Chaire Finance Durable
et Investissement Responsable

Report for the year 2017

ASSOCIATION
FD&IR

ÉCOLE POLYTECHNIQUE

The research projects of the Chaire FDIR are run by the IDEI-Toulouse School of Economics and the Economics department at Ecole Polytechnique. At the initiative of the AFG, the Chaire FDIR is made possible for 2017 thanks to the financial support of the following 10 members:

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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.

Table of contents

Agenda for the meeting of the

Scientific Committee of the Chaire FDIR

6 March 2018

1. Approbation of the 2017 annual report

2. Research achievements and projects

3. Miscellaneous

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Ordre du jour de la réunion

Du Comité Scientifique de la Chaire FDIR

6 mars 2018

1. Approbation du rapport annuel 2017

2. Réalisations et programme de recherche

3. Divers

Research team

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Thomas André, Schneider Electric & Ecole Polytechnique
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Main research achievements

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-IDEI 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-IDEI and Patricia Crifo from Ecole Polytechnique, Chaire FDIR has been running for eleven 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-IDEI and Ecole Polytechnique -> **10+** partners: ABN Amro Investment Solutions, Association Française de la Gestion Financière (AFG), Allianz Global Investors France, Amundi AM, Caisse des dépôts, Candriam France, Edmond de Rothschild AM, Fonds de Réserve pour les Retraites, Groupama AM, HSBC Global AM (France), La Banque Postale 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 -> **25+** academic workshops with partners -> **10+** bilateral scientific meetings with partners -> **100+** scientific studies published -> **100+** presentations in scientific conferences -> **4** books on responsible finance -> **7** 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 -> **2** Best Young Economist nominations for Patricia Crifo and Edouard Challe -> **1** nomination as Chevalier de l'Ordre National du Mérite for Patricia Crifo -> **1** nomination as Chevalier de l'Ordre des Palmes Académiques for S. Pouget -> **1** Best Paper award for Sébastien Pouget from EIF -> **3** Cahiers de l'Institut Louis Bachelier dedicated to the Chaire FDIR

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 2016-2018, the general assembly meeting of the Association FDIR, the researchers of the Chaire FDIR, in conjunction with the sponsors, have defined five high-priority research projects that pertain the three main topics of the Chaire FDIR. The achievements on these five high-priority projects for the year 2017 are detailed below.

A) The five high priority research projects' achievements

The following section presents the main results and state of development of the five high priority projects defined for the period 2016-2018. Some projects are at a more advanced stage of completion than others:

- Project 1 ("how governance affects firm value") was well advanced in 2016 and has been further enriched in 2017: papers have been published in 2017, and new projects have been developed. The main insights have been regularly presented at conferences and workshops with sponsors.
- Project 2 ("Institutional Investors as Active Owner") is maturing: data have been collected, and first results have been obtained. The project has been presented at seminars and at workshops with sponsors.
- Project 3 ("ESG factors and the performance of small and mid cap companies") is well advanced. First results have been obtained. The project has been presented at seminars and at workshops with sponsors.
- Project 4 ("The measurement of ESG performance and risk: qualitative ratings or quantitative metrics?") is well advanced: working papers are available, some have been published, and several results have been presented at workshops. Further empirical analyses are still to be carried out in the future.
- Project 5 ("Sovereign credit ratings and interest rates") is maturing: working papers are available, some results have already been presented, but additional studies are still to be carried out.

Each project's presentation mentions what future research will be carried out, and includes a brief summary of the project's state of achievement. A Main Research Projects' Scorecard summarizes the information page 26.

1. *How governance affects firm value – Coordinated by Simone Sepe (IDEI-TSE)*

Objective

Over the past 20 years, empirical studies have gained tremendous importance in corporate governance discussions. These studies have largely supported the view that governance arrangements protecting directors and managers from removal increase the room for moral hazard by insulating insiders from beneficial disciplinary forces, reducing shareholder and firm value. On this view, "good" (i.e., value-increasing) corporate governance is largely understood today as being about stronger shareholder rights. Instead, managerial protection from shareholder removal, commonly referred to as "entrenchment", epitomizes "bad" (i.e., value-decreasing) corporate governance. The objective of the project is to gather new empirical evidence on what matters in corporate governance. In particular the project aims at understanding whether corporate governance measures traditionally identified as protective, therefore inducing managers and directors' entrenchment, have a detrimental effect on firm value.

Methodology

For this project, a unique dataset that covers thirty years of corporate governance in the US, from 1978 to 2008, has been gathered. These data enable to distinguish between two types of corporate governance arrangements, which were previously uniquely identified as protective arrangements, and therefore considered as bad governance mechanisms.

Precisely, our new data separate those protective arrangements that require the agreement of shareholders (i.e., "bilateral protection arrangements") from the protective arrangements that *do not* require shareholder approval (i.e., "unilateral protection arrangements"). The first category covers staggered (or classified) boards and supermajority requirements. The second category covers for instance poison pills and golden parachutes. The project investigates whether bilateral or unilateral arrangements have an impact on firm value.

The logic underlying these tests is that unilateral protection arrangements are indicative of bad governance because their "dictatorial" nature makes it more likely that moral hazard motivates their adoption, to the detriment of shareholders. Bilateral protection arrangements instead can be consistent with best governance practices because it may be in the shareholders' interest to limit their own rights, if doing so involves a beneficial bilateral commitment by boards and shareholders to corporate stability and longer-term investment strategies.

Results in 2016

The first set of research investigates the long-term association of firm value with changes in board structure (namely, the decision to adopt or remove classified boards). The analysis finds no evidence that classified boards have a strong or persistently negative association with firm value. Rather, in more innovative firms, or in firms in which stakeholder investments are more relevant (e.g., with a large customer or in a strategic alliance), adopting (removing) a classified board is associated with an increase (decrease) in long-term firm value. For example, the adoption (removal) of a classified board is associated with an increase (decrease) in firm value, as proxied by Tobin's Q, of 5.3% for firms with a large customer, and has an insignificant association for firms without a large customer. Further, the results are driven by the second half of our time period (i.e., the 1996-2015 sub-period) and generally insignificant in the first half (i.e., the 1978-1995 sub-period). Overall, these results suggest that classified boards have heterogeneous effects across firms and time, providing no support for the entrenchment view but also making it difficult to draw any one-size-fits-all inference about the relation between classified boards and firm value.

The analysis has then been extended to study a larger set of protective corporate governance arrangements (that is, arrangements that can be seen as protecting directors from being dismissed). The objective is to assess whether protective arrangements always decrease firm value, even if they are bilateral (i.e. if they have been adopted with the approval of shareholders). To do so, we divide the standard Corporate Governance "Entrenchment" Index (the so-called E-Index) into two separate sub-indices: a commitment index (or, more briefly, C-Index), that only includes the E-Index's bilateral provisions, and an incumbent index (or, I-Index), that only includes the E-Index's unilateral provisions. The main result is that increased scores on the C-Index (i.e., more commitment) are associated with increases in firm value, while increased scores on the I-Index (i.e., more incumbent-driven entrenchment) are associated with decreases in firm value.

New results in 2017

Motivated by the novel empirical evidence on the *correlation* between firm value and classified boards, a new analysis has been carried out to try and identify whether a change in board structure has an *impact* on firm value. To do so, it exploits a Harvard Corporate Governance Program (The Shareholder Rights Project, hereafter SRP) that took place during the 2012-2014 proxy seasons, as a quasi-natural experiment to empirically test the impact of the decision to declassify boards. Indeed, the SRP claims to have directly "contributed to bringing about a major reduction in the number of board classification among S&P 500 companies" (SRP's 2012-2013 Report, page 1). Accordingly, our major identification assumption is that some substantial proportion of the firms targeted by the SRP would not have declassified in this time period if they had not been targeted by the SRP, so that the SRP plausibly had a direct, causal impact on board declassifications at many large companies. Our additional identification assumption is that the market could not have fully anticipated the substantial impact the SRP would have on board declassifications before the SRP made its declassification activity publicly known, i.e., before 2012. Under these assumptions, the SRP's declassification advocacy provides a plausible source of exogenous variation in the board structure of a significant proportion of the largest U.S. publicly traded corporations with a classified board in 2011.

We first use Logit model regressions to investigate the likelihood that an S&P 1500 company with a classified board in 2011 might subsequently become an SRP target. We find that companies with higher values*,* higher profitability and larger size were more likely to be targeted by the SRP. If we consider declassifications themselves rather than just the likelihood of being targeted by the SRP, we find that SRP targets that eventually declassified had one significant difference with non-SRP declassifying companies, namely that the declassifying SRP targets had higher ex-ante firm value (i.e., higher Tobin's Q in 2011). Such difference between SRP targets that declassified and non-SRP declassifying companies is consistent with the SRP causing board declassifications that otherwise would have likely not occurred.

Next, we exploit the exogenous variation generated by the SRP and examine the value implications of classified boards, considering both changes in Tobin's *Q* (our proxy for firm value) and stock returns.

Our *Q* results are as follows. First, we find that after declassifying their boards, **SRP targets experienced a decline in value relative to other firms in our full sample.** For example, using the full sample, we find that the *Q* of the SRP targets declines on average by 11% after declassification, which corresponds to 5.9% of the average ex-ante *Q* in the sample of firms targeted by the SRP. Second, we focus on the companies that declassified their boards during the SRP's years of activity, i.e., 2012–2014. **For this sample of firms, we find that firm value generally declined after board declassification, but that this reduction in value is only statistically significant for SRP targets.** Third, **we document that the reduction in value in declassifying SRP targets is greater in firms with more R&D investments, consistent with the hypothesis that classified boards matter more in the presence of more long-term investments in innovation.**

Lastly, we find that the equal-weighted long-short portfolio that buys stocks of firms that declassify after being targeted by the SRP and sells stocks of firms that declassify without being targeted by the SRP has a negative and significant alpha of -5.53% per year, which is consistent with the idea that exogenously declassifying boards has a negative impact on firm value.

Implications

The results found in this project bear major implications for the debate on both the means and ends of corporate governance. **Our results imply that pursuing firm value maximization requires enhanced board protection in the short term without eliminating exposure to shareholder discipline in the longer term.** Increased protection from removal is necessary at the beginning of a director's tenure, when directors are more likely to have competitive private information that the market lacks on the actions that contribute to longer-term value. Protection then efficiently enables directors to take actions that can lead to low short term earnings, without the fear of dismissal. Conversely, over time, as a director's tenure matures and market prices are more likely to catch up with directors' informational advantage, shareholders become better positioned to discipline directorial and managerial actions. **This also implies that corporate governance is not a one-size-fits-all model: some corporate governance arrangements can be desirable at some stages of firms' development, while turning counterproductive at other stages. As a consequence, corporate governance practices should not be adopted blindly by shareholders, and should not, in general, be too strictly defined or regulated.** These results directly speak to the debate on what defines good governance practices.

Project's state of achievement: the project has given rise to four publications, in the Northwestern University Law Review (2016), Minnesota Law Review (2017), Texas Law review (2017) and Journal of Financial Economics (2017) and many communications at academic and general audience conferences.

2. *Institutional Investors as Active Owner – Coordinated by Sébastien Pouget (IDEI-TSE)*

This project studies whether and why institutional investors engage companies to reduce negative externalities they exert on society. Externalities constitute a major source of market failure since market equilibria only reflect private effects that are perceived by the parties involved in the activity, but not overall societal effects. To study institutional investors' engagement to reduce companies' negative externalities, we focus on votes at shareholder meetings on resolutions related to both environmental and social issues. Such a focus is useful because it provides us with a large amount on one type of engagement, shareholder voting, on clearly identified externality issues. To be even more precise in terms of identification, we also restrict our attention on greenhouse gas emissions, a clear example of externality produced by companies.

Two basic arguments warrant institutional investors to be active in engagement related to externality issues. The first argument rests on the universal owner logic (see, e.g., Monks and Minow, 1995, Hawley and Williams, 2000, Dimson, Kreutzer, Lake, Sjo, and Starks, 2013, and Azar, 2017). Large institutional investors own shares in virtually all listed companies and have a long horizon. As universal owners, they might engage firms to mitigate the negative externalities imposed on other firms held in their portfolios, to avoid deteriorating their overall value. For example, they may want to consider the negative economic impact that the GHG emissions of a firm might have on other companies' businesses through water, food, health or migration issues.

A second argument that calls for institutional investors to be active in engagement on externality issues is related to the delegated philanthropy logic (Benabou and Tirole, 2010). Institutional investors such as pension funds, mutual funds and sovereign funds invest on behalf of clients or citizens who may have preferences regarding externalities that differ from the ones of companies' managers. Institutional investors might thus want to promote these clients' and citizens' values and preferences and induce management to choose the appropriate course of action. One can for example think that the level of global risk induced by a firm related to climate change or nuclear energy might not be valued in the same manner by corporate managers and by institutional investors who represent clients or citizens.

To understand what motivation may induce investors to care about exteralities generated by companies, we propose a case study that compares the Norway Fund and BlackRock, two emblematic institutional investors. These two investors have assets under management of more than $1 trillion and $5 trillion, respectively, in 2017. The two investors have a large, global and well-diversified equity portfolio. In this sense, both investors are universal owners (see, e.g., Monks and Minow, 1995). The Norway Fund has also a delegated philanthropic mission (see, e.g., Benabou and Tirole, 2010) as it is monitored by the parliament of Norway and a Council on Ethics. Given their size, the two investors are likely to have a significant influence on corporate behavior across the world.

Methodology

We gathered data that cover the year 2014 and include BlackRock and the Norway Fund votes at 35,382 resolutions for 2,796 firms across the world. Our data also include managers' recommendations as well as various financial and extra-financial characteristics of firms. We classified resolutions into several categories according to the sponsor (management versus shareholders) and the topic (financial, governance, social and environmental issues). We consider resolutions on environmental and social issues as dealing with externality issues. In robustness analyses, we specifically look at climate change resolutions as they are clearly related to externality issues. Our variable of interest is the opposition of investors to management on externality resolutions. These resolutions are for the most part filled by shareholders and opposed by managers.

Results

We find that both BlackRock and the Norway Fund oppose management more for environmental and social resolutions than for financial resolutions. This result suggests that universal ownership does induce institutional investors to engage corporations on externality issues. However, only the Norway Fund is favoring shareholder resolutions on externalities, despite management opposition, more strongly than shareholder resolutions on governance. Our results hold with and without country fixed effects. Investors' holdings in firms seem not to affect their voting policy. Our results are even stronger when we focus on environmental externalities related to climate change. Overall, our findings suggest that both universal ownership and delegated philanthropy provide incentives for institutional investors to fight against negative externalities generated by firms. Delegated philanthropy though appears as a stronger motivation.

Implications

Our first results suggest that corporations that have an influence on the future of the planet are not likely to be disciplined by institutional investors, just because these investors hold well-diversified portfolios. Instead, **our findings suggest that institutional investors' corporate engagement policy should reflect the values of their clients or beneficiaries**. It thus appears important for institutional investors to know what are the main externality issues their clients or beneficiaries would like to see taken care of by firms in which they invest. In this respect, **pass-through voting, whereby institutional investors collect votes from their clients and beneficiaries and transmit these votes to general assembly meetings, might be useful.** Regulators could also request institutional investors to display more clearly their voting policy in their prospectus to indicate to clients the type of externalities they are going to deal with, if any.

Project's state of achievement: The project is in the empirical analysis phase. A first draft has been written, and a working paper will be available in 2018. The first results have been presented at internal seminars and at workshops with the sponsors.

3. *ESG factors and the performance of small and mid cap companies – Coordinated by Sébastien Pouget (IDEI-TSE)*

Objective

This project proposes an empirical investigation of small and mid cap companies' strategic behavior regarding Environmental, Social and Governance (ESG) factors, and aims at testing how it is associated with their risk-return profile on the stock market as well as their economic performance.

There are several reasons to believe that small and mid cap companies are different from large publicly traded companies in terms of business strategies, in particular regarding ESG factors. First, small and mid cap companies are more likely than larger firms to be owned and/or operated by their founder or by the founder's family members (Adams, Almeida, and Ferreira, 2005, and Fahlenbrach, 2009). This provides them with a long-term view and in turn a commitment power that can have valuable business consequences. For example, commitment power of executives and shareholders might enable small and mid cap companies to implement innovative human resources strategies, i.e. providing insurance to their employees in case of downturns or failures in order to increase their level of implication or creativity (Sraer and Thesmar, 2007). Also, a long-term horizon might enable the firm to develop innovative environmental strategies that necessitate efforts in the short run but are beneficial in the long run (Benabou and Tirole, 2010).

Second, even small and mid cap companies that are not owned and managed by founders or their families could enjoy a high level of economic performance: the relative illiquidity of small and mid cap equity markets provides stronger incentives for shareholders to monitor and engage with management (Maug, 1998).

Methodology

We focus on French small-mid cap companies for which we have a unique sample regarding the global performance of firms, including economic, financial and non-financial performances. Data come from various sources. Firms' ESG performance is obtained thanks to Ethifinance, a Paris-based company that builds and maintains a database recording important variables regarding firms' strategies on ESG factors. We use Ethifinance database from 2009 to 2013 that includes 241 French firms. Nearly 74% of these firms are listed on the CAC Mid & Small Index.

We observe that family firms are very prevalent in small-mid cap companies. Following Sraer and Thesmar (2007), we define as family firms the firms in which the founder or a member of his or her family by either blood or marriage own more than 20% of the equity. Family firms constitute over 64% of the database, that is, 163 family firms. Within these firms, families own on average 52% of the outstanding equity. Moreover, family involvement in the management of their firms is widespread: 53% of the firms in the database have a founder or a member of his or her family as CEO. Overall, family firms and non-family firms differ significantly in size, age, ownership, accounting performance, market valuation, risk taking, extra-financial performance and industry affiliation. Family firms appear to have higher accounting performance, lower market valuation and lower risk than non-family firms.

Results

We first explore the effect of ownership structure on firms' accounting performance, market valuation and risk taking. We find that family ownership is positively and significantly associated with accounting performance and market valuation. Moreover, we find that employee ownership fosters family firms' accounting performance. These findings are in line with previous studies, see, e.g., Anderson and Reeb (2003), Villalonga and Amit (2006), Sraer and Thesmar (2007). In addition, we find that family and employee ownership are negatively associated with firm's risk, as measured by the volatility of stock returns. Our results are in line with the long-term commitment policy and show that employee shareholders foster higher accounting performance and lower stock market volatility for family firms. Nevertheless, it seems that employee ownership has no effect on the stock market value of family firms and non-family firms. Regarding family's involvement in management, our results are in line with previous studies. We find that founder-CEO firms have higher accounting performance and lower risk than non-family firms. However, it seems that the stock market value of firms managed by a descendant is lower than non-family firms and family firms managed by a professional, despite delivering a higher accounting performance and a lower stock market volatility.

We next examine the effect of ownership structure on firms' CSR performance. Our results show that employee and family ownership and control enhance the firm's CSR performance. In particular, we find that founder-CEOs are positively and significantly associated with greater CSR performance than non-family firms. Moreover, employee shareholders enhance firms' CSR performance and their effect is greater in family firms. Our results show that founder-CEOs of small&mid caps family firms have higher CSR performance in several dimensions (Social, Environment and Stakeholders) than those of large family firms.

Implications

Our results have several implications for responsible investment fund managers. First, our analysis broadly supports the idea that family firms and firms with higher stock ownership are able to implement a long-term strategy, that reduces risk, and enhances accounting profit and CSR performance. Interestingly, our results also show that the market does not incorporate all of these aspects. In particular, the positive impact of employees' stock-ownership and the presence of a descendant as a CEO do not seem to be reflected in firms' stock price.

Project's state of achievement: The empirical analysis is near completion. A first draft has been written, and a working paper will be available in 2018. The first results have been presented at seminars and workshops with the sponsors.

4. *The measurement of ESG performance and risk: qualitative ratings or quantitative metrics? – Coordinated by Patricia Crifo (Ecole Polytechnique)*

Objective

This project proposes to examine how different combinations of Corporate Social Responsibility (CSR) dimensions affect corporate economic performance with data on CSR performance, that is based on quantitative metrics of CSR-related management practices rather than qualitative extra-financial evaluation through scores or ratings. As emphasized by Chatterji et al. (2009), extra-financial ratings are rarely evaluated and have been criticized for their own lack of transparency.

Methodology

To measure CSR-related practices, this project uses variables extracted from two French statistical surveys consisting in large scale databases including more than 10,000 small and mid caps (firms with more than 10 and 500 employees) in 2006 and 2011.

The first database relies on the 2006 Organizational Changes and Computerization survey administered by the National Institute for Statistics and Economic Studies (INSEE), the Ministry of Labor, and the Center for Labor Studies. The sample extracted from this survey includes 10,293 firms.

The second database relies on the 2011 Sustainable Development survey (Enquête sur le Développement Durable et la responsabilité sociétale des entreprises), administered by the National Institute for Statistics and Economic Studies and the Ministry of Ecology, Sustainable

Development and Energy. This survey gives very detailed information on CSR implementation and intensity, as well as firm motivation for CSR commitment, for a representative sample of business units with at least 10 employees, including all the business groups with more than 500 employees. The sample extracted from this survey includes 8,775 firms.

Results in 2016

Three different types of results have been obtained. The first set of results show that responsible environmental, human resources, and customers & suppliers practices affect positively and significantly profitability when they are implemented both in isolation and as part of a coherent management devices bundle. Yet, the customer & supplier dimension exerts a weaker effect compared to the other two dimensions. Moreover, to improve business performance via CSR investments firms need to implement a particular "mix" of CSR practices. In other words, some ESG combinations are better for profitability than others. In the French case, combining responsible green and customer & supplier strategies improve firm performance more than combining responsible social and customer & supplier strategies.

The second set of results show that CSR disclosure in French businesses does not seem to be associated with stronger greenwashing in the sense that CSR practices are associated with CSR awareness. Moreover, whereas a defensive CSR strategy is associated with low CSR awareness on all ESG issues; pro-social CSR is associated with environmental management through soft practices; and strategic CSR is associated with the three ESG pillars through hard practices (labels and monitoring tools).

The third set of results show that, apart from the size effect of CSR, for small and medium sized enterprises, CSR practices seem more widespread in the agri-food industry, intermediate goods, and energy; and in companies that focus their strategy on quality and differentiation, business networks, outsourcing and internationalization. Moreover, whatever the measure of economic performance retained (profit per head, gross operating surplus, or added value per head) and the CSR dimension (environmental, ethical, human resources, client relationships, and supplier relationships), an average performance gap of 13% is observed to the benefit of responsible businesses, ranging from 5% for the customer relationships to 20% for the human resources dimension.

New projects and results in 2017

Two news project announced in 2016 have been launched in 2017 focusing on the question of impact of responsible investing on the one hand, and on the relationship between responsible governance practices and corporate executives on the other hand.

Regarding the first project on the impact of SRI, the objective is to provide a review of existing impact indicators and to identify those that are implemented and/or with a material impact, through an in-depth study of the literature and empirical approaches implemented by companies. This implies examining various relevant initatives (eg sustainable development goals, Delphi project etc.) and conducting a field questionnaire.

The second project is on the relationship between responsible governance practices and corporate executives. Two articles have been published on corporate governance and accountability, and on Voluntary versus Legislative Approaches in this field. Another working paper proposes an analysis of the relationship between CSR and two main components of companies' governance structure: boards of directors and investor relations officers. We propose an original empirical strategy based on the 120 biggest French capitalizations for the year 2013, showing that corporate governance has an ambiguous impact on corporate sustainability because of opposing forces: CSR performance appears positively related to internal forces (inside directors) but negatively related to external forces (general expert directors and investor activist engagement). **The implications of this study demonstrate the need to carry out efforts to train Boards of directors (specifically inside directors) and investor relations officers to respond to corporate sustainability and to take more of a leadership role in this area.**

Project's state of achievement: So far, the project has given rise to several presentations in various academic and policy seminars and conferences, as well as three publications in 2016 and three publications in 2017. A working paper has been submitted for publication and is currently under revision and another work is still in progress.

5. *Sovereign credit ratings and interest rates – Coordinated by Patricia Crifo & Edouard Challe (Ecole Polytechnique)*

This research priority effectively covers two specific projects:

- Measuring the effect of government ESG performance on sovereign borrowing cost
- Country governance and debt

<u>Measuring the effect of government ESG performance on sovereign borrowing cost</u>

Objective

There is a growing literature supporting the view that a country's environmental, social and governance performance could have a material impact on its ability to repay sovereign debt (and therefore yield spreads) focusing on the determinants of market perceptions of default risk. An influential paper by Reinhart, Rogoff, and Savastano (2003) examines the Institutional Investor ratings, from a panel of economists and sovereign risk analysts who rate countries according to their perception of a risk of default; according to the authors, two factors explain 75% of the cross-country variance of the rating: the debt-to-GNP ratio, and the history of bad policies (hyperinflation, previous episodes of default or restructurings). The authors argue that the fact that institutions and history matters in determining crises is a proof of their theory of "debt intolerance" i.e. the idea that some countries have a structural tendency to default, independently of other economic or financial factors.
In turn, a country's ESG risk would help documenting such a "structural tendency to default".

As such, a country's access to and management of its natural resources, or a government's ability to implement economic policies to generate sufficient revenues to service its debt in fact impacts the country's overall risk profile, thereby affecting its ability to repay sovereign debt both in the short and in the long run.

If governance (political) factors have received a considerable attention in the literature, environmental and social factors have been less scrutinized, partly because of lack of comparable data.

The main question raised (and hypothesis tested) in this project hence is the following : how can we quantifyi the relative impact of environmental and social factors, in addition to governance (political) factors in estimating the pricing of sovereign risks?

Methodology

To answer this question, we propose an econometrics strategy based on an instrumental variables panel regression model using a data set including observations of 23 OECD countries from 2007 to 2012 built from four sources:

- the Vigeo Sustainability Country Rating database, providing information on ESG qualitative performance;
- the Thomson-Reuters Datastream database, providing the yield on sovereign bonds as well as S&P ratings;
- the World Bank database providing information on macroeconomic variables (GDP, inflation debt, imports, reserves and trade openness), and ESG quantitative variables (Electricity, CO2, Forest rents, Social, Health and R&D expenditures, Human Development Index, Regulatory quality, Rule of law, Government effectiveness, Political stability, Voice and accountability, and Corruption control)
- the ISO database giving the number of ISO 14001 certified firms in each of our 23 countries.

Results in 2016

Our results show a negative correlation between the countries' socially responsible performance and the sovereign borrowing cost (defined by the government bonds spread). It seems therefore that countries displaying higher ESG indicators are rewarded by lower sovereign borrowing costs. The results suggest that ESG ratings could play a role in assessing country risk and its location and distribution in the financial system. By facilitating investment decisions, ESG assessments can help investors in achieving a balance in the risk return profile and at the same time assist countries in accessing capital at a low cost (Kohut and Beeching, 2013; Drut, 2010; Connolly, 2007). Moreover, the effect of ESG ratings on sovereign borrowing cost is about however three times weaker (in absolute value) than the effect of financial ratings on sovereign borrowing cost. This suggests that investors may use extra-financial ratings as a supplement to financial ratings.

New results in 2017

To go deeper into the analysis of country ESG performance and borrowing costs, a second project has been developed to identify the quantitative criteria to be incorporated in ESG performance, not only the qualitative (ratings) ones. If the literature remains limited on this topics, it seems that the lack of reliable data on ESG criteria and the absence of a clear methodology to assess the performance of countries in terms of environmental, social and governance issues may be behind this gap.

The goal of this research is to address the data and methods issue by constructing a database on indicators of environmental, social and governance concerns for 20 OECD countries, and introducing a novel methodology for aggregating these indicators into four indexes, namely environmental quality index, social development index, and governance quality index, as well as a composite index: the ESG global index.

Our results illustrate the complexity and variability of the economic relationship between country ESG performance and sovereign risk. We find that this ESG performance is significantly and negatively related to sovereign bond spreads. Hence, **macroeconomic and ESG factors appear to be priced by sovereign bond markets, with good ESG practices being associated with less default risk and thus lower bond spreads.** Our results suggest that it is important to take ESG performance into consideration when designing strategic asset allocation across countries. When considering the differentiated impact of the various ESG dimensions, **we also provide evidence that governance has a stronger financial impact than social performance has, and that environmental performance appears to have no impact.** Furthermore, the relationship between sovereign risk and a country's ESG performance is more significant and stronger in the euro area countries compared to the other advanced countries. Finally, our results reveal a stronger influence of ESG performance during the global financial crisis. This may be related to the fact that during crisis period, the increased importance of uncertainty and of variables reflecting investment confidence conditions and perceptions for the upcoming economic activity may play a more important role in explaining the rise in spreads.

Project's state of achievement: So far, the project has given rise to two articles presented in various academic and policy seminars and conferences, one article has led to a publication in the Quarterly Review of Economics and Finance in 2017 and the other one has been submitted for publication and is currently under review.

<u>Country governance and debt</u>

Objective

The second project on sovereign credit ratings and interest rates is that pursued on the topic of country governance and debt. This line of work examines empirically and theoretically the links between the amount of external debt (both public or private) of a country and the quality of its governance, that is, its "institutions" (broadly defined, following Douglas North, as "the set of rules and constraints that shape economic behavior and incentives"). This question is empirically investigated in a specific context, namely that of the run up to, and then accession of, southern European countries into the EMU. It is then generalized to a broader set of countries.

Methodology

The project contains both an empirical and a theoretical part. Empirically, the quality of governance is measured by means of the World Governance Indicators, which summarise in a handful of indexes ("Control of Curruption", "Rule of Law", "Political Stability"…) the various relevant dimensions of country governance (those indexes are constructed by aggregating the information contained in hundreds of time series on governance quality).

Results in 2016

The project established that country governance had significantly declined in southern Europe (Spain, Portugal, Italy and Greece) over the decade going from the mid-1990s to the mid-2000s. This phenomenon is specific to those countries, occurs nowhere else among developed economies, and happens well before the Great Recession of 2008-2009. It then shows that, both within Europe and within a broad set of countries worldwide, the decline in institutional quality is systematically preceeded by protracted capital inflows (in southern Europe, these inflows followed the run up to the euro, which allowed countries to borrow much more easily and at much cheaper rates). The project then developped a theoretical model aimed to explain this stylized fact. More specifically, it showed that inflows of cheap capital naturally cause governance to deteriorate when two plausible market frictions interact: credit constraints and a "soft budget constraint" syndrome wherebe socially inefficient projects may nevertheless be refinanced du to the inability of the government to commit not to. Low interest rates and easy external financing then lower the social cost of refinancing good projects and hence the need to maintain good institutions.

New results in 2017

The project significantly developed over the year 2017, in response to the feedback received from various experts. First, the empirical focus is now much broader than before: while southern Europe is still taken as a quasi-natural experiment (in which the rise in foreign debt can arguably be taken as exogenous to country institutions), much of the analysis now pertains to the full sample (namely 95 countries), for which **it establishes a systematic connection between capital inflows and institutional declines.** In particular, more care is taken about controlling for reverse causality, endogeneity, and nonlinearities. The theoretical model has also undergone significant evolutions: it has been streamlined in some dimensions, and enhanced in others (e.g., by considering a continuum of project types, rather than binary project types).

Project's state of achievement: The project has been presented at various academic and

policy seminars and conferences. It has given rise to a new working paper in 2017, which has recently been submitted for publication in *the Journal of International Economics*.

B) Other research projects' achievements

Researchers have carried out other projects related to the general topics of the Chaire. These projects have been presented at several workshops with sponsors and are detailed below.

1. Ethical asset pricing and the good society by Christian Gollier

Christian Gollier has written a new book on the role of asset pricing in promoting ethical and sustainable investment decisions, which summary and content are detailed below.

Financial markets played an evergrowing role in the allocation of capital in our economies, and therefore are a key element to shape our collective destiny. Should we trust them to aggregate our individual and collective aspirations into price signals such as interest rates and risk premia that govern the world? Financial economists have long pointed out the many sources of inefficiencies that surround most financial contracts and institutions, such as asymmetric information and moral hazard. The corollary of this observation is that we don't really know whether individual saving decisions, corporate investment choices and market-driven public policies are compatible with the common good. In particular, we don't really know whether we collectively invest enough for the future, or whether we take too much risk. In this book, we derive simple rules from transparent moral principles to evaluate saving and investment decisions. Escaping the mathematical technicalities that surround standard cost-benefit analysis and financial asset pricing theory, we describe the determinants of a system of values to evaluate private and public choices. We are particularly interested in the role of discounting for the valuation of long-dated assets and investments, in link with the debate on corporate short-termism and on climate change. We promote the idea that the rate at which one should discount risk-free long-term benefits should be small.

Chapter 1: Collective aspirations
This chapter presents some basic moral principles on which any action should be evaluated. The independence axiom, and the Rawlsian impartiality principle associated to the notion of the veil of ignorance are discussed.
Keywords: Expected utility, independence axiom, impartiality, social welfare function.

Chapter 2: Choice and measure of values
Because most individual and collective actions entail costs and benefits that are different in nature, their evaluation requires using a common unit to compare and to aggregate them. The cost-benefit analysis presented in this chapter is a method that determines whether an action raises more benefits than costs, in particular when they are not fairly distributed, with winners and losers.
Keywords: NIMBY, cost-benefit analysis, hedonic valuation, valuation, inequality.

Chapter 3: Do we do enough for the future?
What are our responsibility toward future generations? This question can be answered by determining the minimum risk-free rate of return at which one would be willing to act to improve that future. This is the risk-free discount rate. We show how the determination of the socially desirable level of the discount rate is linked to (intergenerational) inequality aversion, and to the concepts of prudence and of precautionary saving.
Kewords: discounting, inequality aversion, prudence, short-termism.

Chapter 4: Is this world too risky?
Risk aversion is a ubiquitous characteristic of human beings. It makes us reluctant to take risks that cannot be washed out by mutualization and diversification. In full coherence with the morale principles used earlier in this essay, we show that it is socially desirable to adjust the discount rate to the risk profile of each investment project by adding a risk premium. In this chapter, we quantify the risk premium in relation to the risk profile of each action or policy to be evaluated.
Keywords: Risk aversion, asset pricing, risk measurement.

2. Corporate Social Responsibility and Corporate Goverannce: The role of executive compensation programs by Patricia Crifo -Ecole Polytechnique & U. Nanterre,together with Sandra Cavaco – Univ. Paris 2 Pantheon Assas and Aymeric Guidoux – Ecole Polytechnique

Objective
Research on the CSR-firm performance relationship lacks reaching a clear consensus. Several papers tend to indicate that there is no direct relationship between CSR and firm performance (Surroca et al., 2010), and recent research considers that an important factor might have been neglected so far in the understanding of the relationship between CSR and performance, namely corporate governance factors (see e.g. Walls et al., 2012 Dam and Scholtens, 2013). Simply stated, corporate governance raises the fundamental questions of what interests the company should serve and how top executives are monitored and incentivized. In order to efficiently discipline CEOs, represent shareholders, and eventually represent other stakeholders, two main types of forces will matter for executive compensation: external forces, based on short term (objectives based on stock prices) ‘high powered’ financial incentives and internal forces based on long term (objectives based on strategic management) ‘low powered’ financial incentives.
A considerable literature has examined the importance, and problems, of short term financial incentives and bonuses as managerial disciplining devices. Regarding extra-financial (long term) incentives, the agency theory considers that they are a way for managers to misappropriate some of the firm’s surplus (entrenchment strategies), exemplifying agency costs and inefficiencies as any type of private benefifs (Hart, 2001, Cespa and Cestone, 2007). On the empirical side, a growing literature examines the relationship between executive compensation and CSR, with conflicting results (see eg Hong et al., 2016).
The goal of this project is to propose an empirical analysis of the relationship between executive compensation based on CSR-based bonuses and corporate financial and extra-

financial performance.

Methodology
To investigate the effect of CSR-based managerial bonuses on firm performance, we use the Vigeo database over the 1999-2015 period. Our overall sample contains 3500 companies, from 55 different countries. In this sample, 355 companies appear to have implemented such an executive compensation policy based on CSR targets since 1999.

Results
Preliminary results show that **there is negative correlation between such a CSR-based bonus policy and financial performance, and a positive correlation between this policy and all dimensions of sustainability performance but the environmental one.**

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Villalonga and Amit, 2006, How do family ownership, control and management affect firm value, Journal of Financial Economics 80, 385-417.
Walls, Berrone, and Phan, 2012, Corporate governance and environmental performance: Is there really a link? Strategic Management Journal 33(8), 885-913.

Main research projects' scorecard

Themes	Projects	Advancement
How governance affects firm value	- Commitment and entrenchment in corporate governance, *Martijn Cremers, Saura Masconale, and Simone Sepe* - Staggered Boards And Long-Term Firm Value, Revisited, *Martijn Cremers, Lubomir Litov, Simone Sepe* - CEO Pay Redux, *Martijn Cremers, Saura Masconale and Simone Sepe* - Board and Shareholder Power, *Simone Sepe*	4 working papers, 3 workshops and meetings with sponsors, international conferences, 4 publications
Institutional Investors as Active Owner	- BlackRock vs Norway Fund at Shareholder Meetings: Institutional Investors' Votes on Corporate Externalities: *Marie Brière, Sébastien Pouget and Loredana Ureche-Rangau*	1 draft, ongoing empirical analysis, internal seminars and meetings with sponsors
ESG factors and the performance of small and mid cap companies	- Family and employee ownership in small and mid caps: Impact on financial and extra-financial performance: *Jamil Jaballah and Sébastien Pouget*	1 draft, ongoing empirical analysis, 2 workshops, meetings with sponsors, presentations at conferences
The measurement of ESG performance and risk: qualitative ratings or quantitative metrics?	CSR related management practices and Firm Performance: An Empirical Analysis of the Quantity-Quality Trade-off on French Data: *Crifo, Diaye & Pekovic* RSE et compétitivité. Evaluation et approche stratégique. *Benhamou, Diaye & Crifo* Governance and form performance: the sustainability equation: *Roudaut* Boards, Investor relations and CSR: *Crifo, Escrig-Olmedo & Mottis*	3 working papers, 2 workshop with sponsors, 2 public workshops , presentations at international conferences, 3 publications, 2 public reports, 1 PhD 1 on-going empirical analysis
Sovereign credit ratings and interest rates	ESG performance and sovereign bond spreads: an empirical analysis of OECD countries: *Capelle-Blancard, Crifo, Diaye, Oueghlissi & Scholtens et Crifo, Diaye & Oueghlissi* Capital Inflows and Institutional Quality: Evidence and Theory *Edouard Challe, Jose I. Lopez and E. Mengus*	3 working papers, 2 workshops and meetings with sponsors, presentations at international conferences

Publications and working papers 2017

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

- Adler, Matthew and Nicolas Treich, 2017, Utilitarianism, prioritarianism and intergenerational equity: A simple cake eating model, *Mathematical Social Sciences* 87, p. 94-102.
- Brière, Marie, Sébastien Pouget and Loredana Ureche-Rangau, 2017, BlackRock vs Norway Fund at Shareholder Meetings: Institutional Investors' Votes on Corporate Externalities, *Working paper*.
- Capelle-Blancard, Gunther, Patricia Crifo, Marc-Arthur Diaye, Rim Oueghlissi and Bert Scholtens, 2017, Environmental, Social and Governance (ESG) performance and sovereign bond spreads: an empirical analysis of OECD countries. *Working paper*.
- Cavaco Sandra, Patricia Crifo, Antoine Réberioux, Gwenaël Roudaut, 2017, Independent directors: less informed but better selected than affiliated board members? *Journal of Corporate Finance*. 43, 106–121.
- Challe, Edouard, 2017, Uninsured unemployment risk and optimal monetary policy, *Working Paper*
- Challe, Edouard, Jose Ignacio Lopez and Eric Mengus, 2018, Capital inflows and institutional quality: Evidence and theory, *Working Paper*.
- Challe, Edouard and Edouard Chrétien, 2018, Market microstructure, information aggregation and equilibrium uniqueness in a global game, *European Economic Review*, 102, 2018, 82-99
- Challe, Edouard, Julien Matheron, Xavier Ragot and Juan Rubio-Ramirez (2017), Precautionary saving and aggregate demand, *Quantitative Economics*, 8(2), 2017, 435-478
- Cremers, Martijn, Lubomir Litov and Simone Sepe, 2017, Staggered Boards and Firm Value, Revisited, *Journal of Financial Economics* 126(2), p. 422-444.
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- Crifo, Patricia, 2017*. Organization & Environment*, special issue on Financial markets and the transition to a low-carbon economy. Co-editor with C. Louche, T. Busch and A. Marcus
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- Crifo, Patricia, Elena Escrig-Olmedo and Nicolas Mottis, 2017, Boards, Investor relations and CSR, *Working paper*.

- Dietz, Simon, Christian Gollier, and Louise Kessler, 2017, The climate beta, *Journal of Environmental Economics and Management*, *forthcoming.*
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- Gollier, Christian, 2017, Variance stochastic orders, *Working paper.*
- Gollier, Christian, 2017, A general theory of risk apportionment, *Working paper.*
- Gollier, Christian, and Olivier Mahul, 2017, Term structures of discount rates: An international perspective, *Working paper.*
- Gollier, Christian, and Richard Kihlstrom, 2017, Preference for an early resolution of uncertainty in the Kreps-Porteus model, *Working paper.*
- Jaballah, Jamil and Sébastien Pouget, Facteurs ESG et performance des petites et moyennes capitalisations, *Working paper*.
- Le Bris, David, Will Goetzmann, and Sébastien Pouget, 2017, The Present Value Relation Over Six Centuries: The Case of the Bazacle Company, *Journal of Financial Economics*, forthcoming.
- Le Bris, David, Will Goetzmann, and Sébastien Pouget, 2017, The development of corporate governance in Toulouse: From 1372 to 1946, *Working paper*.
- Pouget, Sébastien, Julien Sauvagnat, and Stéphane Villeneuve, 2017, A Mind is a Terrible Thing to Change: Confirmatory Bias in Financial Markets, *Review of Financial Studies* 30, p. 2066-2109.
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- Roudaut, Gwenaël, 2017, Gouvernance et performance d'entreprise : quelle équation de durabilité ?, *Revue française de gouvernance d'entreprise*, N°17.
- Rebérioux, Antoine and Gwenaël Roudaut, 2017, Gender Quota and Inequalities inside the Boardroom, *Working paper.*
- Roudaut, Gwenaël, 2017, The Representation of Managers, Shareholders and other Stakeholders inside the Boardroom: Does it Matter for CSR Commitment? *Working paper.*
- Rebérioux, Antoine and Gwenaël Roudaut, 2017, Corporate Governance and Accountability, dans *Handbook of the International Political Economy of the Corporation*, forthcoming.
- Rebérioux, Antoine and Gwenaël Roudaut, 2017, How to Foster Responsible Corporate Governance? Voluntary versus Legislative Approaches, dans *Hanbook of Finance and Sustainability*, forthcoming.
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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 2016, the Chaire 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 at the AFG for the sponsors. 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.

Workshops with the sponsors

- *Workshop*, *13 January 2017*
- Edouard Challe (Ecole Polytechnique): "Country governance and debt: the case of southern Europe 1996-2010",
- Hideki Takada (OCDE): "Green finance and development of green bond market".

- *Workshop, 22 May 2017*
- Patricia Crifo (Ecole Polytechnique)**:** Environmental, Social and Governance (ESG) performance and sovereign bond spreads: an empirical analysis of OECD countries
- Scott Barrett (Columbia University): Coercive trade agreements for Climate Change

- *Workshop, 7 June 2017*
- Christian Gollier (IDEI-TSE- Université Toulouse 1 Capitole)**:** Ethical asset pricing and the good society

- *Workshop, 12 December 2017*
- Simone Sepe (IDEI-TSE, Université Toulouse Capitole): “Board Declassification Activism: The Financial Value of the Shareholder Rights Project”.
- Sébastien Pouget (IDEI-TSE, Université Toulouse Capitole): "Institutional Investors as Active Owners”.

- *Workshop, 10 January 2018*

- Christel Dumas (ICHEC Brussels Management School) : ESG impact indicators and Delphi group
- Jakob Thoma (CNAM) : Les implications du changement climatique sur les portefeuilles financiers

General audience conferences

- Petit déjeuner du FIR, 23 juin 2017: "Testing Asset Pricing on 600 years of Stock Returns", and "Fund managers' contracts and financial markets' short-termism".
- General audience Conference, London School of Economics, Department of Geography, 2 February 2017, "Do we do enough for the future".
- Biannual Conference of International Center for Pension Management (ICPM), 15 October 2017, Keynote lecture on "Ethical asset valuation and the good society".
- Sixth France Stratégie Workshop, 29 March 2017, "Taux d'actualisation : Les controverses scientifiques".
- Conference Caisse Centrale de Réassurance (CCR), 8 June 2017, Keynote lecture "Pour une vision globale des catastrophes naturelles".
- Rencontres Economiques du Ministère de l'économie et des finances. IGPDE, 10 octobre 2017. « L'economie verte : de la contrainte aux opportunités d'emploi ».

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

- Corporate Governance Workshop ESCP Paris 12-13 June 2017, "Ownership concentration and firm's risk: Evidence from the US."
- Financial Econometrics Conference, TSE 12 May 2017, "Stochastic volatility implies fourth-degree risk dominance: Applications to asset pricing."
- HEC Conference on "Coping with uncertainties: Normative approach, current practice", 23 May 2017, "An economic evaluation of our responsibilities towards future generations."
- 2017 Actuarial Research Conference, 27 July 2017, Keynote lecture "Discounting the distant future."
- Annual Conference of the European Association of Environmental and Resources Economists (EAERE), 28 June- 1 July 2017, "Term structures of discount rates: An international perspective."

- Annual conference of the European Economic Association (EEA), 22 August 2017, Presentation of “Board independence and the monitoring advising trade-off.”
- Annual conference of the European Economic Association (EEA), 22 August 2017, Organisation of an invited session on “Climate change and asset pricing”, Presentation of “The climate beta.”
- 1st IAST Conference on Philosophy and the Social Sciences: Inequality, Fairness and Markets, 26-27 June 2017, “Fairness, Efficiency, and Corporate Governance.”
- 4th LAMB Corporate Governance Symposium, University of Notre Dame Law School, Notre Dame, 2 May 2017, “Board and Shareholder Power, Revisited.”
- Joint University of Pennsylvania- Institute for Law and Economics and IAST-Toulouse School of Economics Conference on Corporate Law and Economic Theory, 8 December 2017.
- American Economic Association Annual Meeting, 5-8 January 2017, “Southern Europe’s Institutional Decline”

Examples of workshops and seminars

- Seminar Chapman University, Orange (CA), 27 octobre 2017, “The Present Value Relation Over Six Centuries: The Case of the Bazacle Company.”
- OIKOS Young Scholar Academy, 5 septembre 2017, “Institutional investors’ votes at shareholder meetings: An empirical analysis on externality issues.”
- TSE workshop, 6 juillet 2017, Toulouse, “BlackRock vs Norway Fund at Shareholder Meetings: An Empirical Analysis of Disagreement in the Governance of Corporations.”
- Cass Seminar on ESG Engagement de l’ETHOS Center, 16 juin 2017, Londres, “Why do shareholders engage with companies?”
- Seminars Grantham Institute, London School of Economics, 1 November 2017, Oxford University, 21 February 2017, Maastricht University, 22 March 2017, World Bank, 2 May 2017, ETH Zurich, 8 May 2017, “Term structures of discount rates: An international perspective”.
- Seminar Tilburg University, 20 March 2017, UCL, 24 April 2017, KU Leuven, 3 October 2017, “Stochastic volatility implies fourth-degree risk dominance: Applications to asset pricing”.
- Seminars HEC Paris, 16 March 2017, Erasmus University, 20 March 2017, “Aversion to risk of regret and preference for positively skewed risks”.
- Seminar University of Konstanz, 29 May 2017, “Southern Europe’s institutional Decline”.

3. General audience reports and communication

- Crifo, Patricia, “La croissance verte réunit ecologie et emploi”, Libération, 2 August 2017.
- Crifo, Patricia, “Pour la transparence des données RSE”, Ouest France, April 2017.
- Crifo Patricia, “La RSE et la transition énergétique”, Connaissance des énergies, January 2017.
- Gollier, Christian, “C’est l’aversion aux inégalités qui justifie l’actualisation dans un monde en croissance,” L’Opinion, 17 March 2017.
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- Gollier, Christian, “L’âge des risques extrêmes”, Le Monde – 05 November 2017
- Gollier, Christian, “Comment intégrer nos responsabilités climatiques dans la gestion d’actifs ?”, Magasine des Professions Financières et de l´Economie, December 2017.
- Jaballah, Jamil, “Facteurs ESG et performances des petites et moyennes entreprises,” Edmond de Rothschild Asset Management, Expert interview, 14 February 2017.
- Treich, Nicolas, Commentaire du livre ‘Le Prix d’un Homme’ de François-Xavier Albouy, *Futuribles*, February 2017.
- Treich, Nicolas, “Gestion de l’eau et des risques associés : Quel apport des sciences comportementales ?,” 2017, Interview avec *Etablissement Public Loire*.

Videos:

- Les limites des évaluations des politiques de long terme [Christian Gollier]
  Institut Louis Bachelier – 12 June 2017
- "An Economic Evaluation of our Responsibilities Towards Future Generations" Christian Gollier (TSE)
  HEC Paris - 6 July 2017
- “l’ISR” Patricia Crifo
  Xerfi Canal, April 2017.

4. Awards and other activities in 2017

Christian Gollier has been elected President of the European Association of Environmental and Resources Economists (EAERE) for a period of 6 years starting on January 1, 2018.

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 masters in Economics and Finance at the Ecole Polytechnique, at the Toulouse School of Economics, and at the Institut d'Administration des Entreprises (IAE) of the University of Toulouse. Moreover, eight PhD students are currently working on the important issues of the Chaire FDIR.

1. Courses

- Lecture serie in economics and finance, Cours ECO611 Ecole Polytechnique, PA SEF & GD 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)
- Creation de valeur et gouvernance, 3e année Ecole Polytechnique
- 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 (University of Toulouse): Asset Management and trading (24h)
- Master in Finance, TSE and TSM (University of Toulouse): Psychology of finance (24h)
- Master in Economics, Toulouse School of Economics: Economics of risk and insurance: taking into account the long-term impacts of investments (27h)
- Master in Economics, Toulouse School of Economics: benefit-cost analysis (30 h)
- Master in Economics, Université Paris-Saclay: Macro-finance (24h)

2. PhD Students

PhD students of the Chaire FDIR in 2016-2017 included:

- Liviu Andronic: Extra-financial information and financial forecasts, defended on September 30, 2016 (advisor: S. Pouget)
- Madalena Ferrana: Fairness in Cost Benefit Analysis: Equity-Enhanced Mean Variance Rules, Started in September 2012 (advisor: C. Gollier)
- Aymeric Guidoux: CSR and governance, Ecole Polytechnique, started in 2015 (advisor: Patricia Crifo)
- Yann Kervinio: Fairness in natural resources management, started in September 2011 (advisor: S. Ambec)
- Yves Le Yaouanq: Biases in individual and collective decision-making, defended on November 3, 2016 (advisor: C. Gollier)
- Rim Oueghlissi CSR and performance, Université d'Evry Val d'Essonne. Defended on 26/02/16 (co-advisor: Patricia Crifo)
- Maxime Wavasseur: On the pricing of long-term assets, started in 2014 (advisor: S. Pouget)
- Yuting Yang: Risk and responsibility, started in 2015 (advisor: N. Treich)