trend. For instance, deforestation -which is a major driver of biodiversity loss- is mostly due to the development of animal agriculture and in turn to the demand for meat. However, food systems are also characterized by severe market and political failures. For instance, no country has yet implemented an environmental tax on meat.

In that context, several instruments can be used to cope with the loss of biodiversity. For instance, the use of food labels may be particularly effective. As exemplified by the Dasgupta Review (2021), the financial sector has also an important role to play to mitigate biodiversity loss, for instance by influencing human food demands and by channeling fundings to enable research and development of greener food innovations.

This research project will explore how various instruments such as information tools and nudges as well as financial schemes may help mitigate biodiversity loss, through the incentives that are given to the various stakeholders involved in food systems.

4. Green and social finance labels: Evolution and impact in France and Europe, by Patricia Crifo (Polytechnique)

Objective
Green and social finance labels aim to guarantee practitioners and savers the ecological and/or socially responsible quality of their investments. Overall, about ten green and social labels have been created in the financial markets of the European Union member states since the creation of the first label in 1997 in France. These labels were attributed to nearly 2700 financial products, demonstrating a quantitative success, particularly in France.
In this project we propose to analyze the evolution of these green and social labels in France and in Europe over the last decades, their emergence and development dynamics, in perspective with national and European regulations, and their impact (financial, extra-financial).

Data and Methodology
To examine the contribution of such labels to the energy transition we will rely both on economic approaches that model and evaluate labels in terms of informational problems specific to confidence goods (information asymmetry and incompleteness), and on the literature in organizational science that focuses on labels as a category of products.
We will also compare the nature and performance of the investments made by type of label, with a particular focus on compliance with the criteria and the influence of the labeled funds on the investments made, with respect to national and European regulations.

Two databases are currently analyzed: the data collected by Novethic, a French research and media nonprofit organization, expert in sustainable finance, and a subsidiary of the major state-

linked investment bank. Novethic notably analyses and quantifies the European market of funds awarded with a sustainable finance label. The scope mainly covers listed investment funds (open-ended funds, ETFs) excluding unlisted funds, savings products, insurance funds, etc. to be able to compare equivalent scopes. We observe from these data that the assets under management of labelled funds in Europe have nearly doubled between the end of 2020 and the end of 2021, while their numbers have been multiplied by 1.5. This dynamic has been maintained despite the self-declaration of sustainable funds under Article 8 and 9 of the Sustainable Finance Disclosure Regulation (SFDR) being introduced (Novethic, 2022).
The second database is provided by MSCI, in particular the MSCI Climate Change and ESG Metrics, providing fund level classification (art 8, art 9) as well as firm level data on Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies such as Low Carbon Transition scores and categories.

The EU Sustainable Finance Disclosure Regulation of 2021 requires asset managers to self-classify funds sold inEurope as Article 6, 8, or 9, depending on their sustainability objectives.
A first FDIR workshop was organized on the effect of the new SFDR sustainability labels on mutual funds and individual investors by Fabio Martin (University of Giessen). Our goal in this project is to build upon this approach and start by analyzing the impact on the market of European green labelled funds of the new regulatory technical standards of January 2023, which impose stricter ESG disclosure, and seemed to have led to an important downgrading of Article 9 products to Article 8. We will also examine the different configurations of labelling structures adopted by European funds.

References

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Crifo, P. 2022. La promesse des labels de la finance verte. In Le virus de la recherche – transition environnementale ebook Presses Universitaires de Grenoble.

5. *Are We Becoming Greener? Life-time Experiences and Responsible Investment, by Milo Bianchi (TSE)*

Objective

This project aims at studying how individual investors' characteristics shape their ESG investment behavior and trading over time. We are particularly interested in studying how investors' pro-social attitudes affect ESG demand, and whether these attitudes are shaped by economic and non-economic life-time experiences, such as growing up in a region with more pro-social values, being exposed to an increased level of pollution or to a natural disaster.

Methodology

To answer the above questions, we rely on account-level data from the Shanghai Stock Exchange, reporting complete trading records for individual investors over nine years. A distinctive feature of these data is that all orders can be associated to the investor who has initiated them, thereby providing an exhaustive picture of the investor's stock trading over time. Moreover, for each individual investor, we can obtain information about her gender, age, education, place of birth and of residence. This information is key for our analysis. We study the determinants of individual demand for ESG stocks over time and relate this demand not only to demographic and portfolio characteristics, but also to life-time experiences along both economic and noneconomic dimensions.

Precisely, we first exploit a discontinuity induced by the so-called Huai River policy, which provides heavily subsidized coal for indoor heating to residents to the north, and not to the south, of the Huai River. Previous studies have shown that the policy leads to a significant increase in pollution in cities just north relative to those just south of the river. Using the same regression discontinuity design as in those studies, we show that investors living just north of the river display a significantly larger demand for ESG.

We also investigate the role of pro-social attitudes by considering the so-called Rice-Theory of cultural differences. For instance, individuals who grow up in rice-growing areas have significantly more pro-social attitudes than those in wheat-growing areas, which can be explained by the fact that growing rice requires much more public investment (for irrigation) and social interactions (for sharing labor). We show that investors living in rice-growing cities have significantly larger exposure to ESG stocks than those in wheat-growing cities, supporting the view that pro-social attitudes can be an important determinant of ESG demand.

Results

A first set of results indicates that recent experiences tend to matter more than ancient ones to shape investors' demand for ESG stocks. This suggests that, even for the same investor, the propensity to invest in ESG stocks can evolve considerably over her trading life, possibly in response to accumulated experiences. We also show that economic experiences tend to be more persistent. Non-economic experiences, instead, tend to have more volatile effects on the demand for ESG stocks.

A second key finding is that both economic and non-economic life-experiences affect the propensity to invest in ESG stocks. Living through favorable stock market conditions, for example, positively affects ESG investing. At the same time, living in polluted areas or being exposed to corporate scandals also increases ESG demand. According to our estimates, economic experiences tend to be important to explain between-investors variations in ESG investing, while non-economic experiences matter more for within-investor differences.

These findings support the view that pro-social attitudes are an important determinant of ESG investing and shed light on how these attitudes evolve as investors are exposed to various life experiences. As we show, these experiences affect ESG demand over and beyond any time-invariant investor characteristic and any attitude that an investor may have acquired before entering the stock market.

Reference

Are We Becoming Greener? Life-time Experiences and Responsible Investment, Milo Bianchi, Zhengkai Liu and Gang Wang, TSE working paper 2022-1382.
https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2022/wp_tse_1382.pdf

6. *Asset management and regulatory framework of long-term investment, by Olivier Gossner (Polytechnique)*

Objective

This project focuses on the management and allocation of risky assets for long-term investments. For asset managers whose investments cover long-term commitments, and/or investments that are complex to manage, it is important to consider management costs if one wants to avoid biasing investment strategies by encouraging investors to overweight assets that are relatively inexpensive to manage.

Moreover, in terms of sustainable development and climate, aligning portfolios with a carbon budget based on scientific data and compatible with keeping the temperature increase below

1.5°C and/or the SDGs is a complex task that requires taking into account several sources of risk and uncertainty (physical and transitional in particular).
This project will analyze, on the one hand, the role of management costs of risky assets that may apply in the face of Solvency II or IFRS17 type regulations and, on the other hand, the constraints of constructing "zero net emissions" portfolios and/or aligned with the SDGs.

Methodology and results

Regarding the role of management cost of risky assets, the project proposes a theoretical approach based on the study a financial economy where investors incur investment management costs, which can differ from one investor to another. Since market consistent valuation of a portfolio relies on observed market prices, our first focus is to study how management costs impact equilibrium prices. We show that, compared to a situation without costs, their presence deflates equilibrium prices by a factor measured by a weighted average of market participant costs. We then derive a valuation formula for cashflows, factoring-in the cost structure of the company holding that portfolio. This formula deducts the company's own costs from the market value of the assets generating the cashflow, and it adds back the weighted average of the market's management costs as a correction term which can be meaningful for investors with investments backing long term liabilities, and/or investing in complex to manage investments, typical of sustainable finance (Gossner and Florig, 2022).
Regarding the constraints of constructing zero net emissions portfolios, the goal will be to analyze the importance and impact of net zero commitments of financial actors, using the MSCI database on climate change metrics measuring notably firm level climate risk exposure and low carbon and fossil fuel-free strategies.

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Crifo P. Ghosh E. 2022. How to evaluate countries' commitments and progress towards Net Zero Emissions? Polytechnique insights.

B. Workshops and specific activities

Additional objectives of the Research Initiative FDIR are to maintain a fruitful dialogue between researchers and sponsors, as well as to disseminate results of academic research to the world of practice.
To fulfill the first objective, the agenda of the workshops with the sponsors includes sessions in which researchers and sponsors confront the academic and practitioner views on a topic of practical interest. The idea of such workshops is to help sponsors identify relevant theoretical frameworks for their practices, and to help researchers identify relevant practical questions and obstacles to the development of Socially Responsible Investment.
To meet the second objective, researchers of the Research initiative have organized conferences involving the world of practice, including FDIR partners.

1. *Workshops with sponsors*

- **Are We Becoming Greener? Life-time Experiences and Responsible Investment, November 17, 2022**

With Milo Bianchi (TSE)

Abstract

"How important are pro-social concerns for individual investment decisions? What shapes pro-social attitudes across investors and over time? We investigate how life-time experiences affect the demand for responsible assets by exploiting account-level data from the Shanghai Stock Exchange. We show that some experiences, notably growing up in periods with good market returns and being exposed to a natural disaster, have large and persistent effects on investors' demand. We highlight how economic and non-economic experiences affect investors' intrinsic preferences for responsible assets, and how those preferences can change during investors' trading life."

- **Green and Sustainable Finance Labels, January 20, 2023**

With Fabio Martin (University of Giessen) "The power of ESG transparency: The effect of the new SFDR sustainability labels on mutual funds and individual investors".

Abstract

"This paper analyzes the effect of the Sustainable Finance Disclosure Regulation (SFDR) on mutual funds and individual investors in the EU.
First, we study whether affected funds increase their sustainability compared to a control group. Second, we examine if the regulation makes individual investors allocate more capital into more sustainable funds. In a difference-in-differences setting, we analyze the influence of the regulation on ESG fund scores and fund net inflows. Our result show that affected funds increase their sustainability rating after the policy intervention. Additionally, we find that a better ESG label leads to larger fund net inflows."

- **Social Performance Indicators, April 12, 2023**

With Pierre Monnin (Council on Economic Policies) and Patricia Crifo (Ecole Polytechnique)

Pierre Monnin presented: "Setting the Stage, Inequality and the Energy Transition"

Abstract

"Shifting to a sustainable economy will reshape the outlook for countries and sectors across the world. Managed well, the net zero transition could lead to more and better jobs as well as reduced risks from climate shocks. Managed poorly, however, it could result not only in stranded assets but also stranded workers and communities – and even stranded countries. In response, government policymakers have stressed the necessity for a 'just transition' that leaves no one behind in this process of change. This objective requires action across all policy fields, including financial and monetary policies. A growing number of commercial banks and institutional investors are starting to incorporate just transition considerations into their climate strategies. Until recently, central banks and financial supervisors have focused their attention on the first order climate risks that confront financial systems and institutions. They have tended not to set out how they can respond to the social risks of decarbonisation and what they could do to support a just transition.

However, there are emerging signs that central banks are starting to recognise the just transition agenda. This paper sets out why it is important for central banks and supervisors to take an active role in supporting the just transition. It suggests a roadmap containing three steps – assessing, advising, and acting – for them to achieve this goal and explores some concrete policy options for aligning monetary policy operations and financial regulation with the imperative of a just transition."

Patricia Crifo presented: "Social Performance Indicators: New Frontier of the Environmental
Abstract:
"Combining social jointly with environmental performance represents a significant shift in the climate action agenda by providing that the energy transition should not be at the expense of social issues, whether it is the most impacted sectors or the most vulnerable stakeholders in this transition.
The notion was already in the 2015 Paris Agreement - in its preamble stating that the negotiating parties of the agreement must take into account "the imperatives of a just transition for the workforce and the creation of decent, quality jobs in accordance with nationally defined development priorities." But the covid pandemic and the war-related crisis in Ukraine have brought it back into focus recently, reminding us that preventing climate change from inflicting permanent damage on the global economy requires a fundamental shift in the structure of our economy, inducing systemic changes in the way energy is produced and consumed while preventing inequality from growing and without stalling the investments needed for the energy transition. Fundamentally, the issue is to articulate two dimensions over time: overcoming the climate risks associated with the energy transition by creating new economic opportunities while preserving social justice and limiting inequalities. This issue is complex because environmental risks are not distributed equitably, which raises the issue of "distributive justice"; and the various stakeholders do not have the same opportunities to influence decisions concerning their immediate environment, which raises the issue of "procedural justice". The presentation addressed these two challenges using firm-level data (see details on the project in paragraph A.1)."

2. *Conferences with practitioners*

First edition of the "Rencontres du climat" organized by GetLink and Toulouse School of Economics on the topic of: "When ESG ratings failures impede corporate climate action", April 5, 2023.

Participants:
- Delphine d'Amarzit (CEO, Euronext Paris)
- Christian Gollier (professor of economics and director, TSE)
- Yann Leriche (CEO, Getlink)
- Ulrich Hege (professor of economics, TSE)

III. Publications

Researchers of the research Initiative FDIR have written some of these articles with researchers from other institutions based in France or abroad.

- Bruno Biais, Christophe Bisière, Matthieu Bouvard, Catherine Casamatta, and Albert J. Menkveld "Equilibrium Bitcoin Pricing", The Journal of Finance, vol. 78, n. 2, April 2023, pp. 967–1014.
- Milo Bianchi, Rose-Anne Dana and Elyès Jouini, "Equilibrium CEO Contract with Belief Heterogeneity" (with) Economic Theory, 2022, 74(2): 505–546
- Milo Bianchi, Rose-Anne Dana and Elyès Jouini, "Shareholder Heterogeneity, Asymmetric Information, and the Equilibrium Manager", Economic Theory, 2022, 73(4): 1101–1134
- Marie Brière, Sébastien Pouget, Martin Schmalz, and Loredana Ureche-Rangau, "Delegated Philanthropy in Mutual Fund Votes on Climate Change Externalities", chapter in Climate Investing: New Strategies and Implementation Challenges, ed. Emmanuel Jurczenko, Wiley, january 2023.
- Sandra Cavaco, Patricia Crifo, and Antoine Guidoux, 2022. Les "contrats RSE" indexant la rémunération des dirigeants sur l'atteinte d'objectifs RSE ont-ils un réel impact ? Institut des Politiques Publiques n° 85
- Claude Crampes, and Thomas-Olivier Léautier, "Les Certificats d'Economie d'Energie entre économie et politique", Revue Économique, 2023, forthcoming
- Claude Crampes, and Nils-Henrik Von Der Fehr, "Decentralised Cross-Border Interconnection", The Energy Journal, vol. 44, n. 4, 2023, pp. 147–169
- Patricia Crifo, 2023. « Normes ESG et transition juste : comment prendre en compte simultanément les enjeux environnementaux et sociaux ? » Servir, 520, 16-20
- Patricia Crifo, Marc-Arthur Diaye and Sanja Pekovic, 2023. Wages and corporate social responsibility: entrenchment or ethics?, Employee Relations, 45 (2), 495-515
- Patricia Crifo, 2022. La promesse des labels de la finance verte. In Le virus de la recherche – transition environnementale ebook Presses Universitaires de Grenoble
- Romain Espinosa and Nicolas Treich, "Eliciting non-hypothetical willingness-to-pay for a novel product: A application to cultured meat" R&R Environmental and Resource Economics
- Franziska Funke, Linus Mattauch, Inge van den Bijgaart, H. Charles J. Godfray, Cameron Hepburn, David Klenert, Marco Springmann and Nicolas Treich, "Toward optimal meat pricing? Is it time to tax meat consumption" Review of Environmental Economics and Policy, Volume 16, 2022
- Christian Gollier and Sébastien Pouget, « Investment Strategies and Corporate Behaviour with Socially Responsible Investors: A Theory of Active Ownership », Economica, vol. 89, juin 2022, p. 997–1023
- Lydia Mechtenberg, Grischa Perino, Jean-Robert Tyran, Nicolas Treich and Stephanie Wang, "Self-signaling in voting", R&R Journal of Public Economics
- Silvia Rossetto, Nassima Selmane, and Raffaele Staglianò, "Ownership concentration and firm risk: The moderating role of mid-sized blockholders", Journal of Business Finance and Accounting, vol. 50, n. 1-2, February 2023, pp. 377–410
- Nicolas Treich, "The Dasgupta Review and the problem of anthropocentrism", 2022 Environmental and Resource Economics

IV. Working papers

- Milo Bianchi, "Are We Becoming Greener? Life-time Experiences and Responsible Investment" (with G. Wang and Z. Liu), October 2022
- Olivier Jean Blanchard, Christian Gollier and Jean Tirole, "Fighting the war against climate change", TSE Working Paper, n° 22-1360, septembre 2022.
- Li Bao, Keller Martinez Solis and Sophie Moinas, "Green certification", forthcoming 2023
- Catherine Casamatta and Sébastien Pouget, "Shareholders and corporate social responsibility: A literature review", 2022
- Sandra Cavaco, Patricia Crifo and Antoine Rebérioux, Codetermination and the bonus culture: Does shared governance increase corporate sustainability? Work in Progress, forthcoming 2023
- Frédéric Cherbonnier and Ulrich Hege, "Should There be a Green Supporting Factor? Carbon Policies and Climate Financial Regulation", forthcoming 2023
- Crifo P, Durand R, Fangwa A, Gond, Slager CR, Green and Solidarity Finance: Developments in France and Europe and evaluation of the impact of labels, forthcoming 2023
- Christian Gollier, Jiakun Zheng and Frederick van der Ploeg, « The Discounting Premium Puzzle: Survey evidence from professional economists », TSE Working Paper, n° 22-1345, juin 2022.
- Olivier Gossner and Michael Florig, Market equilibrium with management costs and implications for insurance accounting. CREST Working Paper, 2022
- Ulrich Hege, Sébastien Pouget and Yifei Zhang, 2023, The Impact of Corporate Climate Action on Financial Markets: Evidence from Climate-Related Patents, TSE Working Paper 23-1400

V. Communication of the Research Initiative FDIR achievements and awards

The advances made by the researchers of the Research Initiative FDIR have been presented to a wide audience including academic researchers, finance practitioners, and the general public, both in France and abroad. The Initiative has been instrumental in the creation of the knowledge communicated in the various events described below.

A. Communication to finance practitioners

In 2022, the Research Initiative FDIR has organized various events during which researchers have presented the implications of their results for CSR and SRI. In particular, three workshops have been organized for the sponsors.
The presentations and programmes are available on the Research Initiative FDIR website at https://www.tse-fr.eu/fdir

1. Workshops with the sponsors

- November 17, 2022, Are We Becoming Greener? Life-time Experiences and and Responsible Investment with Milo Bianchi
- January 20, 2023, Green and Sustainable Finance Labels, with Fabio Martin (University of Giessen)
- April 12, 2023, Social Performance Indicators, with Pierre Monnin (Council on Economic Policies) and Patricia Crifo (Ecole Polytechnique)
  See details in Section IIB.

2. Presentations

- Catherine Casamatta, moderator of the roundtable "AI applications in finance: opportunities and risks", 16th Financial Risks International Forum, ILB, Paris, March 20-21, 2023
- Patricia Crifo, Climate Change: Toward A Paradigm Shift? - Science Po, March 2023
- Patricia Crifo, The just transition. Round table of the 16th financial risk international forum, Paris, March 2023
- Patricia Crifo, ESG performance and international law. American society of international law 2023, Washington DC, 2023
- Patricia Crifo, La finance de demain, la cité de l'économie, Paris, 2023
- Patricia Crifo, Forum zero carbone, Paris, December 8, 2022
- Patricia Crifo, Comment la finance peut-elle répondre au défi de la transition écologique ? 1res Rencontres Rencontres pour le Financement de l'économie, Paris, December 2022
- Patricia Crifo, Villes et Université : quelle alliance pour le climat et le DD ? Pavillon de la Francophonie. COP27 Charm El Cheikh, Novembre 8, 2022
- Patricia Crifo, Assurance et transition énergétique. Printemps de l'assurance. Université Paris Dauphine PSL, June, 2022
- Patricia Crifo, Participation des salariés et RSE. Table ronde partage des profits Décideurs Magasine. April 14, 2022
- Patricia Crifo, Intégrer l'employabilité dans la politique RSE : un pilier de la transition Juste. Observatoire de la matérialité, April, 2022.
- Patricia Crifo, La décarbonation de l'industrie. Table ronde La fabrique de l'industrie, April 7, 2022
- Patricia Crifo, La finance verte est-elle un oxymore ? Tables rondes de macroéconomie financière Université Paris Nanterre, March, 2022.
- Patricia Crifo, Salaires contre profits : un rééquilibrage est-il possible ? RFI le débat du jour February 17, 2022
- Christian Gollier, "The welfare cost of ignoring the beta", Colorado webinar, April 13, 2022
- Christian Gollier, International Planetary Health Conference in Andorra, May 13, 2022
- Christian Gollier, Diner-débat de la Société d'économie politique, Paris, May 17, 2022
- Christian Gollier, « Regards croisés » sur le thème de la durabilité, Congrès des actuaires, Paris, June 23, 2022
- Christian Gollier, OCDE-AEN: webinair sur l'optimisation, July 4, 2022
- Christian Gollier, "Innovation, Climate Change, and the Bioeconomy", ICABR Conference, Bologne, July 6, 2022
- Christian Gollier, "The cost-effiency carbon pricing puzzle", Webinar Bank of Italy, July 19, 2022
- Christian Gollier, SNCF diner : échanges sur les objectifs climatiques de la France et le rôle du secteur des transports, Paris, July 19, 2022

- Christian Gollier, "Ambiguity: Insurability; disasters and climate change" and "The value of life & Social inflation", SCOR working session, Bordeaux, September 9, 2022
- Christian Gollier, « Comment prendre en compte le très long terme et le risque dans la décision publique ? », Colloque France Stratégie, Paris, September 22, 2022
- Christian Gollier, Heineken Suisse: Sustainable finance, September 30, 2022
- Christian Gollier, Colloque Meteo France : Valeur de l'information météorologique et climatique, Toulouse, October 18, 2022
- Christian Gollier, "Le financement de la SFEC", Table-ronde CESE, visio, October 26, 2022
- "Congrès Solvay, Bruxelles, November 7, 2022
- Christian Gollier, Dialogue franco-allemand : table ronde consacrée à la définition d'une nouvelle politique européenne de l'énergie, Paris, November 14, 2022
- Christian Gollier, « La sobriété peut-elle être heureuse ? », Futurapolis, Toulouse, November 25, 2022
- Christian Gollier, « Le dérèglement climatique : perception, information et désinformation », Colloque Fondation Descartes, Paris, November 29, 2022
- Christian Gollier, "Transition tardiness: a problem with the method", Natixis CIB Green Summit, Paris, November 29, 2022
- Christian Gollier, Sommet de l'économie, Paris, December 1, 2022
- Christian Gollier, Conférence AFSE DG Trésor sur l'évaluation des politiques publiques, Paris, December 8, 2022
- Christian Gollier, Séminaire annuel sur les perspectives économiques et marchés, Crédit Agricole CACIB, Paris, December 13, 2022
- Sophie Moinas, "Sustainable policies and firm performance", International Days, Toulouse School of Management, January 2023

B. Communication to academic researchers

The researchers of the Research initiative FDIR have been invited to share their work and ideas in various academic conferences and workshops. In their publications or during their presentations, the researchers always gratefully acknowledge the support of the Research Initiative FDIR.

1. Examples of academic conferences

- Ingela Alger, "Evolutionary Foundations of Morality and Altruism – Recent Advances", Tony Atkinson Memorial Lecture, Global Priorities Institute (Oxford University), June 13, 2022
- Ingela Alger, "Homo moralis: on the evolutionary foundations of moral behavior", French regional conference on Complex Systems, June 20-22, 2022
- Ingela Alger, "Estimating social preferences and Kantian morality in strategic interactions", American Economic Association Meetings, 2023
- Catherine Casamatta, "Lending and monitoring: Big Tech vs. Banks", 16th Financial Risks International Forum, ILP, Paris, March 20-21, 2023
- Christian Gollier, "Evidence to Action", 11th Annual JRCPPF Conference (Princeton University), February 25, 2022
- Christian Gollier, "Modeling Uncertainty in Social, Economic, and Environmental Sciences", EMLyon conférence, Lyon, March 17, 2022

- Christian Gollier, "Economics of Carbon Border Adjustments", Seventh CEPR/EAERE Webinar on Climate Policy, Paris, March 21, 2022
- Christian Gollier, “The Discounting Premium Puzzle: Survey Evidence from Professional Economists”, Conférence SCOR, TSE, October 21, 2022; Keynote at RIDGE workshop on Environmental Economics, December 5, 2022
- Ulrich Hege, The Impact of Corporate Climate Action on Financial Markets: Evidence from Climate-Related Patents", with Sébastien Pouget and Yifei Zhang, Banque de France-TSE Workshop, Toulouse, September 29, 2022; 5th FirmOrgDyn Conference (SciencesPo-CEPR-BdF), Paris, December 1, 2022
- Ulrich Hege, Should There be a Green Supporting Factor? Carbon Policies and Climate Financial Regulation”, with Frédéric Cherbonnier, 13th Conference on the Economics of Energy and Climate, Toulouse, June 15, 2022
- Sébastien Pouget, The Valuation of Corporate Social Responsibility: A Willingness-to-Pay Experiment”, Economic Science Association (ESA) North American meeting October 12, 2022

2. Examples of workshops and seminars

- Ingela Alger, "Homo moralis goes to the voting booth: coordination and information aggregation", 5th ETH Workshop on Democracy, Zurich, June 9, 2022; Post-Darwinian Societies seminar, Université Catholique de Louvain, February 10, 2022
- Ingela Alger, “Estimating social preferences and Kantian morality in strategic interactions”, ENS Lyon, October 13, 2022; Universidad Iles Balears, Palma Mallorca, 2022
- Milo Bianchi, "Are We Becoming Greener? Life-time Experiences and Responsible Investment", Presented at seminars at CREST, EDHEC, ESSEC, 2022
- Patricia Crifo, ESG bonuses. HEC Climate Days, May 2022
- Christian Gollier, “The discounting premium puzzle: survey evidence from professional economists”,
- Renmin University of China lecture, visio, September 15, 2022
- Sébastien Pouget, “The impact of corporate climate action on financial markets: Evidence from climate-related patents”, seminar at Indiana University, February 24, 2023
- Sébastien Pouget, “Who benefits from the bond greenium”, seminars at UC Riverside, 3 March 2023, USC, 7 March 2023, University of Utah, 7 April 2023

C. General audience reports and communications

1. Book

- Christian Gollier, Entre fin de mois et fin du monde, Fayard, June 2022.

2. Press articles and interviews

- Nicolas Treich, « Les viandes alternatives sont-elles plus vertueuses que la viande d’élevage ? » Sesame (with Tom Bry-Chevalier et Romain Espinosa), July 7, 2022
- Nicolas Treich, « Pour la création d’un ministère de la condition animale », Libération (collective contribution), June 1, 2022
- Nicolas Treich, « Consommer de la viande n’est pas anodin », Les Echos, (with Romain Espinosa), April 14, 2022
- Christian Gollier, « La transition énergétique peut-elle se faire d'une manière démocratique ? » L'éco, April 12, 2022

- Christian Gollier, Institut Montaigne : politique économique des Verts allemands, June 20, 2022
- Christian Gollier, le T : Sobriété et croissance sont-elles vraiment incompatibles ? La Tribune, September 19, 2022
- Christian Gollier, « C'est arrivé demain/cette semaine » pour parler de « Le climat après la fin du mois », Europe 1, September 30, 2022
- Christian Gollier, Interview on COP 27, l'Opinion, October 20, 2022
- Christian Gollier, Le climat après la fin du mois, France Bleu Périgord, November 23, 2022
- Patricia Crifo, Ghosh E., How to evaluate countries' commitments and progress towards Net Zero Emissions? Polytechnique insights, 2022
- Patricia Crifo, Investissement responsable ou greenwashing : comment faire la différence ? Polytechnique insights, 2023
- Patricia Crifo, Les banques centrales et la lutte contre le changement climatique. Polytechnique insights, 2022.
- Patricia Crifo Kilhgren Grandi L, Allier les villes et les universités pour le climat. Polytechnique insights, 2022
- Patricia Crifo Ghosh E., Comment évaluer les engagements et progrès des pays vers le « Zéro émission nette » ? Polytechnique insights, 2022

3. TSE Reflect, newsletter of the TSE Sustainable Finance Center

The sponsors of the Research Inititiative FDIR, along with all the other partners of the TSE Sustainable Finance Center, have contributed to the development of initiatives aimed at increasing the visibility of the work of TSE researchers to a non-academic audience.

The stakeholders of the Research Initiative FDIR have been kept informed of the latest development of research on sustainable finance through the newsletters of the TSE Sustainable Finance Center. Since 2022, they have been the recipients of a new format of newsletter called "TSE Reflect". This e-newsletter, whose theme varies each month, allows TSE to share the latest work of its researchers with economic decision-makers and, in the first instance, with TSE's partners. Finance is a topic covered twice a year and the other themes regularly addressed are digital, energy and climate, infrastructure and networks, health, and regulation and competition.

Latest issues: on sustainable finance April 2022 and December 2022.
See all past issues: on sustainable finance.

The latest issue on sustainable finance included the press release announcing the renewal of the Research Initiative FDIR: *"9 sponsors unite in support of sustainable finance : The Research Initiative in Sustainable Finance and Responsible Investment is renewed, led by Ecole Polytechnique and TSE, and with the help of the AFG"*. See appendix for the full version of the release.

4. The Research Initiative FDIR website

All information related to the research initiative are disseminated on the . This website is updated regularly. The support team at TSE ensures that the website provides information on events, research projects, members…

D. Awards and memberships

- Catherine Casamatta: member of the Scientific Council of the Autorité des Marchés Financiers (renewed in 2023)
- Catherine Casamatta: ILB fellow
- Catherine Casamatta: member of the jury of the FIR-PRI awards
- Patricia Crifo: member of sustainable finance committee of Region ile de France, appointed in 2022
- Patricia Crifo: member of the Prudential Supervision and Resolution Authority (ACPR)'s supervisory college
- Patricia Crifo: Vice chair of the Prudential Supervision and Resolution Authority (ACPR)'s Climate and Sustainable Finance Commission, renewed in 2022
- Patricia Crifo: ILB fellow and Member of the executive board and scientific advisory panel of ILB
- Patricia Crifo: member of the "Jury du Prix du meilleur Article Financier" by Banque de France, Assoc des journalistes ecofin & Lire l'Économie.
- Patricia Crifo: Science deputy Director, Energy4Climate interdisciplinary center, IP Paris
- Patricia Crifo: member of the committee of the Greenfin label, appointed by the French Ministry of ecological transition
- Patricia Crifo: Member of the French commission on environment, Ministry of ecological transition (former CEDD)
- Patricia Crifo: Member of the GRASFI network and OPSWF working group alliance and member of GRASFI board
- Christian Gollier.: member of the Blanchard-Tirole commission in charge of the Climate Policy chapter
- Christian Gollier.: president of the European Environment Economists Association
- Ulrich Hege: Member of the Commission Climat et Finance Durable, ACPR, since December 2022
- Sébastien Pouget: member of the Finance ClimAct project (sponsored by the EU programme Life): in charge of developing a questionnaire of MIFID compliance integrating non-financial preferences in France
- Sébastien Pouget: member of the ACT 4 FINANCE « Technical Advisory Group » for the assessment of decarbonation strategies of financial institutions
- Sébastien Pouget : Member of the AMF Haut Comité Certificateur de Place
- Sébastien Pouget: member of the Scientific Council of the Autorité des Marchés Financiers (newly appointed in 2023)

E. Highlights

- Ingela Alger was awarded the CNRS silver medal in 2022. Her work focuses on moral and altruistic preferences and on the evolution of preferences.
- On the 19-20 May 2022, TSE organized in partnership with Challenges the second chapter of the Common Good Summit. This event gives experts (Nobel Prize winners in economics, researchers, politicians and business leaders) the opportunity to explain their approach regarding the Common Good and to draw up a roadmap on the climate challenge, the return of inflation, the transportation revolution, the upheaval of the ageing economy and the rise of artificial intelligence. Replay is available here.

VI. Education and training

FDIR is fostering the diffusion of knowledge on CSR and SRI within the young generations of finance practitioners and researchers. State-of-the-art techniques and ideas of CSR and SRI have been taught in various courses offered to Master's in Economics and Finance at the Ecole Polytechnique, at Toulouse School of Economics (TSE), and at Toulouse School of Management (TSM) of the University of Toulouse. Moreover, seven PhD students are currently working on issues related to FDIR.

A. Courses

- Milo Bianchi, Behavioral and Household Finance (doctoral program), TSE
- Milo Bianchi, TSM and TSE (lectures on social preferences and responsible investment)
- Nicolas Treich, Lectures in M2 on "Animal Welfare Economics", TSE
- Ulrich Hege, "Global Risks for a Living Planet: Biodiversity, Climate Change, Zonosis", joint course in the Master in Economics of Global Risks, and in the Master Economics and Ecology (TSE)
- Ulrich Hege, "Understanding Global Risks" incl. on climate transition risks, in the Master in Economics of Global Risks (TSE)
- ExecEd seminar on "Externalities, Decarbonization, and Corporate Strategy" at the Institut of the ENS, Paris 29 June 2022
- Sophie Moinas, M2 Corporate Finance, Advanced Corporate Finance: supervision of students' group projects on firms' climate related financial exposures
- Sophie Moinas, M2 Financial Markets and Risk Evaluation, Derivatives: supervision of students' group projects on the development of a green structured product
- Patricia Crifo, CSR, Bachelor Eco&Math, Ecole Polytechnique
- Patricia Crifo, Sustainable finance and climate action plan evaluation, MSct ESCLIP, Ecole Polytechnique

B. PhD Students

PhD students working on FDIR topics in 2022 included:

- Lea Bou Sleiman: "Urban-related public policies, with a special focus on environmental and transportational aspects", Ecole Polytechnique, Started in 2019. (Advisors: B. Schmutz & P. Crifo)
- Esteban Muñoz, morality, taxation, and charitable giving (advisor: Ingela Alger)
- Pau Juan Bartroli, morality and norms (advisor: Ingela Alger)
- Aatish Seewoolall: Dual class shares and corporate governance, Toulouse School of Management, started in 2020 (advisors: C. Casamatta and S. Rossetto)
- Ruichen Wang: Corporate Social Responsibility: valuation, tools and governance, Toulouse School of Management, started in 2020 (advisor: S. Pouget)
- Yixin Wang: Ownership structure in China, started in 2018 (advisor: S. Rossetto)
- Keller Martinez Solis, ongoing PhD project on Internal carbon pricing (advisor Sophie Moinas), (started in 2021)
- Li Bao (advisor Sophie Moinas), ongoing PhD thesis that includes the following chapters (started in 2018):
    - Common ownership impact of passive investment funds on corporate governance and firm performance
    - Air pollution prevention pressure and firms' green actions

VII. Perspectives

1. Common Good Summit, June 1 and 2, 2023

The 3rd Summit "Saving the Common Good", jointly organized by Challenges, Toulouse School of Economics and Les Echos-Le Parisien Evénéments, will give leaders the opportunity to clarify their approach to the Common Good. Nobel Prize laureates, economists, researchers, politicians and business leaders will meet on June 1 and 2, 2023 in Toulouse to find answers to the challenges currently being faced by the planet. Christian Gollier will open this event and Nicolas Treich will participate in a panel on Animal welfare.

2. Reflexions conference, June 9, 2023

The issues related to climate change require that scientists, political figures and representatives of civil society share their points of view in order to find sustainable and lasting solutions. The 2d Réflexions Conference is a unique forum, bringing together all actors on local, national and international levels, in order to contribute to the understanding and resolution of these issues. Patricia Crifo will moderate a round table on Green finance regulation.

3. Investing for biodiversity Workshop with Nicolas Treich, September 21, 2023

Co-organized by TSE researchers Nicolas Treich and Anouch Missirian, this event on biodiversity and sustainable finance will take place in Toulouse (TSE). Guillaume Lasserre will be one of the panelists. The program will be available within the next few weeks on the TSE event webpage.

4. TSE Sustainable Finance Conference, November-December 2023

The next conference of TSE Sustainable Finance is due to take place at the end of 2023, with a session dedicated to FDIR topics.

Appendix

A. Agenda for the meeting of the FDIR Scientific Orientation Committee

17 May 2023

1. Approbation of the 2022 annual report
2. Review of research projects and activities for 2022-2025
3. Miscellaneous

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Ordre du jour de la réunion Du Comité d'Orientation Scientifique FDIR

17 Mai 2023

1. Approbation du rapport annuel 2022
2. Revue des projets de recherche et activités de FDIR pour 2022-2025
3. Divers

B. Press release December 14, 2022

Communiqué de presse

Paris, le 14 décembre 2022

Toulouse School of Economics et L'Ecole polytechnique poursuivent leur engagement pour la finance durable et l'investissement responsable

Finance Durable et Investissement Responsable

L'Ecole polytechnique et Toulouse School of Economics renouvellent leur collaboration pour 3 années dans le cadre de l'Initiative de Recherche Finance Durable et Investissement Responsable (FDIR) avec le soutien de 9 entreprises mécènes et de l'AFG.

Créée en 2007, l'initiative de recherche FDIR a pour objectif de contribuer à objectiver les arguments selon lesquels le développement de la finance durable et de l'investissement responsable est aujourd'hui non seulement nécessaire mais aussi possible.

Elle vise aussi à développer des méthodologies de recherche permettant de mieux identifier et intégrer les critères extra-financiers dans l'analyse de la création de valeur ainsi qu'à former une équipe scientifique de renommée mondiale sur l'ISR.

Pour atteindre ces objectifs, l'Initiative de Recherche FDIR mène des recherches autour de trois thèmes principaux :

- **L'évaluation des performances et des risques ESG (Environnement, Social et Gouvernance) à long-terme**
- **La gouvernance d'entreprise**
- **L'engagement des actionnaires.**

L'initiative est codirigée par Patricia CRIFO (Professeure à l'Ecole polytechnique), Catherine CASAMATTA (Professeure de finance à TSE et TSM), Sébastien POUGET (Professeur de finance à TSE et TSM). L'AFG, promoteur de l'Initiative de Recherche FDIR, joue quant à elle un rôle actif dans son organisation et son développement.

Catherine Casamatta se réjouit « de l'avancée des travaux de recherche effectués depuis le début de l'Initiative (2007) et du renforcement des liens avec les chercheurs de l'Ecole polytechnique ».

Patricia Crifo se félicite « de la pérennité de ce partenariat avec TSE et l'association FDIR et de l'intérêt, en tant qu'académique, d'échanger avec des professionnels de la finance durable ».

L'Association FDIR rassemble les sociétés de gestion d'actifs, investisseurs institutionnels et entreprises de conseil mécènes de l'Initiative. Guillaume LASSERRE, Directeur adjoint de la gestion de La Banque Postale Asset Management, a été élu président de cette association pour la période 2022-2025 et succède à Mme Luisa FLOREZ.
« Il est indispensable de renforcer les liens entre la recherche et le secteur financier. Cette initiative et ses parties prenantes mettent en lumière les synergies à exploiter entre les deux mondes » souligne M. Lasserre.

L'Initiative de Recherche FDIR s'est dotée d'un comité d'orientation présidé par Claude JOUVEN (ex-président de la Fondation HEC), composé de chercheurs de renommée internationale, dont Rob BAUER (Université de Maastricht), Marcel BOYER (Université de Montréal), Jean-Pascal GOND (Bayes Business School, City University, London) et Henri TULKENS (Université Catholique de Louvain), représentant de l'industrie de l'ISR, Isabelle LAUDIER (Institut CDC pour la Recherche), ainsi que des représentants des mécènes de l'Initiative FDIR.

Autres éléments d'information

Les mécènes de l'Initiative de Recherche FDIR sont :
ABN AMRO Investment Solutions, Amundi Asset Management, Caisse des dépôts, Candriam France, Edmond de Rothschild Asset Management, Fonds de Réserve pour les Retraites, HSBC Global Asset Management (France),La Banque Postale Asset Management et Square Management/Tallis Consulting.

L'AFG favorise la collaboration entre professionnels de la gestion d'actifs et chercheurs dont les travaux contribuent au rayonnement international de la Place de Paris dans le domaine de l'investissement responsable et de la finance durable.

Pour l'École polytechnique, l'initiative de recherche FDIR, participe à une politique volontariste de rapprochement avec le monde industriel. Aux côtés de la Chaire Développement Durable (EDF), la Fondation du Risque et le Labex ECODEC, l'initiative de recherche FDIR consacre l'engagement scientifique de l'X dans les domaines de la finance et de l'économie d'entreprise ainsi que du développement durable.

Toulouse School of Economics (TSE) est un pôle d'excellence en sciences économiques au sein de l'Université Toulouse 1 Capitole. L'Initiative de Recherche FDIR s'insère parfaitement dans la dynamique de collaboration entre chercheurs de TSE et professionnels avec pour objectif le développement de la recherche dans un domaine, la finance du développement durable, porteur tant sur le plan scientifique que sur le plan sociétal.

En savoir plus sur l'initiative FDIR : tse-fr.eu/fdir

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