Chaire Finance Durable
et Investissement Responsable

Report for the year 2019

The research projects of the Chaire FDIR are run by the Toulouse School of Economics and the Economics department at Ecole Polytechnique. At the initiative of the AFG, the Chaire FDIR is made possible for 2019 thanks to the financial support of the following 9 members:

ABN AMRO IS

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Edmond de Rothschild AM

Fonds de Réserve pour les Retraites (FRR)

HSBC Global AM (France)

La Banque Postale AM

Lyxor AM

Projects undertaken by the Chaire 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 (Cass 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 the Chaire FDIR. The insights and guidance of the members of the orientation committee is gratefully acknowledged.

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3 April 2020

1. Approbation of the 2019 annual report
2. Research projects and activities of the Chaire FDIR
3. Miscellaneous

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Ordre du jour de la réunion

Du Comité Scientifique de la Chaire FDIR

3 Avril 2020

- Approbation du rapport annuel 2010
- Projets de recherche et activités de la Chaire FDIR
- Divers

Research team

Patricia Crifo, Ecole Polytechnique & U. Paris Nanterre (Chair co-director)
Sébastien Pouget, Toulouse School of Economics (Chair co-director)
Stefan Ambec, Toulouse School of Economics
Marianne Andries, Toulouse School of Economics
Milo Bianchi, Toulouse School of Economics
Catherine Casamatta, Toulouse School of Economics
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Edouard Challe, CNRS & Ecole Polytechnique
Vanina Forget, Ecole Polytechnique & Ministère Agriculture
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Guy Meunier, INRA Paris & Ecole Polytechnique
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Silvia Rossetto, Toulouse School of Economics
Gwenael Roudaut, Ecole Polytechnique & Ministère Energie DD et Ecologie
Simone Sepe, Toulouse School of Economics
Jean Tirole, Toulouse School of Economics
Nicolas Treich, Toulouse School of Economics

Doctoral and post-doctoral students

Thomas André, Schneider Electric & Ecole Polytechnique
Aurélien Bigo, Ecole Polytechnique
Vincent Bouchet, Ecole Polytechnique
Elena Escrig Olmedo, Universite Jaume I & Ecole Polytechnique
Madalena Ferrana, Toulouse School of Economics
Aymeric Guidoux, Ecole Polytechnique
Hung-Thuy Nguyen, Toulouse School of Economics
Yixin Wang, Toulouse School of Economics
Yuting Yang, Toulouse School of Economics

Main research activity

The research chair on Sustainable Finance and Responsible Investment («Chaire Finance Durable et Investissement Responsable», or Chaire 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 Chaire since its inception.

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

The Chaire FDIR in a few numbers	
The Chaire	-> Started in **2007** -> **20+** researchers -> **2** academic institutions: Toulouse School of Economics and Ecole Polytechnique -> **10** 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
Research	-> **4** fields of practical implications (more information offered is below): • Long-term risk valuation • Design and marketing of SRI funds • Governance, CSR and financial performance • Engagement and dialogue -> **30+** academic workshops with partners -> **10+** bilateral scientific meetings with partners -> **100+** scientific studies published -> **100+** presentations in scientific conferences -> **5** books on responsible finance -> **10** scientific conferences organized
Teaching	-> **15+** PhD students -> **10+** courses every year on responsible finance topics (Master Level)
Visibility	-> **20+** 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 -> **1** Peace Nobel prize for Christian Gollier as a member of the IPCC -> **4** Cahiers de l'Institut Louis Bachelier dedicated to the Chaire FDIR

Information about the Chaire FDIR objectives and activities are at: https://fdir.idei.fr/

The main objectives of the Chaire 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, the Chaire 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 of the Chaire FDIR, in conjunction with the sponsors, have defined four high-priority research projects that pertain the three main topics of the Chaire FDIR. The achievements on these four high-priority projects for the first year (2019) are detailed below.

A) The four high priority research projects

The following section presents the state of development and first 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 Chaire final reports.

1) Employees as directors (Catherine Casamatta, TSE and 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 recent changes 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, and their resulting market (shareholder) value.

- 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 (Acharya, Myers, and Rajan, Journal of Finance 2011). 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.

- 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 and project progress

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. Also, most existing research focuses on large firms (Ginglinger, Megginson, and Waxin, Journal of Corporate Finance 2011).

To assess the impact of employees' directorship on shareholder value, we will 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. To identify a causal effect, we plan to adopt a regression discontinuity design, by matching firms affected by the new law with similar firms whose number of employees is just below the threshold defined by the law. Comparing the abnormal returns of both types of firms, we will be able to assess whether the introduction of the law had an impact on firm value.

We will then try to formulate explanations for the observed differences. To do so, we have to bear in mind that the introduction of the law imposes a constraint on firms (that is, employees' board seats are not chosen by shareholders, but imposed by the law). We therefore need to identify theoretically the channels through which the passage of the law has a positive or negative impact on firm value and relate these possible channels to the empirical findings. For instance, if having employees as directors increases financial returns in the long run, we should observe a positive impact of the law on stock prices only for those firms whose shareholders face commitment issues (and cannot nominate these directors in the absence of a law). If having employees as directors decreases financial return, but increases social performance, then the impact of the law sould have a different impact on stock prices depending on the proportion of SRI investors among shareholders (following the insights of Gollier and Pouget, working paper 2019).

We are still in the data collection and analysis phase. We gathered data on all firms listed on the CAC-all tradable index using the Eikon Reuters, Amadeus and Orbis databases. First estimations suggest that the passage of the law had a negative impact on shareholders' value. We will now try to identify for which types of firms the market reaction is more negative.

2) Employee involvement in corporate decisions (Patricia Crifo, Ecole Polytechnique and Antoine Rebérioux, University Paris 7)

Objective

In the spirit of recent debates in France to redefine the role and missions of companies, the literature on worker involvement in corporate strategy and decision overcomes the restrictive approach of an employment relationship based only under the framework of subordination. Beyond this generic definition, the notion of employee involvement or participation covers a large number of practices and devices that are very different. In particular, worker involvement may be implemented at the operational and/or at the strategic level.

The Action Plan for Business Growth and Transformation (Le Plan d'Action pour la Croissance et la Transformation des Entreprises, PACTE), voted for in France in April 2020, is a perfect illustration of this movement, placing complex questions of corporate responsibility and employee participation at the heart of the debate. 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?

These are the questions that this project proposes to answer. The proposed argument is as follows. The issue of employee participation cannot be dissociated from a reflection on the nature of the company and the special place employees occupy in it. Although the question of their participation in governance, alongside shareholders, may be useful, it must be expressed together with other forms of participation, less direct but no less important. If not, the integration of employees at the heart of governance may contribute to refocusing the company on purely internal strategic considerations (profitability or employment quality of existing employees), to the detriment of broader social and environmental responsibility

Methodology and results

Our approach decomposes the argument in four parts.

Firstly, we describe the various types of employee participation in corporate decisions (participation and work organization, participation and bargaining, financial participation and board-level participation).

Secondly, we examine employee participation in strategic decision via the company's governance structure. In particular, we analyze the legal, economic and sociological determinants of such type of worker involvement and the diversity of national models of involvement. This challenges two classic conceptions of the company – the Marxist and liberal approaches. Although they of course take widely opposing positions, these two approaches converge on one point: for both, the company is by nature an object (or property) belonging to the shareholders. Employee participation in strategic decisions therefore makes little sense from their perspective. This explains the distrust that codetermination has long aroused in the eyes of the most radical trade unions in France. While the Marxist vision is no longer at the fore within the social, economic, and legal sciences, the same cannot be said of the liberal approach, which has been able to renew itself with the doctrine of shareholder value. As we will see in the first section, this doctrine has been the dominant paradigm in corporate governance debates until recently. A shift can now be observed: the idea that companies have "social" responsibility is gaining ground, as is the recognition that employees have a legitimate right to participate, under conditions yet to be defined, in governance. The PACTE action plan reflects this shift, since it proposes rewriting the most fundamental texts defining the company and society and strengthening the role of employees in the decision-making process.

Thirdly, we examine the codetermination model, which is the most advanced type of worker involvement. From an organizational perspective, to truly integrate employees in decision-making, the board needs to be opened to employee representatives, with voting rights. This is the principle of codetermination. The case of two countries are presented here: Germany and France. Nonetheless, the implementation of codetermination is not without its difficulties. It affects internal balances, as well as the nature of the deliberative and decision-making processes that operate within the firm.
The implications of codetermination on the nature and functioning of boards (designation and role of employee-directors, distinction between one-tier and two-tier board structure) and on corporate performance are investigated. Until the mid-1990s, the argument was essentially ideological or principled in nature; since the early 2000s, the questioning has taken on a more applied dimension, with researchers using company data to directly and finely test the relationship between codetermination and performance. In general, employee directors appear to generate an increase in economic and stock market performance. Firstly, because of their special status, these directors are able to influence strategic choices in a way that is favorable to shareholders, the company, and its employees. Secondly, codetermination is likely to increase employees' commitment to their work.

In the fourth and last part of the project, we examine the complementarity between the various forms of involvement to answer the following questions: what are the relationships between employee-directors and employee-shareholders? how do companies articulate boards with employee-directors and worker involvement at the operational and bargaining level ?

In the second part of the project, we see that reflections on the nature of the firm advocate a governance model that combines two properties: (i) recognition by the management team of the possibility of integrating social dimensions into the running of the firm; and (ii) opening up the board of directors or supervisory board to employee representatives. But a question remains regarding the degree of compatibility between the two conditions set out above. This question can be formulated in different ways. Does employee participation really improve the company's relations with its other stakeholders? Or, is participation likely to increase the company's CSR commitment and non-financial performance? There are very few studies or conceptual developments on which to rely, and this last part is therefore more forward-looking than previous ones.
Two views can be identified on the relationship between employee participation and CSR. According to a first approach, these two dimensions are opposed or substitutable, to such an extent that excessive employee participation could be detrimental to companies' non-financial performance. According to a second approach, these two dimensions go hand in hand: greater employee participation also means a stronger commitment to CSR. We suggest that, in reality, the two regimes coexist, with the occurrence of one rather than the other depending on a number of conditions or practices.

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

Objective

Politicians fixed the climate objective of 2°C but what is the optimal carbon abatment path to achieve this objective? As is well-known, the 2°C objective is associated to an intertemporal carbon budget constraint. Determining the optimal timing to consume this carbon budget is a problem isomorphic to the Hotelling's problem (Hotelling, Journal of Political Economy 1931) of extracting a non-renewable resource. Under this cost-efficiency approach, abating one ton of CO_2 today is a perfect substitute to abating one ton of CO_2 in the future. Along the optimal abatement path, frontloading the abatement effort should have a zero net present value. This is possible only if the growth rate of (expected) carbon price is equal to the (risk-adjusted) discount rate.

This simple rule should apply to climate models in which there is no uncertainty and green technological progresses are known in advance. It is then a puzzle that most climate models generate carbon prices whose real growth rate is much larger than the interest rate. This suggests that the allocation of mitigation efforts is not intertemporally efficient. I refer to this observation as the "carbon pricing puzzle" of cost-efficient integrated-assessment (IAM) models. It tells us that, compared to the recommendations extracted from these models, reallocating some climate efforts to the present (by increasing the current carbon price) would be socially desirable.

However, this initial puzzle is based on the premise that the evolution of abatement costs and carbon prices is certain. In this project, I recognize that this key assumption is utterly unrealistic, and I explore the impact of uncertainty on the socially efficient growth rate of real carbon prices. In particular, I explore the possibility that the puzzle be solved by introducing risk into the model.

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. Deep uncertainties also surround future electricity storage technologies and nuclear fusion for example. The extraordinary large uncertainty surrounding the emergence of economically viable renewable systems of energy is an inherent dimension of the energy transition. Similarly, IAM models are generally based on a deterministic growth of total factor productivity (TFP). Recognizing the uncertainty surrounding the growth of TFP in the long run should also be taken into account to determine the carbon price schedule. If economic growth is larger than expected, more abatement efforts will have to be implemented to compensate for the larger emissions and this will require a larger carbon price.

Methodology and results

To account for uncertainty on the optimal timing of climate efforts and the carbon pricing system that supports it, I start from the premise that the expected growth rate of carbon prices should equal the discount rate *adjusted for the riskiness of postponing or frontloading* the abatement effort. To do so, I rely on the insights of the Consumption-based Capital Asset Pricing Model (CCAPM, Breeden, Journal of Financial Economics 1979, Lucas, Econometrica 1978, and Rubinstein, Bell Journal of Economics 1976). Suppose for example that, along the optimal path, marginal abatement costs are negatively correlated with aggregate consumption. In that case, fighting climate change early has the extra benefit to hedge the macro risk. Because of this negative CCAPM beta of early mitigation efforts, one should discount the future benefit of this early investment at a rate *lower than the risk-free rate*, which implies a larger current price of carbon, and a growth rate of the expected carbon price smaller than the risk-free rate. From a positive point of view, this carbon pricing system is compatible with an equilibrium, as investors in green technologies will have an expected rate of return smaller than the interest rate, just because such green investments hedge their global portfolio risk. On the contrary, if marginal abatement costs and aggregate consumption correlate positively, i.e., if the climate beta is positive, the risk premium will be positive, the current price of carbon will be smaller, and the growth rate of expected carbon price will be larger than the interest rate. This policy provides the right price signal for private investors in renewables technologies to take account of the impact of their decisions on social welfare, as is the case on efficient financial markets for other investment projects.

It remains to characterize the determinants of this carbon beta. To do this, 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 (in contrast, most IAM models assume that the modeler observes the realization of the vector of uncertain parameters before optimizing the climate policy under certainty). I characterize the impact of these sources of uncertainty on the optimal growth rate of expected carbon price, and I realistically calibrate this model. By considering a realistic timing of the resolution of the uncertainty, and therefore incorporating the role of precaution in the analysis, I more realistically determine the optimal climate policy in the first period before the resolution of uncertainty.

In this framework, I show that the beta of abatement frontloading is the income-elasticity of marginal abatement costs. Multiplying this beta by the equilibrium aggregate risk premium tells us by how much the growth rate of expected carbon price should differ from the equilibrium interest rate. I show that the sign of this carbon beta is generally ambiguous, with different sources of uncertainty pushing the climate beta in opposite directions. However, a realistic 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*.

Thus, this analysis justifies using a discount rate for green technologies and planning for a growth rate of expected carbon prices that are larger than the interest rate. However, I estimate that the efficient growth rate of carbon prices is around 3.5%, which is much smaller than the 7.04% observed on average in the database of models of the Intergovernmental Panel on Climat Change (IPCC). The bottom line of my analysis remains that the representative concentration pathways of the IPCC inefficiently allocate abatement efforts over time. The same final concentration of GHG in the atmosphere could be obtained with a smaller impact on intergenerational welfare by *abating more today and abating less in the future*.

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

Objective

The objective of this project is to analyze the motivations and main determinants for impact assessments in France, in the French SRI industry to provide insights into why and how investors use impact assessment methodologies for their socially responsible products.

Based on a research conducted by the Scientific Committee of the French public SRI label informed by auditions, an online survey and documentary evidence, the project examines the meanings and motivations behind impact assessment in the SRI community and how it relates to those in the impact investing community.

Impact investing comprises a diversity of approaches, from venture philanthropy, place-based financing to conservation and social impact bonds. Impact assessment appeared in the 1960s in the United States with the awareness of public opinion on environmental and social issues, it developed strongly in the 1990s, thanks to fortunes from the Internet and Silicon Valley venture capital investment methods seeking to revitalize philanthropy. Faced with the failures of public authorities on environmental and societal issues, new investors have thus emerged: “venture philanthropists”. In Europe, the majority of Venture Philanthropy's funds manage assets below 2.5 million euros are relatively low compared to those of SRI and a fortiori of conventional investment (i.e. mainstream), but this movement has strongly contributed to the development of impact measures. Since the 2010s, the motivations to better measure the impact of projects respond on the one hand to new policies and tight budgets which require to make arbitrations upstream and on the other hand to a greater pressure from donors and public opinion.

In France, the impact measurement movement developed after the 2008 financial crisis with the rise of social enterprises, the objective of which is to “create social value rather than generate profit for their owners and their partners.” In Europe, faced with increasing pressure from investors and the will of managers to better understand the impact of these companies, the Commission Expert Group on Social Entrepreneurship (GECES) created in 2012 a working group dedicated solely to impact measurement

Methodology and results

This project is a research article that was written as an outcome of a working group on impact assessment that was launched by the Scientific committee of the French SRI label, supported by the French Ministry of Economy and Finance. Considering the lack of evidence besides the societal impact promoted by SRI as a key weakness of the SRI label and a potential greenwashing threat, the researchers of the Scientific committee of the French SRI label proposed to the Ministry of the Economy and Finance to launch a working group on impact assessment. After some hesitations and debates that related to the technical and political issues raised by the topic, the Ministry finally accepted and officially approved the creation of this group in September 2017. The main objectives of this working group were to 1) analyze current practices and 2) suggest impact assessment metrics to be attached to the label.

The Impact Assessment Working Group was launched on December 1st, 2017 by the SRI label committee. The work of this group consisted in realizing a literature review on impact assessment, organizing auditions of innovative players from France and Europe in this field, conducting an online survey on impact assessment and generating recommendations for the label committee during the year 2018. The final report was publicly released during a conference in october 2018, comprising our main recommendations for the government and an in-depth analysis of the mechanisms of impact assessment (Arjaliès et al. 2018).

The main findings described below comprise insights both from the Impact Assessment Survey we conducted, and the auditions, interviews and documentary evidence gathered throughout the consultation process.

First, the results show that the SRI community wanted to use impact assessment to support both the present and the future development of the business. Half of respondents also mentioned impact assessment as a way to help them meet the SDGs confirms the forward-looking stance of the impact assessment. Unlike the impact investing community, the focus was not on the societal impact per se.

Most respondents associated impact assessment with three main features: 1) (negative) externalities of companies; 2) ESG measurement and 3) the need to provide evidence.

Four styles were mainly used by investors: Pure ESG Indicators was used by a very large majority; Engagement Measures was cited by half of respondents; Monetary ESG and Negative Screening measures were both used by more than one quarter of respondents.

Overall, our results tend to show that impact assessment in SRI does mirror most of the tensions historically present in the SRI community between the “niche” investors more likely to engage in “pure ESG” (i.e. exclusion, GRI) and those more mainstream who tend to use ESG integration as a way to generate financial returns (e.g. monetary ESG, pure monetary).

B) Workshops and conferences

Additional objectives of the Chaire FDIR are to maintain a fruitful dialogue between

researchers and sponsors of the Chaire, 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 has been modified to include 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. The first topic chosen by the sponsors for these workshops was "Impact", and two sessions were dedicated to this question.
To meet the second objective, researchers of the Chaire have been involved in several academic conferences with a mixed audience.

1) Workshops with sponsors

Workshop on the nature and measure of impact: 28 May 2019

Abstract: Impact Investing describes a number of practices that aim for the most efficient capital allocation in relation to the achievement of certain social and environmental goals. While the social impact goal is an essential part of impact investing, such practices can aim to achieve multiple objective functions including the generation of financial returns to investors. In this workshop we will examine impact assessment through an economic lens, in relationship with externalities measurement on the one hand and relying on an empirical analysis highlighting why and how investors use impact assessment methodologies for their socially responsible products on the other hand. A self-administrated survey conducted in 2018 in France helps understand the main motivations, drivers and obstacles to impact assessment, its relevance to investment performance, in relationship with the actual or required indicators to be developed.

Workshop on social impact investing: 30 January 2020

Abstract: The second workshop on impact focuses on current developments in social impact measures. First, researchers from the Society & Organization Center (HEC Paris) will present a new method to enhance the standardization of social impact measures. They will identify seven key challenges to measuring social impact and present a landmark assessment tool to standardize evaluation across all industries and types of organizations. The second presentation will focus on Hémisphère, the first French social impact fund and analyse its objectives and first results.

2) Conferences with the world of practice

PRI Academic conference: 9 september 2019

The Chaire FDIR was chosen to organize the scientific programme of the PRI Academic Network conference 2019. The objective of this conference is to bring together academics and practitionners around issues of Socially Responsible Investment. To foster interactions, all presentations were designed to involve academics and practitioners. The programme included in particular practitioners and academic keynotes as well as panel discussions with academic and practitioners contributors. The academic presentations were all discussed and moderated by practitioners. Specific topics discussed included:

- Women on boards
- Disclosure of climate change risks
- Investor and market responses to climate
- Investing and engaging on carbon
- Bridging the gap between RI practice and academic research: topics of practical interest and access PRI data
- Regulation and legislation
- Corporate misconduct, reputation and director discretion
- Challenges in ESG measurement

The Academic Network Conference 2019 was the largest to date, attended by 58 academics from 46 institutions, alongside 58 investors.

TSE Sustainable Finance Center inaugural conference: 5-6 december 2019

The TSE Sustainable Finance Center launched its inaugural conference in December 2019 in Toulouse. This biennial academic event brings together renowned academicians from international universities as well as the partners of the center. The Chaire FDIR was closely associated to this event that hosted stimulating exchanges and panel discussions on topics such as Financing energy transition, Digital currencies, Finance Intermediaries and Regulation, and Financial markets inefficiencies.

The full programme of both conferences is presented in the section “Communication of the Chaire FDIR achievements and Awards” page 19.

Publications and working papers 2019

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

- **Andries, M**., T. M. Eisenbach, and M. C. Schmalz, (2019), Horizon-Dependent Risk Aversion and the Timing and Pricing of Uncertainty, Working paper
- **Andries, M**. and N. Boyarchenko, (2020), Ambiguous Trade-offs: An Application to Climate Change, Working paper
- **Bianchi, M**. and H. Luomaranta, (2019), Agency Costs and Firm Productivity, Working paper
- **Bianchi, M**., R.-A. Dana and E. Jouini, (2019), Shareholder Heterogeneity, Asymmetric Information, and the Equilibrium Manager, Working paper
- Bègue, L. and **N. Treich**, (2019), Immediate and 15-week correlates of individual commitment to a "green monday" national campaign fostering weekly substitution of meat and fish by other nutrients, Nutrients 11, 1894.
- Bratton, W. and **S. Sepe**, (2020), Corporate Law and the Myth of Efficient Market Control, Cornell Law Review
- Brière M., **S. Pouget**, L. Ureche-Rangau, (2019), Do institutional investors vote to curb climate change? An empirical analysis of shareholder meetings, Working paper
- Brière M., **S. Pouget**, L. Ureche-Rangau, (2019), BlackRock vs Norway Fund at Shareholder Meetings: Institutional Investors' Votes on Corporate Externalities, forthcoming, Proceedings of the Seventh Public Investors' World Bank Conference 2018
- Brodback D., N. Guenster, **S. Pouget**, (2019), On the valuation of corporate social responsibility, Working paper
- Carlier, A. and **N. Treich**, (2019), Directly valuing animal welfare in (environmental) economics", International Review of Environmental and Resource Economics, forthcoming
- **Casamatta C**. and **S. Pouget**, (2019), Fund managers' Contracts and Financial Markets' Short-termism, Working paper
- **Challe, E.**, J.I. Lopez et E. Mengus, (2019), Institutional quality and capital inflows: theory and evidence, Journal of International Money and Finance 96.
- Cremers, M., S. Gurnsey, and **S. Sepe**, (2019), Stakeholder Orientation and Firm Value, working paper
- Cremers, M., S. Gurnsey, and **S. Sepe**, (2019), Selection Bias in Corporate Governance: Evidence from Business Combination Laws, working paper
- Cremers, M., S. Gurnsey, L. Litov and **S. Sepe**, (2019), Shadow Pills, Actual Pill Policy, and Firm Value, working paper
- **Crifo P**., R. Durand, and J.P. Gond, (2019), Encouraging Investors to Enable Corporate Sustainability Transitions: The Case of Responsible Investment in France, Organization & Environment. 32(2), 125-144.
- Capelle-Blancard G., **P. Crifo**, MA. Diaye, R. Oueghlissi, and B. Scholtens, (2019), Environmental, Social and Governance (ESG) performance and sovereign bond

spreads: an empirical analysis of OECD countries, Journal of Banking and Finance 98, 156-169.

- Louche C., T. Busch, **P. Crifo**, and A. Markus, (2019), Financial Markets and the Transition to a Low-Carbon Economy: Challenging the Dominant Logics, Organization & Environment, 32(1), 3–17.
- Cavaco S., **P. Crifo**, and A. Guidoux, (2019), CSR and corporate governance: the role of executive compensation programs, Working paper.
- Mottis N., D.L. Arjalies, **P. Crifo**, and V. Bouchet, (2019), Mesure d'Impact et Investissement Socialement Responsable, Working paper.
- Arjalies DL., P. Chollet, **P. Crifo P**., and N. Mottis, (2019), Myth and Reality of Impact Assessment in the Investment Industry, Working paper.
- Fisch, J. and **S. Sepe**, (2020), Shareholder Collaboration, Texas Law Review
- **Gollier, C**., (2019), Variance stochastic orders, Journal of Mathematical Economics 80, 1-8.
- **Gollier, C.**, (2019), Valuation of natural capital under uncertain substitutability, Journal of Environmental Economics and Management, 94, 54-66.
- **Gollier, C.**, (2019), Aversion to risk of regret and preference for positively skewed risks, Economic Theory, forthcoming.
- **Gollier, C**., (2019), Le climat après la fin du mois, PUF, mai 2019.
- Gollier C. and **S. Pouget**, (2019), The Washing Machine: Asset Prices and Corporate Behavior with Socially Responsible Investors, Working paper
- Gurnsey, S., S. Masconale, **S. Sepe**, and C. Whitehead, (2019), Banking on the Lawyers, Working paper
- Hilton, D., **N. Treich**, G. Lazzara and P. Tendil, (2019), Designing effective nudges that satisfy ethical constraints: The case of environmentally responsible behavior, Mind & Society.
- Jaballah J. and **S. Pouget**, Facteurs Environnentaux, Sociaux et de Gouvernance et performance des petites et moyennes entreprises cotées, Working paper
- Le Bris D., W. Goetzmann, and **S. Pouget**, The present value relation over six centuries: The case of the Bazacle company, *Journal of Financial Economics*, Volume 132, Issue 1, April 2019, Pages 248-265
- **Treich, N**., (2019), Veganomics : Vers une approche économique du véganisme?, Revue française d'économie.

Communication of the Chaire FDIR achievements and awards

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

1) Communication to finance practitioners

In 2019, the Chaire FDIR has organized various events during which researchers have presented the implications of their results for CSR and SRI. In particular, 2 workshops have been organized at the AFG for the sponsors. The Chaire FDIR was chosen as the host institution to lead the scientific committee of the PRI Academic Network Conference 2019 and contributed to the inaugural conference of the TSE Sustainable Finance center. Researchers have also organized or contributed to general audience conferences.
The presentations and programmes are available on the Chaire FDIR website at http://fdir.idei.fr.

a) Workshops with the sponsors

- *Workshop, 28 May 2019*

- Introduction to impact and extra financial externalities: Sébastien Pouget (TSE)
- Determinants and styles of impact measurement: an empirical study on French data, Patricia Crifo (Ecole Polytechnique)

- *Workshop, 30 January 2020*

- Social impact assessment strategy: Rodolphe Durand (HEC S&O Center)
- Hémisphère, the first French social impact fund: Stéphane Saussier and Julie Rouault (IAE Paris)

b) PRI Academic Network Conference 2019: 9 september 2019

Opening keynote: Women on boards: the superheroes of tomorrow?

Renée B. Adams, Saïd Business School, University of Oxford

Many countries and policymakers seem to agree that greater gender diversity on corporate boards is fundamental for economic progress. This session will:

- Highlight the characteristics of female and male directors and contrast the expectations that are placed on women and men, and between independent and non-independent directors
- Examine the transformative potential of women to change corporate governance more so than independent directors

Include a Q&A with the audience about the research findings and what is necessary to realise opportunities
Moderated by Will Martindale, Director of Policy and Research, PRI

Panel discussion: Disclosure of climate change risks

Where is research going and are we moving fast enough on corporate climate disclosures - what else do investors and companies need to do? Since institutional demand for climate risk disclosure is prevalent, why hasn't regulation caught up? What are the next steps, where are we going from here and what are the key outcomes of this?

Institutional investors' views and preferences on climate risk disclosure

The results of a new comprehensive institutional investor survey on investor perceptions on firm-level climate disclosures will be discussed.

Presenter: Emirhan Ilhan, Frankfurt School of Finance & Management and Philipp Krueger, University of Geneva
Co-authors: Zacharias Sautner and Laura Starks

Shareholder Activism and Firms' Voluntary Disclosure of Climate Change Risks

This examines whether shareholder activism induces management to voluntarily disclose firm's exposure to climate risks. Overall, the findings indicate that active shareholders can elicit greater climate risk disclosure and improve corporate governance.

Presenter: Caroline Flammer, Boston University
Co-authors: Mike Toffel and Kala Viswanathan
Moderator: Edward Baker, Senior Policy Advisor, Climate and Energy Transition, PRI
Practitioner discussant: Michael Herskovich, Head of Corporate Governance, BNP Paribas Asset Management

Breakout 1A: Investor and market responses to climate

[When investors call for climate responsibility, how do mutual funds respond?]

The implications of a new eco-label for mutual funds, which was introduced by Morningstar and the research finds that investors were reactive to these ratings and that some mutual funds responded by readjusting their holdings.

Presenter: Stefano Ramelli, University of Zurich
Co-authors: Marco Ceccarelli, and Alexander F. Wagner
Academic discussant: Bert Scholtens, University of St Andrews

[Is 'being green' rewarded in the market?: An empirical investigation of decarbonization and stock returns]

An examination of the risk-return relationship of low carbon-investment and characteristics of carbon-efficient firms.

Presenter: Soh Young In, Stanford University
Co-authors: Ki Young Park and Ashby Monk
Academic discussant: Marie Briere, Dauphine University, Amundi
Moderator/practitioner discussant: Michael Viehs, Associate Director – ESG Integration, Hermes

Breakout 1B: Investing and engaging on carbon

[Climate risk and capital structure]

This research uses innovative data measuring, forward-looking physical climate risk at the firm level and finds that greater climate risk leads to lower leverage post-2015 and that the results are influenced by both demand and supply side factors.

Presenter: Edith Ginglinger, Université Paris-Dauphine, PSL
Co-author: Quentin Moreau
Academic discussant: Vincent Bouchet, Ecole Polytechnique

[Unpacking the roles of shareholder engagement intermediaries: A case study of an engagement process on carbon risk]

A qualitative case study of a three-year engagement project on carbon risk where the authors identify and conceptualise four roles performed by engagement intermediaries to elicit companies' responses.

Presenters: Jean-Pascal Gond, Cass Business School, City, University of London and Emma Sjöström, Stockholm School of Economics
Academic discussant: Fabrizio Ferraro, IESE
Moderator/practitioner discussant: Tom Barron, Manager, Stewardship, PRI

Practitioner panel: A call to action - Bridging the gap between RI practice and academic research

Fiona Reynolds, CEO, PRI and **David Harris**, Group Head of Sustainable Business at London Stock Exchange Group & Head of Sustainable Investment, FTSE Russell
Academic research has the ability to inform and transform investment decision-making and practice, however academic and industry impact are often separated by a large divide. This session will highlight priority issues and challenges from investment practitioners and funding opportunities for academic research.

How academics can access PRI data

[The Reporting and Assessment Framework]

The PRI's 2,500 signatories are required to report on their organisational structure, strategy and governance, climate change reporting and asset class specific modules. Learn about the R&A Framework and how you can use it for academic research.

Presenter: Elina Rolfe, Director, Reporting & Assessment, PRI

The Collaboration Platform

This is a unique private forum with data since 2008 that allows signatories to pool resources, share information and enhance their influence on ESG issues. Learn about the platform, current engagements, recent academic studies that have analysed the success of collaborative engagement on E, S and G issues, and how to access the data.

Presenter: Nabylah Abo Dehman, Manager, Social Issues, PRI

Breakout 2A: Regulation and legislation

Climate regulatory risks and corporate bonds

The authors find that bond riskiness and pricing appear to be jointly determined by a firm's environmental performance and its regulatory conditions.

Presenter: Laura Starks, University of Texas at Austin
Co-authors: Lee Seltzer and Qifei Zhu
Academic discussant: Pierre Chollet, University of Montpellier

Reduction in corporate greenhouse gas emissions under prescriptive disclosure requirements

The research finds there was a real reduction in emissions suggesting that prescriptive carbon disclosure regimes lead to greater reduction in emissions than voluntary regimes.

Presenter: Philipp Krueger, University of Geneva
Co-author: Valentin Jouvenot
Academic discussant: Hao Liang, Singapore Management University
Moderator/practitioner discussant: Jean-François Boulier, President, Af2i

Breakout 2B: Corporate misconduct, reputation and director discretion

How are non-financial and financial misconduct related?

The paper finds that the relation between financial and non-financial misconduct varies both over time and by the type of violation.

Presenter: Aneesh Raghunandan, London School of Economics
Academic discussant: Nadja Guenster, Munster University

Hacking corporate reputations

An unexpected corporate data breach is studied to investigate how firms respond to negative reputation events and finds that these breaches negatively affect firm value and that in response, firms increase their ESG investment.

Presenter: Pat Akey, University of Toronto
Co-authors: Stefan Lewellen and Inessa Liskovich
Academic discussant: Xavier Giroud, Columbia University

Stakeholder orientation and firm value

This paper analyses the relationship between enhanced director's stakeholder orientation and firm value.

Presenter: Scott B. Guernsey, University of Cambridge
Co-authors: Simone Sepe and Martjn Cremers
Academic discussant: Pedro Matos, University of Virginia
Moderator/practitioner discussant: Sebastien Thevoux-Chabuel, ESG Analyst and Portfolio Manager, Comgest

Panel discussion: Challenges in ESG measurement

Accurately measuring investment impact has been historically challenging. In addition, finding objective and standardised metrics for evaluating corporate ESG factors is still an ongoing task. To add clarity to this discussion, this session will:
Discuss how investors can identify investment opportunities which meet a high standard of sustainability and construct portfolios and monitor their impact
Highlight research that examined SRI labelling from a survey of French asset managers and rating agencies understanding of ESG impact measurement considering definitions, indicators, perceptions, determinants and impediments

Question whether more data leads to more disagreement and the effectiveness of using the same assessment language

ESG rating disagreement and stock returns

Presenters: Rajna Gibson Brandon, University of Geneva
Co-authors: Philipp Krueger, Nadine Riand and Peter S. Schmidt
Academic discussant: Patricia Crifo, Ecole Polytechnique
Moderator and practitioner speaker: Mikael Homanen, PRI and Cass Business School
Practitioner discussant: Mark W. McDivitt, Managing Director – Global Head of ESG, State Street Corporation

The PRI Award for Outstanding Research

Student prize: Does environmental performance help firms' value to recover faster from environmental controversies: International evidence

Presenter: Muhammad Ullah, University of Clermont Auvergne

Quantitative prize: ESG Shareholder Engagement and Downside Risk

Presenter: Andreas G.F. Hoepner, University College Dublin
Co-authors: Ioannis Oikonomou, Zacharias Sautner, Laura T. Starks, Xiao Y. Zhou
Awards presented by Martin Skancke, Chair, PRI

c) MATINALE de l'Institut Louis Bachelier : LA PARTICIPATION DES SALARIÉS DANS LES ENTREPRISES : Tuesday 8 October 2019

Présentation de l'ouvrage La Participation des salariés, publié récemment aux Presses de Sciences Po. par Patricia Crifo (École polytechnique) et Antoine Rebérioux (Université Paris 7).

Résumé :
Promu par les innovations managériales, l'engagement des salariés au travail trouve une issue logique dans leur participation aux décisions de l'entreprise. Cette participation répond en outre à l'aspiration des salariés et de leurs représentants à intervenir sur les conditions de travail, à discuter des questions d'emploi et de rémunération, ainsi que des choix stratégiques de leur entreprise.

Certains à discrétion des directions, d'autres obligatoires, les dispositifs de participation que recense et analyse cet ouvrage revêtent des formes diverses : droit économique du comité d'entreprise, négociation collective, représentation au conseil d'administration, etc.

Comment ces canaux s'articulent-ils ? Comment contribuent-ils à l'amélioration des conditions de travail, à la transition écologique, à la responsabilité sociale des entreprises ? Que peut-on en attendre, en termes de compétitivité ?

Un tour d'horizon synthétique et critique, alors que la loi PACTE du 22 mai 2019 prescrit une plus grande participation des salariés au capital et aux décisions stratégiques des entreprises.

d) TSE Sustainable Finance Center inaugural conference: 5-6 december 2019

Keynote: Marianne Bertrand (Chicago Booth): «Corporate Philanthropy and Politics»

Session: Responsible Finance and Long-Term Investments
Milo Bianchi (TSE): «Agency Costs and Firm Productivity» (with Henri Luomaranta)
Simone Sepe (TSE): «Selection Bias in Corporate Governance: Evidence from Business Combination Laws»

Panel discussion: Green Investments, moderated by Ulrich Hege, TSE
Frédéric Samama, Deputy Global Head of Institutional & Sovereign Clients, Amundi
Laurent Clerc, Director for Research & Risk Analysis, Banque de France & ACPR
Diana Philip, Client Service Director, Baillie Gifford

Session: Financial Intermediaries & Regulation
Fabrice Collard (TSE): «Macroeconomics of Bank Capital & Liquidity Regulations»
Giorgia Piacentino (Columbia Business School): «Conflicting Priorities: A Theory of Covenants and Collateral» (with Jason Donaldson & Denis Gromb)
Alexander Guembel (TSE): «Market Information in Banking Supervision: The Role of Stress Test Design»

Session: FinTech & Digital Markets
Catherine Casamatta (TSE): «Equilibrium Bitcoin Pricing» (with Bruno Biais, Christophe Bisière, Matthieu Bouvard & Albert Menkveld)
Rod Garratt (UCSB): «Privacy as a Public Good: a Case for Electronic Cash» (with Maarten R.C van Oordt)
Christine Parlour (UC Berkeley, Haas Business School): «BTC On-Chain Liquidity Supply»

Panel discussion: Digital Currencies, moderated by Bruno Biais, TSE
Rod Garratt, Professor of Economics, UCSB
Yesha Yadav, Professor of Law, Vanderbilt School

Session: Financial Behaviors, Welfare & Market Inefficiencies
Yesha Yadav (Vanderbilt Law School): « The myth of Risk-Free Markets»
Johan Hombert (HEC Paris): «Can Risk be Shared Across Investor Cohorts? Evidence from a Popular Savings Product» (with Victor Lyonnet)
Marie Brière (Paris Dauphine, Amundi) : « Do Universal Owners Vote to Curb Negative Corporate Externalities? An Empirical Analysis of Shareholder Meetings» (with Sébastien Pouget)

Panel discussion: New Risks, New Challenges, moderated by Sébastien Pouget, TSE
Kheira Benhami, Assistant.Director Financial Stability & Risk Division, AMF

Christian Gollier, Managing Director,TSE
Guillaume Levannier, Deputy Head of Group Investment Office, SCOR

2) Communication to academic researchers

The researchers of the Chaire 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 Chaire FDIR.

Examples of academic conferences

- American Finance Association Annual Meeting, “Stakeholder Orientation and Firm Value,” Atlanta, 6 January 2019 (S. Sepe)
- NBER Law and Economic Conference, “Stakeholder Orientation and Firm Value,” Harvard University, Boston, 15 February 2019 (S. Sepe)
- Midwest Finance Association, “Shadow Pills, Actual Pill Policy, and Firm Value,” Chicago, 8 March 2019 (S. Sepe)
- *North American Society for Financial Studies Cavalcade Annual Meeting,* “Stakeholder Orientation and Firm Value,” Pittsburgh, 23 March 2019 (S. Sepe)
- *Augustin Cournot Doctoral Days,* Strasbourg, 24 April 2019 (C. Gollier)
- Grande Conférence - *Climat et finance : prise en compte du très long terme dans le prix des actifs et du carbone,* Montreal, 23 May 2019 (C. Gollier)
- *Financial Management Association European Annual Meeting,* “Stakeholder Orientation and Firm Value,” Glasgow 13 June 2019 (S. Sepe)
- *Conference TSE Climate-Energy,* Toulouse, 18-19 June 2019 (C. Gollier)
- *Society for the Advancement of Economic Theory: "Corporate Behavior with Socially Responsible Investors", Ischia, 3 July 2019* (S. Pouget)
- *Conference Public Economic Theory*, Strasbourg, 10-12 July 2019 (C. Gollier)
- 23d International Congress in Insurance: Mathematics and Economics, Munich, 12 July 2019 (C. Gollier)
- *Banque de France/Bundesbank Conference statistics for sustainable finance,* Paris, 20 September 2019 (C. Gollier)
- Mediterranean PhD School - Impacts of Climate Change and Sustainable Engineering Responses, Naples, 7 October 2019 (C. Gollier)
- *New York University Conference on Financial Economics and Accounting,* “Shadow Pills, Actual Pill Policy, and Firm Value,” 1 November 2019 (S. Sepe)
- *Society for Empirical Legal Studies Conference*, “Shadow Pills, Actual Pill Policy, and Firm Value,” Claremont, 15 November 2019 (S. Sepe)
- Keynote lecture, 9th Annual Christmas Meeting of Belgian Economists, Louvain-La-Neuve, 20 December 2019 (C. Gollier)
- Vietnam Symposium in Banking and Finance 2019 (P.Crifo)
- NBER summer institute (E. Challe)

- Barcelano GSE summer forum (E. Challe)

Examples of workshops and seminars

- "On the valuation of Corporate Social Responsibility: An Experiment," IAE Nantes, 16 May 2019 and IAE Lyon, 7 June 2019 (S. Pouget)
- TSM doctoral workshop: "Corporate Behavior with Socially Responsible Investors," Toulouse, 28 March 2019 (S. Pouget)
- *Spring Corporate Law Roundtable,* University of Pennsylvania Law School Institute for Law and Economics, "Stakeholder Orientation and Firm Value," 3 May 2019 (S. Sepe)
- *Climate Change and Environment Research Seminar Series,* London School of Economics, 22 May 2019 (C. Gollier)
- *Workshop on Behavioral Finance and Economics*, CEU and ESSEC Business School, "Ambiguous Trade-offs: An Application to Climate Change," Cergy, 6 June 2019 (M. Andries)
- *Seminar ETH Zurich,* "Horizon-Dependent Risk Aversion and the Timing and Pricing of Uncertainty," 30 September 2019 (M. Andries)
- *Seminar Chaire économie du climat*, Dauphine, 15 November 2019 (C. Gollier)
- *Seminar USC,* "Horizon-Dependent Risk Aversion and the Timing and Pricing of Uncertainty," Los Angeles, 5 November 2019 (M. Andries)
- *Workshop on Impact Investing*, Academy of Management conference in Boston (P.Crifo)

3) <u>General audience reports and communications</u>

- EFAMA, "On the performance of Socially Responsible Investments", Brussels, 23 May 2019 (S. Pouget)
- France Inter, Le telephone sonne, 15 July 2019 (C. Gollier)
- Débat sur la finance verte, Université d'été de EELV, Toulouse, 23 August 2019 (C. Gollier)
- *Network for Greening the Financial System WG3 workshop,* Paris, 10 October 2019 (C. Gollier)
- *Global Investor Academy, AF2i:* "On the performance of Socially Responsible Investments", Paris, 11 October 2019 (S. Pouget)
- *College of Europe: "Carbon pricing: Responsibilities towards the future versus political acceptability", Bruges, 23 October 2019* (C. Gollier)
- *Conference Green Finance Research Advances,* Banque de France, 25 November 2019 (C. Gollier)
- *Conference "Finance verte : Quel sens donner à vos investissements ? »,* Rendez-vous de l'investissement – CA Indosuez Wealth France, 28 November 2019 (C. Gollier)
- Conference Banque de France: "Climate change: Economic and financial impact", Paris, 13 December 2019 (C. Gollier)
- *The Finance of Climate Change Conference:* "Do institutional investors vote to curb climate change? An empirical analysis of shareholder meetings ", Paris, 16 December 2019 (S. Pouget)

- "La finance verte : utopie ou réalité", C. Casamatta and P. Crifo, in *l'Année des Professions Financières : Quelle finance en 2030?*, directed by le Centre des Professions financières, 2019
- Crifo P., Le défi de la mesure d'impact. Conférence Finance Durable de la Region Ile de France, July 2019.

4) Awards and memberships in 2019

- The book by Christian Gollier: « le climat après la fin du mois » received several awards :

- Prix du meilleur livre d'économie, BFM-Montpensier,
- Prix Marcel Boiteux 2019,
- Prix Turgot 2020.

Click on the following links to see media coverage of the book:
TV : BFM – 4 juillet 2019, BFM – 28 juin 2019
Radio : BFM – 4 juillet 2019
Newspapers: Le Point – 11 mai 2019, Le Monde – 24 mai 2019, Le Monde – 4 juin 2019, Slate – 5 juin 2019, Le Figaro – 13 juin 2019, L'Opinion – 20 juin 2019, Le Point – 20 juin 2019, L'Express – 29 juin 2019, L'Express – 17 juillet 2019, Le Télégramme – 31 juillet 2019, Nouvel Obs – 16 aout 2019, Le Monde – 27 septembre 2019
Le Monde – 29 novembre 2019, AFP – 3 décembre 2019
Ouest-France – 4 décembre 2019, Le Figaro – 6 décembre 2019, La Croix – 17 décembre 2019
Video: Youtube – 23 mai 2019

- Simone Sepe received the Best Paper Award in Corporate Finance/Financial Institutions at the FMA European Annual Meeting 2019 for his paper "Stakeholder Orientation and Firm Value."

- Patricia Crifo is a member of the committee of the **Greenfin label**, appointed by the French Ministry of Ecological Transition, and member of the **Prudential Supervision and Resolution Authority (ACPR)'s Climate and Sustainable Finance Commission**, since october 2019

5) Highlights

- Catherine Casamatta will chair the jury of the 15th edition of the European FIR-PRI Awards *Finance and Sustainability.*
- Researchers of the FDIR Chair participate to events organized by the AFG to promote French initiatives for the asset management industry and present the chair: S. Rossetto (French embassy in Luxembourg, 22 January 2019), and Edouard Challe (French embassy in Madrid, 12 March 2019).

Education and training related to the Chaire FDIR

The Chaire 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, six PhD students are currently working on issues related to the Chaire FDIR.

1) Courses

- Lecture serie in economics and finance, Cours ECO611 Ecole Polytechnique, PA SEF, MScT SCUP& EDACF (20h)
- Stratégies Développement Durable des Entreprises - Master2 Economie du Dév Durable, de l'environnement et de l'energie, AgroParistech, Univ Paris Nanterre & Ecole Polytechnique (20h)
- Responsabilité Sociale et Environnementale - Master2 DDET, Univ Paris Nanterre (20h)
- Gestion et transfert des risques, Master2 BMM & GDA, Université Paris Nanterre (41h)
- La responsabilité sociale des entreprises, mastère ALISEE, AgroParisTech (3h)
- Valorisation de la performance extra-financière des entreprises, spécialité économie et gestion d'entreprises, 3ème année du cursus ingénieur d'AgroParisTech (M2) (3h)
- Sustainable performance, ESSEC (20h)
- Master in Finance, TSE and TSM: Asset Management and trading (24h)
- Master in Finance, TSE and TSM: Psychology of finance (24h)
- Master in Economics, TSE: Economics of risk and insurance: taking into account the long-term impacts of investments (27h)
- Master in Economics, TSE: benefit-cost analysis (30 h)
- Master in Economics, Université Paris-Saclay: Macro-finance (24h)
- Master in Economics, TSE: Topics in Law and Economics (including corporate governance) (30h)
- Master in International and European Law, University of Toulouse Capitole: Economic Analysis of Law (including corporate governance) (15h)
- Master in International and European Law, University of Toulouse Capitole: Intellectual property and the theory of the firm (including corporate governance) (15h)

- Master in International Economic Law, University of Toulouse Capitole: International finance law (10h)
- Msc in Finance, TSM, Corporate governance and ownership structure (5h)

2) PhD Students

PhD students of the Chaire FDIR in 2018-2019 included:

- Aurélien Bigo: “Transport and energy transition scenarios”, Ecole Polytechnique, co-supervision with, Contract CIFRE SNCF-Ecole Polytechnique, Started in 2017 (advisors: P. Crifo and G. Meunier)
- Vincent Bouchet: Integration of climate issues into financial risk management, started in 2018 (advisors: P. Crifo and N. Mottis)
- Aymeric Guidoux: CSR and governance, Ecole Polytechnique, defended in December 2018 (advisor: Patricia Crifo)
- Hung-Thuy Nguyen, SRI in developing countries, Toulouse School of Economics, started in September 2017 (advisor: Ingela Alger)
- Angel Prieto: Management of Decarbonation, Ecole Polytechnique, started in 2019 (advisors: P. Crifo and N. Mottis)
- Yixin Wang: Ownership structure in China, started in September 2018 (advisor: S. Rossetto)
- Yuting Yang: Public economics and the environment., started in 2015 (advisor: N. Treich)