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Exploring the Role of Instruments in the Transformation of Logics: The Case of Socially Responsible Investment

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This is a working paper.

All comments and suggestions are very welcome.

Abstract

The purpose of this article is to explore the role of instruments in the transformation of institutional logics and their associated practices at the micro level. Based on an ethnographic study, this article compares two working groups — one responsible for equity and the other for fixed-income investments — in an asset management company attempting to integrate new demands for socially responsible investment (SRI). These two working groups both sought to change their investment processes through the introduction of

new calculative devices. The equity group was perceived to be more successful than the fixed-income group in introducing SRI because of its greater ability to fabricate calculative devices capable of mediating between financial returns and social responsibility. Elaborating on these findings, the article argues that instruments can effect institutional change when actors come to believe that available instruments are sufficiently flexible and incomplete to act as "mediating instruments" between practice and institutional change.

Key words: Equity Investment – Fixed-Income Investment – Institutional Logics – Mediating Instruments – Socially Responsible Investment

Introduction

Instruments of accounting matter. Accountants have long been interested in the "interplay between ways of calculating and ways of managing social and organizational life" (Hopwood & Miller, 1994, p. 1). The concepts of institutional logics, practices, and instruments are all widely used in accounting. Yet there has been little research on the mechanisms by which, and the conditions under which, instruments can mediate the transformation of institutional logics and their associated practices, especially at the micro level (Cloutier & Langley, 2013; Ezzamel, Robson, & Stapleton, 2012; Jones, Boxenbaum, & Anthony, 2013). This is surprising, especially since accountants are acutely aware of the mediating role of instruments, such as auditing standards and technology roadmaps, in framing practices in their institutional environment (e.g., Mennicken, 2008; Miller & O'Leary, 2007). Scholarship on institutional logics has centered on practice variation as a basis of transformation (Smets, Morris, & Greenwood, 2012; Thornton, Ocasio, & Lounsbury, 2012). However, researchers have almost entirely neglected the role of instruments as a vehicle to enable these practice variations. Part of the problem is that they have not engaged with developments in accounting theory that have pointed to the role of accounts and accounting instruments in creating the classificatory and evaluative media through which practice changes are effected.

This article addresses the role played by instruments such as financial models and financial criteria — so-called calculative devices (Callon & Muniesa, 2005) — in the transformation of the logic and practices of the asset management industry, following the emergence of new demands for socially responsible investment (SRI). For an industry, a logic consists of the "identities and valuation orders that structure the decision making and the practices of the players in a product market" (Thornton & Ocasio, 1999, p. 805). Examining these mechanisms is central to understanding how institutional change is facilitated or hindered in an environment where calculative devices are so fundamental (MacKenzie, 2011). It is also necessary in order to understand the decisive role played by accounting in institutional change. Miller and Power (2013, p. 592) have argued that accounting is a "variable *bearer* of potential institutional logics providing the mechanism for their realization and expression at the organizational level."

The term socially responsible investment refers to the incorporation of non-financial criteria, such as carbon emissions or human rights indicators, into investment processes, with the aim of generating better financial performance and restoring a long-term perspective to asset management. SRI involves a

transformation of the financial logic that underlies the practices of asset management. Based on a three-year ethnographic study, using participative observation, semi-structured interviews, and documentary evidence, this article compares how two working groups in an asset management company redesigned their equity and fixed-income investment processes by transforming their calculative devices to integrate SRI demands. A central concern is the question of the role of these devices in explaining why SRI was apparently better integrated in the equity investment processes than in the fixed-income versions. To date, little research has explicitly examined whether and why demands for SRI shape the practices used for different types of products within the industry in different ways.

This article explores the role of instruments in the transformation of the institutional logic of the asset management industry and its associated practices at the micro level. It specifically seeks to identify the *mechanisms* through which a change in institutional logic is instituted, and how the logic, practices, and instruments mobilized by actors within an organization are bound together in a recursive relationship. The article also analyzes how institutional and practice change are effected through the transformation of instruments that mediate the relationships between the logic and its associated practices (Kurunmäki & Miller, 2011; Miller & O'Leary, 2007; Miller & Power, 2013).

The second aim of the current research is to establish the *conditions* that make the co-transformation of the logic, practices, and instruments possible. The article shows that actors' perceptions of a lack of appropriate instruments may impede institutional change by preventing the available instruments from serving as mediating instruments, which are instruments that mediate between arenas and actors (Miller & O'Leary, 2007, p. 702). This article argues that actors' beliefs in the *flexibility* and *incompleteness* of the instruments in use help explain institutional and practice change by facilitating collective work and the generation of new knowledge that together enrich previous practices. Within the same industry, different categories of products are therefore amenable to institutional change to differing extents owing to the specificity of instruments in use and their associated "clusters of evaluation practices" (MacKenzie, 2011, p. 1783).

The next section describes the theoretical context, and is followed by sections detailing the research setting and methods. The study moves on to present the empirical segment that summarizes developments in the two working groups as they responded to pressures to incorporate SRI. The following section then analyzes those different developments. The study concludes by reflecting upon the

implications of the findings for theorizing the role of instruments in the transformation of logics and practices.

Theoretical background

The role of instruments in mediating practice and institutional change

Accounting scholars have long referenced both practice and institutional theories to study accounting change. Two decades ago, Hopwood and Miller considered accounting to be a "social and institutional practice." (1994). Since then, several researchers have attempted to conceptualize the role of accounting in mediating the relationships between practice and institutional change (e.g., Abernethy & Chua, 1996; Burns & Scapens, 2000; Dambrin, Lambert, & Sponem, 2007; Dillard, Rigsby, & Goodman, 2004; Hopper & Major, 2007).

Previous research has demonstrated that accounting, institutional, and practice change are mutually connected through two relationships. First, accounting instruments and practices are influenced by both institutional and other practice elements. Abernethy and Chua (1996), for instance, argued that both the institutional environment and the strategic choices of actors influence the design of organizations' control packages. In a similar vein, Guerreiro, Rodrigues and Craig (2012) demonstrated that institutional pressures influenced decisions to voluntarily adopt International Financial Reporting Standards. Lander, Koene and Linssen (2013) explored the strategic responses adopted by mid-tier accounting firms when faced with conflicting trustee and commercial logics. They revealed a process of "blending experimentation" in which actors combined different elements of multiple logics.

Second, researchers have found that when accounting practices and instruments are transformed, other organizational practices, and indeed even the whole field and its associated logics, are often transformed too. Oakes, Townley and Cooper (1998) studied how the mechanisms of control involved in business planning processes transformed the identity of producers by changing the capital of a field. Ahrens and Chapman (2007) showed how management control systems both shaped and were shaped by shared norms and understandings, which institutional theorists would refer to as *logics*. Lastly, Ezzamel et al. (2012) studied the sources of practice variation in institutional change by exploring the introduction of new accounting practices. They notably argued that budgeting technologies contributed to institutional change by providing new tools for cognition, stating "budgeting was not a neutral technology of representation within the field: budgeting both represents and intervenes" (Ezzamel et al., 2012, p. 19).

The above studies show that accounting scholars have demonstrated the essential mediating function of instruments — such as accounting standards and financial criteria — in the transformation of practices in relation to their institutional environments. In their historical overview of the discipline, Miller and Power (2013) identified this *mediating* role as being one of the four key functions of accounting. Summarizing these relationships, Miller and O'Leary (2007) coined the concept of "mediating instruments" that "operate as both means of representation and means of intervention, connecting with, yet remaining distinct from the object of intervention" (Kurunmäki & Miller, 2011, p. 222). Miller and O'Leary (2007) showed how Moore's law and technology roadmaps acted as mediating instruments by helping to link a multitude of actors and domains to protect future markets in the microprocessor industry. This relationship has also been studied in other fields, such as auditing (Mennicken, 2008) and education (Ezzamel et al., 2012).

Scholars of the sociology of science and social studies of finance have sought to explain this mediating role of instruments by asserting that instruments have performative functions (e.g., Callon, 1998; Vollmer, Mennicken, & Preda, 2009). The concept of performativity explains how instruments have the capacity "to transform transaction forms, rules and objects" (Vollmer et al., 2009) or to prevent change by reinforcing existing logics. Central to this role are the "interrelated issues of calculation, calculative agency and the conditions under which the latter arise" (Miller & O'Leary, 2007, p. 710). According to Callon (1998), calculation and agency are two sides of the same coin, and calculativeness could not exist without calculative devices. Calculative devices include analytical tools and techniques such as equations, financial models, and criteria that help actors engage in decision making (Callon & Muniesa, 2005; Preda, 2009).

Specifically, MacKenzie (2011) showed that the "clusters of evaluation practices" associated with calculative devices (a concept loosely analogous to Knorr-Cetina's "epistemic cultures" (Knorr-Cetina, 1999, p. 1783)) sustain distinctive ontologies (distinctive presuppositions about the nature and properties of the features and processes of the economic world) even when the types of products are very similar, such as ABSs and CDOs[1]. He suggested that clusters of evaluation practices are path-dependent and that the interactions between them and the ways in which they become organizational routines contribute to explaining major institutional events, such as the 2008 financial crisis. In doing so, MacKenzie reminded us that the relationships between actors and their instruments are expected to be at least as important as the relationships within and between organizations and their institutional environments. However, few

[1] ABSs (asset-backed securities, most importantly mortgage-backed securities) and CDOs (collateralized debt obligations).

studies have explored the mechanisms through which instruments can play a mediating role in institutional transformation, and the conditions under which the mediating role of instruments is possible, especially at the micro level. According to Jones et al. (2013, p. 69), we need to better theorize the role of instruments in the transformation of logics in order to understand how different logics and practices become anchored in organizations.

Theorizing the relationships between logics, practices and instruments: the challenge of disentanglement

A number of scholars have pointed to the centrality of practice change as a basis of institutional transformation (e.g., Jones et al., 2013; Lounsbury, 2008; Smets et al., 2012; Thornton et al., 2012; Weick, Sutcliffe, & Obstfeld, 2005). Smets et al. (2012) developed an important model of practice-driven institutional change, providing key insights into how institutional change can emerge from the routine activities of individuals. Although the authors acknowledged the *material* dimension of practices (p.879), their model included no material element and did not delve into the role of instruments.

One explanation for this lack of theorization is the inherent difficulty of disentangling the relationships between logics, instruments, and practices. Jarzabkowski (2008, p. 623) explained that logics "are instantiated and adapted in the daily lives of individuals". Powell and Colyvas (2008, p. 276) similarly argued that "institutional logics are instantiated in and carried by individuals through their actions, tools and technologies." Yet, it is essential to avoid conflating practices, logics, and instruments. Indeed, while logics are instantiated at the practice level, it is most important to remember that logics refer to guiding principles underlying the practices of a field (Thornton et al., 2012) while practices relate to the actual patterns of activities enacted by actors in their work (Schatzki, 2001, p. 2). While no institutional change can occur at the field level without a change in the enactment of logics at the practice level, this does not mean that logics and practices are interchangeable constructs. Instruments enable the evaluation and valuation of practices (the latter term referring to the attribution of value). They both classify and signify the world (Kjellberg & Mallard, 2013). Just as there is an indeterminate relationship between a logic and a set of practices, such that practices both enact and produce logics, so instruments are both vehicles by which practices are represented and produced, both a "means of representation and means of intervention" (Kurunmäki & Miller, 2011, p. 222).

Our goal should be to understand how instruments are both deployed to represent an institutional logic, yet are also variably productive of the logic, the world of practice, and the objects through which that practice and logic are effected. Several researchers have attempted to theorize the relationships between logics, practices, and instruments. There are, however, few empirical examples of the calculative

practices of actors at work (Beunza & Stark, 2004; Kalthoff, 2005). For instance, Kaghan and Lounsbury reported how institutional logics shape how instruments "are constructed, used and understood" (Kaghan & Lounsbury, 2005, p. 260), but not how instruments could influence the understanding and transformation of logics. Friedland (2013) acknowledged this recursive relationship, but neither he accounted for the mechanisms through which it could occur, nor did he offer empirical analysis. Ezzamel et al. (2012) went further, exploring how new institutional logics were relayed by accounting technologies at the field level, which then triggered new organizational practices. However, the study does not explain "the way that budgeting, as a technology of 'representation', has created the conditions through which these tensions have been played" (Ezzamel et al., 2012, p. 19). As Miller and O'Leary (2007, p. 701) explained:

> The term "institution" is a convenient shorthand for designating the ways in which the beliefs of actors in persistent technological change become routine and taken for granted (MacKenzie, 1996, p. 58). But we need a fuller understanding of how this process of "embedding" is achieved, what practices or instruments help link the actions and expectations of actors across formally separate and diverse domains.

This article aims to address this concern by, as Nicolini (2009) put it, "zooming in" on the transformation of an industry logic and its associated practices and instruments within an organization. Drawing on the concept of mediating instruments (Miller & O'Leary, 2007), this article explores *how* and *why* instruments — specifically calculative devices — both triggered and prevented the transformation of practices associated with two different types of products, equity and fixed-income funds, following demands for socially responsible investment.

Research context

Socially responsible investment is still evolving. For the purposes of this study, SRI is defined as the integration of environmental, social, and governance (ESG) criteria into investment decisions in the belief that this will generate better long-term financial performance and contribute to propelling financial markets toward sustainability. In France, most asset managers adopt a best-in-class approach, which consists of selecting the most socially responsible and financially interesting companies, irrespective of their industry, so armaments manufacturers or alcohol producers can be included in an SRI portfolio, if they are among the most socially responsible firms in their segment.

During the period covered by the study, an increasing number of French asset management companies were facing growing client demands for SRI, who hoped to achieve better long-term financial performance and increase the legitimacy of their investors in the eyes of society (Arjaliès, 2010). At the end of 2009, an estimated 90% of assets under management by conventional funds included at least one ESG criterion, compared with 61% at the end of 2008 and 3% at the end of 2007 (Novethic, 2010). In contrast, purely SRI funds represented only 3% of total assets.

Despite this growth, the positive relationship between SRI and financial performance had yet to be demonstrated, and asset managers were finding it difficult to achieve optimal financial and SRI performance simultaneously.[2] Asset managers often perceived the new demands for SRI as contradictory to the financial logic of the industry. Strongly anchored in market capitalism, asset managers were said to be rational and fixated on maximizing wealth (Von Neumann & Morgenstern, 2007), aiming to increase profits by optimizing risk and return and effectively being guided by economic theories, such as portfolio theory for equity investment and the yield curve for fixed-income investment (Laurel, 2013). The key features of the financial logic that dominated the asset management industry are summarized in Table 1. SRI imposed non-financial constraints on investment decisions, and was often judged to be detrimental to financial performance. In addition, no public organization, including the national stock market's regulatory body, controlled the SRI content of SRI funds. Consequently, any asset management company could claim that its funds were socially responsible. The resulting multiple competing claims served only to increase the confusion among clients about what was and was not SRI (see Appendix A for information on the definition of an SRI fund).

Insert Table 1 about here

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[2] The 2007 UNEP-FI report "Demystifying Responsible Investment Performance" reviews the 20 most influential studies on the relationship between SRI and financial performance without reaching any firm conclusions. The AP7 report, published in 2011, analyzed 21 academic studies published after UNEP-FI's report and confirms the absence of any systematic relationship, whether positive, negative, or neutral.

Against this background, SRI Invest[3], a small asset management subsidiary of one of the largest French mutual insurance companies, with EUR 2 billion under management, found itself in an awkward predicament in 2007. Despite specializing in SRI since 1997, its SRI funds were judged old-fashioned by the consultants paid by institutional investors to select the best asset management companies to be invited to tender for investment. Its integration of ESG criteria into investment processes was deemed too superficial and simplistic, and accordingly its fees for active management[4] were considered unjustifiably high. Furthermore, SRI Invest found it difficult to demonstrate the added value of its funds over those of its competitors, both in terms of financial and SRI performance. The company therefore had little chance of receiving invitations to tender and its survival was under threat.

A new CEO with more than 40 years' experience in asset management was hired to redesign the company's two main practices: equity and fixed-income investment processes (both incorporating SRI). An equity investment process is the buying, holding, and selling of shares on a stock market in anticipation of income in the form of dividends and gains on subsequent sales as the value of the stock rises. A fixed-income investment process, in contrast, consists of lending money to a borrower for a certain period of time in exchange for interest (also known as debt management).[5] These differences will be further outlined below.

To redesign the investment processes, the CEO launched two working groups, one for each type of investment. Each group was composed of representatives from the sales (two project managers), asset management (two asset managers and one financial analyst), and SRI departments (three SRI analysts); only the asset managers were different in the two groups. The goal of each working group was to redesign investment processes in order to meet the new demands for SRI while maintaining good financial performance. Figure 1 shows the organizational chart of SRI Invest.

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[3] SRI Invest is a pseudonym.

[4] Active management refers to a portfolio management strategy in which the manager aims to outperform his/her benchmark index.

[5] This article focuses on the managers of investment-grade fixed-income assets. A security is considered to be investment-grade if it has an S&P rating of BBB- or higher, a Moody's rating of Baa3 or higher, a Fitch rating of BBB- or higher, or if it has the equivalent minimum rating from another nationally recognized credit rating agency. Fixed-income securities that are below investment-grade are often referred to as "junk bonds." The fixed-income managers under study in the article invest in both corporate and sovereign bonds.

Insert Figure 1 about here

Research methods

Research design

Given the research objective of identifying and understanding practice "as it happens" (Schatzki, 2005), an ethnographic approach seemed especially appropriate. As such, I embarked on a three-year project placement with SRI Invest. From May 2006 to May 2009, I worked as an SRI analyst and was allowed to use the data I collected for academic purposes. My involvement with this company took the form of a doctoral agreement between SRI Invest, my university, and myself, under the control of the French Ministry of Research.[6] Given my dual status as a Ph.D. student and an SRI analyst, my role was twofold: to provide SRI analysis of the sectors I was responsible for, and to report on my research to both the company and my university. This study was part of a broader industry-wide research project examining whether and how the financial logic of the French asset management industry was changing following the growing demand for SRI. The broader industry-level study revealed that most asset management companies were in the same situation as SRI Invest, although SRI Invest began redesigning its funds later than its competitors. Throughout the research, three main types of data sources were used: participative observation, interviews, and documentary evidence.

Data sources

[6] Known as a CIFRE (Industrial Contracts for Training through Research).

Participative observation. I visited the company almost every day during two and a half years of my research contract (2006–2009) (six months were dedicated to the writing of my Ph.D.). As an SRI analyst, I analyzed two sectors — financial services and utilities — using the calculative devices of each type of investment on a daily basis. I attended all the meetings of both working groups and also gleaned information from informal situations like coffee and lunch breaks. I spoke regularly at the meetings, together with the other SRI analysts. For instance, I explained the potential effects of asset managers' suggestions on the analysis of SRI in my own two sectors. Following a reflexive ethnographic approach (Whyte, 1943), I kept a detailed diary describing the main events of each day spent at SRI Invest. The final diary comprised hundreds of pages of notes. In order to gain insights at the industry level, I also took part in think tank events, working groups, SRI roadshows, conferences, and business meetings with consultants, agencies, and brokers, attending nearly 40 formal events per year. These formal meetings were complemented by many informal discussions with various industry actors.

Semi-structured interviews. In May 2006, I conducted initial interviews with most company members to get a better understanding of the firm's asset management operations. In February and March 2009, I conducted interviews lasting between one and two hours with all members of the two working groups and the Director of Support Functions. All 2009 interviews were recorded and transcribed verbatim. All actors were asked to explain their feelings, their understanding of the situation, how the redesign took place in practice, why they acted in a certain way, how they interpreted the reactions of other group members, and if they thought the redesign was right. At the end of each interview, they were asked if they considered the redesign successful and why, and which key events they remembered. To complement this insider perspective (Schotter, 2010), I conducted over 40 interviews across the industry from July 2007 to March 2009. These included interviews with five asset management companies, four financial institutions, two brokers, two trade unions, four consultants, one trade association, two NGOs, one pension fund, one think tank, and five social rating agencies. The purpose of using a cross-level design (i.e., practice and field levels) (Thornton et al., 2012, p. 185) was to be sure that the financial logic studied at the working group level was a good reflection of the institutional logic in the field.

Documents and secondary evidence. I collected and scrutinized large volumes of data, including minutes of meetings, e-mails, calculative devices, and presentations of processes to clients. My analysis also included documents and secondary sources at the industry level, including trade association surveys, professional reports (by consultants, asset managers, brokers, and social rating agencies), NGO studies, newspapers, newsletters, and websites. Further details are provided in Appendices B and C.

Data analysis

The study followed an abductive process of going back and forth between the data, the literature, and the company (Dewey, 1938; Lorino, Tricard, & Clot, 2011; Lukka & Modell, 2010). For instance, conducting interviews at the industry level soon revealed that other firms were experiencing similar issues to SRI Invest. This revelation triggered my curiosity regarding the reasons for these problems and I regularly referred to them during meetings, in e-mails, and in informal discussions, systematically asking participants for their interpretations.

In the course of the process, I developed an "emerging coding" system (Strauss & Corbin, 1998). Specifically codes emerged from the collected data, in this case "lack of ESG criteria," "financial performance," "client demands," and so on. Each e-mail and document collected (between five and 20 e-mails per day and five documents per week in all) was categorized accordingly. The same coding was used for the industry-level interviews, which helped me to refine my categories. For instance, I asked social rating agencies and brokers whether they encountered difficulties with fixed-income investment. I also discussed issues with SRI analysts in other asset management companies to ascertain whether they were having the same problems. Five months after the working groups were launched, I started to piece together the work done from my notes, e-mails, and documents to see how the different problems emerged. These results were triangulated with industry-level data to identify which problems were specific to SRI Invest and which were more broadly applicable to the industry as a whole. I also thoroughly examined the calculative devices (mainly Excel files and databases) available in the company to see whether the asset managers' complaints about ESG criteria were justified. In order to validate these findings, ten months after the working groups were disbanded I interviewed all the people who had been members of both groups and convened a collective meeting to reflect on what had happened. Before the interviews and meeting, each interviewee read a draft of an earlier version of this paper provided as a discussion aid. I also discussed my research findings with other practitioners at the industry level. I maintained an informal dialogue with several key members of SRI Invest until we reached consensus on the findings and no alternative explanations were being suggested. This point was reached at the beginning of January 2010. My main concern throughout was to account for how and why the financial logic instantiated within the two types of products had (not) been transformed.

While ethnographic research has been used before in social studies of finance (Vollmer et al., 2009), one potential concern is that the researcher may unconsciously guide the research process, introducing a bias toward the expected findings. This study attempted to overcome such bias by inviting continuous critical feedback from both practitioners and researchers and triangulating the different sources of data. Given the length of the research period and the wide-ranging array of interviews, observations, documents, and secondary data, I was able to obtain rich contextual detail.

Case study

Equity working group

The first working group meeting relating to equity investment took place in September 2007 and was chaired by the Director of Sales and SRI. The investment process had not changed for ten years and consisted of three stages: first, SRI grades provided by two social rating agencies were used to draw up a ranking of companies based on their ESG performance; second, SRI analysts conducted further analysis on all the shortlisted companies; third, asset managers selected companies for the portfolios so as to ensure that the fund's SRI grade (obtained by adding each company's grade) was above average.

The sales representatives were convinced that the consultants' criticism of the firm's SRI funds was solely due to miscommunication. As such, they asked the asset managers and SRI analysts to give a more detailed description of their work by providing written assessments for 300 companies. Each assessment included a one-page explanation of the SRI grades, which were based on hundreds of ESG and financial criteria together with the SRI analysts' and asset managers' own professional opinions. The analysts and asset managers were unhappy with this request, which would be extremely time-consuming to fulfill. They believed the problem lay not in miscommunication, but in the selection of companies. Working group discussions were heated: the Director of Sales and SRI interpreted the SRI analysts' and asset managers' reluctance as a refusal to work, and the analysts and asset managers felt the Director did not understand SRI.

Despite this disagreement, the working group tried, over a period of several weeks, to design PowerPoint presentations describing the various stages of the investment process. It also worked on the content of the one-page assessment. This brought up a number of questions regarding the process of selecting companies, such as which ESG criteria should be selected for each sector, and what balance should be struck between ESG and financial criteria. Two months after the launch of the working groups, three people from the three different departments (sales, SRI, and asset management) began to discuss these questions informally before deciding to seek a solution together and unofficially assume the leadership of the working group. They carefully studied what competitors were doing and compared this with the funds run by SRI Invest. The limitations of SRI Invest's funds became clear: the asset manager lacked room to maneuver when selecting companies and the ESG criteria were too simplistic. Moreover, no company was excluded merely for SRI reasons, although "SRI selectivity," the performance criterion that assessed the proportion of companies excluded for SRI reasons, was deemed very important by clients. The purpose of the working group now became twofold: to give the asset manager more freedom in company selection by loosening the SRI constraint, and to increase funds' SRI selectivity. Since many companies deemed financially sound were considered "SRI laggards" and vice versa, the main challenge was to reach high SRI selectivity without endangering financial performance.

At every meeting, each department put forward new ideas to the other two departments. In response to these ideas, the departments worked together on proposals that could meet the requirements of them all, and gradually, a new way of selecting companies was developed. Meanwhile, the working group looked at how other asset management companies were identifying investment opportunities. Between meetings, the sales department incorporated the new proposals into its PowerPoint presentations of the investment processes and submitted them to clients and consultants for feedback.

Throughout this process, the SRI analysts and asset managers worked on new ESG criteria that they believed would influence financial performance. They reduced the weighting of ESG criteria they considered less important for the long-term survival of companies, such as donations to charity. They closely studied companies with contradictory financial and SRI profiles. They wanted to find out whether ESG criteria provided information that the market did not incorporate, or whether ESG criteria were meaningless in business terms. For this purpose, they developed a database of SRI grades and translated their own financial and SRI knowledge of companies into grades in order to test the relationship between SRI and financial performance with an econometric approach. This gave rise to a "decision matrix" method that compared the SRI and financial rankings of each company (see Figure 2).

Insert Figure 2 about here

The existing SRI grade in the portfolio was replaced by the profile defined under this matrix in order to favor companies with the best combinations of SRI and financial profiles. Companies considered laggards in both finance and SRI terms would therefore be excluded from the portfolio. Depending on their position in the matrix, other companies would be over, equally, or underrepresented in portfolios compared to their benchmark indices (i.e., DJ Eurostoxx 300). Five months after the launch of the working group, a new investment process had been redesigned on paper (see Figure 3). As ESG criteria had been reframed in terms of financial performance requirements, this new process was deemed appropriate to meet both SRI and financial demands.

Insert Figure 3 about here

Nevertheless, SRI Invest needed clearance from the French financial authorities before it could implement the new investment process. It also needed to test the investment process on fictitious portfolios to determine the tracking error.[7] Over a four-month period, the working group continued to meet weekly to discuss the results of these tests. Meanwhile, all staff behaved as though the new investment process was already in place. The SRI analysts and asset managers assessed companies using their new criteria and matrix. In May 2008, SRI Invest received clearance and the tests were declared successful. The asset manager began to implement the new investment process for existing portfolios, which involved divesting and reallocating assets. Only a few weeks later, however, difficulties appeared concerning SRI selectivity. Too many companies with a good financial profile were being excluded for SRI reasons, endangering financial performance by significantly reducing the investment universe. Asset

[7] Measure of how closely a portfolio follows the index to which it is benchmarked.

managers had an obligation to respect the risk/diversification ratios inherent in constructing an optimal portfolio when selecting companies.[8] Consequently, the SRI analysts and asset managers decided to reduce the proportion of companies excluded for SRI reasons alone (i.e., companies belonging to the "laggards" category), first to 40% and then to as low as 25%. Ten months after its launch, the working group was officially disbanded and the new investment process was deemed successful. This meant that the fund process was considered "good" compared to its peers and that the integration of ESG criteria generated adequate financial and SRI performance to justify added value, in comparison to other actively managed funds.

Fixed-income working group

In the fixed-income working group, the selection of companies and public issuers followed a three-stage process. First, an SRI ranking was obtained by compiling SRI grades issued by two social rating agencies: one SRI ranking for OECD countries and one SRI ranking for companies belonging to the DJ Eurostoxx 600 index (the same analysis was used for equity investment); then, asset managers selected issuers according to their financial criteria; and thirdly, SRI analysts ensured that the portfolio's overall SRI grade was above average, regardless of whether there were sovereign or corporate bonds. Since asset managers could also select companies that did not belong to the index, SRI analysts could not assess all companies included in the portfolio.

During the first working group meeting, each department submitted its ideas to the other two departments. The sales representatives admitted they had few ideas. They had studied what competitors were doing and none seemed to be using a different investment process. However, they urged the other two departments to find a way to meet the growing client demand for SRI funds. The SRI analysts acknowledged their lack of experience in fixed-income investment but were keen to redesign the whole investment process in order to attain high SRI selectivity. The asset manager was against this idea, arguing that strengthening reference to ESG criteria would jeopardize the funds' financial performance.

[8] In theory, it is possible to construct an "efficient frontier" of optimal portfolios offering the maximum possible expected return for a given level of risk. A key principle of this theory is holding a diversified portfolio of assets in order to reduce the exposure to individual asset risk. Excluding companies for SRI reasons threatens this diversification by reducing the investment universe.

For weeks, the working group could not agree on what should be done. Two months after its first meeting, an SRI analyst and a sales representative decided to work informally on a new investment process. Believing that the SRI grade did not significantly influence the investment process, they asked the asset manager to change his way of selecting issuers to rely more on SRI grades. The asset manager responded that the request was unrealistic, adding that fixed-income investment was far more complicated than equity investment and that SRI analysts, lacking a financial background, could not understand the potential threat ESG criteria posed to financial performance. The SRI analyst and the sales representative felt that the asset manager had a condescending attitude. One month later, the working group became deadlocked and the asset manager refused to attend any further meetings.

The sales representative and SRI analyst continued to work on the investment process, focusing on increasing SRI selectivity. After a few weeks, they had ideas for new ESG criteria but could not test them in practice. They realized that they did not know how the asset manager's selection process worked. Once again, they analyzed competitors' practices and clients' demands, but the whole industry seemed to be in the same situation: nobody really knew what SRI should consist of. Discouraged by this lack of consensus, they abandoned the search.

Five months after the launch of the working group, SRI Invest found itself in a predicament. Its very survival was threatened by the 2008 financial crisis. The SRI equity funds had lost almost half of their assets, which meant a 50% decrease in the company's revenues. It was now imperative to redesign fixed-income funds to meet the new invitations to tender that consequently favored fixed-income at the expense of equity investment. The CEO decided to re-launch the working group. He organized a brainstorming session during which all actors were required to contribute ideas, however extreme. The SRI analyst and sales representative who had been most active previously made several suggestions: 1) to change the SRI ranking of companies in the same way as the equity investment group; 2) to add new ESG criteria to the SRI ranking used for countries, and reframe it in a sector approach encompassing developed versus less developed countries; 3) to oblige asset managers to invest at least 70% of fund assets in companies assessed by SRI analysts; and 4) to exclude all issuers ranked as "SRI laggards." The asset manager agreed with the first three proposals, but was strongly opposed to the last because he felt it would endanger financial performance. The SRI analysts openly complained about the redesign project, saying that financial performance was clearly being favored over SRI selectivity. The atmosphere became very tense.

The CEO did not want to endanger financial performance and asked the SRI analysts to find a better solution before adjourning the meeting and scheduling another for three days later.

At the next meeting, an SRI analyst put forward a solution inspired by the "prudent mean" rules developed in the nineteenth century to limit the power of large shareholders in US corporations. It consisted of limiting the proportion of assets from a single issuer according to its SRI ranking (see Figure 4). Issuers with the best SRI grades (referred to as category M1) had to make up at least X% of the portfolio's assets, while the proportion of other issuers was limited. For instance, issuers from category Q1 could not make up more than Y%. This was a way to favor issuers with the best SRI profiles without excluding issuers with bad SRI profiles. Opinions differed as to the proportions, but everybody approved of the process. One month later, a new process had been redesigned on paper, ready for the asset manager to implement the following month.

Insert Figure 4 about here

Nine months after the working group's initial launch, the SRI analyst and the sales representative who took over the group began to doubt whether the SRI constraint had any real influence. They voiced their concerns to the asset manager, who replied that he had significantly changed the way he selected the issuers out of respect for the SRI constraint. However, they were not convinced. Two months later, an informal discussion confirmed their impression: the asset manager declared that ESG criteria were useless in his investment activity. In his opinion, SRI was still meaningless for fixed-income investment and was nothing more than a formality to be complied with. To be of any use, he believed ESG criteria should resemble financial criteria and help him identify the companies most likely to go bankrupt. The SRI analysts advised that this was not possible.

Findings

SRI as enriching the financial logic or constraining it

After one year of process redesign, two different outcomes had emerged. The equity working group perceived SRI as relevant for their investment activity, whereas the fixed-income group questioned the added value of SRI in the investment processes:

> The good thing about fixed-income is that we can still greatly improve the process, because at the moment we're in a pretty bad place. There are still things to do. The question is: "What does SRI bring to the process?" And I don't know... […] We need more explanations of what fixed-income managers do, how they work, what a risk means for them. Once we've got that, we can start to think about what a true SRI process should be. (SRI analyst)

However, when asked about the differences between the two working groups, SRI Invest members were vague. They found it difficult to explain exactly how the fixed-income working group was different. They began by explaining the divergences between the working groups in terms of power relationships:

> For SRI to be deeply integrated into the [equity investment] selection processes, right from the moment companies were selected, the asset manager had to validate the investment process that was proposed in the working group. He had to accept it, be fully committed to the redesign, see and say if this would impact his tracking error, etc. […] In the fixed-income group, I would say the opposite applied. It was the asset manager who won, but I wanted that to be the case because I didn't believe that such integration of SRI was feasible in fixed-income. […] Honestly, I don't see how SRI could play anything but a marginal or minority role in fixed-income. (CEO)

What happened in the working groups confirmed this assertion. The fixed-income manager clearly resisted the redesign process, as evidenced by his leaving the working group in November 2007. However, when the CEO decided to re-launch the fixed-income working group because of the financial crisis, the asset manager had no choice but to change his investment activity. SRI analysts were forced to adapt to the constraints the asset manager set, which included not being allowed to exclude SRI laggards. However, the equity working group made a similar adaption, although it appeared to be made more willingly, when

SRI selectivity was lowered from 50% to 40% and then 25%. In both working groups, the SRI analysts had to adapt to the position of the asset manager and vice versa. For example, the fixed-income manager was not allowed to "gamble" (i.e., invest 10% of the fund's assets) on any company considered a laggard in terms of SRI. Yet this situation did occur a few times, and occasionally proved costly in terms of financial performance. In both groups, all parties had to compromise to progress the redesign of the investment process.

Despite the investment constraints, there was a feeling that SRI had hardly influenced fixed-income investment at all. As noted above, the CEO felt SRI had only a marginal role in fixed-income investment, whereas SRI was integral to the selection processes for equity investment. This analysis was confirmed by the doubts expressed by the SRI analyst and sales representative over the real impact of SRI on the fixed-income manager's practices. Consequently, the fixed-income situation could be interpreted in terms of "decoupling" (Meyer & Rowan, 1977). Since financial and SRI demands proved contradictory, SRI Invest could be seen as decoupling its symbolic displays from its technical operations. But this interpretation would be misleading for two reasons. First, the fixed-income manager was investing subject to constraints and his practices were affected by ESG criteria. Second, it would be difficult to tell whether the equity manager was subject to more constraints than the fixed-income manager. Is an obligation not to invest more than 10% of fund assets in a single company, when there are in fact few alternatives available on the market, a lesser constraint than excluding 25% of companies from a universe of 300? It is a difficult question to answer.

Actually, when the CEO stated that SRI played "a marginal or minority role" in fixed-income investment, he was not referring to the impact of SRI on investment practices themselves but to SRI's effect on how the financial logic was understood and instantiated within this type of product. While the financial logic of equity investment was enriched by the new demands for SRI, the financial logic of fixed-income investment remained almost unchanged, maintaining a view according to which SRI demands threatened financial performance. A discussion with each asset manager about what SRI brought to their "identities and valuation orders" (Thornton & Ocasio, 1999) clearly illustrates this difference.

Discussion with the equity manager:

RESEARCHER: Has the incorporation of SRI changed the way you invest?

EQUITY MANAGER: Yes. It's made it more interesting, more elaborate and it enhances the investment activity. […] It's surprising, but you sometimes see companies with a very good financial profile and a very bad SRI profile. When you read financial analyses, they appear to be excellent. But when you listen to the SRI analysts, they describe things that aren't working inside those companies. So I wonder how such companies can succeed at the end of the day. How can they make up for bad working conditions, for example?

RESEARCHER: So you like managing SRI funds?

EQUITY MANAGER: Yes, I do. I hope that this type of management will be fully recognized one day. […]

RESEARCHER: So you feel that you are an SRI equity asset manager?

EQUITY MANAGER: Yes. That's how I perceive myself, and it's how I introduce myself.

Discussion with the fixed-income manager:

RESEARCHER: What does SRI mean for you?

FIXED-INCOME MANAGER: It's a constraint you have to abide by when investing, like any constraint.

RESEARCHER: When a constraint applies, is it difficult to manage?

FIXED-INCOME MANAGER: It's always difficult to manage a constraint.

RESEARCHER: Is that because it's an SRI constraint?

FIXED-INCOME MANAGER: No, no. It's not linked to the fact that it's an SRI constraint.

RESEARCHER: OK. So SRI is a constraint like any other constraint. But does it contribute anything to your investment activity?

FIXED-INCOME MANAGER: Personally, I don't think so.

The difference between the two asset managers' interpretations of the role of SRI in investment activity was substantial. The equity manager judged that SRI had enriched investment activity by making it more interesting and more elaborate. He believed SRI had expanded his knowledge of companies. He took ESG criteria into consideration when selecting companies because he felt that those criteria bolstered his financial analysis by providing new information. His cognitive operations and the selection, projection, and evaluation of the outcomes of market transactions (Preda, 2009) had been transformed. Furthermore, he introduced himself as an SRI equity manager, meaning his professional identity, too, had changed. Hence, the "identities and valuation orders" (i.e., the financial logic) (Thornton & Ocasio, 1999) of equity investment had come to incorporate SRI concerns.

In contrast, the fixed-income manager described SRI in terms of constraints and did not relate SRI to his selection process. To him, the content of the constraint made no difference because it did not influence his investment activity. It was a constraint like any other. In contrast to the situation in equity investment, SRI had not penetrated the financial logic of fixed-income investment. Neither the asset manager's cognitive operations nor identity had changed. He selected companies according to his previous financial logic, and then adapted his choices to meet the SRI constraint. Therefore, contrary to the spirit of SRI, the fixed-income manager did not believe SRI was a key element of a successful investment strategy. The CEO explained:

> This brings us back to the fundamental problem. In equity, everybody can understand that SRI is a positive thing for investment activity; it's intrinsically linked to the management of companies. […] But to all the fixed-income managers in Paris, and almost all the fixed-income managers in the world, integrating SRI into investment activity means nothing. (CEO)

Different "clusters of evaluation practices"

The fundamental difference between the two groups results from the fact that the transformation of the fixed-income process following the new demands for SRI meant nothing to the asset manager. A key element to understanding this difference concerns the added value that SRI brings to the issuer selection process. While it helped the equity manager select the companies most likely to succeed, the fixed-income manager perceived it to be meaningless. This divergent opinion clearly reflects the differences in terms of "clusters of evaluation practices" (MacKenzie, 2011) associated with the calculative devices used in each type of product. The CEO explained:

> There's something abstract about fixed income; it's an actuarial model […] fixed income can't be embodied in reality, so it's difficult to incorporate SRI. […] In equity, there's an idea of durability, effort, success and long-term existence for the fund that embodies SRI. In fixed income, all investments involve permanent arbitrage[9], so there's total volatility. It's very difficult to embody something that is linked to sustainability in an investment that is, by design, volatile. (CEO)

When equity managers select a company for a fund, they believe that the company will succeed and generate profits, which will contribute to an increase in shareholder value. Managers must invest in all sectors in order to spread the risk, and therefore aim to select the two or three companies in each industry that appear to be the most financially promising in the long run. They first identify potentially interesting companies in each industry in the investment universe concerned, and then select the most profitable companies in each industry based on their own criteria, company knowledge, and personal experience, in compliance with the risk and financial ratios set at the portfolio level. This usually leads to adjustments in the industry weightings within portfolios.

Fixed-income managers, in contrast, lend money to a borrower for a defined period of time. In this case, the goal is to select the issuers that offer the best interest rate and the best likelihood of reimbursing the loan. If a company goes bankrupt, the asset manager loses all the money lent. The issuers may be private companies or public institutions, such as countries or cities. Although a bankruptcy risk also exists in equity investment, it is not considered to be as important owing to the different perceptions of risks in

[9] Arbitrage is the practice of taking advantage of a price difference between two or more markets.

the two types of investments. Fixed-income investment is judged to be very safe, since the return is a given; it is therefore of primary importance that its only risk — that of default on payment — should be very well managed.[10] On the contrary, the goal of equity investment is to generate excess returns (the "alpha") for which investors are prepared to take more risks, including the risk of bankruptcy. What matters is achieving the expected performance.

The interest rates used in fixed-income investment change over time for a variety of reasons, most of them macroeconomic. For example, if there are few actors in the market with free cash to lend, the issuer will have to offer a higher rate of interest. Consequently, there is an inverse relationship between interest rates and bond prices. A fixed-income manager therefore relies heavily on the yield curve (see Figure 5) and actuarial models, rather than other financial and business criteria. Given the importance of these models, fixed-income investment can be described as far more mathematically driven than equity investment.

Insert Figure 5 about here

It follows that how companies and countries react to climate change or human rights issues, for example, does not affect the fixed-income manager's investment decisions, since those reactions influence interest rates only marginally. Instead, such reactions are expected to contribute to an increase in the company's share value in the future, a factor of primary importance to the equity manager. This is the reason why the CEO says that the effort of a company will be rewarded in equity investment by success, whereas investment decisions in fixed-income investment will be principally influenced by arbitrage benefits.

[10] The debt crisis that followed obviously contributed to the questioning of some strong beliefs shared in fixed-income investment.

The perception of reality as abstract (i.e., decoupled from the actual behavior of issuers) is reinforced by the relationship of fixed-income investment to time. An equity investment manager buying shares is interested in the *future* increase in their stock market value. In this case, the idea conveyed by SRI makes sense: if a company anticipates and plans for costs linked to below-average performance in ESG domains, it is more likely to succeed and see its share value increase. The use of ESG criteria can expand the equity asset manager's knowledge of companies, providing additional information for calculative devices and cognitive operations, and therefore investment decisions.

In contrast, the interest rates studied by the fixed-income manager usually depend on the company's *present* borrowing capacity and market conditions. The company's *future* success in fixed-income investment is less important than it is for equity investment. The financial performance of fixed-income investment results less from an asset manager's ability to anticipate which companies are more likely to succeed than from the ability to *constantly* take advantage of a price differential between different markets. In other words, fixed-income investment is more concerned with change than stability. This explains why it is described as volatile and why the long-term rewards approach advanced by SRI is meaningless. In fact, the only time when future considerations affect fixed-income investment decisions is when an asset manager tries to anticipate whether a company or country could go bankrupt and default on payment, but this information could not be provided by SRI analysts (further explanations for this are given in the next section).

The perceived lack of appropriate calculative devices

The previous section showed that the differences between the distinctive presuppositions about the nature and properties of the economic world between the two types of evaluations practices and calculative devices (MacKenzie, 2011, p. 1783) explain why SRI is next to meaningless in fixed-income investment compared to equity investment. However, it did not clarify why ESG criteria were unable to identify which companies were most likely to go bankrupt, the main area of fixed-income investment where SRI could make a contribution. Interestingly, the fixed-income manager explicitly asked the SRI analysts to provide him with this information, but they found it impossible.

> I found it very positive, except for the content of the request. I remember very clearly that he asked us to identify the factors that will impact a company's value. So in short, he asked us to find the "philosopher's stone" of SRI. […] To find the essence that all asset management companies are looking for today, an essence they aren't finding. They aren't finding it because it's a bit too early, there are no historical data and they find it difficult to identify all these things. (SRI analyst)

According to the SRI analyst, the lack of historical data explains why no relationship had yet been identified connecting ESG criteria and the probability of going bankrupt. One way of understanding this problem was to ask the fixed-income asset manager what form the ESG criteria should have taken for it to be more helpful:

> RESEARCHER: So, in theory, ESG criteria could be useful for you but they're no help at the moment?
>
> FIXED-INCOME MANAGER: Exactly, since we don't have anything to measure them, there's no point in looking at them [ESG criteria]. […] I think that [social] rating agencies are totally incapable of doing this. […] They [ESG criteria] are so approximate that it's impossible to rely on them.
>
> RESEARCHER: You mean that finance is much more reliable?
>
> FIXED-INCOME MANAGER: I think so. First, there are a lot more obligations that concern finance: very simple things such as publishing the accounts, having them certified, etcetera. […] The data are comparable; they've existed for a very long time. It's arithmetical, not qualitative. They aren't declarations or protocols… but concrete information we can verify.
>
> RESEARCHER: So you can rely on financial criteria, but you cannot rely on ESG criteria?
>
> FIXED-INCOME MANAGER: Yes, in order to work, ESG criteria should be like financial criteria. The social rating process should be like the financial one.

The problem here relates to the form and content of ESG criteria. If ESG criteria are not reliable because fixed-asset managers cannot measure them, how can an equity manager rely on them? The explanation lies in their different calculative devices and associated evaluation practices. A fixed-income manager has a mathematical background and relies mainly on actuarial models, and will therefore probably expect criteria to be arithmetical rather than qualitative. Fixed income managers cannot deal with qualitative factors such as ESG criteria because they cannot be included in the calculative devices they use (e.g., econometric models). Equity managers, in contrast, rely far more on personal knowledge and experience. They are used to relying as much on financial criteria as on other business criteria such as governance and social issues, and can therefore more easily integrate ESG criteria into their investment decisions.

Another problem mentioned by the fixed-income manager is that ESG criteria were first framed on equity investment's calculative devices and evaluation practices; that is, according to a sector-based approach. Indeed, an equity manager aims to select the most financially- and socially-responsible firms in each sector (with no sector excluded). However, this sector-based approach to ESG criteria actually prevented the fixed-income manager from incorporating SRI into investment decisions. To better understand why, Figure 5 provides an example of the sector-based ranking used by SRI analysts compiling the different social ratings bought by SRI Invest and the personal analysis of its SRI analysts, and Figure 6 provides an example of a company factsheet that summarizes the financial and SRI profile of a company. First, we can see that the same analysis is used for both equity and fixed-income investment in the case of corporate issuers. Second, we can clearly see that the types of financial and ESG ratios in use are those useful for the evaluation practices of equity at the expense of fixed-income investment (with the exception of the financial structure ratios). For instance, it is difficult to identify a direct relationship between SRI ratings and the yield curve (see Figure 5).

Insert Figures 6 and 7 about here

Taking the example of climate change, imagine company X and company Y, respectively rated 55/100 and 45/100 on the "CO_2 emissions" criteria. The 10-point difference might, for example, be a result of company Y having set no reduction targets. When reporting these ratings to asset managers, SRI

analysts also offer commentary. They may advise against investing in company Y, or explain that the rating is one year old and does not reflect the company's recent efforts, and therefore recommend company Y instead of company X despite the latter's poorer grade.

An equity manager would consult SRI analysts to identify companies that are more likely to have high CO_2 emissions: information that asset managers might find useful in selecting which company can be successful in the future. In this case, both SRI and financial analyses would be included in company selection because ESG criteria are deemed to affect business. The equity manager explained:

> I don't want to keep a sort of watertight division between SRI analysis and my analysis. I want them to be correlated. Otherwise, it would mean that I select issuers on criteria I can't verify at all, and that wouldn't be credible for clients. (Equity manager)

A fixed-income manager, on the other hand, would ask SRI analysts which company would be more likely to go bankrupt and what to do if only one company offers bonds. But SRI analysts cannot answer because it is too early to say. No relationship has yet been identified between issues like CO_2 emission levels and the probability of a company going bankrupt. Furthermore, ESG criteria were developed to facilitate comparisons within sectors. Should the asset manager favor an automobile company with a good SRI profile over a clean tech company with a bad SRI profile? SRI analysts cannot advise on that. In other words, ESG criteria do not currently provide the information the fixed-income manager would consider relevant to investment decisions. Based on these findings, it can be argued that the perceived lack of ESG criteria corresponding to the evaluation practices and calculative devices of fixed-income investment largely explains why the financial logic embodied in fixed-income logic was not enriched by the new demands for SRI.

Discussion

This article has focused on the micro-mechanisms through which the investment practices of two different products embedded within the same financial logic unfolded over time following new demands

for SRI. The previous section detailed why SRI Invest personnel perceived that the logic, practices, and instruments associated with equity investment were enriched by the integration of SRI while viewing those of fixed-income investment as remaining almost the same, so that SRI was perceived as an external constraint that just had to be accepted. This section explores the implications of these findings for theorizing the role of instruments in the transformation of a logic and its associated practices.

The mechanisms through which instruments can mediate the transformation of a logic and its associated practices

Previous research has shown that disentangling the relationships between logics, practices, and instruments is an extremely difficult task, both empirically and theoretically. This is explained by the fact that practices are material instantiations of logics (Thornton et al., 2012, p. 128). Nevertheless, analysis of how the two working groups aimed to integrate the new demands for SRI in their financial logics provides evidence that, though they remain analytically distinct, instruments, practices, and logics are bound together in a recursive relationship. It also suggests that instruments specifically mediate the relationships between logics and their associated practices.

The mutual relationships among financial logics, instruments, and practices are illustrated by the (in)ability of actors to transform what MacKenzie (2011) referred to as "the cluster of evaluation practices" associated with each type of investment. On the one hand, the evaluation practices and their associated ontologies — notably, the relationships between investment decisions and the real economy — influenced the design of the calculative devices used in the evaluation and valuation processes, which then reinforced the existing material instantiations of the financial logic. This is evident in the inability of the working group to integrate ESG criteria into the econometric models used by the fixed-income managers, resulting in the continuation of the established evaluation practices. On the other hand, the features of calculative devices influenced the observation, analysis, and calculation processes through which the asset managers made decisions. The equity manager, for instance, was able to transform financial practices by incorporating ESG criteria into the decision matrix, which then led him to integrate SRI into the financial logic itself. In other words, instruments both shaped and were shaped by the existing logic and practices; they acted as mediating instruments (Miller & O'Leary, 2007) between the logic and its associated practices.

To argue that the logics, instruments, and practices are interlinked, however, requires them not to be identical. The fact that mediating instruments are distinct from their objects of intervention (Miller & O'Leary, 2007) is exemplified by the fact that all calculative devices (e.g., ESG criteria, econometric models, SRI/financial decision matrices, etc.) existed independently of their *uses* in investment practices and their *meanings* for actors. This shows that although calculative devices embodied how actors made sense of the financial logics, instruments were different from the overall principles that guided behavior in each type of investment and from the actual practices of the actors involved.

To distinguish between a financial logic and its associated practices — specifically the clusters of evaluation practices (MacKenzie, 2011) — seems far more difficult. This is because evaluation practices are defined as "distinctive presuppositions about the nature and properties of the features and processes of the economic world" (MacKenzie, 2011, p. 1783). This definition is similar to the notion of "evaluation cultures" (i.e., "aggregate patterns and dynamics that are on display in expert practice and that vary in different settings of expertise" (Knorr-Cetina, 1999, p. 8)) and to the definition of logics: the principles that guide behavior in a social situation, providing actors with frames of reference that precondition their sense-making, acting, and identity choices (Thornton et al., 2012; Thornton & Ocasio, 1999; Thornton, 2002).

These similar definitions further demonstrate the close relationships between the logics and their material instantiations in practice. This does not mean, however, that actors are not able to perform practices that are not guided by the dominant logic of the industry, and/or to propose new guidance. If that were the case, institutional change would not be possible. For instance, the integration of ESG criteria into the evaluation practices of the equity asset managers followed their understanding of the financial logic for this type of investment — that integrating non-financial criteria should help identify those companies more likely to succeed — but also transformed the financial logic itself by reinforcing the need for investment decisions to benefit from and serve a sustainable economy. This shows that although the financial logic provided the rationale for transforming their calculative devices and also investment and evaluation practices, the actual transformations of those instruments and practices subsequently led to a transformation of the financial logic. In contrast, while the fixed-income managers did transform their investment practices by adding an SRI constraint, they did not integrate SRI concerns into the "identities and valuation orders" (Thornton & Ocasio, 1999, p. 805) that structured their decision making. SRI appeared to be an external constraint on the financial logic.

Based on these findings, it can be argued that instruments, practices, and logics are bound together in a recursive relationship, while being theoretically and empirically different. Two relationships among the three elements are then possible: either they are linked to one other directly and/or indirectly, or one element mediates the relationship between the other two. The definition of a mediating instrument would tend to naturally argue for the second form of relationship: that instruments connect arenas and actors (Miller & O'Leary, 2007; Miller & Power, 2013). However, it could also be argued that practices mediate between logics and instruments. To conclude this argument would definitely require further research on the relationships between the three elements.

However, the observations and the way the actors explained how they transformed their practices and the associated financial logic indicated that actors always thought and acted through their instruments. For instance, they redesigned their investment processes through the use of PowerPoint presentations that schematized what they were doing, which then helped them re-think the financial logic. They also transformed their evaluation practices through the transformation of existing (and the creation of new) calculative devices, such as the decision matrix and the creation of new ESG criteria. Instruments seemed to act as performative supports without which transforming the financial logic and/or its associated practices would have been impossible. This is the reason why this article positions instruments as a medium for transforming the logic and its associated practices.

The conditions under which the co-transformation of the logic, practices, and instruments is possible

The mechanisms through which both working groups aimed to transform their investment practices following the new demands for SRI were similar: instruments, logics, and their associated practices were bound in a recursive relationship. However, the outcomes differed in that SRI was integrated into the financial logic of equity investment but remained an external constraint in fixed-income investment. The analysis reported above identified several reasons explaining this difference, particularly the perception of the lack of appropriate calculative devices in the fixed-income investment sphere. Based on these findings, this section aims to further explore why these devices could not mediate the transformation of the financial logic and associated practices in fixed-income investment. It identifies two features of the instruments that are suggested to be key to the transformation of equity investment that were lacking in the fixed-income investment arena: the perceived *flexibility* and *incompleteness* of the calculative devices in use.

Two features of the calculative devices used in equity investment appeared essential to their performative nature: they made asset managers and SRI analysts work together, and they helped generate new knowledge that enriched previous practices. Indeed, for SRI to be integrated into the practices and logic of equity investment, it was important that SRI analysts and asset managers could cooperate and that new knowledge about how to transform investment activity in response to the demand for SRI could emerge from this cooperation. Several means were used to achieve this, such as holding weekly meetings to raise issues and suggest new ideas, routine informal discussions, and involving SRI analysts in invitations to tender. Although these means were clearly facilitators, ultimately the key factor explaining the greater integration of SRI into the financial logic of equity investment was the design of a new calculative device: the SRI/Financial decision matrix (see Figure 2).

The decision matrix design made cross-disciplinary work possible by providing a catalyst for discussion between SRI analysts and asset managers, and to a lesser extent project managers, all of whom were involved in responding to client demands. Throughout the redesign process, SRI analysts and asset managers explained, compared, shared, and finally merged their own calculative devices into this decision matrix. This was possible because the calculative devices were flexible, in that they were sufficiently open-ended and malleable to enable both SRI and financial concerns to be integrated into the investment processes. For instance, asset managers added ESG criteria to their financial analysis and SRI analysts framed ESG criteria according to asset managers' financial constraints. Both managers and analysts worked on how to set decision matrix ratios that respected the risk diversification policy suggested by portfolio theory. The fact that the asset manager was used to referring to qualitative criteria in his investment decision process clearly facilitated this alignment of understandings and interests, together with the fact that ESG criteria had first been framed for equity investment (as evidenced by the sector-based approach).

The decision matrix design also contributed to the generation of new knowledge about companies, on how to select companies, and on how to sell that company selection to clients. This generation of new knowledge led the asset manager to perceive SRI as an enhancement to investment activity and its associated logic. A new approach emerged because asset managers and SRI analysts did not perceive their existing calculative devices as fixed and constant, but instead as incomplete and open-ended (Nicolini, Mengis, & Swan, 2012). They believed that improvement was possible. In particular, both asset managers and SRI analysts were intrigued by the fact that they could not explain why some companies with very bad

SRI grades performed well financially, and vice versa. The search for understanding prompted cooperation and created mutual dependencies.

Two factors facilitated the emergent and expansive nature of these instruments: the future orientation of calculative devices and their somewhat lower relative importance than human agency in the investment decision process. The SRI analysts and the asset manager believed the redesign project was worthwhile because they thought better financial performance could be generated in the long-term as a result of including ESG criteria (it also resulted from the relationships between equity investment and the real economy). Moreover, though constrained by their calculative devices when investing — and especially by the risk ratios suggested by portfolio theory — the equity asset manages was independent enough of those devices to consider changing them and trusting more in his own knowledge, experience, and intuition.

In contrast, fixed-income investment relies heavily on quantitative calculative devices. Ideally, econometric models would act as a substitute for human agency, making the investment process as rational as possible. There was understandably strong resistance to any intervention that might threaten this scientific basis; the introduction of qualitative ESG criteria, which appear less objective and reliable than financial criteria, was not positively received. Because the fixed-income group believed that the existing models could not be improved upon, this hindered the generation of new knowledge. The situation might have been different if a systematic relationship had been identified between ESG criteria and the probability of an issuer going bankrupt, but this was not possible. Consequently, despite the financial crisis and the potential knowledge that could be generated by exploring this relationship, the existing calculative devices in fixed-income investment remained largely uncontested. This shows that one way of sustaining an institutional logic is by cementing the unquestioned status of its associated instruments.

Another factor was that those calculative devices were very difficult to unpack. Despite repeated requests, the SRI analyst and project manager failed to obtain detailed information about the models used by the fixed-income manager, who said it was all too technical for analysts and project managers with little financial background. So the fixed-income manager's calculative devices remained black boxes. This obviously did not facilitate collaboration between the asset management and SRI departments. The SRI analysts found it almost impossible to integrate qualitative and sector-based criteria into what seemed to

them to be impenetrable, inflexible econometric models. The *rigid* nature of calculative devices therefore also resulted from the perceived *inaccessibility* of the calculative devices. Both dimensions contribute to explaining why ESG criteria remained an ex-post constraint that did not help asset managers select issuers and why calculative devices could not be merged.

The differences between how calculative devices were transformed in equity compared to fixed-income investment have ontological implications. In equity investment, the fusion of financial and SRI calculative devices enabled the alignment of the two ontologies associated with each type of calculative devices. Because instruments provide the evaluation through which reality is valued, SRI has become valuable in financial terms. The new calculative devices in use came to be shaped by both financial and SRI values and shaped practices and the financial logic accordingly. In other words, they were mediating instruments. In fixed-income investment, both ontologies (i.e., finance and SRI) remained separate as a consequence of the separation between calculative devices. The lack of transformation of the financial calculative devices used in fixed-income investment prevented asset managers from perceiving economic reality in a different way and SRI was perceived to be valueless in financial terms. As MacKenzie explained (2011, p. 1783), different evaluation practices sustain different "presuppositions about the nature and properties of the features and processes of the economic world". The creation of the new calculative devices in fixed-income investment did not enable the commensurability of SRI and financial values and evaluations: they did not trigger ontological change.

The above findings suggest that some features of calculative devices facilitate their roles as channels for the transformation of practices and its associated logic, providing some conditions under which this co-transformation is possible. This relationship is summarized in Figure 8. However, the identification of these two conditions does not mean that other factors, such as the unwillingness of fixed-income asset managers to collaborate with SRI analysts and the type of cluster of evaluation practices, did not play a role. As shown above, these elements are bound into a recursive relationship. For instance, the view of the fixed-income investment's calculative devices as impenetrable black boxes also resulted from the conviction of actors that they could not be transformed. That is why it is very important to understand that it is above all the *belief* on the part of actors that ESG criteria were impossible to incorporate into the econometric models of fixed-income investment processes that led to the lack of integration of SRI into the financial logic. There could conceivably have been a different outcome if the fixed-income manager had believed in the ability of SRI analysts to help forecast debt problems. This shows that instruments acquire their performative nature rather than it being somehow inherent. It is the relationships among

instruments, practices, and institutional logics that determine whether those instruments will have performative effects and if they do, of what kind they will be.[11]

Insert Figure 8 about here

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[11] Obviously, drawing firm conclusions based on one case study is difficult, especially since the asset management industry relies heavily on calculative devices, which explains their central role in this article. The model proposed by the article is therefore a proposition that would require further testing.

Conclusion

This article sought to show that the fashioning of new calculative devices is an essential process through which practices change, and thereby potentially change an institutional logic. However, the nature of the calculative devices, the identities of actors, the organizational practices, and the institutional logic all depend on one another. The fashioning of new calculative devices enabled the integration of SRI in equity investment in a way it did not in fixed-income investment. This was due primarily to the different ways in which the actors understood the instruments and their relationships to the financial logic. Introducing a new calculative device does not tell us enough about the way it will be shaped and shape practices and the institutional logic. This work suggests potentially productive intersections between accounting and institutional literatures. Institutional theorists need to take accounting seriously both as a site in which to observe institutional change and as a medium through which it is effected. Reciprocally, accounting theorists can develop better accounts of the productivity of these instruments by specifying the way in which they articulate with changes in practices and as media for the transformation of institutional logics.

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APPENDIX A

WHAT IS AN SRI FUND?

An SRI (Socially Responsible Investment) fund is an entity that collects money from investors (institutional or individual) in order to invest it in transferable securities (shares, bonds, etc.). Every fund must obtain clearance from the financial authorities. To receive clearance, funds must comply with several financial and risk ratios known as the "fund profile," and disclose this information. An asset manager runs each fund and decides where and when to invest money according to the fund's "investment process" (see below). An investor deciding to invest in an SRI fund is often interested in several criteria, summarized as follows:

- Assets under management: the total must be at least ten times greater than the assets in which the client wants to invest.

- Financial performance: the fund must "beat the market," which means that its financial performance must exceed the benchmark index and competing fund performances.

- Management fees: the asset management company's fees must be as low as possible.

- Investment processes: these must convince clients of the asset management company's ability to achieve better financial performance. They must also demonstrate that the most socially responsible companies are selected for the portfolio. This means the asset management company must provide evidence of its unique expertise by offering sophisticated investment processes, selecting companies through the complex use of calculative devices such as financial models and ESG criteria. Often, the investment process of an SRI fund follows a three-stage approach: 1) financial and SRI analysis; 2) definition of an "investment universe" which comprises all companies in which asset managers can invest; and 3) application of decision criteria by asset managers to select companies from this investment universe.

APPENDIX B

PARTICIPATIVE OBSERVATION AT THE INDUSTRY LEVEL

	Organization	Events	Date
1	Broker C	SRI Road Show	18/01/07
2	Think-Tank A	Working Group on CSR[12] Corporate Governance Code	23/01/07
3	Think-Tank A	Working Group on CSR Corporate Governance Code	20/01/07
4	Social Rating Agency	2006 Annual Meetings / Conference	22/02/07
5	Employers Lobby A	Meeting for CSR Corporate Governance Code	28/02/07
6	Employers Lobby B	Meeting for CSR Corporate Governance Code	05/03/07
7	Think-Tank A	Governance and financial communication (Conference)	14/03/07
8	Think-Tank A	Working Group on CSR Corporate Governance Code	20/03/07
9	Think-Tank B	Working Group on SRI	28/03/07
10	Think-Tank C	Working Group on Shareholder activism	13/04/07
11	Think-Tank A	Working Group on CSR Corporate Governance Code	24/04/07
12	European Commission	Meeting for CSR Corporate Governance Code	07/05/07
13	Think-Tank B	Working Group on SRI	04/05/07
14	Bank A	Annual Meeting	14/05/07
15	Think-Tank A	Working Group on CSR Corporate Governance Code	22/05/07
16	Consulting Firm C	Implementing CSR in the companies (Conference)	12/06/07
17	French SRI Lobby	Annual Conference	12/06/07
18	Think-Tank A	Governance in listed companies (Conference)	25/06/07
19	Think-Tank B	SRI and Retail (Conference)	27/06/07
20	Think-Tank C	Working group on CSR	05/07/07
21	Think-Tank C	Working group on CSR	10/07/07
22	Think-Tank C	Working group on CSR	12/07/07

[12] Corporate Social Responsibility

	Organization	Events	Date
23	Think-Tank D	Working group on CSR	20/07/07
24	Think-Tank D	Working group on CSR	06/09/07
25	Think-Tank C	Working group on CSR	20/09/07
26	Think-Tank A	CSR in the CAC 40 Boards (Conference)	03/10/07
27	Broker B	SRI Road Show	30/10/07
28	Social Rating Agency E	Meeting	05/11/07
29	Invitation to tender A	Meeting	13/11/07
30	Social Rating Agency F	Meeting	16/11/07
31	Social Rating Agency G	Meeting	22/11/07
32	Think-Tank C	Working group on CSR	04/12/07
33	Think-Tank B	Working Group on SRI	06/12/07
34	Think-Tank C	Working Group on SRI	06/12/07
35	Think-Tank C	SRI in Fixed-Income Management (Conference)	20/12/07
36	Invitation to tender B	Meeting	11/01/08
37	Social Rating Agency A	Meeting	15/01/08
38	Think-Tank B	SRI (Conference)	30/01/08
39	Think-Tank B	Working Group on SRI	21/02/08
40	Think-Tank C	CSR (Conference)	02/04/08
41	Broker B	SRI Road Show	08/04/08
42	Consulting Firm D	CSR Road Show	10/04/08
43	NGO B	Meeting	15/04/08
44	European SRI Lobby	Working group on SRI	17/04/08
45	Invitation to tender C	Meeting	06/05/08
46	European SRI Lobby	Working group on SRI	13/05/08
47	European Mutual Insurance Lobby	Working group on SRI	16/05/08
48	Invitation to tender D	Meeting	19/05/08
49	Bank E	Annual Meeting	22/05/08
50	Bank A	Annual Meeting	27/05/08
51	Consulting Firm E	SRI Conference	03/06/08

	Organization	Events	Date
52	Think-Tank B	Working group on SRI	16/06/08
53	Asset Management Company C	SRI Funds of funds (Conference)	17/06/08
54	Broker A	SRI Road Show	18/06/08
55	Consulting Firm F	SRI Analysis Products Presentation	19/06/08
56	Social Rating Agency B	Meeting	26/06/08
57	Asset Management Company E	Meeting	02/07/08
58	Social Rating Agency B	Meeting	03/07/08
59	Social Rating Agency A	Meeting	08/07/08
60	Invitation to tender E	Meeting	11/07/08
61	Think-Tank E	Working group on SRI	22/07/08
62	Proxy (Manifest)	Business Meeting	05/02/09
63	Conference	CSR	06/02/09
64	Conference	SRI & Institutional Investors	12/02/09
65	Meeting/Business Development	Asset management company A	05/03/09
66	Conference	Greenwashing	10/03/09
67	Meeting/Business Development	Asset management company B	24/03/09

APPENDIX C

INTERVIEWS

	Organization	Function	Date	Time	Recorded
	Asset Management Companies				
1	Asset Management Company A	Head of SRI	13/10/06	1h00	No
2	Asset Management Company B	Head of SRI	13/11/07	1h13	Yes
3	Asset Management Company C	Head of SRI	01/08/07	1h15	Yes
4	Asset Management Company D	CEO	06/09/08	1h10	Yes
5	Asset Management Company D	SRI Analyst	06/09/08	1h10	Yes
6	Asset Management Company E	Head of European Fund Distribution & CEO France	05/02/09	1h00	Yes
7	Asset Management Company D	Equities Manager	09/03/09	1h28	Yes
8	Asset Management Company D	Fixed-Income Manager	09/03/09	0h44	Yes
9	Asset Management Company D	Head of SRI & Development	13/03/09	1h45	Yes
10	Asset Management Company D	CEO	13/03/09	1h55	Yes
11	Asset Management Company D	SRI Analyst	16/03/09	1h31	Yes
12	Asset Management Company D	SRI Development Management	19/03/09	0h59	Yes
13	Asset Management Company D	Executive	19/03/09	0h30	Yes
14	Asset Management Company D	SRI Analyst	19/03/09	1h05	Yes
	CSR Departments				
15	Bank A	Head of Corporate CSR	09/08/07	1h02	Yes
16	Bank B	Project Manager	28/02/08	1h27	Yes
17	Insurance Company C	CSR Group / Project Manager (2)	19/02/08	1h22	Yes
18	Insurance Company C	CSR France / Project	09/06/08	1h05	Yes

	Organization	Function	Date	Time	Recorded
		Manager			
19	Insurance Company D	Head of Corporate CSR	26/10/07	2h00	Yes
20	Insurance Company D	Project Manager	11/03/08	1h52	Yes
21	Other company A	Project Manager / CSR Group	26/11/07	0h58	Yes
22	Other company B	Project Manager / CSR Group	27/10/09	1h15	No
	CSR Managers within Business Units				
23	Insurance Company C / Purchase Dpt.	Project Manager (2)	13/08/07	2h30	Yes
24	Insurance Company C / Purchase Dpt.	Project Manager	20/02/08	2h15	Yes
25	Utility B / Purchase Dpt.	Project Manager	28/02/08	1h02	Yes
	Brokers with SRI Departments				
26	Broker A	Head of SRI Research	21/11/07	1h13	Yes
27	Broker B	Head of SRI Research	23/02/09	1h05	No
28	Broker B	Head of SRI Research & SRI Analyst	30/11/09	2h00	No
	SRI Trade Unions" label				
29	CIES Trade Union A	Member	08/08/07	0h55	Yes
30	CIES Trade Union B	Member	16/07/07	2h06	Yes
31	CIES Trade Union A, B & C	Members (3)	11/01/10	2h00	No
	Consultants specialized in CSR/SRI				
32	Consulting Firm A	Senior Consultant	09/07/07	1h30	No
33	Consulting Firm B	Partner	05/03/08	1h00	Yes
34	Consulting Firm C	Senior Consultant	07/11/07	1h30	No

	Organization	Function	Date	Time	Recorded
35	Consulting Firm D	Consultant	25/02/08	1h00	No
	French Asset Management Professional Association				
36	French Association of Management	Head of Research	22/10/07	2h15	No
37	French Association of Management	Chief Executive Officer	23/07/07	1h35	Yes
	NGO				
38	NGO A specialized in SRI	Head of SRI Research	30/10/08	0h50	Yes
39	NGO B specialized in Finance	Project Manager	06/03/08	2h03	Yes
	Pension Funds				
40	Pension Fund A	Head of Equity and SRI	29/10/08	1h07	Yes
	Social Rating Agencies				
41	Social Rating Agency A	Head of Research	12/12/07	1h22	Yes
42	Social Rating Agency B	Head of Research	19/09/08	1h00	Yes
43	Social Rating Agency C	Head of Research	02/08/07	0h45	Yes
44	Social Rating Agency D	Head of Research	09/08/07	1h05	Yes
45	Social Rating Agency E	Senior Client Relationship Manager	26/09/08	1h52	Yes
	Others				
46	Think Tank B specialized in SRI	Project Manager	17/07/07	1h29	Yes
47	Development French Agency	Consultant for the Headquarters	25/02/09	1h05	Yes

LIST OF TABLES

Table 1. Ideal Type of Financial Logic in the Asset Management Industry

(Adapted from Laurel, 2013 based on Thornton, 2002; Thornton et al., 2012)

	Financial Logic
Economic System	- Market Capitalism
Mission	- Clear mission of profit maximization by optimizing risk and return - Guided by strong economic theories such as portfolio theory and yield curve
Sources of Identity	- Asset Management as profit-maximizing business
Basis of Norms	- Self-interest
Basis of Attention	- Status gained from profit maximization
Basis of Strategy	- Increase financial profit
Sources of Legitimacy	- Net Asset Value and financial return over a benchmark
Sources of Authority & Authority Structures	- Shareholder (client) activism - Fiduciary duty
Governance	- Highly regulated - Strong governance structures in place (e.g. Management fees; reporting and disclosure standards)
Tools and Models	- Sophisticated tools and models - Reporting and disclosure standards

LIST OF FIGURES

Figure 1: SRI Invest's Organizational Chart

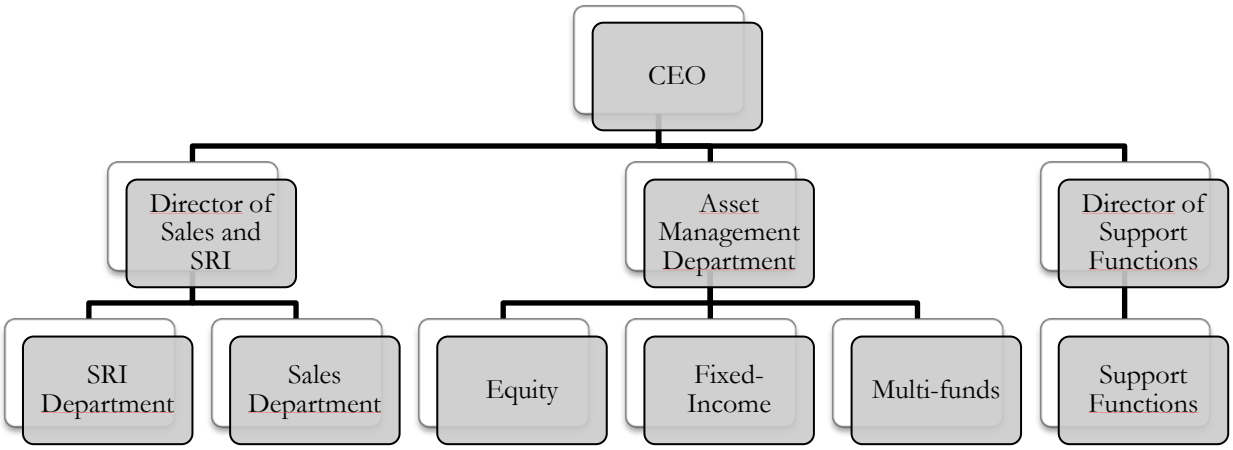


Figure 2: Decision Matrix (source: SRI Invest)

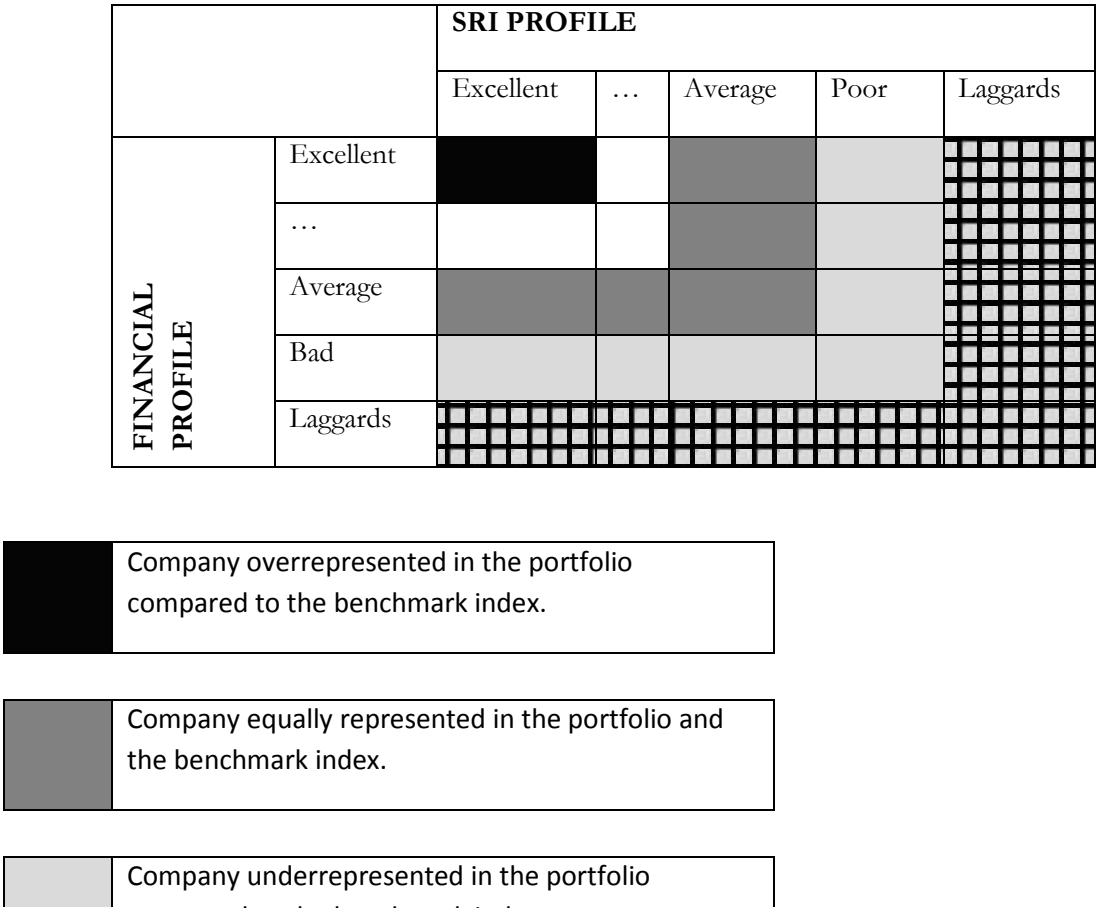


Figure 3: Equity Investment Process (source: SRI Invest)

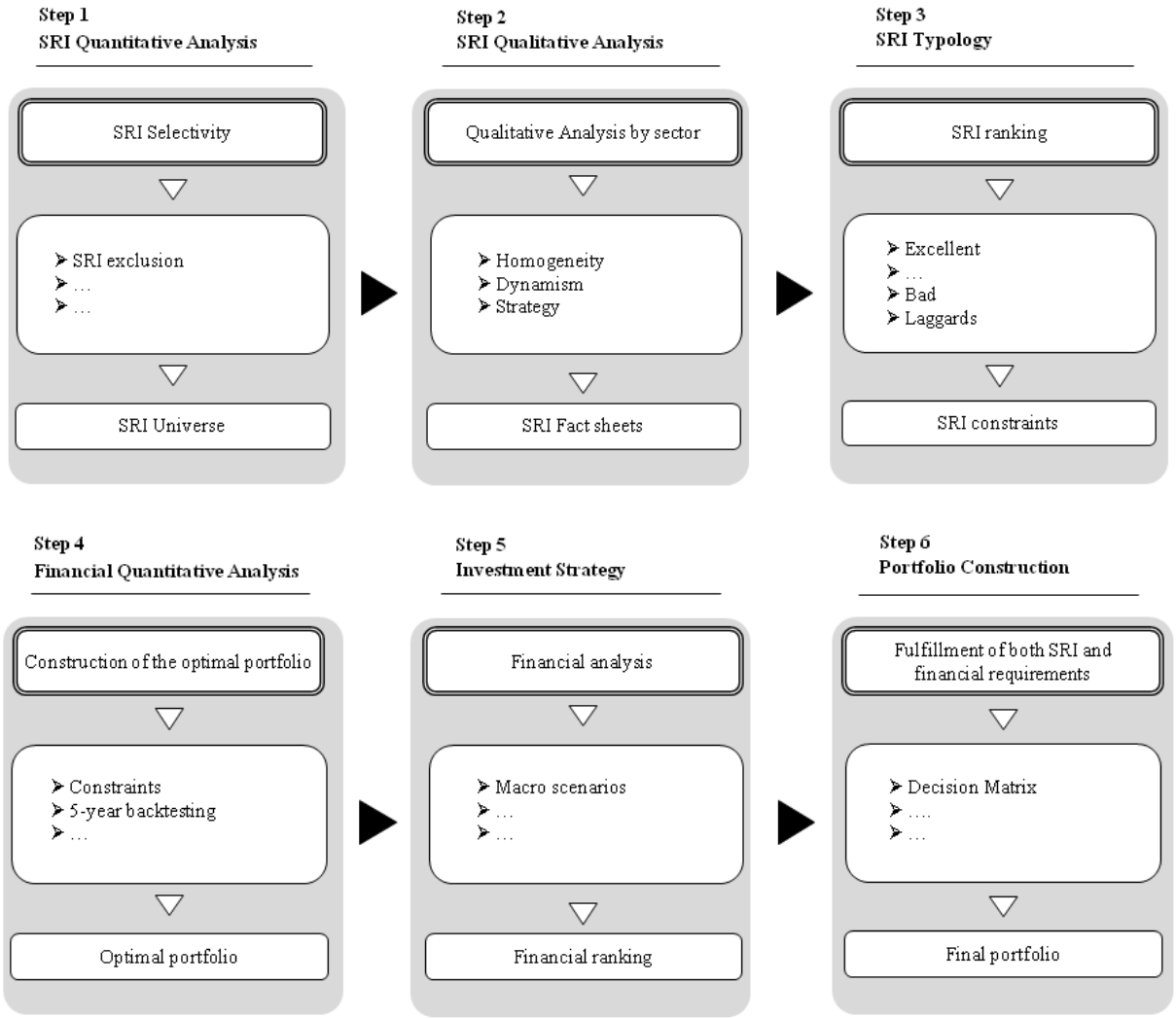


Figure 4: Fixed-Income Funds' SRI Constraint (source: SRI Invest)

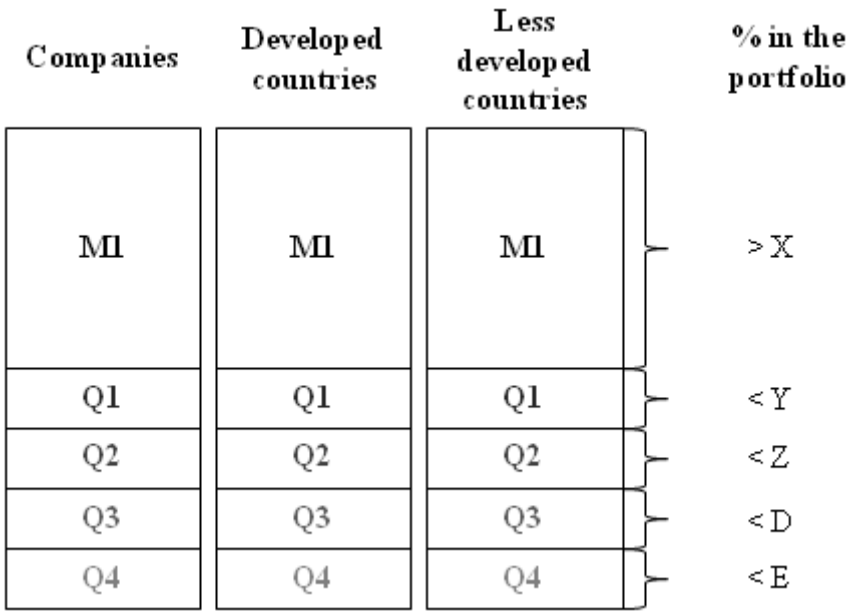


Figure 5 – Example of yield curve[13]

[13] The yield curve exhibits the relationship between interest rates and time. Used as a benchmark for debt in the market, the shape of the yield curve gives an idea of the future interest rate direction.

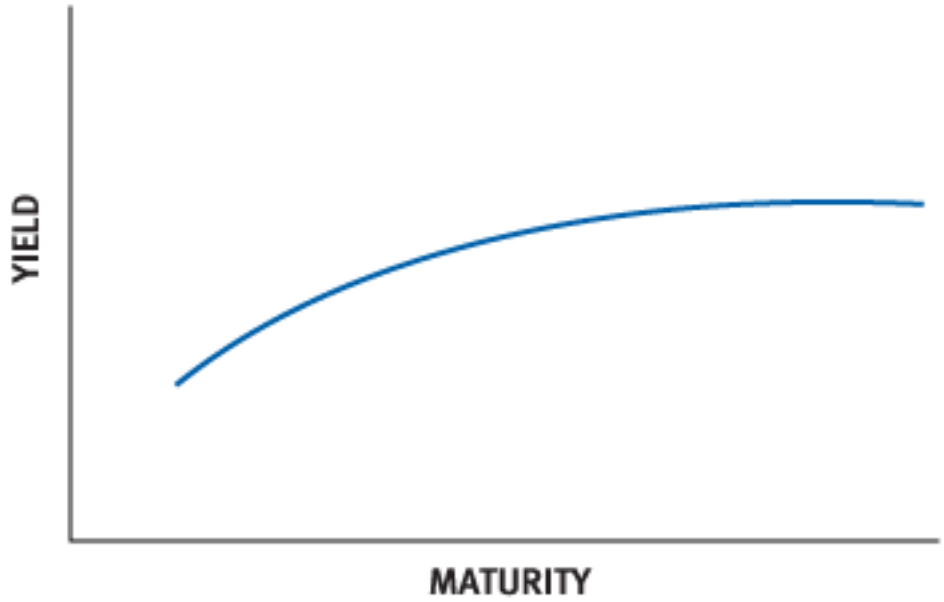
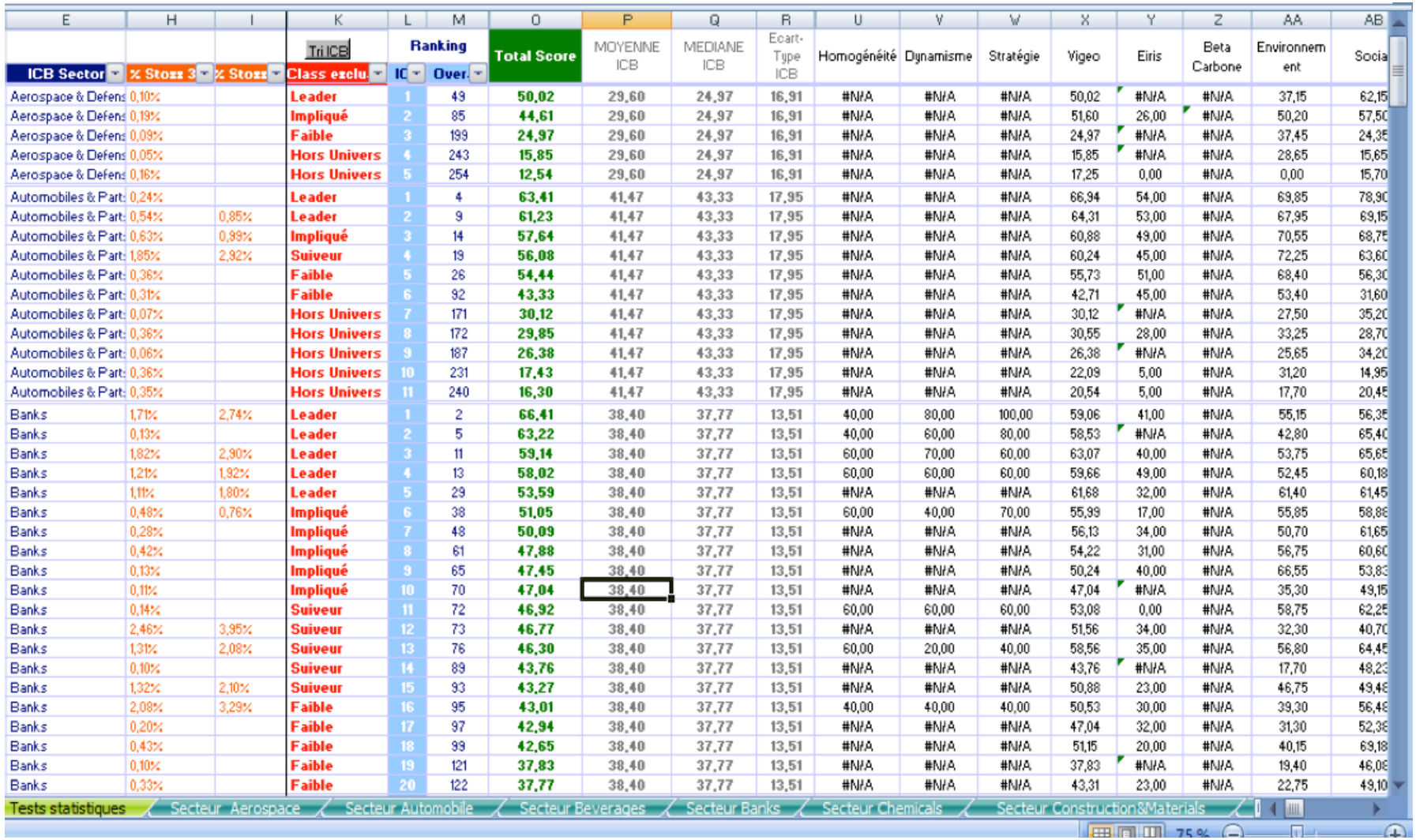

YIELD
MATURITY

Figure 6 : Example of corporates' SRI ranking used in both equity and fixed-income investment (source : SRI Invest)



E	H	I	K	L	M	O	P	Q	R	U	V	W	X	Y	Z	AA	AB
			Tri ICB	Ranking		Total Score	MOYENNE ICB	MEDIANE ICB	Ecart-Type ICB	Homogénéité	Dynamisme	Stratégie	Vigeo	Eiris	Beta Carbone	Environnement	Socia
ICB Sector	% Stoxx 3	% Stoxx	Class exclu	IC	Over												
Aerospace & Defens	0,10%		Leader	1	49	50,02	29,60	24,97	16,91	#N/A	#N/A	#N/A	50,02	#N/A	#N/A	37,15	62,15
Aerospace & Defens	0,19%		Impliqué	2	85	44,61	29,60	24,97	16,91	#N/A	#N/A	#N/A	51,60	26,00	#N/A	50,20	57,50
Aerospace & Defens	0,09%		Faible	3	199	24,97	29,60	24,97	16,91	#N/A	#N/A	#N/A	24,97	#N/A	#N/A	37,45	24,35
Aerospace & Defens	0,05%		Hors Univers	4	243	15,85	29,60	24,97	16,91	#N/A	#N/A	#N/A	15,85	#N/A	#N/A	28,65	15,65
Aerospace & Defens	0,16%		Hors Univers	5	254	12,54	29,60	24,97	16,91	#N/A	#N/A	#N/A	17,25	0,00	#N/A	0,00	15,70
Automobiles & Part	0,24%		Leader	1	4	63,41	41,47	43,33	17,95	#N/A	#N/A	#N/A	66,94	54,00	#N/A	69,85	78,90
Automobiles & Part	0,54%	0,85%	Leader	2	9	61,23	41,47	43,33	17,95	#N/A	#N/A	#N/A	64,31	53,00	#N/A	67,95	69,15
Automobiles & Part	0,63%	0,99%	Impliqué	3	14	57,64	41,47	43,33	17,95	#N/A	#N/A	#N/A	60,88	49,00	#N/A	70,55	68,75
Automobiles & Part	1,85%	2,92%	Suiveur	4	19	56,08	41,47	43,33	17,95	#N/A	#N/A	#N/A	60,24	45,00	#N/A	72,25	63,60
Automobiles & Part	0,36%		Faible	5	26	54,44	41,47	43,33	17,95	#N/A	#N/A	#N/A	55,73	51,00	#N/A	68,40	56,30
Automobiles & Part	0,31%		Faible	6	92	43,33	41,47	43,33	17,95	#N/A	#N/A	#N/A	42,71	45,00	#N/A	53,40	31,60
Automobiles & Part	0,07%		Hors Univers	7	171	30,12	41,47	43,33	17,95	#N/A	#N/A	#N/A	30,12	#N/A	#N/A	27,50	35,20
Automobiles & Part	0,36%		Hors Univers	8	172	29,85	41,47	43,33	17,95	#N/A	#N/A	#N/A	30,55	28,00	#N/A	33,25	28,70
Automobiles & Part	0,06%		Hors Univers	9	187	26,38	41,47	43,33	17,95	#N/A	#N/A	#N/A	26,38	#N/A	#N/A	25,65	34,20
Automobiles & Part	0,36%		Hors Univers	10	231	17,43	41,47	43,33	17,95	#N/A	#N/A	#N/A	22,09	5,00	#N/A	31,20	14,95
Automobiles & Part	0,35%		Hors Univers	11	240	16,30	41,47	43,33	17,95	#N/A	#N/A	#N/A	20,54	5,00	#N/A	17,70	20,45
Banks	1,71%	2,74%	Leader	1	2	66,41	38,40	37,77	13,51	40,00	80,00	100,00	59,06	41,00	#N/A	55,15	56,35
Banks	0,13%		Leader	2	5	63,22	38,40	37,77	13,51	40,00	60,00	80,00	58,53	#N/A	#N/A	42,80	65,40
Banks	1,82%	2,90%	Leader	3	11	59,14	38,40	37,77	13,51	60,00	70,00	60,00	63,07	40,00	#N/A	53,75	65,65
Banks	1,21%	1,92%	Leader	4	13	58,02	38,40	37,77	13,51	60,00	60,00	60,00	59,66	49,00	#N/A	52,45	60,18
Banks	1,11%	1,80%	Leader	5	29	53,59	38,40	37,77	13,51	#N/A	#N/A	#N/A	61,68	32,00	#N/A	61,40	61,45
Banks	0,48%	0,76%	Impliqué	6	38	51,05	38,40	37,77	13,51	60,00	40,00	70,00	55,99	17,00	#N/A	55,85	58,88
Banks	0,28%		Impliqué	7	48	50,09	38,40	37,77	13,51	#N/A	#N/A	#N/A	56,13	34,00	#N/A	50,70	61,65
Banks	0,42%		Impliqué	8	61	47,88	38,40	37,77	13,51	#N/A	#N/A	#N/A	54,22	31,00	#N/A	56,75	60,60
Banks	0,13%		Impliqué	9	65	47,45	38,40	37,77	13,51	#N/A	#N/A	#N/A	50,24	40,00	#N/A	66,55	53,83
Banks	0,11%		Impliqué	10	70	47,04	38,40	37,77	13,51	#N/A	#N/A	#N/A	47,04	#N/A	#N/A	35,30	49,15
Banks	0,14%		Suiveur	11	72	46,92	38,40	37,77	13,51	60,00	60,00	60,00	53,08	0,00	#N/A	58,75	62,25
Banks	2,46%	3,95%	Suiveur	12	73	46,77	38,40	37,77	13,51	#N/A	#N/A	#N/A	51,56	34,00	#N/A	32,30	40,70
Banks	1,31%	2,08%	Suiveur	13	76	46,30	38,40	37,77	13,51	60,00	20,00	40,00	58,56	35,00	#N/A	56,80	64,45
Banks	0,10%		Suiveur	14	89	43,76	38,40	37,77	13,51	#N/A	#N/A	#N/A	43,76	#N/A	#N/A	17,70	48,23
Banks	1,32%	2,10%	Suiveur	15	93	43,27	38,40	37,77	13,51	#N/A	#N/A	#N/A	50,88	23,00	#N/A	46,75	49,48
Banks	2,08%	3,29%	Faible	16	95	43,01	38,40	37,77	13,51	40,00	40,00	40,00	50,53	30,00	#N/A	39,30	56,48
Banks	0,20%		Faible	17	97	42,94	38,40	37,77	13,51	#N/A	#N/A	#N/A	47,04	32,00	#N/A	31,30	52,38
Banks	0,43%		Faible	18	99	42,65	38,40	37,77	13,51	#N/A	#N/A	#N/A	51,15	20,00	#N/A	40,15	69,18
Banks	0,10%		Faible	19	121	37,83	38,40	37,77	13,51	#N/A	#N/A	#N/A	37,83	#N/A	#N/A	19,40	46,08
Banks	0,33%		Faible	20	122	37,77	38,40	37,77	13,51	#N/A	#N/A	#N/A	43,31	23,00	#N/A	22,75	49,10

Tests statistiques | Secteur Aerospace | Secteur Automobile | Secteur Beverages | Secteur Banks | Secteur Chemicals | Secteur Construction&Materials

Figure 7 – Example of company fact sheets used in both equity and fixed-income investment (source : SRI Invest)[14]

[14] The analyst's name is a pseudonym.

Value		Sector		
X		Banks		
Financial Rating				
Exploitation Ratios				
Turn Over	**xxx**	**xxxx**	**xxx**	**xxx**
11740	*43,71*	*11,12*	*8,03*	*0,43*
Structure Ratios				
Debt	**xxx**			
23,78				
Increase Valuation				
xxx	**PER**	**xxx**	**xxx**	**xxx**
1,427E+10	*6,565*	*7,363*		*0,57*
Price to book	**Stock**	**xxx**	**xxx**	**xxx**
0,82	*11,68*	*22,24*	*10,25*	*-46,837*
Consensus				
Consensus	**xxx**	**xxx**	**xxx**	**xxx**
2,684	*19*	*3*	*11*	*5*
Asset Manager Position				
X is the bank the more exposed to the crisis...[...]				

Country	SRI Analyst	Date
FRANCE	John Smith	2008/26/02

SRI Rating

Quantitative Analysis

Domains	Rating		Innovation (+)	Shortcoming (-)
Environnement	xxx	Excellent [..]	Co2 emissions are particurlarly [...]	None
Social	xxx	Very good [...]	Integration of disabled [...]	The management of stress constitutes [...]
Governance	xxx	Sector average [...]	Good level of transparence [...]	Lack of women [...]
Societal	xxx	Weaken aspect [...]	Discussion on the elements [...]	A clear lack of stakeholders [...]

CSR Management Systems
>High-level quality of the environmental & social reporting

Qualitative Analysis

Homogeneity	xxx	Good	Risk management is particularly [...]	Societal aspects suffer from [...]
Dynamism	xxx	Good	A very good [...]	None
Strategy	xxx	Good	A good integration in [...]	A macro analysis would have been [...]

SRI Analyst Position

X presents a good profile in terms of [...] but suffers from [...].

Decision Matrix

Figure 8 : The mediating role of instruments in the transformation of a logic and its associated practices