Chaire Finance Durable et Investissement Responsable

Report for year 2012

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 2012 thanks to the financial support of the following 15 members:

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Agenda for the meeting of the

Board of the Chaire FDIR

January 25th, 2013

1. Approbation of the 2012 annual report and of the research projects for 2013-2015 (already presented during two meetings on 11/9/2012 and 12/7/2012)

2. Confirmation of the financial support of sponsors and determination of the annual budget of the Chaire

3. Renewal of the Bureau of the Association

4. Miscellaneous

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Ordre du jour de la réunion

Du Conseil d'Administration de la Chaire FDIR

25 janvier 2013

1. Approbation du rapport annuel 2012 et plan de travail 2013-2015 (déjà présentés lors des réunions du 9/11 et 7/12 2012)

2. Confirmation de l'engagement financier des sponsors et détermination du budget annuel de la chaire

3. Renouvellement du Bureau de l'Association

4. Divers

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Research achievements

The research of the Chaire FDIR lies within seven broad topics of interest identified by the researchers and the sponsors in February 2010. These topics include (1) the definition, measure and impact on performance of corporate social responsibility (CSR), (2) the nature of the demand for socially responsible investments (SRI), (3) the means to induce firms to reduce externalities, (4) the relevant environmental, social and governance (ESG) indicators, (5) the engagement of investors towards firms, (6) the issue of bottom-of-the-pyramid (BOP) and long-term growth activities, and (7) the governance and SRI policies of institutional investors.

We thereafter highlight four contributions made by the researchers of the Chaire FDIR that speak to several of these seven topics of interest. These four contributions are related to i) the performance and impact of socially responsible investment funds, ii) the impact of external pressure on environmental and financial performances of firms, iii) the financial and extra-financial impact of engagement and iv) the relationship between governance and performance.

i) Performance and impact of socially responsible investment funds

Socially responsible investors constitute an important part of today's financial markets. According to the Social Investment Forum (2012), about 11% of assets under management in the US is managed following this investment style. In Europe, this percentage has been growing at a fast pace to reach €6.7 trillion according to Eurosif (2012). Socially responsible investors base their decisions not only on financial analysis but also on environmental, social, and governance criteria. Indeed, corporations produce positive and negative externalities that they do not usually internalize, because they do not translate into corporations' incomes and costs. Typical positive externalities can be found in the management of human resources (training to acquire skills that can be valued by other employers), or in the investment in R&D (production of non-patentable knowledge). But firms also produce negative externalities (pollution, health hazard...). Due to the presence of global public goods and the difficulty of finding meaningful multi-country agreements, public institutions recommended by economists, such as Pigouvian taxes for example, have only partially reduced the inefficiencies in the allocation of resources that these externalities have generated in the economy. In this context, the objective of socially responsible investors is to induce corporations to internalize the externalities they exert on Society and at the same time to offer an appropriate long-run financial performance.

To achieve this objective, socially responsible investors use extra-financial performance of firms in the determination of their portfolio allocation. Most popular SRI strategies involve overweighting best performing companies in terms of ESG factors (a strategy referred to as best-in-class) or underweighting worse performing companies or sectors (strategies referred to as norm-based screening and exclusion, respectively). Eurosif (2012) indicates that these strategies account for more than 50% of the assets under management in the European SRI industry. These positive and negative screen strategies can be viewed as the two sides of the same coin: all these strategies alter the purely financial optimal portfolio to take into account extra-financial factors.

Whether these SRI strategies have an actual impact on firms is not clear. Indeed, their impact can be counterbalanced by purely financial investors who would shy away from responsible companies if they were to offer lower expected returns. Using an asset pricing model with socially responsible investors, the researchers of the Chaire FDIR have shown that despite the counterbalancing effect of purely financial investors, SRI investors will always have a beneficial impact on the cost of capital of responsible firms. The reason is that, SRI strategies not depending on the actual price level of assets, responsible investors push up the value of responsible firms, and thus reduce their cost of capital. This result is in line with the empirical evidence offered by Hong and Kacperczyk (2009) who show that vice companies have higher risk-adjusted costs of capital than other companies. More precisely, they focus on the industries that are subject to exclusion campaigns by SRI: alcohol, tobacco, and gaming. Using data from 1980 to 2006, they first show that sin stocks are less widely held by institutional investors such as pension funds, university endowments, banks and insurance companies, and that they are less followed by financial analysts who cater to these investors. Then, using data from 1965 to 2006, they find that the cost of capital of sin stock is higher than the one of comparable firms by 2 percentage points per year. These results are obtained on the U.S. stock market but Hong and Kacperczyk (2009) confirm their analysis out-of-sample on Canada, France, Germany, Italy, Netherlands, Spain, Switzerland, and the United Kingdom using data from 1985 to 2006. These results are consistent with the theoretical conclusions offered by the researchers of the Chaire FDIR.

Another mechanism through which SRI investors have a beneficial impact on responsible firms may be analyzed by focusing directly on firm valuation and investment decision for both responsible and irresponsible firms. Firm value aggregates a large quantity of information on the company’s past, current and future cash flows and assets, both tangible and intangible. Many factors, often not directly available to researchers, interweave in real life to build firm value, making it difficult to isolate the sole contribution of extra-financial performance in standard empirical analysis. A first research path consists in analyzing listed firms, whose values publicly result from stock market consensus. Yet, the backbone of our economies consists in non-listed firms, for which no public price is available. The researchers of the chaire FDIR have provided an original analysis based on experimental economics, allowing to quantify the contribution of sustainable practices to the value of non-listed firms. Observation of decisions taken by professional private equity investors allows inferring from their expertise explicit measures of over and underperformance in terms of sustainable practices. The main findings of this work show the existence of an asymmetrical effect of non-financial performance, investors having more to lose from unsustainable practices than to gain from sustainable ones. Unsustainable corporate policies appear to both prevent equity financing and increase its cost, sustainability thus consisting in a defensive strategy to protect firm value and equity access.

Finally, researchers of the chaire FDIR also have investigated the role of labels on the SRI market to see how this might affect the future of SRI in particular towards retail investors. Comparing SRI labels with labels existing in other sectors, in particular in the agri-food sector, the analysis shows that for labels to promote SRI towards individual investors it is necessary to have commercial stakes in place, as this is the case for organic agriculture or fair trade labels for instance. It is when labelling becomes a commercial issue that the corresponding market becomes more mature.

ii) The impact of external pressure on environmental and financial performances of firms

Besides responsible investors, regulations and the associated risks of litigation are an extremely important source of pressure on companies' management. One way of understanding the consequences of ambitious CSR policies on companies' economic and extra-financial performances is thus to study the impact of environmental regulations. As was put forward by Michael Porter, stringent but flexible environmental regulations can lead to productivity gains due to innovation that more than offset the initial cost of investment in new technologies.

Researchers of the Chaire FDIR gathered data on around 4200 production plants from seven OECD countries (Canada, France, Germany, Hungary, Japan, Norway, and the US). They show that a 1% increase in the probability to have a stringent environmental regulation increases by 0.04% the probability for a firm to make environmental R&D investments and 0.02% percent the probability for a firm to be profitable. The researchers have also shown that dirigist technology standards (such as making catalytic converters mandatory, for example) are not effective at fostering innovation. Flexible regulatory policies are more effective. This opens an avenue of potential development for engagement that is an external pressure imposed on firms but with a very flexible and custom-tailored approach. The analysis also indicates that the stringent regulations induce large direct financial costs of compliance on firms. This result has implications for the design of effective CSR policies within firms. It suggests that effective selection and implementation of CSR policies are crucial to avoid that the cost of CSR borne by firms does not outweigh the economic benefits.

At the industry level, the researchers of the chaire FDIR are developing a research project on the validity of the Porter hypothesis in the agri-food sector. Such an hypothesis in fact considers that pollution involves unnecessary or incomplete utilization of resources and reducing pollution is often coincident with improving productivity with which resources are used. Properly designed environmental regulation can thus trigger innovation that may partially or more than fully offset the costs of complying with them. But environmental regulation may generate such a positive effect only when another source of inefficiency is present together with the environmental externality targeted by public regulations. Such an inefficiency may rely on cognitive bounds (routine behaviors), agency problems (delegation and short-term biases), public spillovers of R&D, imperfect competition, or absence of economies of scale in the treatment of pollution. This research aims at characterizing the presence and relative importance of these various factors of the Porter hypothesis in the agri-food industry.

iii) Financial and extra-financial impact of engagement

Within the area of SRI, engagement strategies play a central role. As explained in Pardo and Valli (2012), investors indeed realized in the 1980's and 1990's that actively dialoguing with firms and voting at shareholder meetings could enable them to better defend their interests. At the European level, Eurosif (2012) indicates that almost 30% of the assets are managed according to these strategies. Engagement strategies now constitute an important channel through which SRI investors may have an impact on corporate behavior.

Researchers of the Chaire FDIR have designed a model of financial markets with socially responsible investors in which shareholders may engage in companies and vote on main strategic decisions. The model enables to predict when socially responsible investors are likely to hold a fraction of firms' capital that is large enough to enable them to influence firms' decisions through dialogue or vote at shareholders' meetings. The model suggests that CSR policies are more likely to be adopted when the number of SRI investors and the potential CSR improvements are high enough, and when SRI investors' risk aversion and the level of un-diversifiable risk are low enough. The first two conditions are related to the popularity of the proposed CSR policies and proxies for the support CSR proposals can obtain. The last two conditions are related to the willingness of responsible investors to actually hold a proportion of shares that is large enough to ensure control over the CSR policy decisions.

The financial consequences of engagement for responsible investors are unclear. On the one hand, the costs associated with engagement are borne by a given asset manager or institution while the benefits, if any, are enjoyed by all the shareholders. On the other hand, as shown by researchers of the Chaire FDIR, firms will experience a positive stock price reaction after the adoption of a CSR policy only if this policy does not impede too much economic performance, and if the potential improvement in CSR and the strength of the consensus around the particular CSR issue at stake are high enough. Overall, this analysis indicates that engagement policy can be beneficial for firms' extra-financial performance and profitable for responsible investors but that careful design of these policies is required to achieve these two objectives.

iv) Governance and performance: the central role played by boards of directors

Over the last two decades the boards of directors of large US and -to a lesser extent- European public companies have come increasingly to contain a majority of independent directors. In the US, the fraction of independent directors for large public firms has shifted from approximately 20 percent in the 1950s to approximately 75 percent by the mid-2000s. In France, the proportion of outside directors also increased, but more recently, reaching around 50% to 60% in average in 2012 for the biggest capitalizations (CAC40 index).

Many observators applaud this trend. For example, the American National Association of Corporate Directors recommends that boards have a 'substantial majority' of independent directors. Greater board independence also remains high on the agenda of activist institutional investors.

But do independent directors guarantee a higher performance? It is often argued that independent board members are more effective monitors of senior corporate managers and companies with more independent board members are more likely to be managed in the interest of shareholders. Yet, the literature on board independence and firm performance found no convincing empirical evidence that firms with a majority of independent directors achieve better performance than other firms. Note that most of the literature considers Anglo-Saxon firms, with very few exceptions on European firms. Overall, this literature shows that the direct evidence that board composition affects corporate profitability is weak, and several studies even suggest that firms with more independent directors perform worse. For Baghat and Black (1998), independent directors would in fact often turn out to be lapdogs rather than watchdogs.

To address the issue of the relationship between board independence and firm performance, researchers of the chaire FDIR have gathered a unique and original database on French listed firms using information on board composition provided by Proxinvest, and economic, financial data from Infinancials, and extrafinancial data from Vigeo. The resulting sample consists in board composition and corporate performance of the biggest publicly traded French firms (340 firms of the SBF250 index) over the 2003-2012 period. The main result of this study shows that board composition is not neutral with respect to both financial and extra financial performance. Independent directors tend to be associated with low firm performance from an accounting perspective (economic and financial profitability) and this relationship is not explained by the fact that low performing firms would increase their share of outside directors in order to satisfy market demands. On the contrary, the long-term value of the firm (measured by the Tobin's Q) is not affected. Finally, the study also shows that extra-financial performance is positively linked to board independence. Outside directors thus appear more sensitive to social and environmental externalities compared to internal directors.

Research projects for 2013-2015

As decided on December 7th, 2012, the researchers of the Chaire FDIR in conjunction with the sponsors have defined four high-priority research projects for the years 2013-2015. These projects are transversal to the main research topics listed in the document of February 2010. These projects are related to the motivations for SRI, to the SRI bond markets, and to the governance and engagement policies of socially responsible firms. These research topics are briefly presented below along with preliminary results.

1. The motivations for socially responsible investments

What determines the demand for SRI products? The asset management industry is currently confronted with some difficulties to collect new savings. In light of these difficulties, SRI products can constitute an interesting way of retaining clients or of obtaining new ones. To test these ideas, this project proposes to empirically study the motivation of French individual investors for SRI products. This project will have obvious implications for the retail SRI market but it will also speak to the institutional investors' market. Indeed, if institutional investors are professional investors, at the end of the chain are beneficiaries who are individuals. A good understanding of the aspirations of these individuals in terms of ESG performance of portfolios can thus be helpful to better define the fiduciary duties of institutional investors.

Preliminary investigations done by researchers of the Chaire FDIR are based on methodologies developed by social psychologists. It shows that the higher the similarity between the values expressed by funds' investment policy and those expressed by investors, the higher is investors' trust towards the funds. Values being surveyed dealt with Environmental, Social, and Governance (business ethics) issues. This research concerned partly American laypersons.

In this project, we plan to deepen our understanding of these issues by studying French investors and by looking at whether trust actually converts into higher actual investments. We also plan to better understand the link between belief in better long-term financial performance, moral values, altruism, and social image concerns on one side, and the investment in SRI funds on the other side. We are currently working with one of the sponsors of the Chaire FDIR to submit a questionnaire to 6,000 clients, both SRI and traditional, in order to better understand the determinants of the demand for SRI. More than a third of the asset managers that belong to the Chaire FDIR have expressed their interest for this project so it would be very interesting to have access to their retail branches in order to have a more representative set of individuals.

Because SRI is a complex product, customer relationship managers are likely to play a crucial role in the decision to invest in SRI. When preparing the survey for individual clients, it thus appeared interesting to study the perception and understanding of SRI by these managers. A questionnaire was thus designed to measure the perceived familiarity with SRI products, the moral values, and the level of altruism of managers as well as their propensity to advise particular funds according to their SRI characteristics and to the characteristics of the clients. Preliminary results are as follows. Customer relationship managers believe that SRI can be a source of improvement in corporate practices regarding environment and social issues, and that SRI can be beneficial for investment performance in particular in the long term. They also think that they are not vey familiar with SRI. Regarding advising, managers have a greater propensity to propose better performing funds and sustainable development generalist funds especially if they benefit from an SRI label. They do not tend to propose more the funds that correspond to their own values. Customer relationship managers are able to perceive clients' inclination towards environment, social or governance issues, and adequately propose the funds that are in line with clients' inclination. When confronted with a client that has pro-social orientation (whether it is in favor of the environment, the employees, or the integrity of business practices), managers also tend to propose the sustainable development generalist funds. Our future study on the clients will enable us to study whether clients would like to be proposed such generalist funds or whether they would prefer to be proposed funds that are more specialized.

Sponsors have indicated that it would also be interesting to study institutional investors' motivations for responsible investments as well as the structure of incentives in the responsible investment business. Researchers of the Chaire FDIR have thus approached the Principles for Responsible Investment (PRI). The idea would be to work with PRI signatories through interviews and/or survey in order to deepen our understanding of current practices in terms of responsible investments and long-term asset management mandates.

2. The SRI bond market

Bond markets are the largest securities markets in the world and constitute a large part of the portfolios of institutional investors and asset managers. It thus appears crucial for the development of SRI to have a good understanding of the relationship between ESG factors and fixed-income instruments within the corporate and mainly the public sectors (which is much larger).

Regarding the link between corporate bonds and ESG factors, the Chaire FDIR has organized several conferences with several of the world experts on these issues, Jeroen Derwall and Daniel Hann from the University of Maastricht, and Sudheer Chava from Georgia Tech. Jeroen Derwall presented evidence that suggests that firms with the best employee relationships have better credit ratings, lower firm-specific risk, and lower cost of debt. Daniel Hann highlighted results indicating that better environmental performance is associated with higher credit ratings and lower cost of debt on the bond market. Sudheer Chava complemented those results by showing that firms with good environmental performances are charged lower interest rates on bank loans and enjoy the presence of more institutional investors in their shareholding base and more banks in their loan syndicates. Overall, these results suggest that environmental and social issues are priced in financial markets. They are in line with the theoretical results obtained by the researchers of the Chaire FDIR.

Regarding sovereign debt, two conceptual projects have been launched that aim at defining what level of debt is compatible with sustainable development. The first project analyzes what State's borrowing/investing decision is compatible with inter-generational fairness. The novelty is that the budget deficit decision is subject to a solvability constraint that limits total debt at 100% of the gross national product. Preliminary results suggest that, in order to achieve inter-generational fairness, a State should have a countra-cyclical deficit policy. The second project emphasizes the link between a country's debt and its assets. Indeed, it is very common to compare sovereign debt levels to gross domestic products

(GDPs) but this comparison is somehow misleading because GDPS are a flow variable while sovereign debt is a stock variable. In order to have a better understanding of the sustainable level of debt of a country, it is useful to compare it to another stock variable such as the amount of real assets held by the country. The present project focuses in particular on environmental assets and the so-called green debt. It aims at understanding what level of sustainable debt is acceptable to ensure at the same time appropriate investments in environmental assets (for example, in home improvements towards energy efficiency) and inter-generational fairness. Preliminary results suggest that one should expect a positive correlation between the level of debt and the level of environmental performance of a country.

Two empirical projects have also been launched to better understand the link between a State's borrowing capacity and financing costs on the one hand, and its ESG performance on the other hand. The idea is to study, both for developed and developing countries, whether and which ESG factors have an impact on a State's macroeconomic performance and repayment ability.

Discussions with the sponsors suggest that there is a pressing need to design objective methods to judge the extra-financial ratings of States. This would be very helpful for institutional investors and asset managers to alleviate the legitimacy issue they are facing when deciding to over- or under-invest in some countries for extra-financial reasons. The research projects undertaken by the Chaire FDIR will contribute to establishing better standards of extra-financial ratings for sovereign issuers.

3. Governance

The research project on governance has proved interesting results on board composition and performance, partly confirming early results of the literature on the negative or insignificant link between independence and performance in the Anglo-Saxon context. In particular, the negative relationship between board independence and performance tend to reflect the informational deficit that characterizes outside directors. In fact, as outsiders, independent directors must acquire and process substantial firm-specific information to be efficient in their advising and monitoring duties. When there are significant costs to acquire detailed knowledge of the firm's operating, financing, and investing activities (more opaque corporate information environment), independent directors are less effective in doing so, and so is their impact on firm performance.

To further explore the relationship between board composition and performance, a new research project is initiated focusing not only on independence but also on the expertise of directors. In fact, the role of expertise is to improve the capacity of directors to analyze information they receive and to better advise firms and managers on their strategic choices. Hence, expertise represents a quality guarantee for directors and is expected to play an important role for firm performance.

As a matter of fact, an increasing number of countries now require audit committee to be composed of financial experts. In the US, the Blue Ribbon Committee (1999) recommended that the NYSE and NASD should require large listed companies "to have an audit committee comprised of a minimum of three directors each of whom is financially literate (..) or becomes financially literate within a reasonable period of time after his or her appointment, and further that at least one member of the audit committee have an accounting or related financial management expertise". The Sarbanes-Oxley act (2002, sec.

407) also requires "each issuer to disclose whether or not, and if not the reasons there for, the audit committee of that issuer is comprised of at least one member who is a financial expert". In the UK, the Smith Committee report (2003) contains financial expertise recommendations similar to the Blue Ribbon Commission requirements (at least one member of the audit committee with a financial expertise). In France, similar texts have been adopted, translating European and French public regulation authorities (AMF) recommendations. In particular, according to the Executive Order of 8 December 2008 (transposing the European Directive 2006/43/EC), the composition of the audit committee is determined by the board of directors or supervisory board, it should not include any executive members, and "at least one member of the audit committee should have specific expertise in financial or accounting matters, and be independent according to specific criteria that are made public by the management or supervisory body". Note however that all these texts apply to the audit committee and not to the board composition in general.

To examine the relationship between board independence, expertise and firm performance, a new dataset has been constructed, gathering data on multiple sources of directors' expertise from Ethics & Boards, together with economic, financial and extra financial performance indicators (from Infinancials and Vigeo) on the largest French listed firms (SBF120) over the 2009-2011 period. The quality of directors is evaluated thanks to three main criteria: independence, expertise coming from their degrees or colleges (initial training) translating into 7 disciplines (science, economics, management, political science, law, literature and other fields); and expertise coming from the sector of activity.

Preliminary results show that two types of boards emerge: advising (experts-based) versus supervising (independent-based) boards. From this perspective, economic expertise is often used by independent directors to increase their monitoring ability over managers. Hence, independence and economic expertise tend to complement each other in order to reinforce the monitoring role of boards. However, there is also a trade-off between independence and sectoral expertise, showing that boards are either composed of sectoral experts (favoring the advising role of boards) or of outsiders (favoring the monitoring role of boards), but not of both independent and sectoral experts.

This project will be pursued in order to address a number of issues and better understand the interplay between independence and expertise. First, professional expertise will be considered (based on the professional trajectories of directors), in addition to sectoral or college-based (initial training) expertise. The role of specialized committees will also be investigated (in particular audit committees and CSR committees for instance).

4. Shareholder engagement

Many investors develop engagement approaches. The term "engagement" embeds a large diversity of practices from requesting ESG (Environmental, Social and Governance) information directly from companies to exercising shareholder rights to influence their practices, to long-term dialogue with management on sustainable development issues.

The annual survey conducted by AFG on the exercise of voting rights by asset management companies in 2011 reveals interesting trends on shareholder engagement and dialogue policy in France. First, there is a continued increase of the asset managers' participations to General Assembly Meetings (overall increase in participation was 20%, compared with 13% in 2010). Second, a sharp improvement of dialogue and quality of exchanges with issuers is observed. In particular, a growing number of companies are keeping asset managers informed of their draft resolutions. Third, “opposition” votes are no longer an exception, with capital dilution and board composition being the main reasons for “no” votes. Fourth, persistent regulatory and technical problems still restrict access to voting (some countries’ regulations make voting by asset managers more expensive and more complicated). And finally, institutional customers are increasingly questioning asset managers about their voting and the content of their voting policies.

SRI investors are increasingly becoming active owners through voting, dialogue and engagement practices with companies. The development and the increase in voting and dialogue policies hence raise a number of questions. How do SRI investors develop their engagement and dialogue policy? Is it interesting to collaborate with other shareholders? What is the link between shareholder engagement and traditional best-in-class policies?

To address these issues, researchers of the Chaire FDIR have initiated a survey on engagement practices comparing France and other European countries. The purpose of this study is both to examine the integration of shareholder engagement practices in investment funds and to analyze the relationship between the integration of ESG issues into investment funds and shareholder engagement practices. In particular, the objective of this project is to understand several aspects of shareholder engagement in France and abroad:

- Determinants and goals of shareholder engagement and dialogue policy (how do investors engage? With whom?)
- Nature of shareholder engagement and dialogue policy (dialogue with CEOs vs voting strategies, themes of engagement strategies, links with ESG integration)
- Success or failure of shareholder engagement and dialogue policy (key factors) and impact on ESG performance

A first sample of responses has already been collected in France and Spain. A second wave of responses will be searched in other European countries, provided that a collaboration for instance with the PRI can be put in place.

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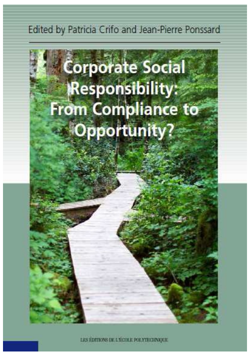
Communication of the Chaire FDIR achievements

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. Books

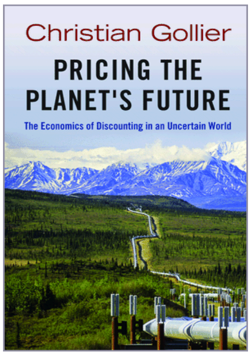
The chair has been involved in three books, one that came out in 2010, and two others in 2012 at Princeton University Press and at the Presses Universitaires de France.

Corporate Social Responsibility: from Compliance from opportunity (P. Crifo & J.-P. Ponssard eds, Editions de l'Ecole Polytechnique, 2010)



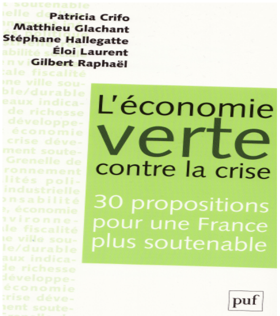
This book summarizes the chair's research output in four areas. i. what lessons can be drawn from the crisis in terms of governance and financial stability? ii. Where do we stand regarding the link between CSR and the financial performance of the firms? iii. How do firms manage new sectoral risks such as climate change, nutrition and health? iv. How and at what cost do firms interact with the communities with whom there are intermeshed in the developing world?

Pricing the Planet's Future : The Economics of Discounting in an uncertain world (Christian Gollier, Princeton University Press, 2012)



Many books have described how civilizations rise, flower and then fall. Underlying this observed dynamic are a myriad of individual and collective investment decisions affecting the accumulation of capital, the level of education, the preservation of the environment, infrastructure quality, legal systems, and the protection of property rights. This vast literature from Adam Smith's Wealth of Nations through Gregory Clark's Farewell to Alms to Jared Diamond's Collapse is retrospective and positive, examining the link between past actions and the actual collective destiny. In contrast, this book takes a prospective and normative view, analyzing the problem of investment project selection. Which projects should be implemented to maximize intergenerational welfare? The solution to this problem heavily relies on our understanding and beliefs about the dynamics of civilizations.
Life is full of investment decisions, trading off current sacrifices for a better future. This book examines the economic tools that are used to evaluate actions that entail costs and benefits that are scattered through time. These tools are useful to optimize the impacts of our investments both at the individual and collective levels. It presents the fundamental quantitative tools to evaluate the social responsibility of projects and companies.

Green economy against the crisis - 30 propositions for a sustainable French economy (P. Crifo, M. Glachant, S. Hallegatte, E. Laurent & G. Raphael, Presses Universitaires de France, 2012)



This book builds upon the observation that we are experiencing a sustainability crisis - that is a financial, social and ecological crisis. Because the environmental transition is by nature at the forefront of sustainability, it may guide us from one growth model to another. But we have to be realistic: environmental arguments will be heard only if they propose a strategy of recovery from the crisis. The strength of the green economy is to offer both a tactical alternative and a strategic vision against current problems.

Developing the green economy means using environmental constraints as engines of economic and human development of a country, by favoring economic activity and employment on the one hand, and improving welfare and reducing inequality on the other hand. Social justice, employment, re-industrialisation, globalisation: here are the real stakes of the green economy.

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

- The Fourth Joint WB/BIS Public Investors Conference, Washington, December 2012
- Plenary conference at the PRI-CBERN academic network conference, October 2012
- AFR Summer Institute of Macro-Finance, Hangzhou, June 2012
- Eighth International Conference on Renewable Resources and Biorefineries, Toulouse, June 2012
- Conference Climate Change Justice, Chicago, May 2012
- International Meeting on Experimental and Behavioral Economics, March 2012
- Comparative Analysis of Enterprise Data, Nuremberg, February 2012
- Alliance for Research on Corporate Social Responsibility (ARCS), Yale, February, 2012
- CSR workshop "Shaping the Future of CSR Research", Gent, January, 2012
- Fourth Joint WB/BIS Public Investors Conference, Washington, December 4, 2012
- Private Equity Forum, Paris, 2012
- European Association of Environmental and Resource Economists, Prague, 2012

Examples of workshops and seminars

- Environmental Economics and Policy Seminar, Kennedy School of Governance, Harvard, October 2012
- Intergovernmental Panel on Climate Change (IPCC) Working Group III - Mitigation of Climate Change (WG III), Lead Author Meeting, Wellington, March 2012

The presentations made during these workshops are available on the Chaire FDIR website at www.idei.fr/fdir.

3. Communication to finance practitioners

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.

List of recent meetings, workshops and conferences organized by the chaire FDIR
Workshops for the sponsors

- *Workshop « SRI in bond markets – Theory », October 2012*

. Christian Gollier (Toulouse School of Economics), "Dette souveraine : Quelle est la politique d'endettement socialement responsable ?";
. Stefan Ambec (Toulouse School of Economics), "Dette verte et développement durable".

- *Workshop « SRI in bond markets – Evidence », February 2012*

. Daniel Hann (DWS Investment GmbH – Deutsche Bank Gruppe), "Corporate Environmental Management and Credit Risk";
. Sudheer Chava (Georgia Institute of Technology), "Environmental Externalities and Cost of Capital";
. Bastien Drut (Amundi), "Some considerations about SRI in sovereign bonds".

- *Workshop « Governance and engagement », February 2012*

. Yuri Biondi (Ecole Polytechnique), « Gouvernance et comptabilité de l'entité entreprise »
. Céline Louche (Vlerick Leuven Gent Management School), « When CEOs and priests meet: religious organisation and their shareholder engagement practices »
. Antoine Reberioux (Université Paris Ouest Nanterre La Défense), « Composition du conseil d'administration et performance »

- *Workshop « Governance and engagement », July 2012*

. Vanina Forget (Ecole Polytechnique) « Engagement et valorisation de la performance non financière: le cas du capital-investissement »
. Daniela Laurel (HEC Paris et Politecnico di Milano) « Towards a Theory of Positive Governance: The Effects of Non-financial Voluntary Disclosure, Shareholder Activism, and Research on Performance in Socially Responsible Mutual Funds»
. Gwenael Roudaut (Ecole Polytechnique) « Expertise et indépendance des administrateurs : deux facteurs complémentaires ou substituables pour atteindre des performances durables au sein des entreprises ?»

The presentations made during these workshops are available on the Chaire FDIR website at www.idei.fr/fdir.

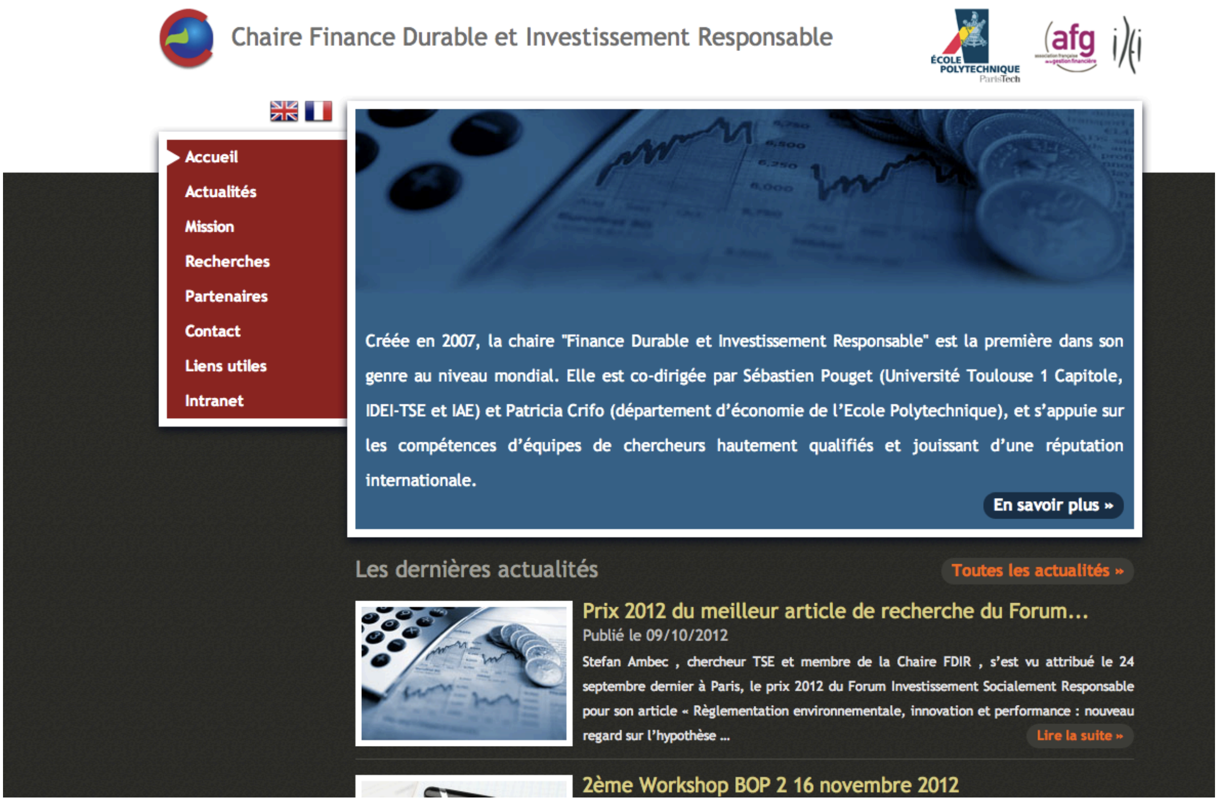
Public workshops

- Second Research Workshop "Sustainability & Impact Challenges at the BoP" in collaboration with ESSEC and HEC. November 16, 2012

4. Communication to the general public

The chair is visible on the Internet via its website (**http://www.idei.fr/fdir/**), summarizing in a user-friendly manner all the realizations of the chair's researchers since its inception in 2007. The website is meant both for internal use and external communication of the chair's achievements. Among other things, the website contains:

- All supporting documents to the workshops organized by the Chaire;
- The annual reports of the Chaire;
- A restricted access page that ensures effective communication between researchers and sponsors



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, a dozen of PhD students have been working on the important issues of the Chaire FDIR.

1. Courses

- 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 (24 h)
- Master in Environmental and Natural Resources Economics, Toulouse School of Economics: Finance and sustainable development (36 h)
- Master Ecoscience (Ecole Polytechnique): Economic growth and sustainability (50h)
- Master EDDEE (Ecole Polytechnique, Agro, Mines, Université Paris Ouest…): Corporate Social Responsibility (20h)
- Master DET (Univ. Paris Ouest Nanterre): Governance and Sustainable development (20h)

2. PhD Students

PhD students of the Chair FDIR in 2012 included:

- Yann Kervinio: Fairness in natural resources management, started in September 2011 (S. Ambec advisor)
- Loïc Berger: Essays on the Economics of Risk and Uncertainty, started September 2012 (C. Gollier advisor)
- Thomas André: BOP strategies and extra-financial performance, started in September 2011 (JP. Ponssard & P. Crifo advisors)
- Liviu Andronic: Extra-financial information and financial forecasts, started in September 2010 (S. Pouget advisor)
- Vassili Vergopoulos: Behavioral aspects of long-term investments, started 2010 (C. Gollier advisor)
- Claire-Marie Bono: Fiscal reforms under environmental constraints, started in 2009 (E. Challe advisor)
- Marco Heimann: Trust and socially responsible investments, started in September 2009 (S. Pouget advisor)
- Gwenael Roudaut: Governance and performance, started in september 2012 (P. Crifo advisor)
- Vanina Forget: Private equity and sustainable development, defense occurred in December 2012 (P. Crifo advisor)

Visibility of the chair

This section offers some examples of items that show the visibility of the Chaire FDIR.

- Best paper prize 2012 awarded by the French SIF (FIR) and the Principles for Responsible Investment (PRI) for an empirical article published in *Journal of Economics and Management Strategy*.

- Best PhD Thesis prize 2011 awarded by FIR-PRI for a PhD dissertation on the study of institutional change in the Socially Responsible Investment business.

- Keynote speech at the PRI-CBERN Academic Network Conference 2012 in Toronto on "Creating incentives that work in the long-term: aligning the interests of asset owners and asset managers"

- Publication by Princeton University Press of a book on "Pricing the Planet's Future: The Economics of Discounting in an Uncertain World".

- Keynote speech at the 21st congress of the Canadian Resource and Environmental Economics Study Group on "Discounting, inequalities and economic convergence".

- Members of the research center have been nominated of the prize of "best young economist in France" or have been Visiting Professor at the University of Princeton in charge of teaching investments and behavioral finance courses.

- Many publications in prestigious academic journals including *Review of Economic Studies*, *Journal of Economic and Management Strategy* and *Journal of Business Ethics*.

- Many conferences with an international audience are also organized by the Chaire FDIR including the workshop on the "Economics of Climate Change" in Paris and the "Behavioural Environmental Economics" conference in Toulouse.

• The researchers of the Chaire FDIR are collaborating with various people at international institutions including the European Centre for Corporate Engagement (ECCE) at Maastricht University, Princeton University, the OCDE, Harvard University, University of Maryland, and HEC Montréal.

***** Institut Louis Bachelier Research Review dedicated to the Chaire FDIR's research.**

Both in French and in English, this research review is directed towards the general interested public. The last special edition was entitled "Making Finance Serve Society" has been realized based on articles of the Chaire FDIR research team by Stefan Ambec, Edouard Challe, Patricia Crifo, Christian Gollier, Sylvaine Poret and Jean Tirole.

A second special edition of Institut Louis Bachelier Research Review for the Chaire FDIR will come out **in the first semester of 2013**.

Scorecard of research projects

Theme	Projects	Advancement
The definition, measure and impact on performance of CSR	Measure and impact of CSR in French firms: *Crifo, Diaye & Pekovic* The rationale for CSR and SRI: *Tirole* The factors that affect the valuation of CSR including risk and ambiguity: *Gollier, Treich* Evaluating Porter hypothesis: *Ambec*	Several working papers, several published articles, 1 PhD in progress, to be defended in October 2012
The nature of the demand for SRI	Similarity in Values and the Perceived Trustworthiness Of Investment Funds: *Heimann, Pouget* Analysis of strategic competition between labels in the domain of sustainable development, including SRI : *Ponssard , Hobeika and Poret*	Several working papers, several published articles, 1 PhD in progress
The means to induce firms to reduce externalities	Standards, norms, GMOS in the agri-food sector: *Giraud-Heraud* Investing for Change: Profit from Responsible Investments: *Landier* Asset pricing and Corporate Behavior with SRI: *Gollier, Pouget* Public regulations and innovation : an analysis of the Porter hypothesis in the food sector: *Ponssard, Giraud Heraud and Sinclair Desgagné*	5 articles in progress, 1 PhD defended in June 2010 1 book published
Bond markets and SRI	ESG and sovereign bond market: *Crifo, Pouget* The term structure of interest rates with environmental risk: *Gollier* On the sustainable level of sovereign debt: *Ambec*	1 article, 1 working paper

The relevant ESG indicators	What type of ESG policy mix is valued by investors*: Crifo, Cavaco, Diaye & Pekovic* The value of life-threatening externalities: *Treich* The value of environmental externalities: *Gollier*	1 working paper, 2 articles in progress, several published papers

The engagement of investors towards firms	Governance and board composition (independence and expertise): *Crifo, Challe, Cavaco, Reberioux, Roudaut* The business case for SRI private equity: *Crifo, Forget & Teyssier*, *Gollier, Pouget*	5 articles in progress, 1 PhD started in September 2012
BOP and long term growth activities	BOP: *Andre*	1 PhD starting in late 2011
The governance and SRI policies of institutional investors	Financial market short-termism and the mandates of SRI fund managers: *Casamatta, Pouget*	1 Working Paper