Chaire Finance Durable
et Investissement Responsable

Report for the year 2015

ASSOCIATION FD&IR

ÉCOLE POLYTECHNIQUE

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Table of contents

Agenda for the meeting of the
Scientific Committee of the Chaire FDIR
February 15, 2016

1. Approbation of the 2015 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
15 février 2016

1. Approbation du rapport annuel 2015

2. Réalisations et programme de recherche

3. Divers

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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 nine 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+** patners: Association Française de la Gestion Financière (AFG), Allianz Global Investors France, Amundi, Caisse des dépôts, Candriam, Ecofi Investissements, Edmond de Rothschild AM, Fonds de Réserve pour les Retraites, Groupama AM, HSBC Global AM (France), La Banque Postale AM, Neuflize OBC Investissements
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 -> **16+** academic workshops with partners -> **10+** bilateral scientific meetings with partners -> **100+** scientific studies published -> **100+** presentations in scientific conferences -> **3** books on responsible finance -> **7** scientific conferences organized
Teaching	-> **15+** PhD students -> **10+** courses every year on responsible finance topics (Master Level)
Visibility	-> **18+** articles in popular press (Le Monde, Les Echos, La Tribune, Libération, Financial Times, L'opinion) -> **3** 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 -> **2** Cahiers de l'Institut Louis Bachelier dedicated to the Chaire FDIR

In terms of research, the main contributions of the Chaire pertain to 1) the evaluation of distant and uncertain events such as climate change; 2) investors' motivation for responsible investments; 3) the links between firm governance, CSR and financial performance; and 4) issues related to shareholders' engagement.

1. Evaluating distant and uncertain events

Investors determine the value of investment projects by estimating their future cash flows based on financial and extra-financial analysts' insights regarding the materialization of future business opportunities and risks. Standard economic tools prescribe penalizing cash flows that arise in good economic conditions more often than in bad (because diversified investors are already wealthy in good conditions) and in the distant future (because people are in general impatient and because people in the future are expected to be much richer than today thanks to economic growth). The penalty manifests itself in the form of a discount rate that is large for risky projects and for projects that pay further into the future. As a result, the value of such projects is viewed as low.

This standard valuation framework is relevant to value projects related to sustainable development. Indeed, these projects are deemed to avoid the negative consequences of various global risks such as climate change, nuclear accidents, biodiversity destruction and GMO health impacts. Since it is likely that such risks will be associated with bad economic conditions, sustainable development projects should benefit from a low interest rate and thus from a high value and desirability.

However, because the cash flows of these projects are viewed to occur only in the very long run, they are often penalized by very high discount rates (William D. Nordhaus prescribes 4%) and thus pretty low values. The research of the Chaire FDIR has shown that such a high penalty imposed on long-term projects might not be warranted due to difficulties in quantifying the risks, uncertainty in future growth rates, to complementarities between environmental and standard goods, and to learning by agents regarding the future impact of these projects.

These scientific contributions have had an impact in practice. Indeed, the researchers of the Chaire FDIR have participated in various groups that were in charge of orienting public policies. For example, **the Chaire FDIR recommends a 2% discount rate for discounting long-term projects**.

Researchers of the Chaire FDIR have also studied the influence of a country's extra-financial performance on their sovereign bond spreads. Sovereign bond spreads reflect both an economic default risk and a strategic default risk. A country's extra-financial performance can reduce both types of default risk by improving future macroeconomic prospects and by signaling good commitment abilities.

Results of the Chaire FDIR show that a country's average cost of capital decreases with its environmental, social and governance (ESG) performance. This result is valid both for OECD and emerging countries. This research has implications for portfolio managers. It shows that **ESG factors are useful to better assess the expected returns of sovereign debt**. It also suggests that **dynamic asset allocation policies that anticipate changes in ESG performance of countries can be beneficial for investors**.

2. Motivations for responsible investments

Researchers of the Chaire FDIR have also shed some light on the complex mix of interdependent motivations that underlies the demand for socially responsible investments (SRI). First, investing in SRI funds may be driven by intrinsic altruism: to varying degrees, we all aspire to do good and help. It thus appears **important for SRI products to clearly identify what is their impact on social and environmental issues**.

Second, material incentives may also be important: people tend to contribute more to public goods when contributions are tax-deductible. In this logic, investors will be more likely to invest in SRI funds if their financial performance is not at odd compared to the one of traditional funds. These results suggest that the **demand for SRI funds will increase, as the information concerning their performance will gradually be disseminated among investors**.

Third, investors may also be driven by social image concerns. An increase in coverage and attention to SRI might frequently remind us of various issues that we would prefer to ignore such as poverty or climate change. In turn, these **reminders of sustainable development issues may increase the demand for SRI funds**.

The research of the Chaire FDIR has also identified two potential negative impacts of exploiting social- and self-image motives to spur SRI. On the one hand, the efficacy of **publicizing someone's given pro-social behavior might be self-defeating**. At one point, it becomes normal to adopt such behavior and nobody gets credit in terms of image anymore. On the other hand, pro-social intentions might be directed towards more visible and salient choices such as buying a hybrid car but less towards less glamour choices, such as buying SRI products. To mitigate this potential negative impact of image concern, **SRI should be made more visible, clearer and associated with vivid examples of impact**.

This line of research of the Chaire FDIR has also involved practitioners thanks to a large-scale field experiment implemented in collaboration with three different retail banking networks. The idea was to empirically test the impact of various psychological and situational factors on the demand for SRI products. **A total of 3,104 clients have participated in the experiment**, thus providing a large source of relevant data.

The results suggest that only 11% of individuals are reluctant to SRI. The likelihood to invest in SRI increases with the perceived impact and with individuals' perceived individual effectiveness at influencing environmental and social issues. In the experiment, the **proportion of money invested in the SRI fund appears 40% higher than the proportion invested in the otherwise identical conventional fund**.

3. The links between governance, CSR and financial performance

Researchers of the Chaire FDIR have provided novel results on the relationship between corporate governance (CG), corporate social responsibility (CSR) and financial performance.

A first set of contributions focus on the puzzling links between CSR and financial performance. First, considering the largest European capitalizations, the research of the Chaire has shed light on the apparent lack of consensus in the academic literature by uncovering a double phenomenon: **firms which simultaneously adopt some CSR practices**

that are relative complements (e.g. human resources and business behaviors) exhibit high performance, **while firms which simultaneously adopt CSR practices that are relative substitutes (environmental and business behaviors) exhibit low performance**. Second, based on an original field framed experiment on the private equity industry, the research has also highlighted that **firms would have more to lose from irresponsible policies than to gain from responsible ones**. In fact, while irresponsible policies would decrease firm stock price by about 11%, 10% and 15% for E, S and G issues respectively, responsible policies tend to increase firm stock price by only 5%, 5.5% and 2% for E, S and G issues respectively.

A second set of contributions has examined the relationship between governance, board independence and firm performance. Most OECD countries, whatever their legal origins, strongly support independence as a way to reduce agency costs and as a standard response to corporate crises in order to provide greater transparency. Along this view, independent directors would act as "watch dogs" on behalf of dispersed shareholders, enhancing thereby the disciplinary role of the board.

In this context, a first result obtained by the Chaire's researchers is to document a robust **negative relationship between firm accounting performance and the proportion of independent directors**, suggesting (unexpected) flaws in promoting independent boards that could offset the likely benefits of reduced agency costs. **Independent directors may in fact suffer from an informational gap that impedes their ability to monitor and/or serve as a source of advice and counsel for corporate executives**, with a detrimental effect on overall firm performance. This second result suggests that the negative relationship observed is at least to some extent due to the position of the independent director (and not only to the person himself or herself). Taken together, these results show that in the French institutional and legal environment, the costs of independence seem to outweigh its benefits over the last decade.

Another project on the composition of boards of directors has examined the way the French board-level gender quota, enacted in 2011, has impacted corporate governance for listed companies belonging to the SBF 120 index over the 2006-2014 period. It shows that the quota succeeded in opening the doors of the boardroom to new female directors, not present on the director labour market before the regulation. However these directors present distinctive characteristics (in terms of experience, age, nationality etc.) which, combined with the companies choices to allocate directors to positions inside the boardroom, make them less likely to enter the most strategic committees (monitoring committees). And as a consequence, **in terms of compensation and fees, the gender fees gap that female directors are facing has increased** with the quota to reach 6%.

In future work, we would like to further investigate the directors role through individual fees and decompose the latter depending on the directors' positions (committees' membership and chairing) and individual attributes (tenure and age). This would allow examining directors' compensation in a new perspective, investigating the economic determinants of the director fees gap.

A last project in this topic aims at understanding what characteristics of **small and mid cap companies** may offer them the **long-term view and commitment** necessary to successfully implement **innovative ESG strategies, and how these affect their performances**. The project focuses on French small-mid cap companies.

Data come from various sources. Firms' ESG performance is obtained thanks to an agreement with Vigeo. 133 firms are covered for the French stock market, including the 40 large-caps that constitute the CAC 40 index. We keep these large firms as a benchmark. Accounting information comes from the database Infinancial. The database FactSet details the holdings of institutional shareholders. Stock market data come from Datastream. Three additional databases are used to identify the names of the CEO and the percentage of shares held by founder's families. After merging and cleaning these databases, we have a total of 100 non-financial firms.

These data are used to run various regressions to study how abnormal returns, stock price volatility, return on asset, depend on ESG performance and on firms characteristics such as the fact that a company is a family firm or a firm under LBO. We also perform an event study to examine the stock market reaction to changes in the level of ESG performance of small and mid-cap companies.

Preliminary results suggest that French small and mid-cap companies that display the best social responsibility benefit from a lower cost of capital. This is the case after controlling for the three Fama-French risk factors. This result is in line with the previous literature (Bauer and Hann, 2010, Bauer, Derwall, Hann, 2009, Chava, 2014). It suggests that capital providers are requiring lower returns to hold the responsible small-mid cap companies. Such a lower cost of capital may favor a better development of responsible small and mid-cap companies.

Good news regarding the social responsibility of small and mid cap companies is associated with an increase in the stock price, controlling for general market movements. This implies that portfolio management strategies based on ESG information may generate abnormal returns if they are able to anticipate the future evolution of the ESG performance of firms.

The determinants of ESG performance in small and mid cap companies seem related to the type of ownership. Firms owned by their founder appear to have a lower ESG performance than other firms. This might be due to the fact that founders are charismatic enough not to have to cater to the various firms' stakeholders in order to ensure a good development. Also, we find that firms that are held more by fund management companies display a higher ESG performance except if the firms are under LBO (as measured by a large amount of debt in their balance sheet).

In future work, we would like to extend the cross-section of firms included in our sample and potentially include European corporations. As of now, we measure ESG performance using Vigeo ratings that cover around 130 French firms. We are thus eager to receive support to find other sources of information regarding the ESG performance of French and European firms.

4. Shareholder engagement and dialogue

Researchers of the Chaire FDIR have designed an investment strategy based on engagement and dialogue with businesses: the **"Washing Machine" investment strategy**. The idea is to invest in non-responsible and therefore undervalued companies, to start improving their social responsibility, and to resell part of the stakes at a premium to other socially responsible investors.

Three conditions must be satisfied for this strategy to succeed. First, the investment fund must be able to **acquire a significant influence** on the target companies. Otherwise they would not be in a position to implement the changes envisioned. Furthermore, **only a fund with a long-term outlook can implement the strategy**. Indeed, the fund must be able to credibly commit to remain involved in the business long enough for its corporate social responsibility to improve. Last, the fund itself must be able to **provide guarantees of credibility with regard to socially responsible orientations**. Otherwise, it will fail to convince the market of the reality of the commitments made by the company. When implementing the “Washing Machine” strategy as a coordinated engagement policy, funds should **adequately manage the risk of concerted action**.

This research from the Chaire FDIR has found an echo in the practice of responsible investments. Indeed, Tau Investment Management has launched a fund in New York in 2015 with a strategy in line with the “Washing machine”. Also, a Financial Times’ news article written by Jonathan Eley on February 20th, 2015, qualifies the “Washing machine” strategy as particularly suited for “really big investors such as Norway’s sovereign wealth fund or big North American retirement funds like Calpers.”

Finally, responsible investors are confronted to specific engagement strategies in multinationals operating on emerging markets. One of them relates to **« Bottom of the Pyramid » (BOP) strategies** (selling products targeted at low income populations, especially in emerging countries), suggesting that multinational firms may make revenues while alleviating poverty. Such a BOP concept has received a lot of attention recently but still needs theoretical foundations and empirical validity. The researchers of the Chaire FDIR have studied several firms’ projects within the BOP markets, **highlighting the capacities necessary to succeed together with the learning and innovation challenges posed by such strategies**.

Jean Tirole and Christian Gollier's view on the COP21
Avant la COP21:
Pour un accord efficace sur le climat

Cet article a initialement été publié dans Le Monde et dans The Economist

En décembre, Paris accueillera des négociations décisives pour le changement climatique. Les délégués des Nations Unies devront parvenir à un accord contraignant permettant de limiter à 2°C l'augmentation de la température mondiale. L'analyse économique peut nous permettre d'identifier les stratégies les plus efficaces.

Le changement climatique relève de la gestion d'un « bien commun » à l'échelle mondiale. A long terme, l'humanité bénéficierait massivement d'une coopération internationale sur le climat ; malheureusement, chaque pays est fortement incité à laisser aux autres la charge de réduire les émissions de gaz à effet de serre.

L'approche consensuelle chez les économistes pour résoudre ce problème de « passager clandestin » consiste à imposer un prix uniforme sur les émissions. Une telle stratégie incite les pollueurs à engager tous les efforts de réduction des émissions dont les coûts sont en deçà de ce prix. Elle garantit à la collectivité que le bénéfice environnemental est maximal pour un sacrifice collectif donné.

Bien que cette approche ait fait ses preuves dans le passé pour résoudre d'autres questions environnementales, elle reste difficile à faire accepter : lors de la conférence de Copenhague de 2009, l'idée d'un prix mondial du carbone a été abandonnée, et la convention-cadre sur le changement climatique de l'ONU s'est transformée en une chambre d'enregistrement de promesses d'efforts à venir pour lutter contre le réchauffement.

Course de lenteur

Ce mécanisme d'engagements volontaires sera certainement confirmé à Paris alors qu'il se limite pour chaque pays à indiquer des engagements non contraignants, sans même prévoir une méthode coordonnée pour en mesurer la mise en œuvre.

La stratégie d'engagements volontaires est largement insuffisante. Elle n'a pas l'efficacité économique que procure la fixation d'un prix unique du carbone. En outre, l'absence de tout engagement contraignant limite sa crédibilité.

A Paris, les pays auront tout intérêt à faire en sorte que leurs engagements soient difficilement comparables entre eux et impossibles à vérifier, ce qui leur permettra de revenir facilement sur leurs promesses. Enfin, ce processus renforce les attitudes non coopératives, car continuer à polluer permet de renforcer sa position dans les futures négociations. La course de lenteur continue.

On peut rêver d'un monde meilleur. Une taxe carbone, prélevée par chaque pays, semble être un outil bien plus efficace. Chaque nation s'engagerait sur un prix ambitieux du carbone si tous les autres en faisaient autant. Afin de répondre aux préoccupations liées à l'équité, des transferts pourraient être établis en faveur de pays en développement ou réticents à rentrer dans un accord global, par le biais du Fonds vert pour le climat, par exemple.

Un système de marché de permis d'émission

Malheureusement, un fonds vert est trop visible pour être politiquement acceptable : les gouvernements ne souhaitent pas être « vus » en train de donner d'importantes sommes d'argent à des étrangers. En outre, et surtout, les pays peuvent mettre en place une taxe

carbone sans l'appliquer pleinement ou en atténuant son effet par des subventions ou des allégements fiscaux. Il est difficile d'imposer de l'extérieur une discipline fiscale, comme on a pu le voir en Grèce avec la « troïka ».
En revanche, un système se concentrant sur le niveau d'émission nationale est relativement simple, puisque la technologie permet aujourd'hui de surveiller facilement les émissions de CO2 d'un pays.
Nous privilégions donc un système de marché de permis d'émission, dans lequel une organisation multilatérale attribuerait aux pays participants, ou leur vendrait aux enchères, des permis échangeables. Les exemples à travers le monde – au sein de l'Union Européenne mais également en Californie, en Corée du Sud et dans certaines parties de la Chine – démontrent la faisabilité de cette solution et fournissent aujourd'hui des indications précieuses sur la meilleure manière de la mettre en œuvre.
Un tel marché permettrait de définir un prix du carbone unique au niveau mondial. Les mesures de compensation en faveur des pays en voie de développement pourraient être mises en place par de simples attributions gratuites de permis.

Sanctions
Cependant, même en cas d'obtention d'un accord adéquat sur le changement climatique, il faudra encore s'assurer de son application. Comme nous avons pu le constater avec les engagements du protocole de Kyoto, ternir la réputation d'un pays qui revient sur sa parole a un effet limité : celui-ci se trouvera toujours des excuses. Il n'existe aucune solution miracle, mais au moins deux mesures pourraient être utilisées contre les pays qui ne respectent pas les accords signés.
Tout d'abord, l'Organisation Mondiale du Commerce devrait traiter le refus de mettre le même prix que les autres sur le carbone comme une pratique de *« dumping »* entraînant des sanctions.
Deuxièmement, une insuffisance de permis à la fin de l'année serait valorisée au prix de marché et s'ajouterait à la dette publique du pays concerné. Dans le même esprit, les Etats non signataires devraient être pénalisés par le biais de taxes prélevées aux frontières et gérées par l'OMC.
Il n'y a pas de solution idéale, mais l'actuelle stratégie fondée sur des engagements volontaires et non contraignants est vouée à l'échec, en favorisant l'attentisme. Une taxe carbone mondiale est une meilleure solution. Mais la mise en place d'un marché d'émissions nous semble être la solution la plus pertinente dans le cadre des négociations en cours.

Jean Tirole's view on the COP21
Après la COP21:
Nous ne sommes guère plus avancés qu'il y a six ans

Cette tribune a initialement été publiée dans L'Opinion

Les faits - Laurent Fabius, très ému, a remis samedi en fin de matinée la version finale de l'accord sur le climat aux 195 représentants des pays participant à la COP21, le qualifiant d'« ambitieux et équilibré ». Le texte a été approuvé en séance plénière en fin de journée. Dans une tribune exclusive pour l'Opinion, Jean Tirole juge que les moyens de cette ambition affichée à la COP21 ne sont ni assez précis, ni à la hauteur des objectifs à atteindre. Il souligne néanmoins plusieurs « causes d'optimisme ».

La COP 21 se devait de déboucher sur un accord efficace, juste et crédible. Mission accomplie ? L'accord annoncé est ambitieux. L'objectif à atteindre est maintenant « bien en dessous des 2 °C » et le monde devrait ne plus produire d'émission de gaz à effet de serre (GES) en net après 2050 ; les fonds dédiés aux pays en voie de développement dépasseront après 2020 les 100 milliards de dollars par an qui avaient été décidés à Copenhague en 2009.

Malheureusement, dans les faits, le compromis est bien en deçà de l'ambition et nous ne sommes guère plus avancés qu'il y a 6 ans.

Question efficacité dans la lutte contre le réchauffement climatique, la tarification du carbone, recommandée par la très grande majorité des économistes et de nombreux décideurs, mais chiffon rouge pour le Venezuela et l'Arabie Saoudite, a été enterrée dans l'indifférence générale par les négociateurs, compromettant sérieusement la réalisation de l'objectif climatique, comme le note la Fondation Nicolas Hulot.

Et pourtant, il faut un prix universel du carbone compatible avec l'objectif des 1,5 ou 2 °C. Les propositions visant des prix différenciés selon les pays non seulement ouvrent une boîte de Pandore (qui paiera quoi ?) mais surtout ne sont pas écologiques. La croissance des émissions viendra des pays émergents et pauvres, et sous-tarifer le carbone dans ces pays ne permettra pas d'atteindre l'objectif ; d'autant qu'un prix élevé du carbone dans les pays développés encouragera la localisation des productions émettrices de GES dans les pays à bas prix du carbone, annihilant ainsi les efforts faits par les pays riches.

Question justice, les pays développés n'ont pas détaillé les contributions aux pays en voie de développement (PVD) et ont laissé trop de place au volontariat ; or les promesses collectives ne sont jamais tenues. Il serait important que ces transferts soient spécifiés et constituent des transferts additionnels, et non de l'aide déjà existante redirigée vers des projets verts, des prêts ou l'allocation de revenus incertains.

Et que dire de la crédibilité ? L'accord repousse à une date ultérieure un engagement concret des pays à réduire leurs émissions. La stratégie attentiste des engagements volontaires de réduction des émissions (INDC) l'a emporté. Les engagements ne sont pas comparables, ils sont insuffisants, ils seraient coûteux s'ils étaient appliqués, et il y a fort à parier que, non contraignants, ils ne seront pas mis en œuvre de toute façon (les promesses n'engageant que ceux qui les écoutent).

La négociation sur la transparence a elle aussi été un échec. Il est difficile de comprendre pourquoi les pays du Sud ne seraient pas soumis au même processus de suivi, notification et vérification que les autres ; les pays du Nord doivent être généreux, pas fermer les yeux. Enfin, l'idée que l'on adoptera une trajectoire plus vertueuse, par des révisions tous les cinq ans des ambitions, ignore ce que les économistes appellent l'effet de cliquet : sommes-nous si sûrs qu'un pays se mettra à l'avenir en meilleure position de négociation en respectant allègrement ses promesses plutôt qu'en « traînant la patte » ? On demande toujours plus au bon élève.

Trois échecs ? En fait un seul. Il est vain de chercher à obtenir des pays développés des engagements ambitieux sur le fonds vert, sans que ceci ne débouche en contrepartie sur un mécanisme capable d'atteindre les objectifs climatiques. Et on ne peut demander aux pays du Sud de faire les efforts nécessaires sans une compensation crédible. C'est un jeu qui se joue à deux.

Ce tableau sombre ne devrait quand même pas occulter **les causes d'optimisme**. Tout d'abord, la prise de conscience dans les opinions publiques a progressé depuis quelques années. Ensuite, tous les pays présents à la COP21 ont présenté des trajectoires de leur pollution, contrairement à ce qui avait été fait à Kyoto en 1997 : c'est un progrès symbolique.

Enfin, plus de 40 pays, et non des moindres (Etats-Unis, Chine, Europe...) ont aujourd'hui des marchés de droits d'émission négociables, certes avec des plafonnements beaucoup trop généreux et donc des prix du carbone très bas, mais démontrant leur volonté d'utiliser une politique rationnelle de lutte contre le réchauffement climatique. Ces bourses de carbone pourront un jour être reliées entre elles pour former un marché mondial plus cohérent et plus efficace, même si la question des « taux de change » sera épineuse (il faudra savoir si un droit d'émettre une tonne dans un système équivaut au même droit dans un autre système. Les pays les plus vertueux, ayant émis moins de droits, risqueraient alors de se sentir lésés). Il faudra construire sur ces dynamiques.

S'il est important de maintenir un dialogue au niveau mondial, **le processus onusien** a montré ses très prédictibles limites. Négocier entre 195 nations est incroyablement complexe. Il faudrait arriver à créer une « coalition pour le climat », comprenant au départ les grands pollueurs actuels et à venir. Je ne sais pas s'il doit s'agir du G20 ou d'un cercle plus restreint (par exemple, les cinq plus gros pollueurs, l'Europe, les Etats-Unis, la Chine, la Russie et l'Inde, représentant 65 % des émissions mondiales).

Les membres de la coalition pèseraient sur l'Organisation mondiale du commerce, qui pourrait alors autoriser, pour cause de dumping environnemental, une taxe aux frontières vis-à-vis des pays refusant d'imposer le prix du carbone qui permettra de réaliser l'objectif climatique.

Il convient enfin de simplifier la négociation en sériant ce qui est simple et donc devrait être acté, et ce qui devrait être le vrai objet de la négociation. La lutte contre le réchauffement climatique n’est pas un problème économique (« on sait faire »), mais un problème géopolitique.

Les questions difficiles, mais incontournables, sont celles du respect des accords et, encore plus, des transferts financiers entre pays. Arrêtons de tourner autour du pot.

Research projects for 2016-2018

As decided on September 10th, 2015, during 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 for the years 2016-2018. These projects are transversal to the main research topics listed in the document of February 2010. These projects are also related to the three priority topics that have been defined in the 2014 general assembly meeting and that deal with corporate governance, engagement, and the opportunities and risks in long-term investments. The precise research projects are presented below.

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

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 —in the legal academy as well as the real corporate world, both at the national and international level— 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.

This project plans to study this view in more depth by gathering new empirical evidence that enables to evaluate the results of prior studies and develop a novel theoretical account of what matters in corporate governance. We are gathering a unique dataset that covers thirty years of corporate governance in the US, from 1978 to 2008, and that enables to identify governance arrangements that grant directors and managers protection from removal with the agreement of shareholders (i.e., "bilateral protection arrangements") —such as staggered boards and supermajority requirements to modify the charter. The idea is then to test whether these bilateral arrangements increase firm value. The data also enables to identify protective arrangements that do not require shareholder approval (i.e., "unilateral protection arrangements") —such as poison pills and golden parachutes—. The idea would then be to test whether these arrangements reduce 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. On the other hand, bilateral protection arrangements appear as consistent with best governance practices because it may be in the shareholders' own interest to limit their rights, if such limits involve a beneficial bilateral commitment by boards and shareholders to corporate stability and longer-term investment strategies.

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

The objective of this project is to empirically study why and how institutional investors, asset owners and managers, vote during shareholder meetings. Separation between ownership and control is one of the fundamental characteristics of modern companies (Berle and Means, 1932). This separation opens the room for potential conflicts of interests between investors and corporate executives (Jensen and Meckling, 1976): managers may not always favor the strategies that are best for investors.

To mitigate the negative effects of these conflicts, investors can induce executives to follow their guidance by engaging companies, i.e., discussing with executive managers and board members, filing shareholder proposals and obviously voting during shareholder general meetings.

A priori, managers know best what is the right course of business for firms. But companies may generate externalities on society, and investors may care more about these externalities than managers. Two basic arguments then warrant investors to be active in engagement. The first argument rests on the universal owner logic (Mattison, Trevitt and Van Ast, 2011). Large institutional investors own a significant share in virtually all listed companies and have a long horizon. The situation is very different for corporate executives who, for the sake of incentives, in general own concentrated stakes in their companies. These different holding profiles generate conflicts of interests: executives are not going to internalize the effects that their companies have on the payoffs and value of other companies. For example, they may not take into account the negative economic impact that the polluting activities of their firm have on other companies. On the other hand, institutional investors that own very diversified portfolios would like the firm to take into account these negative effects to avoid deteriorating the overall value of their portfolios.

A second argument that calls for institutional investors to be active in engagement is related to the delegated philanthropy logic (Benabou and Tirole, 2010). Institutional investors such as pension funds, sovereign funds and mutual funds invest on behalf of clients who may have preferences regarding externalities that differ from the ones of executive managers. As a result, investors might want to promote their values and preferences towards executives so that they 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, nuclear activities…) might not be valued in the same manner by managers and by the investors who represent clients. Investors may thus want to communicate corporate executives what is their preferred level of precaution. This can only be achieved via engagement.

This project plans to collect data on voting policies of various institutional investors in order to study how their engagement/voting policy is implemented in practice. Recent empirical evidence suggests that universal owners do have an impact on the firms in their portfolios (Dimson, Karakas, and Li, 2014, Azar, Schmalz, and Tecu, 2014, Kempf, Manconi, and Spalt, 2014, and He and Huang, 2014). However, the precise mechanism through which they exercise their influence has not yet been empirically identified. Our idea is thus to test whether institutional investors are more actively engaging firm in areas that are subject to externalities, and to test whether various investors have different preferences over these issues.

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

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 affects their risk-return profile on the stock market. There are several reasons to believe that small and mid cap companies are very different from publicly traded large caps 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 (2005)). 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).

This project aims at understanding what characteristics of small and mid cap companies may offer them the long-term view and commitment necessary to successfully implement innovative ESG strategies, and how these affect their performances. This project will rely on data on corporate governance, corporate behavior, accounting statements, financial ratios, and stock market performance for small and mid cap companies, as well as data on their ESG performance. These data will be obtained from public sources, for example Point.Risk of Altares, and from proprietary sources (after having signed appropriate confidentiality contracts).

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

In the CSR-financial performance literature, many scholars still consider that much research needs to be conducted before this relationship can be fully understood (see e.g. Delmas et al., 2011; Griffin and Mahon, 1997; Rowley and Berman, 2000; Surroca et al., 2010). From this perspective, 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. In this project, the quantitative measures of CSR related management practices that are used offer a novel approach by relying on actual practices implemented by the firms, rather than evaluations (scores or ratings) based on past and/or expected future CSR behaviors. These CSR related practices are measured via the COI survey and the ENDD survey (from INSEE) two large scale databases including more than 10,000 French firms of more than 10 and 500 employees in 2006 and 2011.

The goal of this research is to analyze how different combinations of CSR dimensions affect firm performance measured by corporate profits. In particular we investigate the quality-quantity trade-off in the design of responsible ESG strategies. Preliminary results show that an aggregate measure of CSR, which counts quantitatively the number of practices adopted in terms of environmental, human resources, and customers & suppliers practices, affects positively and significantly firm performance. But on the other hand, the profitability of CSR investments seems to rely on a specific qualitative mix of different CSR dimensions. For instance combining responsible green and customer & supplier strategies improve firm performance more than combining responsible social and customer & supplier strategies. Hence the relationship between CSR and firm profitability is very complex. This first set of results will be further developed to analyze the links between CSR motivations (strategic/altruistic/defensive) and CSR commitment intensity, and their relationship with CSR actual practices. The interest is to determine which type of CSR metrics best correspond to declared versus implemented CSR practices and risks.

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

The use of a large number of variables (quantitative and qualitative) as determinants of sovereign credit ratings reflects somehow the ambiguity surrounding the criteria underlying sovereign ratings. The objective of this project is to help better understand variables used in the determination of sovereign credit ratings. Our analysis builds on the previous literature by exploring the use of environmental, social and governance (ESG) factors as explanatory variables. The main question raised (and hypothesis tested) is the following: how much of an impact do ESG quantitative indicators have on sovereign credit ratings and interest rates?
Related to this, our principal challenge is how to quantify government ESG performance. The ESG performance of governments is difficult to assess for at least two reasons. According to many observers, it is often hard to know whether the government should be evaluated as a geographical entity (indicators based on its ESG factors, i.e. forest resources, access to water or CO2 emissions), as a demographic entity (indicators based on results that depend on the public authority's resources and therefore the nation's wealth and development, e.g. illiteracy rate, life expectancy) or as a political institution (this raises the question of how policy is judged based on level of development). In addition, there is no clear definition of the methodology and the value applied to assess the ESG performance of governments. The reality is that rating agencies and investment managers use a wide array of data from different official and recognized sources.

In that regard, in order to offer to the users of ESG analysis a more standardized method to, we will initially implement a Principal Component Analysis (PCA) to identify the number of quantitative criteria to be incorporated in ESG performance. This will also enable us to construct intermediate ESG indexes (including governance index, social index, population and labor status index, land and biodiversity index and environmental index) as well as a global ESG index. Then, we will examine the impact of ESG global index on the price of sovereign risk as well as the joint implementation of the five intermediate ESG indexes measured by the individual score (including governance quality score, social quality score, population and labor status score, land and biodiversity score and environmental pressure score) and interaction terms of the respective ESG indicators. The price of sovereign risk will be tested by using sovereign credit ratings from the two U.S. leading agencies, Standard and Poors, the oldest provider of sovereign ratings since 1961, and Moodys, providing sovereign ratings since 1974. The population of ratings used will be for the period from December 1996 to December 2010. Our analysis will be carried out across 35 advanced economies (AEs) and emerging market economies (EMEs).

Main research projects' scorecard

Themes	Projects	Advancement
Motivation for SRI	The recommendation of SRI funds: *Heimann and Pouget* Value similarity and trust in SRI funds: *Heimann, Bonnefon, Mullet and Pouget* Individual Investors' motivation to invest in SRI: *Heimann, Bonnefon, and Pouget*	2 working papers, 5 workshop and meetings with sponsors, presentations at conferences, 1 publication
SRI bond markets	SRI and performance of bond funds - Do extra-financial ratings affect sovereign borrowing cost?: *Crifo, Oueghlissi, Diaye* Sovereign bond spreads and extra-financial information - An empirical analysis of emerging markets: *Berg, Margaretic and Pouget* Green sovereign debt and sustainable development: *Ambec (with d'Albis)*	3 working papers, 3 workshops and meetings with sponsors, presentations at conferences
Governance	Board independence and operating performance: *Challe, Crifo and Roudaut (with Cavaco and Reberioux)* Board composition and extra financial performance: *Crifo and Roudaut* Bonus culture - Competitive Pay, Screening, and Multitasking: *Tirole (with Benabou)* Governance and performance of small- and mid-cap companies: *Jaballah and Pouget* Corporate Governance and Risk: *Rossetto*	6 working papers, workshops with sponsors, presentations at conferences, 3 publications
Engagement	The washing machine - Asset prices and corporate behavior with socially responsible investors: *Gollier and Pouget* Engagement at general assembly meetings: *Andronic*	2 working papers, 2 workshops with sponsors, presentations at conferences

	Shareholder engagement and dialogue: a case study: *Crifo (with Escrig Olmedo), Crifo and Mottis*	
CSR, performance and SMEs	CSR and governance structures: *Crifo and Roudaut (with Cavaco and Reberioux)* CSR and performance in SMEs: *Crifo (with Diaye and Pekovic)* CSR and private equity: *Crifo, Teyssier and Forget; Crifo and Forget* CSR, innovation and performance: *Ponssard, Giraud-Heraud and Sinclair Desgagné*	4 working papers, 2 workshops with sponsors, presentation in conferences, 1 publication

Publications and working papers

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

Adler M. and N. Treich, 2015, Prioritarianism and climate change, *Environmental and Resource Economics,* 62, 279-308.

Ambec S. and J. Coria, 2015, Strategic environmental regulation of multiple pollutants, TSE Working Paper, n° 15-602.

Ambec S. and L. Ehlers, 2015, Regulation via the polluter-pays principle, forthcoming *Economic Journal*.

Ambec S. and Y. Kervinio, 2015, Cooperative decision-making for the provision of a locally undesirable facility, forthcoming *Social Choice and Welfare*.

André, T., 2015, Managing Societal Performance of Impact Investing: An Action Research Inquiry, Cahier de Recherche n° 2015-14, Department of Economics, Ecole Polytechnique

André, T. & Ponssard J.-P., 2015, Managing Base of the Pyramid as a Business Opportunity: A Longitudinal Field Study, Cahier de Recherche n° 2015-15, Department of Economics, Ecole Polytechnique,

Andries M. and V. Haddad, 2015, Information Aversion, Working Paper.

Andries M., T. Eisenbach, M. Schmalz, 2015, Asset Pricing with Horizon Dependent Risk Aversion, Working Paper.

Andries M., 2015, Social Responsibility and Asset Prices: Is there a Relation?, Working Paper.

Bec F. and C. Gollier, 2015, Cyclicality and term structure of value-at-risk within a threshold autoregression setup, Bankers, Markets & Investors 134, 5-19.

Cavaco S., Crifo P. 2015. RSE et performance. IRES, *Etude CFE CGC*.

Challe, E. Chrétien, E., 2015, Market composition and price informativeness in a large market with endogenous order types, Journal of Economic Theory, 158, 679-696

Challe, E. Chrétien, E., 2015, Market microstructure, information aggregation and equilibrium uniqueness in a global game, Ecole polytechnique Working Paper 2015-11

Challe, E., Ragot, X. 2016, Precautionary saving over the business cycle, Economic Journal (forthcoming)

Challe, E., Ragot, X. 2015, Precautionary saving and aggregate demand, Working Paper

Cherbonnier F. and C. Gollier, 2015, Decreasing aversion under ambiguity, *Journal of Economic Theory*, 157, 606-623.

Cremers J. M., L. Litov, and S. Sepe, 2015, Staggered Boards and Firm Value, Revisited, Working Paper.

Crifo P., Diaye MA., Oueghlissi R., Pekovic S. 2015. What drives firm's Corporate Social Responsibility: The role of ownership concentration. in *Global Perspectives of Corporate Social Action and Social and Financial Performance*. Manos & Drori eds. Palgrave Mc Millan: New York.

Crifo P., Diaye MA., Pekovic, S. 2015. CSR related management practices and Firm Performance: An Empirical Analysis of the Quantity-Quality Trade-off on French Data. *International Journal of Production Economics*. doi:10.1016/j.ijpe.2014.12.019.

Crifo P., Escrig Olmedo E., G. Roudaut. 2015. Proposal quality : a good proxy for firm's responsible behavior for investors? Working paper.

Crifo P., Forget V., Teyssier S. 2015. The Price of Environmental, Social and Governance Practices Disclosure: An experiment with professional private equity investors. *Journal of Corporate Finance*. 30: 168-194.

Crifo P., Forget V. 2015. The Economics of Corporate Social Responsibility: A Firm Level Perspective Survey. *Journal of Economic Surveys*. 29(1): 112–130.

Crifo P., Forget V., 2015. Capital Investissement et enjeux ESG, *Analyse Financière* n° 56, p46-48, juillet-août sept 2015.

Crifo P., Reberioux A. 2015. Gouvernance et responsabilité sociétale des entreprises: nouvelle frontière de la finance durable ? *Revue d'économie Financière*. 117: 205-223.

Dhillon A. and S. Rossetto, 2015, Ownership structure, Voting, and Risk, *Review of Financial Studies*, pp. 521-560.

Forget, V. 2015. I may not be green but I am honest – On Green Signaling and Lying Costs in a Laboratory Equity Financing Game. Working paper.

Gollier C., 2015, Discounting, inequality and economic convergence, *Journal of Environmental Economics and Management*, 69, 53-61.

Gollier C., 2015, Long-term savings: The case of life insurance in France, *Financial Stability Review*, 19, 129-136.

Gollier C. and J. Tirole, 2015, Negotiating effective institutions against climate change, *Economics of Energy and Environmental Policy*, 4, 5-27.

Gollier C., 2015, Valuation of natural capital under uncertain substitutability, Working Paper.

Gollier C., 2015, Evaluation of long-dated assets: The role of parameter uncertainty, Working Paper.

Mottis, N. 2015. Finance et RSE, un pilotage à construire, Finance & Gestion, juil. 2015, Vol. 331, p. 9 10

Poret S. 2015. Labels Battle: Competition between NGOs as Standard Setters. Working paper

Roudaut, G. , Rebérioux A. 2015. Gender quota inside the boardroom: Female directors as new key players? Cahier de recherche Ecole Polytechnique

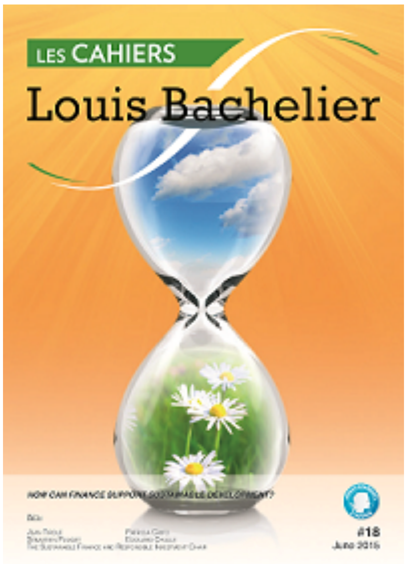
Roudaut, G. 2015. Do firm motivations matter for CSR awareness? Working paper

Roudaut, G. 2015. The representation of managers, shareholders and stakeholders: does it matter for CSR commitment? Working paperRheinberger C. and N. Treich, 2015, Attitudes toward catastrophes, Working Paper.

Communication of the Chaire FDIR achievements

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. Vulgarization of research



A new issue, the third one, of the Cahiers de l'Institut Louis Bachelier focused on the contributions of the Chaire FDIR has been published in 2015.

The Cahiers presented articles by Jean Tirole, Edouard Challe, Patricia Crifo, and Sébastien Pouget. They covered topics related to Corporate Governance, the Motivations fro Socially Responsible Investments, Sovereign Bonds and ESG factors. A more philosophical piece by Jean Tirole on Ethics and the Market was offered.

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

- BRIC conference NYU, May 2015 (New York)
- Society for Economic Dynamics conference, June 2015 (Warsaw)
- Conference of the Environmental Association of Environmental and Resource Economists (EAERE), June 2015 (Helsinki)
- NBER Summer Institute Asset Pricing, July 2015 (Cambridge, USA)

- Lunch Policy Session on Climate Change, World Congress of the Econometric Society, August 2015 (Montréal)
- French Association of Environmental and Resource Economics, September 2015 (Toulouse)
- Economic stakes of the 2015 Paris Climate Conference, Paris-Dauphine University, October 2015 (Paris)
- "Financial markets' short-termism: Designing incentives for the long term", University of Technology Sydney, October 2015 (Sydney)
- PRI Academic Conference – London School of Economics, September 2015
- RIODD 2015 (Montreal)
- Linked Employer/Employee Data Conference 2015 (Lisbonne)
- European Economic Association 2015 (Mannheim)
- Oikos-PRI Young Finance Academy, June 2015 (London)
- European Association for Research in Industrial Economics (EARIE), August 2015 (Munchen)
- French Economic Association (AFSE), June 2015 (Rennes)
- Annual meeting of the Academy of International Business (AIB), June 2015 (Bangalore)
- Financial Management Association Europe conference, June 2015 (Venise)

Examples of workshops and seminars

- INSEAD, September 2015 (Fontainebleau)
- Collège de France, October 2015 (Paris)
- 10th Annual Meeting of the Swiss Finance Institute, November 2015 (Zurich)
- Nanjing University, May 2015 (Nanjing)
- Conseil Economique du Développement Durable, December 2015 (Paris)
- Séminaire INSEE July 2015 (Paris)

- Conference ADRES (Paris)
- Tinbergen Institute, November 2015 (Amsterdam)
- CREI, September 2015 (Barcelona)
- University of Ottawa, March 2015 (Ottawa)
- MEDEF & Institut de Gestion Sociale, June 2015 (Paris)

3. Communication to finance practitioners

In 2015, 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. Moreover, the Chaire FDIR has organized at Amundi a conference that featured a presentation by Jean Tirole on the economics of climate change mitigation.

Workshops with the sponsors

- *Workshop, July 2nd, 2015*

. Marco Heimann and Sébastien Pouget, IDEI-Toulouse School of Economics: "Motivation for Socially Responsible Investments".
. Silvia Rossetto, IDEI-Toulouse School of Economics: "Ownership structure, Voting, and Risk".
. Simone Sepe, IDEI-Toulouse School of Economics: "Staggered Boards and Firm Value, Revisited".

- *Workshop, June 19th , 2015*

. Elena Escrig Olmedo (Université Jaume I & Ecole Polytechnique): «Annual Meeting Proposal Quality: a Good Proxy of Firm's Responsible Behavior for Investors? »
. Gwenael Roudaut (Ecole Polytechnique, AgroParisTech)
« CSR Motivations and Commitment Intensity: New Evidence from a French Survey»

Conference on November 2nd, 2015

- Conference of Jean Tirole: "The economic institutions to fight against climate change"
- Roundtable facilitated by Jean-Marc Vittori with the following speakers

  . "Financements innovants de la transition énergétique", Alain Grandjean (Carbone 4)
  . "Evaluation et couverture des risques catastrophiques", Pierre Picard (Ecole Polytechnique)

. "Rémunération et incitations des dirigeants", Augustin Landier (IDEI-Toulouse School of Economics)

The presentations made during these workshops and conferences are available on the Chaire FDIR website at http://fdir.idei.fr.

4. Communication to the general public

- Challe, E. « Les bulles spéculatives mènent au surdéveloppement de la finance », Le Monde Economie, May 18, 2015
- Pouget S., Measuring corporate social responsibility, Incentives for Long-term Investments, Journées des Investisseurs Instit Invest, December 2015.
- Treich N., Les enjeux de COP21 : La conférence génère de grands espoirs, Interview *Le Figaro*, September 2015; Evaluer le risque climatique, un défi pour les economists, *Le Monde Web*, August 2015; The economics of the end of the world as we know it, *The Economist*, Free Exchange, July 2015; 100 milliards de coûts annuels pour la pollution à Paris : ce qu'ont fait les métropoles qui ont réussi à agir, Interview Atlantico, July 2015.

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, six PhD students are currently working on the important issues of the Chaire FDIR.

1. Courses

- Economic growth and sustainability, Cours ECO572 Ecole Polytechnique, PA Ecoscience, avec Bernard Sinclair Desgagné (20h)
- Stratégies Développement Durable des Entreprises - Master2 Economie du Dév Durable, de l'environnement et de l'energie, AgroParistech, Univ Paris Ouest & Ecole Polytechnique (20h)
- Responsabilité Sociale et Environnementale - Master2 DDET, Univ Paris Ouest (20h)
- Entreprise et Société - Master2 IES, Univ Paris Ouest (24h)
- 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, IAE (University of Toulouse): Asset Management (12h)
- Master in Finance, IAE (University of Toulouse): SRI (12h)
- Master Financial Markets and Intermediaries, Toulouse School of Economics: Economics of risk and insurance: taking into account the long-term impacts of investments (27h)
- Master in Environmental and Natural Resources Economics, Toulouse School of Economics: Environmental Economics (36 h)
- Master in Environmental and Natural Resources Economics, Toulouse School of Economics: Green Business Strategies and Socially Responsible Investments (36 h)
- Master in Environmental and Natural Resources Economics, Toulouse School of Economics: Finance and sustainable development (36 h)
- Master in Economics, Université Paris-Saclay: Macro-finance (24h)

2. PhD Students

PhD students of the Chaire FDIR in 2015 included:

- Thomas André : Evaluation économique des stratégies Bottom of the Pyramid, PhD Cifre with Schneider Electric, started in 2011 (advisor: JP Ponssard & P Crifo).
- Liviu Andronic: Extra-financial information and financial forecasts, started in September 2010 (advisor: S. Pouget)
- Madalena Ferrana: Fairness in Cost Benefit Analysis: Equity-Enhanced Mean Variance Rules, Started in September 2012 (advisor: C. Gollier)
- Yann Kervinio: Fairness in natural resources management, started in September 2011 (advisor: S. Ambec)
- Yves Le Yaouanq: Political values and the polarization of beliefs, started in September 2013 (advisor: C. Gollier)
- Gwenael Roudaut : En termes de gouvernance, quels sont les déterminants des performances durables?, started in 2012 (advisor: P. Crifo).
- Yuting Yang : Risk and responsibility, started in 2015 (advisor: N. Treich)
- Aymeric Guidoux: CSR and governance, Ecole Polytechnique, started in 2015 (advisor: P Crifo)