



Finance Durable et Investissement Responsable

Report for the year 2021



INSTITUT
POLYTECHNIQUE
DE PARIS



Toulouse
School of
Economics



The research projects of the 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 is made possible for 2021 thanks to the financial support of the following 10 members:

- ABN AMRO IS
- Amundi AM
- Caisse des dépôts
- Candriam France
- Edmond de Rothschild AM
- Fonds de Réserve pour les Retraites (FRR)
- HSBC Global AM (France)
- La Banque Postale AM
- Lyxor AM
- MGEN

Projects undertaken by the Research initiative FDIR (hereafter FDIR) are supervised by an orientation committee chaired by Claude Jouven (ex-chairman of the *Fondation HEC*), and composed of Rob Bauer (*University of Maastricht*), Marcel Boyer (*Université de Montréal*), Jean-Pascal Gond (*Bayes Business School, City University, London*), Isabelle Laudier (*Institut CDC pour la Recherche*), Henri Tulkens (*Université Catholique de Louvain*) as well as representatives of the partners of FDIR. The insights and guidance of the members of the orientation committee is gratefully acknowledged.

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Agenda for the meeting of the FDIR Scientific Orientation Committee

17 May 2022

1. Approbation of the 2021 annual report
2. Review and renewal of research projects and activities for 2022-2025
3. Miscellaneous

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

17 Mai 2022

1. Approbation du rapport annuel 2021
2. Revue et renouvellement des projets de recherche et activités de FDIR pour 2022-2025
3. Divers

I. Research team

- Ingela Alger, *Toulouse School of Economics*
- Stefan Ambec, *Toulouse School of Economics*
- Geoffrey Barrows, *Ecole Polytechnique*
- Milo Bianchi, *Toulouse School of Economics*
- Catherine Casamatta, *Toulouse School of Economics* (**FDIR co-director**)
- Sandra Cavaco, *University Paris 2 Pantheon Sorbonne & Lemma*
- Patricia Crifo, *Ecole Polytechnique* (**FDIR co-director**)
- Christian Gollier, *Toulouse School of Economics*
- Alexander Guembel, *Toulouse School of Economics*
- Guy Meunier, *INRA Paris & Ecole Polytechnique*
- Sophie Moinas, *Toulouse School of Economics*
- Jean-Pierre Ponsard, *CNRS & Ecole Polytechnique*
- Sylvaine Poret, *INRA Paris & Ecole Polytechnique*
- Sébastien Pouget, *Toulouse School of Economics* (**FDIR co-director**)
- Antoine Rebérioux, *University of Paris & Ladyss*
- Arnaud Reynaud, *Toulouse School of Economics*
- Jean-Charles Rochet, *University of Geneva & Toulouse School of Economics*
- Silvia Rossetto, *Toulouse School of Economics*
- Benoit Schmutz, *Ecole Polytechnique*
- Jean Tirole, *Toulouse School of Economics*
- Nicolas Treich, *Toulouse School of Economics*

Doctoral and post-doctoral students

- Li Bao, *Toulouse School of Management*
- Lea Bou Sleiman, *Ecole Polytechnique*
- Aurélien Bigo, *Ecole Polytechnique*
- Vincent Bouchet, *Ecole Polytechnique & Edhec*
- Keller Martinez Solis, *Toulouse School of Management*
- Hung-Thuy Nguyen, *Toulouse School of Economics*
- Aatish Seewoolall, *Toulouse School of Management*
- Ruichen Wang, *Toulouse School of Management*
- Yixin Wang, *Toulouse School of Economics*

II. Main research activity

The research initiative on Sustainable Finance and Responsible Investment (Finance Durable et Investissement Responsable, or FDIR) was launched in 2007, at the initiative of the French Asset Management Association AFG, by Christian Gollier from Toulouse School of Economics and Jean-Pierre Ponssard from Ecole Polytechnique. The inaugural lecture was given by Jean Tirole, the 2014 recipient of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel and a prolific contributor to the programme since its inception.

Now co-directed by Catherine Casamatta and Sébastien Pouget from Toulouse School of Economics and Patricia Crifo from Ecole Polytechnique, FDIR has been running for fourteen years with about twenty internationally renowned scholars and has produced numerous scientific contributions to help our understanding of responsible finance. The table below summarizes the main figures about FDIR, and more detailed information about its achievements is provided thereafter.

FDIR in a few numbers	
FDIR	<ul style="list-style-type: none"> - Started in 2007 - 20+ researchers - 2 academic institutions: Toulouse School of Economics & Ecole Polytechnique - 11 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, Lyxor AM, MGEN
Research	<ul style="list-style-type: none"> - 3 fields of practical implications for the design, management, and marketing of SRI funds <ul style="list-style-type: none"> • Long-term risk valuation • Governance, CSR and financial performance • Engagement and dialogue - 50+ academic workshops with partners - 10+ bilateral scientific meetings with partners - 110+ scientific studies published - 110+ presentations in scientific conferences - 5 books on responsible finance - 10+ scientific conferences organized
Teaching	<ul style="list-style-type: none"> - 15+ PhD students - 10+ courses every year on responsible finance topics (Master Level)
Visibility	<ul style="list-style-type: none"> - 50+ articles in popular press (<i>Le Monde, Les Echos, La Tribune, Libération, Financial Times, L'opinion</i>) - 5 Best PhD Thesis awards from FIR-PRI - 1 Nobel prize in Economic Science for Jean Tirole - 1 Peace Nobel prize for Christian Gollier as a member of the IPCC - 4 Cahiers de l'Institut Louis Bachelier dedicated to FDIR

You can find more information on the [FDIR website](#).

The main objectives of FDIR are to:

- Contribute to objectivizing the arguments to show that the development of sustainable finance and responsible investment is – in today’s world – not only necessary but also possible
- Develop research methodologies allowing to better identify and integrate non-financial criteria into the analysis of value creation
- Form a world-class scientific team on SRI.

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 2019–2021, the general assembly meeting of the Association FDIR, the researchers involved in FDIR, in conjunction with the sponsors, have defined four high-priority research projects that pertain the three main topics of FDIR. The achievements on these four high-priority projects for the final year (2021) are detailed below.

A. The four high priority research projects

The following section presents the results of the four high priority projects defined for the period 2019–2021. These projects have been selected by the sponsors and presented at the Scientific Committee Meeting of the 4 April 2019. The achievements of these high priority projects are presented at workshops with sponsors and discussed in the FDIR final reports.

1. Employees as directors (Catherine Casamatta, TSE & Sébastien Pouget, TSE)

Objective

Should employees be associated with the management of the firm that employs them? What is the impact on firm value of having employees seating at the board of directors? The objective of this project is to exploit changes in 2013 and 2015 in the French Law to shed light on these long-standing issues.

There are different reasons why the participation of employees at the board of directors can affect firms’ strategy, the resulting market (shareholder) value, and long-term economic performance:

– Employees-directors can for instance have a positive impact on shareholder value if they help overcome CEOs’ short-termism and allow the firm to implement more long-term investment strategies. Relatedly, the presence of employees at the board can ensure that information flows smoothly between different levels of the hierarchy. Better information sharing should then lead to more informed board decisions and to a better implementation of these decisions. Last, the presence of employees in the board room can help implement implicit contracts between firms and workers, through which workers agree to contribute more, in exchange for future insurance against adverse shocks for instance.

- At the opposite, the presence of employees at the board can help top managers develop antitakeover strategies, at the expense of external shareholders. Or the presence of directors with different objectives and horizons can burden the decision process and result in suboptimal choices. Another situation can be that employees at the board can help improve social performance (say, by reducing turnover or developing human capital), while having a negative or nul impact on shareholder value.

Methodology

Measuring empirically whether and how employees' participation at the board affects firms' outcomes is a difficult task, to the extent that the nomination of employees as directors is an endogenous decision. To circumvent the issue of endogeneity, we exploit an evolution of the French legislation regarding mandatory employees' board representation. The 14 June 2013 Law (resp. the 17 August 2015 Law) imposes mandatory seats for employees for firms employing more than 5000 (resp. 1000) employees in France. The broad idea of this project is to compare the outcome of "treated" firms, which have to comply with the new law because their number of employees is just above the legal threshold, to that of "control" firms, which do not have to comply but are otherwise comparable to the treated firms.

We gather data on all firms listed on the CAC-all tradable index using the Eikon Reuters, Amadeus and Orbis databases. We split this sample in various groups of firms: firms affected by the law ("treated group"), and firms not affected, either because they are already compliant with the new law, or because they fall out of the scope of the law.

We first study the short-term reaction on the stock price, and then the long-term impact on firms' social performance.

To interpret the short-term market reaction, we need to clarify what reaction one should expect from shareholders at the passing of the law. First, one can expect a negative reaction of investors since this law imposes new constraints on shareholders' choices. In that respect, one should observe a negative market reaction for firms whose board composition does not comply with the new law, and a neutral reaction for firms which are already compliant. This effect is denoted the "*legal constraint channel*". Next, one can expect a positive reaction in some cases. For instance, if having employees at the board increases firm value in the long run, but for some reason, shareholders failed to nominate employees as directors (say, because they are short sighted or dispersed), imposing to have employees as directors can impact equity returns positively. We denote this effect the "*long term channel*". Alternatively, it can be that having employees at the board is good for employees' well being and company's social climate but not necessarily for equity returns. In that case, the impact on the stock price can be positive if, by fostering social performance, the law increases stock demand from investors who value the social dimension of firms' performance (e.g., SRI investors), as analysed theoretically by Gollier and Pouget 2021. We call this effect the "*social performance channel*."

Results

To assess the short-term market reaction, we first perform an event study for which we compute the abnormal returns of each group of firms using as a benchmark the Fama-

French three factors model. For both the 2013 and the 2015 law, we observe a negative market reaction for: i) the entire sample of firms, ii) the treated firms, and iii) the out-of-scope firms. We do not find any significant reaction for firms which are already compliant. To assess more precisely the impact of the law on the treated firms, and compare it to an appropriate control group, we exploit the discontinuity created by the threshold of 10 000 employees and compare the market reaction for firms above and below the 10 000-employees threshold. We document a significant difference in the market reaction for firms employing between 10 000 and 15 000 employees, compared to firms employing between 5 000 and 9 999 employees. These results all concur to a legal constraint channel and show no indication of a long-term or social performance channel: imposing employees' representatives at the board of directors was viewed by investors as detrimental to shareholder value.

We next collect the ownership structure of each firm to test whether market reactions are different for some categories of firms. We identify separately family firms, and firms with socially responsible investors. This allows us to test specific hypotheses: if family firms already incorporate employees' well-being in their strategy and decisions, we expect a neutral market reaction. The presence of socially responsible investors allows to test whether we can identify a social performance channel defined above. Again, firms controlled by families or with socially responsible shareholders do not exhibit different reactions from the others.

We next investigate the impact of the law on firms' long-term social performance. To do so, we collect data on the evolution of aggregate ESG scores as well as on specific indicators of social performance: layoffs, strikes, employee turnover, and proportion of women employed. We perform diff-in-diff regressions to test whether firms affected by the law exhibit significantly different social performance after the law is passed. Our results indicate that firms that had to comply with the law exhibit significantly less employee turnover, and have less layoffs than the others, after the law is passed. Regression results also indicate that treated firms exhibit significantly lower percentages of layoffs almost every year after 2013, suggesting that the impact on firms' employment policy is durable. Surprisingly, the results on indicators do not translate into significant differences in the aggregate "Social" score. Treated firms do however exhibit lower environmental or governance scores. It is hard to draw precise conclusions from the impact of the law on ESG scores, but results seem to indicate a discrepancy between raw indicators and aggregate scores.

Project realisations

- Workshop with the partners on March 17, 2022
- Casamatta, C., J. Jaballah and S. Pouget, 2022, Employees as directors, working paper.

2. Employee involvement in corporate decisions (Patricia Crifo, Ecole Polytechnique and Antoine Rebérioux, University of Paris)

Objective

This project questions the determinants and impact on quality and efficiency of governance of employee involvement (or participation) in corporate decisions.

The growing realization that our development model is running out of steam, and our increased awareness of the environmental and social damage that economic activity can produce, exacerbated by the pandemic crisis, have combined to bring corporate social responsibility and the idea of employee participation in decision-making to the fore.

Participation is a logical outcome for the principle of engagement, promoted by organizational and managerial innovations. The more employees are asked to engage, to propose, and to invest, the harder it is to keep them away from decisions that concern them, either directly (working conditions, remuneration) or indirectly (the company's strategy, investments, asset disposals, market positioning, etc.). Participation also responds to a fundamental desire of employees and their representatives: the desire to intervene in a more effective way in the organization and its working conditions, the worsening of which affects their health, and the desire to discuss employment issues stemming from the company's strategic choices.

This project proposes to examine this phenomenon, which is at the heart of multiple issues. How can the requirements of responsibility, participation, and efficiency be reconciled? How can companies involve employees in their governance? What are the links between employee participation and companies' financial and non-financial performance? To address these issues, two main axes of research are developed.

First project's methodology and results

The first axis analyzes the drivers of employee participation.

If corporate social responsibility contributes to a reexamination of the place of employees within the company, employee participation is not so new, and has always been part of the debate, at least in Europe, on the position of labour and its relationship with the firm and the company.

Firm-specific changes have also had a direct impact on the way in which paid employment is conceived. The idea of a simple division of labor – whereby expert authorities (public agencies and the government) would have the capacity to implement effective regulations (standards, taxes) that companies would merely have to comply with in their effort to maximize profits – has lost ground. Growing uncertainty about current developments and environmental risks has led to the emergence of a precautionary paradigm, where companies need, by themselves, to integrate and take into account the social consequences of their activity. This leads to an interest in corporate governance, i.e. the way in which major strategic decisions are formed, made, and controlled – and in the role that employees, who have a certain form of expertise, could play in this area.

In this way, concerns and reflections on the nature and responsibility of firms, particularly with regard to the ecological and environmental crisis, have taken over from earlier efforts to involve employees in decision-making. The challenges have thus shifted to less operational and more strategic considerations. The participation of employees in the decision-making process therefore delineates a democracy that is no longer merely liberal, but also “social”, in which the ability to influence collective choices is no longer attached solely to the status of citizen but also to that of employee. We propose here a review of literature on employee participation that examines the different categories of participation depending on the firm’s CSR and governance model, and the impact of employee involvement on company functioning and performance.

Second project’s methodology and insights

The second research axis of the project proposes an empirical analysis of the impact of employee participation on responsible corporate governance practices.

The vast majority of statistical studies focus on Germany, where notably the first codetermination law of 1952 granted one third (33%) of supervisory board seats to employee representatives, for all companies with more than 500 employees. To be fully effective the integration of employees in the decision-making process requires a set of coherent practices, beyond the mere display of compliance permitted by respecting the law.

We contribute to this literature by focusing on a sample of European companies over the period 2010–2018, comparing the results of companies affected by aimed at increasing employee participation (in France in particular) with other European companies with similar characteristics but not affected by the reform (control group).

Preliminary results show that employee representation on the board of directors has an impact on the firm’s compensation policy, in particular linking executives’ bonus to CSR criteria. Additional estimations are conducted on other firm’s policy indicators.

Project realisations

- Crifo, P., and A. Rebérioux, 2022, Employee participation as a new frontier in corporate social responsibility: a review of the literature, working paper.
- Cavaco S., P. Crifo, and A. Rebérioux, 2022, Employee involvement in corporate decisions and executive remuneration, work in progress.
- Cavaco S., P. Crifo, and A. Guidoux, 2020, Corporate social responsibility and corporate governance: The role of executive compensation programs, *Industrial Relations* 59(2), 240–274
- Crifo, P., and A. Rebérioux, 2019, La participation des salariés, Presses de Science Po

3. Carbon pricing under deep uncertainty (Christian Gollier, TSE)

Objective

Green investments generate social costs and social benefits that need to be compared to determine whether they are socially responsible. The problem is that most environmental benefits, such as reducing climate damages in the case of renewable energy, are not only distant in the future (35% of the CO₂ emitted today will still be in the atmosphere by 2300), but they are also very uncertain in their intensity. The objective of this research is to consider various ways to take this uncertainty into account when weighting uncertain future environmental benefits with current tangible cost of these investments. It is therefore composed of several projects, which achievements are presented below.

First project's methodology and results (see details in the report for the year 2019)

A first project was carried out to explore how uncertainty on the evolution of abatement costs (i.e., the costs of switching to technologies that reduce carbon emissions) affects the socially efficient growth rate of real carbon prices. What can be the effect of uncertainty on carbon pricing? Obviously, technologically optimistic models allow for low carbon prices and efforts in the short run by anticipation of the emergence of these low-cost mitigation technologies. But if technological changes do not materialize, one will have to drastically increase carbon prices to satisfy the intertemporal carbon budget.

To account for uncertainty on the optimal timing of climate efforts and the carbon pricing system that supports it, I develop a two-period "act-then-learn" model in which the dynamically optimal mitigation strategy is endogenously determined under uncertainty about the future abatement cost function, economic growth and carbon budget. I characterize the impact of these sources of uncertainty on the optimal growth rate of expected carbon price, and I realistically calibrate this model. The calibration of the two-period model suggests a *positive climate beta*. This means that it is socially desirable to implement a climate strategy with a *growth rate of expected carbon price that is larger than the interest rate*, thereby allowing to start with a *relatively low carbon price today*.

Second project's methodology and results (see details in the report for the year 2020)

To assess further the impact of uncertainty on green projects' valuation, I explore the consequences of *not* using an appropriate discount rate (that is, not using a discount rate that incorporates risk) to value green investments. To do so, I focus on the valuation of public investments. It is indeed an enduring common practice in most western countries to value public investments and policies by measuring the present value of their flow of expected social benefits using a *single* discount rate. Economic theory however prescribes that projects should be valued according to their impact on aggregate risk in the economy. The standard candidate to evaluate the impact of an investment on the risk borne by its stakeholders is its "consumption beta", or simply beta. The beta of a project is defined as the elasticity of its future benefit to changes in future aggregate consumption. The larger the project's beta, the larger its impact on the aggregate risk in the economy. Consider projects which benefits materialise mostly in good states of nature (such as expanding the

capacity of energy and transportation infrastructures). These projects have a positive beta. Consider next projects which improve earthquake-resistant construction norms, increase pandemic-treatment capacities, or build a strategic petroleum reserve. Such projects provide benefits in bad states of nature and therefore hedge macroeconomic risk: they have a lower, possibly negative, beta. When governments use the same discount rate to value both projects, they tend to overvalue projects with large benefits in good states, and undervalue projects which hedge against macroeconomic risk. Therefore, it is likely that governments underinvest in projects that hedge against macroeconomic risk. In this project, I estimate the social cost of such a practice and find that it is huge.

To do so, I calibrate a dynamic model in which investments are endogenously selected in an opportunity set with heterogeneous risk profiles and expected benefits. The first-best investment rule entails a CCAPM discounting system in which the project-specific discount rate is a linear function of the project's beta. I then compare this dynamic equilibrium to another equilibrium in which the representative agent uses a single discount rate to determine her investment strategy. I show that the absence of risk-adjustment in this procedure has catastrophic effects on intertemporal welfare: the welfare loss of using a single discount rate is equivalent to a permanent reduction in consumption that lies somewhere between 15% and 45%.

Contribution to public debate

One key message of this project is that the public cost of capital should not be used to uniformly discount all public projects. It also contributes to the debate on the Social Cost of Carbon. The first recommendation of using a risk-adjusted cost of capital comes from a commission convened by the Obama administration. The Technical Support Document (TSD, Interagency Working Group on Social Cost of Carbon, 2010) used three discount rates: 2.5%, 3% and 5%, this latter rate reflecting "the possibility that climate damages are positively correlated with market returns." Dietz et al. (2018) showed that in the DICE model of Nordhaus (2008), the CCAPM beta of climate damages is close to unity: In the business-as-usual scenario, future climate damages will be larger if the future will be more prosperous. Business-as-usual projects, if valued using a discount rate that is too low, are implemented too often, leading to an excessive level of investment in such projects. On the other hand, climate-change mitigation projects might suffer from underinvestment. This research investigation is thus another step in the necessary effort to take risk into account in the climate discount rate.

Project realisations

- Gollier, C., 2021, The welfare cost of ignoring the beta, working paper
- Gollier, C., 2020, The cost-efficiency carbon pricing puzzle, working paper

4. Impact assessment and SRI: Why and how investors use impact indicators? (Patricia Crifo, Ecole Polytechnique)

Objective

The subprime and sovereign debt crisis in the euro zone marked an important milestone in the development of responsible finance. But the concomitance of the climate emergency and the Covid-19 pandemic marks a new stage in the indispensable societal commitment of financial actors. While in the early 2010s, a key question surrounding the development of SRI and the legitimacy of its model was its performance, in other words its financial materiality, a decade later, it is extra-financial materiality that is at the heart of concerns. This project examines what patterns this search for a double materiality, financial and extra-financial has taken in the SRI industry highlighting the motivations and practices of impact assessment.

Three main research axes are proposed.

Methodology and insights from the first project

Although academic research on non-financial information has now reached a certain level of maturity and seems to be focusing on the subject of impact, thematic renewal remains timid. The field of SRI in fact still seems to be searching for the link between the two sources of performance - financial and extra-financial - and is struggling to convince individual investors. We examine this literature by distinguishing three types of strategies implemented by companies or investors, corresponding to three forms of extra-financial materiality: reducing its negative impacts and increasing its positive impacts on society and contributing to the general interest; developing a competitive positioning as a responsible company; and responding to an internal demand within the company. Each of these strategies has been deployed in response to external and internal factors, which we detail. Second, we analyze the empirical literature on the dual financial and extra-financial materiality and performance, and how this literature has evolved towards analyzing the social impacts of SRI on society.

Methodology and insights from the second project

SRI is usually distinguished from impact investing in terms of investors' different intentions (contributing to sustainable development in a financially savvy way for SRI vs. demonstrating a societal impact for impact investing). This research axis elaborates on the practices of impact assessment of the French SRI industry, using interviews, participative observation, a survey, and documentary evidence. We show that, beyond the fundamental distinction between SRI and impact investing, the meanings and motivations behind impact assessment in the SRI community are broadly different from impact assessment practices in impact investing, creating a distance between the two communities. In fact, little is known about impact assessment practices in SRI, despite the market power of this asset class. We address this shortcoming by investigating 1) who is interested in impact assessment in the SRI industry, 2) why SRI investors want impact assessment, and 3) what impact assessment looks like in the SRI industry. We develop this analysis to suggest areas of concern and opportunities for the SRI, impact investing, and accounting communities.

SRI investors' recent appropriation of impact assessment indicates that the three communities' interests and success will increasingly be linked to one another. The topic therefore warrants investigation.

Methodology and insights from the third project

The climate crisis calls for a profound reorientation of public and private investments away from harmful activities towards more environmentally friendly ones. As the amount of money invested in sustainable finance and SRI is continuously growing over time one can naturally wonder whether green and sustainable finance can provide enough fundings to finance the energy transition necessary to mitigate the effects of climate change.

To answer this question, we first discuss the tools that adequately account for environmental impacts in the evaluation of investments. In particular we investigate whether socio-economic calculus, currently used for the evaluation of investment projects by the State and its operators in France, can be useful for private actors willing to integrate the environmental impacts of their investments to a degree consistent with the collective ambition in this area.

Second, we analyze why sustainable or responsible finance raises as much hope as skepticism. Sustainable finance in fact has become a new challenge in global economic competition, following different models in different regions of the world and resulting in a fierce battle on extra-financial standards worldwide. A real schism in international finance cannot be excluded if there is no leadership and cooperation. Moreover, while household savings have risen sharply since the Covid-19 crisis and there is a demand to finance the ecological transition, the SRI market, which is very popular with professionals, has not been as successful as expected with individuals.

Project realisations:

- Arjalies, DL, P. Chollet, P. Crifo, and N. Mottis, 2022, The Motivations and Practices of Impact Assessment in Socially Responsible Investing: The French Case and its Implications for the Accounting and Impact Investing Communities, *Social and Environmental Accountability Journal*, 1-29.
- Crifo, P, 2022, L'ISR à la recherche d'une double matérialité, financière et extra-financière, in *ISR et Finance Durable*, N. Mottis ed., 2e edition, Ellipse: Paris, *forthcoming*
- Arjaliès, DL., C. Bouchet, P. Crifo, and N. Mottis, 2022, La mesure d'impact et l'Investissement Socialement Responsable (ISR): Un tour d'horizon, in "L'entreprise socialement responsable. Perspective multiple: droit, administration et éthique" Ivan Tchotourian et Luc Brès éditeurs, Yvon Blais Editions Canada, *forthcoming*.
- Cravero, G., and P. Crifo, 2021, La finance durable, nouvel enjeu de la compétition économique mondiale, *Politique étrangère* 3.

- Crifo P., Y. Kervinio, and E. Quinet, 2020, L'intégration des impacts environnementaux dans l'évaluation des investissements privés, *Transitions*, 76-83.

B. Workshops and specific activities

Additional objectives of 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, and edited academic journals special issues on topics of interest for FDIR.

1. Workshops with sponsors

- Employees as Directors, 17 March 2022, with Catherine Casamatta and Sébastien Pouget (TSE)
Abstract: this workshop presented the main results of the project "Employees as directors" which investigates the impact of the French laws of 2013 and 2015 on firms' financial and social performance.
- Shareholders and the Environment: Four Decades of Academic Research, 9 December 2021, with Gunther Capelle-Blancard and Adrien Roziers (Université Paris 1 Panthéon Sorbonne)
Abstract : this workshop presents a synthesis of four decades of empirical research on shareholder reaction to environmental events (such as industrial accidents, public disclosure programs, legal actions following environmental violations, changes in environmental regulations, environmental news, and corporate initiatives). It covers a critical review of over 100 event studies. A key insight is that stock market penalties for environmental concerns are likely to be quite small. This limits the use of corporate social responsibility as a business strategy for a sustainable society.
- L'évaluation d'impact d'une politique : application aux transports - le cas de la fermeture des voies sur berges à Paris, 18 November 2021, with Lea Bou Sleiman (Ecole Polytechnique)
Abstract : The workshop presents the impact on traffic conditions of the city of Paris' decision in 2016 to close a section of the street "Georges-Pompidou" along

the river's banks to car traffic. Relying on a double difference method, the study highlights an effective impact of the closure decision on mobility indicators (occupancy rate, probability of congestion and travel time) as well as on environmental impact indicators (pollution exposure). The presentation concludes with perspectives of application of this impact assessment method to other types of decisions, in particular investment decisions.

- Some economics of biodiversity, 21 October 2021, with Nicolas Treich (TSE)
Abstract: This workshop presents some thoughts on the economics of biodiversity. The presentation starts by recalling some facts on the evolution of biodiversity, and shows how economics can participate in the study and maintenance of biodiversity. It also covers the main results of the Dasgupta Review (2021) and discusses the issue of anthropocentrism, which is the dominant approach to the study of biodiversity.

2. Conferences with the world of practice

- A special session on Responsible Finance was organized under the aegis of FDIR on the 2 December 2021, during the 2nd TSE Sustainable Finance Conference (2-3 December 2021), with FDIR partners participating to the panel discussion

Programme :

- 9am-3.30pm : Responsible finance session, chaired by Catherine Casamatta and Silvia Rossetto (TSE)
 - o 9am-9.45am : The asymmetry in responsible investing preferences, by Jacquelyn Humphrey (U of Queensland)
 - o 9.45am-10.30am : Understanding the motivations for socially responsible investing : a field experiment, by Nadia Guenster (U of Munster)
 - o 10.45am-11.30am : Socially responsible finance : how to optimize impact ? by Augustin Landier (HEC Paris)
 - o 11.30am- 12.30pm : panel discussion on "Shareholder engagement and corporate social responsibility", chaired by Sébastien Pouget, with contributions from Vincent Ducros (GetLink), Guillaume Lasserre (LBPAM), Clémence Moullot (EDRAM), Nathalie Thiollet (Impak)
 - o 2pm-2.45pm: Eliciting pension beneficiaries sustainability preferences: why and how? by Rob Bauer (Maastricht U)
 - o 2.45pm-3.30pm: Does money talk? Market discipline through selloffs and boycotts, by Mariassunta Giannetti (Stockholm School of Economics)
- 4pm-5pm: Markets and morality, keynote lecture by Jean Tirole (2014 Nobel laureate in Economics, TSE)

Full conference programme [here](#).

- A special issue of the Revue Française de Gestion was co-edited by Patricia Crifo on the topic « ISR : succès ou dilution? »

The new special edition of the Revue Française de Gestion was presented on February 7, 2022.

Programme :

5.30pm : General introduction by the editors of the special issue, B. Mzali, P. Crifo & N. Mottis

5.45-6.30pm : Round table - Presentation of the articles by the authors

- G. Capelle-Blancard, A. Desroziers, A. Garel & A. Petit-Romec, *L'ISR, changement structurel et faux semblant*
- C. Dumas & S. Anastasiadis, *Mécanismes calculatifs et discursifs dans les notations ESG - Effets sur la légitimité auprès de parties prenantes*
- V. Bouchet, *Les ODD : nouveau référentiel pour mesurer l'impact de l'investissement responsable ?*
- V. Serret & C.A. Loher-Delalune, *Quelles sont les incitations à l'engagement actionnarial ? Une étude exploratoire des acteurs de l'écosystème français.*

6.30-6.40pm : Perspective from the ACPR (L. Clerc) & the AMF (J. Ansidei)

6.40-7pm : Questions & Debate

III. Publications and working papers 2021

Researchers of FDIR have written some of these articles with researchers from other institutions located both in France and abroad.

- Ambec S. and Ph. De Donder, 2022, Environmental policy with green consumerism, *Journal of Environmental Economics and Management* 111
- Ambec, S., and C. Crampes, 2021, Real-time electricity pricing to balance green energy intermittency, *Energy Economics* 94
- Arjalies, DL, P. Chollet, P. Crifo, and N. Mottis, 2022, The Motivations and Practices of Impact Assessment in Socially Responsible Investing: The French Case and its Implications for the Accounting and Impact Investing Communities, *Social and Environmental Accountability Journal*, 1-29.
- Arjaliès, DL., C. Bouchet, P. Crifo, and N. Mottis, 2022, La mesure d'impact et l'Investissement Socialement Responsable (ISR): Un tour d'horizon, in "L'entreprise socialement responsable. Perspective multiple: droit, administration et éthique" Ivan Tchotourian et Luc Brès éditeurs, Yvon Blais Editions Canada, forthcoming.
- Bao, L., K. Martinez Sollis, and S. Moinas, 2021, Green certification, *work in progress*
- Bianchi, M., and H. Luomaranta, 2021, Agency Costs and Firm Productivity, *working paper*
- Bianchi, M., R-A Dana, and E. Jouini, 2021, Equilibrium CEO Contract with Belief Heterogeneity, *working paper*
- Bianchi, M., R-A Dana, and E. Jouini, 2021, Shareholder Heterogeneity, Asymmetric Information, and the Equilibrium Manager, *Economic Theory*, p.1-34.
- Bou Sleiman L., P., Crifo, and B. Schmutz, 2021, Des centres plus verts, des banlieues plus grises, *Institut des Politiques Publiques* note n° 65.
- Brière, M., S. Pouget, and L. Ureche-Rangau, 2022, Do institutional investors vote to curb climate change? An empirical analysis of shareholder meetings, forthcoming as a book chapter in *Climate Investing*, edited by Emmanuel Jurczenko
- Brodback, D., N. Guenster, S. Pouget, and R. Wang, 2021, The Valuation of Corporate Social Responsibility: A Willingness-to-Pay Experiment, *working paper*
- Casamatta C. and S. Pouget, 2021, Shareholders and corporate social responsibility: A literature review, *working paper*
- Casamatta, C., J. Jaballah, and S. Pouget, 2022, Employees as directors, *working paper*
- Cavaco S., P. Crifo, and A. Rebérioux, 2022, Employee involvement in corporate decisions and executive remuneration, *Work in progress*.
- Cherbonnier, F., and C. Gollier, 2021, Stress discounting, *working paper*
- Cravero, G., and P. Crifo, 2021, La finance durable, nouvel enjeu de la compétition économique mondiale, *Politique étrangère*, 3.

- Crifo, P., 2022, L'ISR à la recherche d'une double matérialité, financière et extra-financière, in *ISR et Finance Durable*, N. Mottis ed., 2e édition, Ellipse: Paris, *forthcoming*.
- Crifo, P., Rebérioux A., 2022, Employee participation as a new frontier in corporate social responsibility: a review of the literature, *working paper*.
- Espinosa, R., and N. Treich, 2021, Animal welfare: Antispeciesism, veganism and 'a life worth living', *the Society for Social Choice and Welfare* 56, 531-548
- Espinosa, R., and N. Treich, 2021, Moderate vs. radical NGOs, *American Journal of Agricultural Economics* 103, 1478-1501
- Gollier, C., 2021, A general theory of risk apportionment, *Journal of Economic Theory* 192, n°105189
- Gollier, C., 2021, The French case, in *No Brainers and Low-Hanging Fruit in National Climate Policy*, directed by Francesco Caselli, Rick van der Ploeg and Alexander Ludwig, CEPR
- Gollier, C., 2021, The welfare cost of ignoring the beta, *working paper*
- Gollier, C., 2021, The welfare cost of vaccine misallocation, delays and nationalism, *Covid Economics* 74, 1-24
- Hege, U., 2021, CSR, Carbon Policies and the Role of Governments and Other Stakeholders, *working paper*
- Lavaine, E., P. Majerus, and N. Treich, 2021, Health, air pollution and animal agriculture » *Review of Agricultural, Food and Environmental Studies*, 2021
- Moinas, S. and S. Rossetto, 2021, Sustainable policies and firms' economic/financial performance", *working paper*
- Treich, N., 2021, Cultured meat: promises and challenges, *Environmental and Resource Economics* 79, 33-61
- Treich, N., and Y. Wang, 2021, Public safety under imperfect taxation, *Journal of Environmental Economics and Management* 106, n°102421

IV. Communication of FDIR achievements and awards

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

A. Communication to finance practitioners

In 2021, FDIR has organized various events during which researchers have presented the implications of their results for CSR and SRI. In particular, 4 workshops have been organized for the sponsors.

The presentations and programmes are available on the FDIR website at <http://fdir.idei.fr>.

1. Workshops with the sponsors

- 21 October 2021, Some economics of biodiversity, with Nicolas Treich (TSE)
- 18 November 2021, L'évaluation d'impact d'une politique : application aux transports - le cas de la fermeture des voies sur berges à Paris, with Lea Bou Sleiman (Ecole Polytechnique)
- 9 December 2021, Shareholders and the Environment : Four Decades of Academic Research, with Gunther Capelle-Blancard and Adrien Roziers (Université Paris 1 Panthéon Sorbonne)
- 17 March 2022, Employees as Directors, with Catherine Casamatta and Sébastien Pouget (TSE)

2. 2nd TSE Sustainable Finance Conference (2-3 December 2021)

The first day of the 2nd TSE Sustainable Finance conference was dedicated to the topic of Responsible Finance (December 2-3, 2021)

3. Online presentation of the special issue "ISR: succès ou dilution?" of the revue Française de Gestion (7 February 2022)

An online conference was organized to present the special issue of the Revue Française de Gestion co-edited by Patricia Crifo on the topic « ISR : succès ou dilution ? ».

4. Christian Gollier Inaugurale Lecture at the Collège de France (9 December 2021)

Christian Gollier holds the annual chair Avenir et Prospérité 2021-2022 at the Collège de France. He gave his first lecture on the topic « Entre fin du mois et fin du monde : économie de nos responsabilités envers l'humanité ».

5. TSE german-french roundtable on Climate Challenges, 18 October 2021

This round table was animated par Christian Gollier and Ottmar Edenhofer (Director and chief economist at the Potsdam Institute for Climate Impact Research).

B. Communication to academic researchers

The researchers of 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 FDIR.

1. Examples of academic conferences

- Bianchi, M., 4th Future of Financial Information Conference, “Augmenting Investment Decisions with Robo-Advice”, 2021
- Bianchi, M., LTI Colloquium, “Augmenting Investment Decisions with Robo-Advice”, 2021
- Bianchi, M., 14th Financial Risks International Forum, “Augmenting Investment Decisions with Robo-Advice”, 2021
- Bianchi, M., Bank of Italy/EIEF/CEPR conference on Ownership, Governance, Management & Firm Performance, “Agency Costs in Small Firms”, 2021
- Casamatta, C., 37th international conference of the French Finance Association (AFFI), “Equilibrium bitcoin pricing”, 2021
- Casamatta, C., discussion at the MaCCI conference on “Competition and the Regulation of Financial Innovation”, U. of Mannheim, 18-19 November 2021
- Crifo P., Climate Finance Symposium, University of Otago - New Zealand, December 2021
- Gollier, C, Keynote lecture, On the economics of climate change, AXA Investment Managers, 6 January 2021
- Gollier, C, HBS Alumni conference, “Donnons une valeur aux choses qui nous sont chères: Le carbone et la vie », 20 January 2021
- Gollier, C, CGEDD Conference, « Actualisation et bien-être », 3 March 2021
- Gollier, C, Climate finance and economics workshop, “The cost-efficiency carbon pricing puzzle”, University of Sussex, 12 March 2021
- Gollier, C, Conference on Risk, Utility and Decision, “The welfare cost of forgetting the beta”, University of Minnesota, 15 June 2021
- Gollier, C., Keynote lecture, ACI Monaco, “Investir pour le climat de demain », 17 June 2021
- Pouget, S., presentation at the CEPR Virtual Conference on Climate Change & Sustainable Finance, “Do institutional investors vote to curb climate change? An empirical analysis of shareholder meetings,” 22 November 2021

2. Examples of workshops and seminars

- Bianchi, M., seminars at Collegio Carlo Alberto and at SUFE Shanghai, “Augmenting Investment Decisions with Robo-Advice”, 2021
- Gollier, C., Joint seminar at Berlin’s Humboldt University (HU), the Potsdam Institut for Climate Impact Research (PIK) and the Mercator Institute on Global Commons and Climate Change (MCC), “The cost-efficient carbon pricing puzzle”, 25 January 2021

- Gollier, C., Seminar at HEC Paris, The cost-efficiency carbon pricing puzzle, 10 juin 2021
- Gollier, C., Seminar at the 37th International Symposium on Money, Banking and Finance, Paris, “The welfare cost of vaccine misallocation, delays and nationalism”, 17 juin 2021
- Gollier, C., Seminar, DGCCRF, Ministère des Finances, “Sustainable development and competition”, Paris, 18 June 2021
- Gollier, C., Seminar, CEPR/EAERE webinar series on climate policy, “The cost-efficient carbon pricing puzzle, 30 September 2021
- Pouget, S., Seminar at University of Bologna, “The Valuation of Corporate Social Responsibility: A Willingness-to-Pay Experiment”, 18 May 2021
- Pouget, S., EDF Digital Forum on Corporate Social Responsibility, 17 juin 2021
- Pouget, S., Seminar at Université de Pau, “Do institutional investors vote to curb climate change? An empirical analysis of shareholder meetings,” 25 June 2021

C. General audience reports and communications

1. Reports

- Report for the President of the French Republic « [les grands défis économiques](#) », coordinated by Olivier Blanchard and Jean Tirole, June 2021
- Institut Montaigne report coordinated by Christian Gollier « [Europe : agir ensemble pour la décarbonation](#) », September 2021

2. Press articles

Bianchi, M.: Robo advisors: quels apports et quels futurs développements? Option Finance, April 2022.

Bianchi, M.: How robo-advice leads to further investments, The Inside Adviser, June 2021

Bianchi, M.: Robo advice lifts member contributions, Investor Strategy news, June 2021

Bianchi, M.: Robo advisors: un impact mesurable, Revue Banque, March 2021

Bou Sleiman L, P. Crifo, and B. Schmutz, 2021, La piétonisation des centres villes est elle une bonne idée ? La Tribune 26 May 2021

Crifo, P., 2021, La finance peut-elle devenir notre amie ? Partageons l'économie, La Tribune 20 May 2021.

Crifo P., 2021, De l'importance des salariés dans les conseils d'administration, Le Monde, 14 July 2021.

Crifo, P., 2021, Est-il efficace de conditionner les bonus des dirigeants aux notations RSE ? Polytechnique insights, 16 April 2021.

Crifo P., 2021, Changement climatique et stabilité financière, Pour l'éco, 16 August 2021

Espinosa, R. and N. Treich, TSE Debate, The economics of animal welfare, March 2021.

- Gollier, C. : [Pour une vraie évaluation du coût des éoliennes](#) L'Express, December 12, 2021
- Gollier, C. : [Le Collège de France entre fin du mois et fin du monde](#) Le Figaro, December 12, 2021
- Gollier, C. : [Christian Gollier : « Nous vivons sur l'utopie d'une transition écologique heureuse »](#) Les Échos, December 9, 2021
- Gollier, C. : [Qu'est-on prêt à payer aujourd'hui pour réduire un dommage qui se produira dans deux siècles ?](#) Collège de France, November 25, 2021
- Gollier, C. : [Christian Gollier sur le changement climatique : "Il va falloir se serrer la ceinture"](#) Midi Libre, November 6, 2021
- Gollier, C. : [COP 26 : on va encore jouer la comédie!](#) L'Express, November 4, 2021
- Gollier, C. : [Transição energética implicará sacrifícios e perda de poder de compra, alerta Christian Gollier](#) Economia, October 23
- Gollier, C. : [« La tarification du carbone est la solution »](#) Le Point, October 21, 2021
- Gollier, C. : [Pour ou contre la taxe carbone ?](#) Ouest France, Octobre 7, 2021
- Gollier, C. : [Christian Gollier: «Il ne faut pas cacher le coût de l'énergie au consommateur»](#) L'Opinion, October 7, 2021
- Gollier, C. : [Enfin, un vrai prix pour le carbone!](#) L'Express, September 23, 2021
- Gollier, C. : [Personne ne sait comment atteindre le zéro émission nette de CO2 en 2050](#) Le Point, September 21, 2021
- Gollier, C. : [Il n'y aura pas de transition énergétique sans un prix élevé du carbone](#) Le Figaro, September 16, 2021
- Gollier, C. : [L'objectif de réduction des émissions de gaz à effet de serre doit avoir le moindre impact social](#) Le Monde, September 3, 2021
- Gollier, C.: [Rapport du Giec : Tout va très bien, Madame la marquise !](#) L'Express, August 10, 2021
- Gollier, C.: ["Le Pacte Vert européen, un courageux passage de la parole aux actes"](#) L'Express, July 17, 2021
- Gollier, C.: [Les ressorts du capitalisme de marché](#) Le Nouvel Économiste, July 7, 2021
- Gollier, C.: [Sur les défis fondamentaux, les Français ont la culotte à l'envers](#) Les Échos, July 9, 2021
- Gollier, C.: [Un marché carbone européen](#) Le Maine Libre, June 30, 2021
- Gollier, C.: [Le casse-tête du coût de la transition écologique](#) Challenges, May 27, 2021
- Gollier, C.: [« On n'échappera pas à la taxe carbone »](#) Le Point, May 10, 2021
- Gollier, C.: [Si la France double sa vitesse de vaccination du mois de mars, 61 000 morts pourraient être évités d'ici la fin 2021](#) Atlantico, April 13, 2021
- Gollier, C.: ["Suspendre par précaution la vaccination cause des morts supplémentaires"](#) L'Express, March 17, 2021
- Treich, N. : « Alimentation : Les raisons profondes de notre attachement à la viande » Interview, *mediacities*, 11 October 2021

3. Presentations and interviews

Casamatta, C.: "[What profitability of capital for the common good?](#)", roundtable with JL. Bonnafé (BNP Paribas), S. Golshani (White & Case) and P. Hildebrand (Blackrock) organized for the TSE-Challenges Common Good Summit, 27-28 May 2021

Crifo P., 2021, La finance à impact, Journées épargne & Investissement chaired par A. Holroyd, 7 December 2021

Crifo, P., 2021, Performances financières et performances durables, Les mesures financières de la transition énergétique, Conference École des Ponts ParisTech, 8 July 2021.

Crifo, P., 2021, Jusqu'où l'intervention des banques centrales ?, Rencontres économiques d'Aix, le Cercle des Economiste, 3 July 2021.

Crifo, P., 2021, Impact finance, Webinar organized by the Ministry of sustainable, social and solidar economy, December 2021.

Gollier, C. : [Fin du monde ou fin du mois ?](#) TV5 Monde, December 8, 2021

Gollier, C. : [Fin du mois, fin du monde : les énergies du désespoir.](#) France Culture, December 9, 2021

Gollier, C. : [Climat et économie : Christian Gollier répond aux questions de Dimitri Pavlenko](#) Europe 1, October 6, 2021

Gollier, C. : [Les rapports se succèdent et donnent systématiquement des résultats pires qu'annoncés précédemment](#) BFM Business, August 9, 2021

Gollier, C. : [Nouveau tour de vis, une défaite pour Macron ?](#) Europe 1 Radio, March 31, 2021

Gollier, C. : [Faut-il changer de manière durable notre rapport à l'aviation ?](#) Europe 1, February 21, 2021

Gollier, C. : [Stop and go ou Zéro Covid : que disent les économistes ?](#) Roundtable on France Culture, March 1, 2021

D. Awards and memberships in 2021

- Casamatta, C.: member of the Scientific Council of the Autorité des Marchés Financiers
- Casamatta, C.: appointed ILB fellow
- Casamatta, C.: member of the jury of the FIR-PRI awards
- Casamatta, C.: Chair of the 2021 PhD award in Corporate Finance AFFI-FNEGE committee
- Casamatta, C.: team member of the Europlace Institute of Finance 2021 research grant "Financing frictions and the transition to green aviation" with Sophie Shive and Boris Vallée
- Crifo, P.: member of the Prudential Supervision and Resolution Authority (ACPR)'s supervisory college
- Crifo, P.: Vice chair of the Prudential Supervision and Resolution Authority (ACPR)'s Climate and Sustainable Finance Commission

- Crifo, P.: Fellow ILB and Member of the executive board and scientific advisory panel of Institut Louis Bachelier
- Crifo, P.: member of the commission “Investing for a sustainable transformation”, French center for impact investment and Ministry of Economy and Finance
- Crifo, P.: member of the “Jury du Prix du meilleur Article Financier” by Banque de France, Assoc des journalistes ecofin & Lire l’Économie.
- Crifo, P.: member of the Independent Judging Panel of the Principle for Responsible Investment Awards
- Crifo, P.: deput scientific director, Energy4Climate interdisciplinary center, IP Paris
- Crifo P.: member of the Jury of the FIR-PRI awards
- Crifo P.: member of the committee of the Greenfin label, appointed by the French Ministry of ecological transition
- Crifo P.: Member of the French commission on environment, Ministry of ecological transition (former CEDD)
- Crifo P.: Lead member of the GRASFI- OPSWF working group alliance
- Gollier, C.: Chairman of the CEPR Research and Policy Network on Climate Change. Six webinars organized in 2021, with 300-400 participants each
- Gollier, C.: member of the Blanchard-Tirole commission in charge of the Climate Policy chapter
- Gollier, C.: chairman of the Institut Montaigne Commission in charge of a report on the European climate policy
- Gollier, C.: member of the French-German Economic Council in charge of a policy note on carbon pricing in Europe and the implementation of a crossborder carbon tax adjustment
- Gollier, C.: president of the European Environment Economists Association
- Hege, U.: scientific advisor for Institut Montaigne on the report “Prix interne du carbone: une solution qui tombe à PIC pour les entreprises?”, November 2021
- Hege, U.: appointed member of the scientific advisory board of
- Pouget, S.: PRI Academic Network committee member
- Pouget, S.: 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
- Pouget, S.: newly appointed member of the ACT 4 FINANCE « Technical Advisory Group » for the assessment of decarbonation strategies of financial institutions
- Pouget, S. : Member of the AMF Haut Comité Certificateur de Place

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.
- Christian Gollier was appointed invited professor at the Collège de France on the annual chair 2021-2022 Avenir Commun Durable

- On the 27-28 May 2021, TSE organized in partnership with Challenges the first Common Good Summit, with opening speeches from Emmanuel Macron, President of the French republic, Carole Delga, President of the Occitanie Region, and Barbara Pompili, Ministry of Ecology Transition. During two days, academics, including 5 Nobel Prizes in economics, exchanged views with political and corporate leaders on the regulation of capitalism and the safeguard of the common good. Replay is available [here](#).
- In June 2021, Jean Tirole submitted with Olivier Blanchard their report to the President of the French Republic “Les Grands Défis Economiques” with the following chapters and contributors:
 - Introduction : « La France face à trois défis majeurs », by Olivier Blanchard and Jean Tirole ;
 - Chapter I : « Changement climatique », by Christian Gollier and Mar Reguant ;
 - Chapter II : « Inégalités et insécurité économiques », by Dani Rodrik and Stefanie Stantcheva ;
 - Chapter III : « Changement démographique », by Axel Börsch-Supan, Claudia Diehl and Carol Propper.

V. Education and training related to FDIR

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

- MSct Economics for smart cities and climate policy (Esclip), Ecole Polytechnique: Lecture serie in urban economics and green finance, and capstone projects on climate and sustainable finance action plans at the city or regional level (36h)
- MSct ESCLIP, EDACF, Ecole Polytechnique: Urban services and utilities
- MSct ESCLIP, Ecole Polytechnique: Cities and transportation
- MSct ESCLIP, EDACF, Ecole Polytechnique: Traffic and Transportation systems in urban contexts
- MSct ESCLIP, EDACF, Ecole Polytechnique: Environment and local Development
- MSct ESCLIP, EDACF, Ecole Polytechnique: Environmental economics and policies in cities
- Master Economie de l'environnement, de l'énergie et des Transports, AgroParistech & Ecole Polytechnique, Ethique, profits et impact social et environnemental des entreprises (20h)
- Bachelor in Mathematics and Economics: Corporate Social and Environmental Responsibility (8h)
- Sustainable development certificate, Ecole Polytechnique
- Master in Finance, TSE and TSM: Asset Management and trading (24h)
- Master in Finance, TSE and TSM: Psychology of finance (24h)
- Master in Finance, TSE and TSM: Green structured products and climate risk (12h)
- Master in Finance, TSE and TSM: Group projects on firms' climate related exposure
- Master in Economics, TSE: Economics of animal welfare
- Master in Economics, TSE: Advanced Environmental Economics (30 hours)
- Master in Economics, Ecole Polytechnique: Macro-finance (24h)
- Master in Economics, Ecole Polytechnique: Advanced environmental economics (12H)
- PhD TSE: Energy and climate economics (15 hours)

B. PhD Students

PhD students working on FDIR topics in 2021 included:

- Li Bao: "Essays on passive and green asset management", Toulouse School of Management, started in 2018 (advisor: S. Moinas)
- Vincent Bouchet: "SRI", Ecole Polytechnique & CDC, started in 2017, defended in 2021. (Advisors: P. Crifo & N. Mottis)

- 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)
- Keller Martinez Solis: “Internal carbon pricing”, Toulouse School of Management, started in 2021 (advisor: S. Moinas)
- Hung-Thuy Nguyen, SRI in developing countries, Toulouse School of Economics, started in 2017 (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)

C. Master theses and Capstone projects (*)

- Keller Martinez Solis (MSc Finance, TSM), Green assets, supervised by Sophie Moinas, 2021
- Hanh Nguyen Luu (MSc Finance, TSM), Blue bonds, supervised by Sophie Moinas and Stéphane Villeneuve, 2021
- Dorra Amrouni, Thomas Bedouet, Pénélope Rascol, Siham Safir (MSct ESCLIP, Polytechnique): Green finance (1): The Climate efficiency of retrofit subsidies for the city of Paris, supervised by B. Schmutz & L. Bou Sleiman
- Ekaterina Ghosh, Arthur Pécondon-Lacroix, Samuel Triboulet, (MSct ESCLIP, Polytechnique): Green finance (2): Financing Residential Energy Retrofits in Paris, supervised by B. Schmutz & L. Bou Sleiman
- Alicia Nitsch, Hamit Kemal Yildirim, Natalia Pietruszewska, Wang Tianqi (MSct ESCLIP, Polytechnique) : Paris Traffic Policy and CO2 Emissions, supervised by B. Schmutz & L. Bou Sleiman
- Guenola Dutheil, Sonia Zareski (MSct ESCLIP, Polytechnique): The drivers of food waste at the macroeconomic level, supervised by P. Crifo
- Yana Abdallah (MSct ESCLIP, Polytechnique): ESG factors at the municipal/regional level, supervised by P. Crifo

(*) Capstone Projects are applied master theses for which students must carry out a research-based scientific project on a subject related to the climate plan / sustainable finance / local sustainable development strategy theme of a partner institution, by integrating the knowledge acquired from their quantitative and applied courses and data from real use cases