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From Fiduciary Duty to Impact Fidelity: Managerial Compensation in Impact Investing

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Abstract

Investors with standard monetary preferences will give a fund manager incentives to increase firm profits, which can be achieved through a share in profits via carried interest. When investors have social preferences, it is not clear which incentives the manager should receive. We explore this puzzle by applying an agency theory perspective to impact investing, a practice where investors seek both financial returns and a measurable social or environmental impact. Using an inductive, qualitative approach, we identify and describe the ethical tensions and challenges faced by fund managers to structure and implement impact-based variable compensation schemes. Our results indicate that economic incentives tied to non-financial objectives are useful to alleviate goal incongruity between principals and agents during fund creation but have the potential to lead to perverse effects during the fund lifecycle, where managers may exploit subjective non-financial metrics to maximize personal wealth. We introduce the concept of impact fidelity, a conceptual equivalent of fiduciary duty, to ensure that investment decisions reflect the asset owner's impact preferences.

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Introduction

This paper identifies and describes the moral hazard problems and ethical implications of using economic incentives tied to both financial and non-financial criteria as a mechanism to align interests in multi-task principal-agent relationships. The paper builds on the case of the nascent, but evolving impact investment industry, where investments aim to generate positive, measurable social and/or environmental impact alongside a financial return (Hehenberger et al., 2019; Höchstädter & Scheck, 2015). Well-known examples of impact investing funds include LeapFrog Investments and Bamboo Capital Partners, which use debt and equity to scale businesses in underserved and marginalized communities in developing markets across areas such as nutrition, health and life-improving goods and services[1].

Balancing financial and social objectives is a key challenge for hybrid organizations such as impact investing funds. Organizational governance, through control mechanisms such as managerial compensation, has been suggested as a way to avoid mission drift, i.e., the potential for financial considerations to crowd-out an organization's social mission (Ebrahim et al., 2014; Hong et al., 2016; Ramus et al., 2018). However, subjectivity in non-financial criteria potentially allows the fund manager to exploit informational advantages and pursue their personal agenda at the expense of the investor's impact preferences. In this paper, we argue that the traditional agency theory prescription of economic incentives is useful to alleviate goal incongruity between principals (investors) and agents (fund managers) during the formative stages of fund creation but that relying on such incentives may have an adverse effect on managerial motivation and performance during later stages of the fund lifecycle.

When investors outsource dual-objective investment decisions, such as in impact investing, to asset managers, the presence of social preferences carries implications related to fund governance and incentive alignment. Indeed, impact investors (principals) may want to provide incentives for their agents (fund managers) to deliver both financial returns and social/environmental impact (Baron, 2008). To date, however, most impact investing funds have adopted the traditional incentive structure observed in the hedge fund and venture capital industry (Balandina, 2016; Spiess-Knafl & Scheck, 2017). This might be considered puzzling: if a core tenant of impact investing is the production of intentional and measurable impact (Hehenberger et al., 2019), why not also incentivize fund managers through social or environmental impact targets?

The combination of financial and non-financial incentives to structure executive compensation has long been a topic in accounting and, more recently, has emerged within the strategic management literature (Ittner et al., 1997; Ittner et al., 2003; O'Connell & O'Sullivan, 2014; Flammer et al., 2019). A main question that is also given substantial attention in the business ethics literature is how managerial compensation relates to instances of unethical behavior or outcomes (e.g., Dalton &

[1] LeapFrog website (https://leapfroginvest.com); Bamboo Capital Partners website (http://www.bamboocp.com).

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Daily, 2001; Harris & Bromiley, 2007; McCall, 2004). In this paper, we turn this perspective around and develop insights into how managerial incentives can be structured to promote ethical behavior and outcomes.

Our contribution is thus positioned at the intersection of these two literature streams. Interestingly, the use of nonfinancial incentives in the accounting and management literature is typically argued to increase a firm's long-term financial performance and therefore serves as another mechanism through which principals can monitor the effort of their agents (Feltham & Xie, 1994; O'Connell & O'Sullivan, 2014). By contrast, principals in impact investing explicitly want to incentivize the simultaneous production of *both financial and non-financial value* which forces agents to balance financial return and social impact. In this vein, our research complements recent attempts to illustrate how non-financial incentives aim to increase value beyond that of shareholders (Ikram et al., 2019). As a result, our work extends the literature in business ethics on the compatibility between financial return and social goals (Auer, 2016; Glac, 2009; Trinks & Scholtens, 2017). Rather than attempting to quantify how ethical considerations affect financial returns, we focus on how managerial incentives affect these dual aims in the investment process.

As an emergent sector, there is little agreement among impact investing participants regarding the processes and procedures for impact measurement and their use as an incentive in managerial compensation. This feature provides opportunity for experimentation and innovation but also means that standardized, large-scale datasets are unavailable to study the compensation practices in the sector. For this reason, we employed a qualitative, inductive approach and interviewed 22 fund managers, fund advisors, and industry experts to identify the ethical challenges that result from the use of impact-based rewards and describe how impact-based compensation schemes allow fund managers and impact investors to deal with these ethical issues.

Our findings indicate that through collaborative goal setting, fund managers and investors can use impact-based variable compensation schemes to create mission lock during the creation of the fund that results in principal-agent *alignment*. These compensation schemes primarily occur through one of two forms: carried interest that is conditioned on impact performance or an impact bonus that can be issued at various points in time throughout the life of the fund. However, informants also indicated that the use of an impact-based compensation can drive *perverse effects*, such as the gaming of metrics used to determine impact performance, during later stages of the fund lifecycle since fund managers can potentially manipulate informational advantages to maximize their personal wealth. *Impact management* thus emerged as a construct that fund managers can use to engage in ongoing dialogue with investors, for instance by creating metrics that are flexible over time or that can be adapted to the specific environmental context faced by portfolio companies.

Thus, while an agency theory approach based on contracting provides an initial forum for investors and fund managers to discuss the balance between financial and impact objectives, intrinsic motivation is also required from the agent. To this end, we introduce *impact fidelity*, a conceptual equivalent of fiduciary duty, as a mechanism to bind fund managers to the impact goals that an investor articulates. Impact fidelity is the managerial ability to sustain focus on multiple objectives even in contexts where the objectives may be contradictory. Whereas fiduciary duty requires

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managers to act in the best financial interests of shareholders, impact fidelity imparts an ethical duty on the fund manager to use impact management to balance trade-offs between alignment and perverse effects. Rather than a one-size-fits-all approach, impact fidelity encourages dialogue between fund managers and investors to jointly establish fund objectives, the set of reporting tools to measure progress toward impact goals and flexibility that allows them to evolve over the fund lifecycle.

The paper is structured as follows. In the next section, we provide an overview of the impact investing market. Section 3 reviews the literature on principal-agent tensions related to the pursuit of dual objectives and discusses the potential adverse effects of using economic incentives on the motivation and performance of agents. Section 4 describes our research methodology and data structure. We introduce our qualitative findings and model of impact fidelity in Sect. 5 and follow with a brief discussion in Sect. 6 that outlines our study limitations, theoretical implications, boundary conditions, and avenues for further research. Section 7 concludes.

Institutional setting

The impact investment market has observed significant growth since the term was first used at a Rockefeller Foundation event in 2007, likely accelerated by the 2008 financial crisis and the global disappointment and distrust toward traditional economic models (Grabenwarter & Liechtenstein, 2011; Spiess-Knafl & Scheck, 2017; Zingales, 2015). According to estimates from a recent (April 2019) report from the Global Impact Investing Network (GIIN), a leading data aggregator for the sector, assets under management (AuM) of more than 1,340 organizations worldwide reached USD 502 billion by 2018 (GIIN, 2019).

Stylized facts suggest that impact investors differ from pure profit-maximizing investors (Barreda-Tarrazona et al., 2011; Bugg-Levine & Emerson, 2011), and in recent years, scholars have started to theorize the boundaries of the emergent impact investment arena (Cornee et al., 2018; Nicholls & Emerson, 2015). These efforts have revealed investment logics in impact investing to be highly heterogeneous, ranging from impact-first funders who may deliberately accept no or below-market financial returns to finance-first investors who prioritize financial returns with a social impact floor (Hochstadter & Scheck, 2015). There are a plurality of actors making impact investments, including philanthropic foundations, open- and closed-end investments funds as well as public bodies who often engage in blended finance schemes (Emerson, 2003).[2]

[2] In this paper, we exclude venture philanthropists (VPs) from our analysis. Although many VPs use the same financial instruments as impact investors more broadly, the principal-agent relationship varies considerably, and as a result, we limit our focus in this paper to funds that can return principal at a minimum.

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As impact investors define their investment strategy and set a combination of financial and impact objectives, the balance between the two dimensions might differ. Hence, while some investors target market-rate financial returns, others may prioritize projects with lower financial returns or higher risk, but which promise potentially higher impact (Hochstadter & Scheck, 2015; Spiess-Knafl & Scheck, 2017). Brest and Born (2013) define impact investments as those that "(increase) the quantity or quality of the enterprise's social outcomes beyond what would otherwise have occurred" (p. 22). In light of their definition, such "additionality" materializes through two distinct strategies. First, impact investors can finance deals with below-market-rate returns, for instance by supporting very early-stage ventures, subsidizing ongoing enterprises or catalyzing traditional investors' capital in projects with first-loss capital. Second, impact investors may seek investments yielding market-rate returns, but they may have specific expertise that allows them to engage with companies that are overlooked by traditional investors, while also being particularly qualified to select investees with the most efficient solutions to a particular social or environmental issue (Brest & Born, 2013).

The 2018 GIIN Impact Investor Survey indicates the vast majority of impact investors target risk-adjusted, marketrate returns (64% of respondents). The remaining investors accept below-market-rate returns, among which a minority of investors pursue impact-first strategies with financial returns close to capital preservation (16% of respondents) (GIIN, 2018). When investors adopt an impact-first strategy, they accept to finance ventures that have a less attractive risk-return profile and may yield lower returns or provide more patient capital (i.e., investments with a longer time horizon). In return, impact-first investors seed investments that promise ex-ante greater impact, potentially on a much larger scale or sustained over longer time horizons.

Despite diverse motivations and investor profiles, a key feature unifying the impact investing field resides in its commitment to the measurement of social impact and the generation of both financial and social returns (Agrawal & Hockerts, 2019a; Lehner, 2016; Millar & Hall, 2013). As the industry has matured, emphasis on impact measurement has also prompted best practices to emerge in an attempt to transparently and efficiently demonstrate impact. To this end, impact investing demonstrates ethical investing obligations, which are based on procedural moral standards or principles such as transparency, integrity, accountability, and non-deceptiveness (Schwartz, 2003). However, the professionalization of the sector has to a large extent failed to incorporate impact measurement and the use of non-finan- cial incentives as a mechanism to compensate fund managers, which we explore in the next section through the lens of principal-agent tensions.

Literature Review

THE PRINCIPAL-AGENT RELATIONSHIP AND MANAGERIAL COMPENSATION

Agency problems caused by the separation of ownership and control in firms were first popularized by Berle and Means (1932) and have since been examined extensively from both an economic (Fama

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& Jensen, 1983; Jensen & Meckling, 1976; Ross, 1973) and management perspective (Davis et al., 1997; Eisenhardt, 1989; Gomez-Mejia et al., 1987). Put simply, agency theory models the relationship between a principal who delegates tasks to an agent, who in turn performs the tasks (Eisenhardt, 1989).

Agency problems and ethical tensions arise when agents can serve their interests at the expense of principals. In their seminal paper, Jensen and Meckling (1976) consider conflicts of interest and agency costs as inherent elements in any principal-agent relationship and observe that once ownermanagers reduce their ownership level below 100 percent, utility-maximizing managers have incentives to consume more firm resources. Agency theory thus assumes that goal incongruity will always exist between principals and agents such that principals want to maximize wealth subject to risk constraints while agents seek to maximize personal wealth while minimizing personal effort and risk (Cuevas Rodriguez et al., 2012).

To counteract a portion of the agency costs that stem from the conflicting interests of the principal and agent, principals can structure the agreement by making a portion of the agent's pay contingent on achieving outcomes important to the principal (Fama & Jensen, 1983; Jensen & Meckling, 1976). As a result, extrinsic rewards tied to performance outcomes are argued to motivate agents under conditions where effort cannot be directly observed (Cuevas Rodriguez et al., 2012). Although the long-standing agency theory prescription has been to condition variable compensation solely on profits and other financial accounting figures, recent literature has criticized this approach, suggesting that it encourages managers to sacrifice long-run firm performance to increase short-term financial results in an effort to maximize the agent's personal compensation (Ittner et al., 2003; O'Connell & O'Sullivan, 2014; Flammer et al., 2019).

To overcome the short-run orientation of accounting-based reward systems, many firms are implementing compensation plans that supplement financial metrics with additional non-financial measures that arguably provide a higher level of performance management (Neely & Al Najjar, 2006; O'Connell & O'Sullivan, 2014; Cho et al., 2019). The use of non-financial incentives is typically argued to increase the long-term financial value of the firm and captures items such as customer or employee satisfaction, safety and environment, or other qualitative factors such as corporate social responsibility (CSR) (O'Connell & O'Sullivan, 2014; Chen et al., 2015; Cho et al., 2019; Flammer et al., 2019).

The value of economic incentives tied to financial performance, and even non-financial objectives, is not as clearly established as a mechanism to reduce agency costs for social firms. In the social sector, workers are likely to be motivated agents, i.e., agents who pursue goals because they perceive intrinsic benefits from doing so (Besley & Ghatak, 2005). Viewing workers as mission-oriented makes sense when the output of a firm is thought of as the production of both private and public goods and where the donation of income earned in the market to an impact organization is likely to be an imperfect substitute for joining and working in it (Bes- ley & Ghatak, 2005). This could be due to the presence of agency costs or because individuals care not only about the generation of impact, but also about their personal involvement in its production (i.e., "warm glow" effects) (Andreoni, 1990). To this end, intrinsic motivation appears likely to explain some degree of incentive

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alignment between the principal and agent. In the management literature, stewardship theory builds on this premise and posits that intrinsic incentives may provide an alternative mechanism of control over agents' behavior in contrast to the extrinsic incentives that are prescribed by traditional agency theory (Cuevas Rodriguez et al., 2012).

Stewardship theory views agents as stewards whose utility function is maximized by pro-organizational thinking and by maximizing corporate performance. As such, agents are not purely self-serving, they are also self-motivated to act in the best interest of the firm (Davis et al., 1997). The stewardship theory of the firm suggests that using resources to guarantee pro-organizational behavior from the agent could be counterproductive because it will lower his/her motivation (Argyris, 1964; Davis et al., 1997). As a result, the use of economic incentives may crowd out existential, social, and ecological values that influence the manager's commitment to ensure responsible business conduct (Frey, 1997; Harris & Bromiley, 2007; Ims et al., 2014), and have negative spillover effects that reduces the manager's performance (Ims & Zsolnai, 2009).

ETHICAL TENSIONS UNDERLYING THE PRINCIPAL-AGENT RELATIONSHIP IN FUND MANAGEMENT

The PE/VC industry is predominantly structured as limited liability partnerships (LLPs), whereby investors become limited partners (LPs) and venture capital managers are the general partners (GPs) of the fund (Fenn et al., 1995; Sahlman, 1990). In a typical LLP, the GP effectively has complete control over committed funds and the investment process, and the investors are legally constrained from direct involvement in the fund's operation to secure preferential tax advantages (Jaaskelainen et al., 2007). As a result, full autonomy over investment activity is given to the fund manager despite the GP typically providing not more than 1% of the fund's total committed capital (Gilson, 2003; Sahlman, 1990).

To align the interests of LPs and the GP, the compensation structure of the GP is often highly dependent on the financial success of the fund. In nearly all cases, the GP receives approximately 20% of the net capital gain of the fund, called "carried interest" (Sahlman, 1990). Before participating in any capital distribution, however, GPs are often contractually required to return a minimum level of return (in addition to the drawn-down capital) to the LPs, i.e., the 'hurdle rate' (Gompers & Lerner, 1999). Once the hurdle is met, the GP 'catches up' to the distributed profits of LPs by receiving capital gains until the agreed carry interest ratio has been reached (Jaaskelainen et al., 2007).

In addition to these variable-pay capital gain incentives, the GP usually receives an annual management fee of approximately 2-2.5% on committed/invested capital through the life of the fund (Sahlman, 1990). This fee is primarily levied to cover the agent's operating costs related to the investment activities of the fund and is not intended by the LPs to be a significant or separate source of profit for the fund managers.

To date, most impact investing funds have adopted a compensation structure in line with the traditional PE/VC "2-20," charging a small management fee to bear the fund's administrative expenses, with additional compensation at exit in the form of carried interest (Balandina, 2016;

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Spiess- Knafl & Scheck, 2017). Evidence from practitioner reports indicates that the annual management fees for impact funds skew a bit higher than traditional PE/VC, in the range of 2-4% (Spiess-Knafl & Scheck, 2017), and a 2014 GIIN survey of 127 PE/VC impact funds reported a slightly lower average fee of 2.4% (GIIN, 2014).

The rationale for charging slightly higher management fees in impact funds, and impact-first funds in particular, is first that impact funds are often smaller than traditional PE/VC funds in an industry that is subject to substantial economies of scale (Lerner, 1994). Second, impact funds may require a larger management fee to remain competitive in terms of team quality as well as to account for the additional work related to impact due diligence (Balandina, 2016). Since impact fund managers attempt to identify investments that perform well on both impact and financial dimensions, fund managers face more complex funding decisions (Miller & Wesley, 2010), particularly given the lack of efficient and cost-effective techniques to assess the impact-side of a deal given the nascence of the sector (Brest & Born, 2013; Lehner, 2016). Higher management fees may also reflect increased costs related to human resources, i.e., require more full-time equivalents, since staff need expertise in both investing and impact, particularly in cases where the fund provides portfolio companies with non-financial support to help sustain their business and impact. Finally, impact investments require additional costs over the life of the fund related to the ongoing impact measurement and evaluation of portfolio companies.

Creating appropriate incentives for impact fund managers is likely to be particularly challenging since it requires not only the alignment of stakeholder interests (i.e., investors, fund managers and portfolio companies), but also a balance between pursued impact and financial objectives (Spiess-Knafl & Scheck, 2017). Many scholars have questioned whether adherence to non-financial goals constitutes a breach of fiduciary responsibilities (Lydenberg, 2014; Martin, 2009; Sandberg, 2011). As a result, impact investment funds face an additional risk related to agency problems, which is the risk of mission drift. Mission drift refers to the potential for financial considerations to crowd-out the fund's social and/or environmental mission (Cetindamar & Ozkazanc-Pan, 2017; Cornforth, 2014). In the economic literature, Holmstrom and Milgrom (1991) show that important interaction effects exist when attempting to motivate agents on dual objectives, i.e., if it is important for the agent to engage in both tasks rather than concentrating efforts on a single one, it is optimal for the principal to reduce incentives for the task that is easy to measure.

However, this feature poses a challenge in the impact investing industry since fund managers (agents) have a large degree of freedom to define the impact metrics through which they will be evaluated and simultaneously have informational advantages over the reporting of such information to the principal. This potentially allows the agent to utilize his private information in dishonest ways. If principals provide incentives for both financial and non-financial objectives, the agent could be inclined to use private information without any ethical restrictions (B0hren, 1998). For example, previous research indicates the agent will gladly lie about his product's quality (Akerlof, 1970), the firm's output (Diamond, 1984), or the value of the shares he offers for sale to new stockholders (Myers & Majluf, 1984). As a result, the design of impact fund compensation schemes should attempt to minimize the trade-offs between providing opportunity for the agent to violate

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ethical norms through deception, misappropriation of funds, or violating the balance between financial and social returns and deterring the agent's intrinsic motivation.

From both an agency and stewardship perspective, impact funds might consider adapting carried interest to impact performance. From an agency perspective, principals would like to motivate agents to invest in organizations with high impact potential. However, given the long-time horizons of investment funds, and open-ended funds in particular, principals may be wary of a stewardship mindset since the intrinsic motivation of agents may shift over time. As a result, we expect a wide range of impact-based compensation schemes to emerge both as a rational approach to incentive alignment between the GP and LPs as well as a mechanism to legitimize the sector's stated objectives of both financial and impact returns.

INITIAL EXPERIMENTATION WITH ECONOMIC INCENTIVES IN IMPACT INVESTING

Impact-based variable compensation schemes have recently emerged in practice, structured in the form of two primary mechanisms: (1) carried interest and (2) bonus schemes (Balandina, 2016; GIIN, 2011; Transform Finance Investor Network, 2016). Impact-based carried interest is computed using the same mechanism as in traditional PE/VC funds, yet it is only distributed if certain predefined impact goals are achieved in addition to the financial hurdle. Impact performance is assessed across the portfolio and considered in the form of a second hurdle (i.e., in addition to the financial hurdle) or as a modulator (i.e., adjusts variable pay up- or downwards) at the time of the fund's liquidation.

By contrast, the amount available for an impact-based bonus may depend on considerations that are irrelevant to the fund's financial performance, such as total assets under management, committed capital, or it could even be a predefined flat bonus pool negotiated with investors. The features of these two schemes are presented in Table 1. Importantly, impact-based carried interest and impact-based bonuses are not mutually exclusive; they can potentially be integrated through a hybrid impact-based mechanism (GIIN, 2011; Transform Finance Investor Network, 2016).

Irrespective of whether a fund adheres to a bonus or carried interest scheme, distribution of the variable-based compensation is conditioned to the achievement of impact objectives and may be adjusted up- or downwards according to the impact achieved (Balandina, 2016; GIIN, 2011; Transform Finance Investor Network, 2016). Three methods were identified as to how impact performance enters the reward formula: (1) all-or-nothing, (2) stage-based, and (3) pro-rata (GIIN, 2011; Transform Finance Investor Network, 2016).

The first, most straightforward structure conditions the distribution of variable pay upon a certain threshold of impact performance. In this case, the compensation is all- or-nothing, that is, fund managers only receive the full variable pay if all impact hurdles are achieved. A second option increases impact-based pay in stages. In this scheme, different levels of achievement against a single indicator may correspond to different levels of variable pay. In the third distribution method, impact-based compensation can be distributed on a pro-rata basis relative to the achievement of the fund's impact objectives. Effectively, funds using such a scheme translate achievement levels across different impact objectives into a numeric score, which allows for a linear increase of the

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variable pay alongside impact results (GIIN, 2011). The different options can also be combined so that the compensation increases on an impact-based pro rata basis but is only distributed above a predefined impact threshold.

Table 1 *Overview of variable impact-based compensation schemes*

Compensation scheme	Financial conditions	Impact integration	Relative strengths
(1) Impact carried	Yes	Focus on long-term impact objectives	Aligned with other commonly used inventive schemes found in the investment industry. Provides large, long-term incentive for fund managers
(2) Impact bonus	Not necessarily	Focus on short-term (and potentially long-term) impact objectives	Not dependent on financial returns. Flexibility in distribution frequency and in setting compensation pool
(3) Hybrid	Partly	Integrates both long-term and short-term focus	Combines advantages of both schemes

Research Methods

Given that impact investing funds are under-researched organizations, the compensation schemes of impact funds remain largely unexplored in the academic literature. We therefore chose to follow a qualitative approach (Edmondson & McManus, 2007) to allow fine-grained description of their compensation practices and of the organizational context in which they are deployed. The aim of our inductive inquiry (Eisenhardt, 1989; Langley, 1999) was to identify the reasons for establishing impact-based variable compensation schemes, as well as describe the particular designs and ethical issues underlying such schemes.

DATA COLLECTION

We first reviewed existing gray literature to develop questionnaires for semi-structured interviews with fund managers and industry experts in the impact investing field. Although the practitioner briefs highlight a few innovative examples and call for further discussion and experimentation, they do not document the implementation processes of such schemes, nor the perception of actors about their effectiveness. Hence, our interview questionnaire (Appendix A) was designed to gather information about the implementation of impact-based compensation practices and the perceptions of key players, highlighting potential ethical tensions or issues that arise during the creation of such schemes. Additionally, the briefs helped us identify interesting field actors to interview given their previous experience in the implementation of such schemes or because of their expertise and position in the field as advisors to investors and/or fund managers.

Partially driven by limited access to investors (LPs) in impact funds, we concentrated on the agent perspective ofimpact-based compensation. Regarding the type of impact fund, we primarily focused on closed-end funds that can divest their assets after the life of the fund and return the principal to the investors. This decision removed philanthropic funds, i.e., those not expecting the return of principal and interest, from our scope of analysis. Assuming that variations in funds' investment

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theses and related trade-offs between social impact and financial return may lead to differences in compensation schemes, we attempted to diversify our sample by integrating impact funds that seek at least the return of capital (impact-first) as well as funds that seek market rate returns while also achieving impact (finance-first). We also aimed for a global reach by interviewing funds that are headquartered in various geographical areas, as local contexts may also influence the choice of compensation scheme.

The initial interviews allowed us to expand our sample through snowball sampling, which aimed to increase the diversity of data sources (Noy, 2008). The selected interviewees had notable track records in impact investing and, in many cases, on impact-based financial reward schemes in particular. Between January and March 2019, we conducted 15 interviews with impact fund managers and 7 interviews with advisors and experts. All 22 interviews lasted approximately 30 min to 1 h. We prepared each interview by collecting background information and documents about our informants (such as mission statements, activity reports, etc.) in order to contextualize the informants' responses in terms of identity, positioning, and strategy.

The semi-structured interviews allowed us to collect the interviewees' experience and opinion on the following items: impact-based financial reward schemes; challenges in setting impact metrics and targets; impact audit and reporting challenges; and team dynamics and motivation. We also allowed flexibility for interviewees to express any information they deemed important and for adapting questions to the evolving needs of the research. The set of questions (Appendix A) was distributed in advance to allow interviewees time to review the discussion topics, and thus be better able to reflect on their own practices and views.

Table 2 presents a summary of our informants' characteristics. Panel A of Table 2 presents our sample of 15 funds based on the following characteristics: country of headquarters, impact focus, target returns, fund size, and date of inception. Panel B of Table 2 presents the list of interviewed advisors and experts and describes their organization, position, and geographic location.

For confidentiality reasons, the interviewees were assigned labels according to their role. We thus distinguish fund managers from impact advisors and experts. Impact fund managers will be referred to as fund 1 to fund 15 while the impact advisors and experts will be referred to as advisor 1 to advisor 7.

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Table 2 *Data inventory*

Panel A	Headquarters	Impact focus	Target returns	Fund size	Inception
fund1	Brazil	Education, health, financial services	(near) market-rate	$50-99 M	2009
fund2	USA	Cross-sectoral	(near) market-rate	$100-249 M	2011
fund3	Switzerland	Clean energy, sustainable agriculture, circular economy	(near) market-rate	$100-249 M	2010
fund4	Belgium	Cross-sectoral	(near) market-rate	$50-99 M	2010
fund5	The Netherlands	Circular economy, health, clean tech, education, consumer goods	(near) market-rate	$25-49 M	2014
fund6	France	Health, clean tech, sustainable agriculture, microfinance	(near) market-rate	$50-99 M	2002
fund7	Belgium	Global challenges	(near) market-rate	$0-24 M	2012
fund8	Germany	Social, ecological or societal purpose	below market-rate	$25-49 M	2003
fund9	The Netherlands	Environmental sustainability, social inclusion, creativity in society	(near) market-rate	$100-249 M	1991
fund10	Luxembourg	Cross-sectoral (fund-of-funds)	Below market-rate	> $250 M	2015
fund11	Luxembourg	Clean tech, microfinance, global health	(near) market-rate	$50-100 M	2007
fund12	Canada	Environmental sustainability, job creation, land conservation, water and sanitation	(near) market-rate	$20 0-250 M	2008
fund13	Panama	Environmental sustainability, conservation, reforestation	(near) market-rate	$0-24 M	1994
fund14	Costa Rica	Sustainable agriculture, reforestation, ecotourism,	(near) market-rate	$25-50 M	1998
fund15	UK	Cross-sectoral	(near) market-rate	> $500 M	2002

Panel B	Domicile	Position	Organizational description
advisor1	UK	Head of institutional sales	Impact investment bank
advisor2	UK	Senior advisor	Specialist corporate finance firm focused on sustainable and impact investment
advisor3	UK	Co-founder and CEO	Corporate finance firm focused on impact investment
advisor4	Germany	Program manager	Specialized advisory firm bridging public funders and impact investors
advisor5	Austria	Academic, expert on social impact strategies	Educational institution
advisor6	Switzerland	Founder and managing director	Advisor to private, institutional and public investors on implementation of impact strategies
advisor7	The Netherlands	Managing director	Consultancy firm specialized in impact measurement and investment

Note (near) market-rate and below market-rate correspond to finance-first/impact-first funds, respectively.

DATA ANALYSIS

The interviews were first recorded and transcribed. In order to capture our informants' meanings and understandings of the tensions facing the adoption and implementation of impact-based variable compensation schemes, we employed traditional grounded theory techniques of thematic coding and analysis, including open and axial coding (Charmaz, 2014; Gioia, 2004; Gioia et al., 2013). Following two rounds of open coding and comparative discussion between three of the four authors, we developed a data structure and coded the data into 22 first-order concepts. These codes reflected the informants' language and unveiled key elements of their meaning systems.

We then used axial coding to identify relationships among the first-order concepts to develop second-order themes. We derived eight second-order themes, which we identified by searching for key words, their underlying meaning, and the context within which they were embedded. Themes repeated by multiple informants within and across cases indicated patterns (Pratt et al., 2006, p. 240). In the final selective coding stage, we created aggregate dimensions by integrating the second-order themes to develop theory of principal-agent tensions in impact-based reward schemes. This final stage led to the identification of three central dimensions that form the core structure of our

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results section: (1) alignment, (2) impact management, and (3) perverse effects (see data structure in Fig. 1).

As grounded theory requires an explanation of the interrelationships between core components, we used these second-order themes and aggregate dimensions as the basis and input for the model in Fig. 2, which outlines the principal-agent tensions and conflicts between impact fund managers and investor. Variability across informant testimonies further suggested that the basic impact fidelity model could be moderated by a number of factors such as how the impact reward is structured (i.e., bonus vs. carried interest), the characteristics of the fund (impact-first vs. finance-first) and the relationship between the fund manager and the investors of the fund (agentic vs. steward relationship). The model and moderating factors are presented and described in the second part of the findings section.

Findings

ALIGNMENT

The data show that fund managers and investors use impact-based compensation schemes to collaboratively set impact goals and financial targets, which helps to lock in the social and/or environmental mission at the time of fund origination.

COLLABORATIVE GOAL SETTING

The impact strategy of a fund was identified as a starting point to define impact targets and indicators, which then serves as the basis to measure progress against the fund's overarching goals. Fund managers should articulate their impact strategy with a clear vision of their impact goals at the fund-level, the type of investees suitable for investment and outline the support services provided to portfolio companies. The defined impact ambitions also need align with the social preferences of the fund's investors for them to feel confident that fund managers can deliver impact in line with their expectations. An impact-based financial reward creates alignment by forcing fund managers and investors to define the specific metrics to be achieved. As summarized by fund3:

The most important thing is for fund managers to have an impact vision: where do you want to go with investees? Then you can see which indicators might help them increase impact based on the targeted final goal.

However, informants also indicated that this federating process should not be carried out in isolation. Rather, the impact metrics and targets should be designed considering portfolio companies' own impact strategies and account for their specific context, which brings dual benefits. First, metrics based on the fund's impact thesis can be used by portfolio companies to manage their business from an impact perspective. Hence, the definition of impact targets is concurrent with the implementation of an impact assessment methodology at the investee-level. It is part of a

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professionalization process, where fund managers use reporting requirements as an opportunity to help portfolio companies design their own impact measurement framework, which in turn leads to improved management of their impact strategy. Second, investees will be more willing to track and report on their impact since they see impact measurement as a value-adding process, rather than burdensome paperwork. Fund4 reinforced the idea that metrics should be useful to all parties, "ideally, come up to an agreement with investees: what are the right metrics, interesting and ambitious objectives for them? How can metrics be best designed so that they're not too much of a burden?".

This collaborative process enables investors and fund managers to build trust and clarity on the fund objectives, and ultimately attempts to codify social impact into the decision-making of fund managers.

Mission lock. The dual set of objectives in impact funds implies that a balance should be struck between impact and financial considerations (Davies & Doherty, 2019; Ebrahim et al., 2014). An impact-based compensation scheme provides a forum to discuss and align the impact ambitions of investors, fund managers, and ultimately, portfolio companies around a specific strategy. According to fund4, the use of an impact-based reward scheme "lays the cards on the table," making sure that everyone is committed to specific and aligned impact goals. This sentiment was echoed by fund1, "We, as managers, wanted to be accountable for the impact: we felt that if we were only compensated based on the financial returns of the fund, there would be a slight misalignment between us and our investors." As such, the impact-based incentive operates as a federating process to align fund managers and investors around a common mission.

Several informants revealed that by not linking compensation to impact, there is a risk that fund managers forego impact in exchange for greater financial returns and drift away from the initial mission of the fund. Establishing impact objectives, and further tying them to a reward, serves as a reinforcing mechanism to drive attention toward the agreed upon impact objectives and provides a mechanism to mitigate the risk of mission drift. Nevertheless, informants simultaneously pointed out that the utility of these compensation schemes is circumscribed by their subjective nature.

PERVERSE EFFECTS

Informants indicated that perverse effects related to impact-based compensation could materialize through three mechanisms: (1) metric fairness, (2) motivation, and (3) gaming.

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Figure 1. *Data structure showing ethical challenges in impact investing*

Open Coding: *First-Order Concepts*	**Axial Coding:** *Second-Order Themes*	**Selective Coding:** *Aggregate Dimensions*
• Balances risk of mission drift, where fund managers sacrifice impact for greater financial returns • Federating process of the fund to decide strategic objectives • From impact measurement and management to impact-based reward • Signals "best practice" and commitment of fund manager	Mission lock	Alignment
• Definition of the fund's impact strategy, goals and success indicators • Definition of investee impact metrics and targets based on the impact thesis • Impact measurement and management as a professionalization process for investees (value add rather than burdensome requirement) • Formalized impact measurement and reporting	Collaborative goal setting	
• Bias risk related to how ambitious the targets are, how fair and reliable indicators of success are (risk related to self-audited data) • Delicate balance between the need for transparent and reliable data against the costs of an independent, third-party evaluation	Metric fairness and accountability	Perverse effects
• Risk of providing counter-productive incentives, as a broad impact ethos is reduced to a set of indicators • Incentives direct attention to what it takes to obtain them, potentially driving fund managers away from impact considerations at a higher level) • Are performance incentives even required in for social organizations?	Lower intrinsic motivations	
• Impact-based incentives might easily be gamed	Gaming metrics	
• Lack of benchmarks and indicator track records in the impact investing industry • Difficulty to assess impact in all its dimensions	Impact metric/target complexity	Impact management
• Trade-off between flexibility to adapt impact targets and indicators, and ensuring they are fair and ambitious (allow an organization to evolve and innovate while staying true to its mission) • Indicators need to reflect real world but also be flexible • An ongoing conversation with each portfolio company is required to set effective impact targets and metrics	Impact metric/target flexibility	
• Reliable impact measurement and management can be costly • Trade-off between limiting costs by reducing the number of measurable items and measuring enough to get a full picture • Aspiration for a "good enough" impact measurement and management system with a simple set of metrics	Cost-reliability balance	

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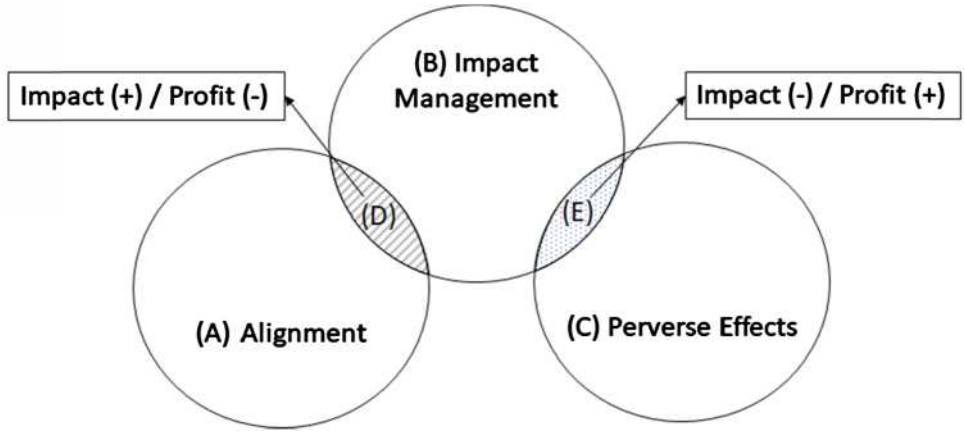
Figure 2. *A model of impact fidelity*



METRIC FAIRNESS AND ACCOUNTABILITY

Tying impact performance to managerial compensation brings additional tensions related to the fairness and accountability of tracking impact. As noted by fund6, "with any incentive, there is a bias in how ambitious the targets are." Fund managers may be tempted to set easily achievable impact objectives to condition distribution of the impact reward. Since impact funds are already challenged to generate financial returns, the addition of a second, impact-based objective may only serve to distract management.

Some fund managers also questioned the fairness of impact assessments in a context of limited resources. The complex definition of impact metrics and targets makes it particularly challenging to design fair and reliable indicators of success, as often only outputs or outcomes are observed. Fund12 outlined the challenge facing smaller funds:

We do not have the means to build an impact measurement and management infrastructure ourselves; we are too small of a fund for the deep dive thinking required to come up with metrics that are fair.

Related to fairness, fund managers must also consider accountability concerns when reporting impact to investors. That is, should impact assessment be reported directly by fund managers or does a third party need to audit impact performance? Some fund managers considered an independent, external audit of impact as an example of best practice once impact performance is tied to compensation. Others, such as fund1, explicitly mentioned agency problems when allowing fund managers to self-report the impact:

One of the requirements for this impact compensation scheme to work is that it is validated by a third-party, right? Because if you were evaluating your results, and your compensation is tied to it, then you have an agency problem—so you need a third party, doing credible work, to validate that you are delivering what you're saying.

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LOWER INTRINSIC MOTIVATION

Informants expressed that a substantial portion of motivation toward achieving impact is intrinsic. For instance, fund14 claimed that "creating impact is the fund's intrinsic purpose; all investments are reviewed under that lens." A key driver of impact performance is an ambitious impact vision that is carried out by an impact-driven team who deeply cares about the impact goals pursued. Thus, while the impact-based reward is valuable to discuss, align, and commit to impact objectives, it does not exclusively secure impact achievements per se. As stated by fund6:

The process of setting up an impact-based financial reward scheme itself has virtue, yet it is not what guarantees an impact-oriented team... for that you need to hire the right people, with values and motivations that will be reflected in their work for impact achievements.

Some informants even suggested that the introduction of an impact-based reward might have a detrimental effect on the investment team's intrinsic motivation. If fund managers feel that their efforts are reduced to a set of indicators, they may focus simply on obtaining the reward, potentially at the expense of impact-driven considerations that they would otherwise prioritize. As highlighted by advisor6, "people just try to do everything in order to get their carried interest and that becomes an excuse for not managing the rest." Others, such as fund2, mentioned that, "there is probably no need to align impact metrics with an incentive: fund managers are committed to impact anyway and would be doing the exact same thing without it." Finally, some informants, as highlighted by advisor5, simply suggested that "performance-based bonus [are not] needed in the social sector."

GAMING METRICS

Perhaps the most egregious of the three identified perverse effects, several informants indicated that impact metrics could potentially be gamed to achieve the impact-based bonus. The inclusion of impact metrics in a reward formula should be carefully developed to avoid the risk of biased incentives (when targets are too easily achieved) or counter-productive incentives (when the selected impact indicators fail to account for all key impact dimensions). In short, performance might increase against impact objectives tracked, while other aspects that are not appropriately measured deteriorate. Alternatively, as advisor5 mentioned, "impact measurements are quite easy to trick, it's not something very solid." This implies that fund managers have a large degree of discretion over the type and rigor of impact metrics; an idea that was reinforced by advisor7, who stated:

We have seen examples where impact targets actually provide the wrong incentives, e.g., where impact investors predominantly go for the safe investments which they know will have an impact, rather than riskier investments which, if they succeed, have a higher impact potential.

Since impact-based compensation has benefits in the form of ex-ante alignment as well as drawbacks in the form of perverse effects, informants suggested proper management of these two concepts throughout the lifecycle of the fund was critical to the successful implementation of an impact-based compensation scheme.

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IMPACT MANAGEMENT

Impact management is a valuable, albeit complex process. Although impact management helps to shape strategies that drive impact maximization, it is also a source of tension due to the difficulty of assessing impact performance. Informants reported that designing impact metrics is challenging due to their (1) complexity, (2) flexibility, and (3) monitoring cost.

IMPACT METRIC/TARGET COMPLEXITY

The evaluation of a portfolio company's impact requires an assessment of the incremental positive change triggered by the organization's activities. Whereas metrics for an organization's outputs are fairly easy to define, indicators for impact are much harder to design as they require further considerations such as additionality (i.e., would the impact have occurred anyway without the investee's activities and impact fund's investment?) and attribution (i.e., how much of the change is the investor responsible for?). The assessment of each individual impact component, when observed separately, may not yield a complete and sufficiently reliable picture of the impact achieved.

Impact exists at multiple levels throughout the investment chain. Informants suggested that a complete understanding of the impact created should not only consider the impact of portfolio companies' products and services, but also the extent to which portfolio companies positively impact their stakeholders (e.g., employee treatment, pay suppliers a fair price, etc.); improve environmental, social and governance (ESG) standards; or continuously improve their products and services to better solve the targeted issue. Impact may also be assessed at the fund-level to account for ESG efforts of the impact fund as an organization or to capture the quality of the investment team's support to scale and respond to the needs of investees.

Fund managers can set generic metrics that apply across the entire portfolio, which may be aggregated at the fundlevel to assess achievement toward the fund's overarching goals, as well as the extent of each individual investment's contribution. The disadvantage of generic metrics is that since they are systematically applied to all investees, they may not reflect each portfolio company's specific realities. Generic metrics, however, may be used to assess elements that are deemed crucially important to the fund in all circumstances, such as indicators of the investee's social or governance practices.

As impact materializes in several dimensions, which may be considered both at investee- and fund-level, impact funds must determine which facets will be measured and tracked and how they will be tied to an impact-based financial reward distribution. Several informants noted that current impact assessment methodologies do not yet provide convenient frameworks to yield fair and reliable pictures of broad impact realities, revealing strong aspirations for improved, easy-to-use tools to measure and manage impact.

Setting targets that are sufficiently ambitious and challenging, yet also attainable, was another barrier mentioned by informants. This issue is further compounded by the lack of benchmarks in the impact investing industry. Impact measurement is a novel practice and, as noted by fund14, "it is

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very difficult to predict a company's growth and how that will translate into impact." Impact investors that provide capital to early-stage ventures may not yet be able to define "strong" performance for the start-up. As indicated by fund15:

The main implementation challenge is to be able to meaningfully measure impact: it is hard to do that well and agree on a benchmark that is good enough. Often we invest in innovative models that no one else in the industry is doing and where you can only start to measure impact over time.

As such, impact goals for more mature businesses with an existing track record appear easier to establish but obviously limits the available investment universe available to impact funds.

IMPACT METRIC/TARGET FLEXIBILITY

Some informants expressed a desire to leave room for flexibility of impact metrics over the lifetime of the fund. Fund11 described the issue, suggesting, "metrics are important, but there has to be flexibility in those metrics as you want your portfolio companies to be innovative and think about new ways to address their markets, which metrics defined ex-ante might not be capturing." Fund6 suggested to "leave room for flexibility to be able to review metrics that are not suited anymore and account for changes in investees' market environment."

Flexibility was particularly stressed for funds investing in early-stage ventures where the business has no or little track record. Leaving impact metrics and targets open for review is crucial to maintain an appropriate impact assessment framework as investees scale their operations. The need for a dynamic approach was captured by fund15:

We always check with [portfolio companies] that impact gets sufficient attention. We don't just collect the data and report that back to investors, but our team actually engages with our portfolio companies and meets with staff to find out what is going well, and where they want to go next - and we set an impact agenda... to decide core priorities in the next 3-6 months.

Informants suggested that target/metric flexibility could release pressure on investees during times of difficulty or changes in their business strategy. In this case, flexibility helps to avoid the imposition of impact targets at the expense of the commercial viability. The need to balance commercial and impact objectives was stressed by fund14:

As we are in touch with portfolio companies on an ongoing basis, we know what the drivers for growth vs. downturn, and we would really only take action in those cases where we feel that everything is going as planned, and the company is just being lazy on the impact part.

Nevertheless, flexibility should not alter fidelity to core impact goals. Indeed, the reward becomes unchallenging when impact objectives are incessantly adjusted downwards or changed to impact targets that are already being achieved. As noted by fund11, "there is a tricky balance in making sure that the company stays core to its mission, while it is able at the same time to evolve and innovate." Many informants suggested that the key to flexible impact targets was frequent interaction with portfolio companies because it allowed investees to better understand their market environment and refine their impact strategy.

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Status : Postprint (Author's version)

COST-RELIABILITY BALANCE

Several informants alluded to a trade-off between using a small number of simple, standardized metrics versus a larger number of complex, specific indicators. While the former provides cheaper, comparable and easily accessible metrics, it risks yielding a poor reflection of reality since there is both a reduction in the number of impact items assessed as well as the meaningfulness of those indicators. However, more complex metrics are costly and difficult to obtain. Furthermore, applying unique impact metrics for each portfolio company prevents comparison of the impact performance from one investment to another, or restricts aggregation at the portfolio level. The cost-reliability dilemma was nicely illustrated by fund13:

If you want to have a simple measurement system in order to reduce costs, the first thing you do is reduce the number of things you measure - so the question is, do you get the right image with the reduced number of things you're measuring? And if you increase the number of indicators to measure many things then it provides a better picture of reality, but it increases your costs enormously.

Ideally, impact assessment should be simple, while at the same time offer a full picture of the impact created. Although additional costs may be acceptable for larger investments, it is hard to justify such a cost for investments with a smaller ticket size. Fund13 viewed the trade-off from an adversarial perspective, "I see a danger in this impact measurement: it is another element of cost added to a project and it may add significant costs, especially for small investments." Similarly, reporting requirements for mature startups are often not transferable to early-stage portfolio companies who do not have the human and financial resources, nor the infrastructure to monitor complex metrics.

The frequency of impact reporting from portfolio companies to the fund manager, and ultimately to the investors, will also increase the resources required. Although frequent impact assessment enables fund managers to review, adapt, and improve activities and performance, it also increases the costs of monitoring impact. Fund4 notes, "reporting frequency is not a key element, it is more of an administrative burden and opportunity for providing agile reactions." Fund managers thus need to determine the frequency of reporting sufficient to correct deteriorating impact performance, while also considering the human and financial resources at hand.

In sum, rather than provide an optimal contract structure, our qualitative findings suggest that fund managers and investors should aim to balance the three following items when designing an impact-based compensation scheme: (1) setting ambitious impact metrics and targets, (2) allowing flexibility to revise impact metrics and targets that may become irrelevant as the organization evolves, and (3) verifying impact metrics and targets through a third-party, such as an impact committee or external auditor.

A MODEL OF IMPACT FIDELITY

Our data show that the implementation of an impact-based compensation scheme depends on three main factors: (1) alignment, (2) perverse effects, and (3) impact management. The federating process of alignment encourages dialogue between fund managers and investors to collaboratively set the financial and impact objectives of the fund. Nevertheless, informants simultaneously

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indicated that impact-based compensation might be detrimental to fund objectives since subjectivity in impact metrics might deteriorate the motivation fund managers, undermine the agent's perception of metric fairness, or in the worst case result in the agent's gaming of impact metrics to achieve the impact-based bonus. The third construct of impact management thus emerged as a way to balance the positive effects of alignment and the negative perverse effects (see Fig. 2). Taken together, we suggest that the use of impact management to balance trade-offs between alignment and perverse effects constitutes an ethical duty on the part of the fund manager, which we describe as impact fidelity.

The basis of the impact fidelity model resides in impact management, for which fund managers must design a methodology that is suited to their needs and resources. Tying impact performance to a financial reward explicitly encourages fund managers to seek high impact investees in line with the impact mandate of the fund. However, incentivizing fund managers through an impact-based financial reward is also costly. In addition to the explicit costs of the impact-based reward, further costs are incurred to monitor the fund's impact performance. As a result, the overlap between *alignment* and *impact management* (section D) is impact enhancing and profit diminishing for both investors and fund managers, although fund managers potentially recoup some of the agency costs through the impact-based reward mechanism.

Since monitoring and measuring impact are complex and costly, the adoption of an impact-based variable compensation scheme can induce perverse effects. For example, fund managers could be incentivized to exaggerate the impact of their investees or potentially view the reduced set of impact metrics simply as an additional constraint in their decisionmaking process. The overlap between *impact management* and *perverse effects* (section E) is therefore impact diminishing, profit enhancing for fund managers and occasionally profit enhancing for investors depending on the fund structure and operative impact-based incentive (impact bonus vs. carried interest).

The dilemma posed to fund managers and investors is to how to balance the trade-offs between the sizes of section D and section E. Put another way, fund managers and investors can decide to use stringent impact measurement techniques (for instance through third-party auditors or random control trials) if they want to reduce the risk of perverse effects. This strategy increases monitoring costs for the fund, i.e., increases the area of section D. Alternatively, fund managers and investors can choose to relax impact accountability constraints, permit flexibility over time, or use simple, easy- to-capture metrics. This strategy reduces the upfront costs of alignment but potentially allows perverse effects to reduce the impact of the fund over its lifecycle.

Variability across informant testimonies suggested that additional moderating factors change how fund managers evaluate the trade-off between increased monitoring costs and incentives to exploit informational advantages. Among the most obvious were (1) incentive structure, (2) fund characteristics, and (3) relationship with limited partners.

Perhaps unsurprisingly, the structure of the impact-based reward itself emerged as a central element to manage principal-agent conflict. By structuring incentive pay as carried interest, the fund manager may also signal the high (expected) return profile of the fund. Principals, especially those who may not perceive trade-offs between financial return and social impact, may positively view the

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use of impact-based carried interest for its long-term focus, as it encourages fund managers to stay with the fund through its divestiture period. As a result, carried interest schemes will typically decrease the size of section D but increase the potential for perverse effects.

By contrast, the flexibility of an impact-based bonus is potentially appealing to investors who perceive trade-offs between impact and financial objectives. By removing dependency on the financial return profile of the fund, an impact-based bonus can help managers signal the impact focus of the fund. Bonus schemes can also evolve over the life of the fund, allowing for flexibility with respect to the impact indicators prioritized, as well as changes in impact measurement and industry best practice. Finally, some informants suggested to mix carried interest and bonus schemes to create a hybrid structure. Although a hybrid structure is still highly reliant upon the financial return of the fund, it allows fund managers and investors to balance short-term goals that can be rewarded through the bonus mechanism and long-term objectives that are conditioned through the carried interest. Both the bonus and hybrid schemes increase alignment costs (section D) since they require continued evaluation and development over the life of the fund. However, they reduce the potential for perverse effects (section E) because they are continually revisited jointly by fund managers and investors.

Interestingly, for both impact-based carried interest and bonus schemes, informants indicated that the introduction of an impact-based reward alone was beneficial in that it created reflection on the impact objectives to be pursued. In this way, the structure of an impact-based reward could potentially serve as a self-selection mechanism to match impact-first and finance-first funds with impact-oriented/ return-oriented investors.

The return profile of the fund also appears to play an important role when structuring impact-based compensation schemes. For impact-first funds, especially those who are only concerned with the return of principal, a carried interest scheme appears to be inappropriate. In the case of capital preservation, the carried interest incentive is effectively worthless, and in the worst case it leads to mission drift by encouraging fund managers to actively seek deals with significant financial upside. As a result, informants suggested that if an impact-first fund were to use an impactbased incentive, it should be in the form of a bonus. By contrast, finance-first funds have more degrees of freedom to structure an impact-based reward. However, the wider choice of mechanism design comes at the cost stronger perverse effects. That is, finance-first funds have stronger incentives to game impact metrics or drift since their variable pay is highly reliant upon the financial success of the fund and should therefore consider increasing alignment costs to improve accountability in impact measurement.

Informants indicated that the use of an impact-based reward was highly dependent on the relationship between the investors and fund manager. In high-trust relationships, reflective of a stewardship mindset, informants indicated that an impact-based bonus (or the rigor of impact performance reporting) was not required to align investors and fund managers since managers would already be serving investor interests without an incentive. In these cases, if an impact-based reward were to be implemented, it should be simple enough to deliver the required level of reliability while keeping the related costs and efforts reasonably low. By contrast, informants suggested that

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in cases where fund managers were unfamiliar with investors, more rigorous impact management tools, such as impact verification by an external third-party would be required to successfully implement an impact-based reward. Thus, the more agentic the relationship between fund managers and investors, investors may wish to add explicit agency costs in the form of monitoring that limit the perverse effects in terms of over-claiming or gaming impact metrics.

Discussion

Arguments in the management literature typically argue that non-pecuniary performance incentives, integrated by using a sustainability balanced scorecard for instance, are justified because they increase the long-term economic success of a business (Figge et al., 2002). The principal-agent relationship in impact investing deviates from this line of reasoning because principals in impact investing want to explicitly incentivize financial return and social/environmental impact. As a result, the dual investment aims in impact investing also raise implications related to the fiduciary role of the agent in fund management, where many business ethicists have questioned if the inclusion of social goals violates the fiduciary duty of the agent (Lydenberg, 2014; Martin, 2009; Sandberg, 2011). Our analysis reveals that non-financial incentives positively affect the alignment process and thereby reduce ethical tensions during fund creation. The use of non-finan- cial incentives provides a forum for impact investors and fund managers to agree on the balance between financial and social objectives as well as the tools and procedures to ensure fidelity to impact.

Nevertheless, the subjectivity of non-financial incentives raises ethical tensions, which to some extent has already been identified in the literature as managerial power theory, where agents undermine subjective performance measures to increase profits for themselves (Ittner et al., 1997; Bebchuk et al., 2002; Perego & Kolk, 2014). Our research indicates that fund managers face these same tensions and may be tempted to game impact metrics for personal gain. However, since both principals and agents are aware of the potential for perverse effects, we suggest that both extrinsic and intrinsic motivation is required for agents to reliably act in accordance with the preferences of the investor.

To this end, we introduce the concept of impact fidelity. On the one hand, impact fidelity empowers fund managers to adhere to the social and environmental impact preferences of the investor. Although previous research indicates that hard corporate social performance (CSP) targets are effective in increasing CSP (Maas, 2018), our paper indicates that soft targets are also useful as they have a signaling power for stakeholders to show how important CSP is to the firm; raise awareness and drive executives' attention toward CSP; and motivate people involved. Recent work in impact investing indicates that impact investors and their portfolio companies alleviate conflict through communication and the establishment of social performance metrics (Agrawal & Hockerts, 2019b). To this end, our research points to the importance of the soft role of impact incentives: they provide an opportunity for investors and fund managers to collaboratively establish and monitor the financial and social objectives of the fund.

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Ultimately, for impact funds to deliver on the promise of intentional and measurable impact, fund managers need to establish ways to reliably adhere to an investor's social preferences. This is not to say that all impact investments need to deliver the impact promised; all investments carry a risk of poor financial return. However, our research suggests that impact-based compensation can serve as a mechanism to align all players within the impact value chain. In this way, we believe that a collaborative stance is necessary to successfully achieve the dual aims of impact investing funds.

BOUNDARY CONDITIONS AND STUDY LIMITATIONS

Impact investing is an emerging field with diverse stakeholder profiles. Impact funds that return principal to investors may therefore form a boundary condition for our findings. However, we selected this context because its uniqueness clearly illustrated the ethical tensions related to multi-task principal-agent relationships. The core of our model is that fund managers and investors can use impactbased reward mechanisms to align interests over impact objectives, but the introduction of an impact-based compensation mechanism can also lead to perverse effects that cause fund managers to undermine the utility of investors by subverting impact reporting in a way that exaggerates the level of impact achieved. We believe that these tensions are likely faced, to some extent, by all impact investors. Thus, we consider closed-end funds that return principal to investors as the boundary condition, rather than a feature that is inherent to the theoretical process. In other words, it was more interesting to study impact-based financial rewards in an environment where the principal-agent relationship is clearly that of investor-fund manager.

Nevertheless, our study is subject to a number of limitations. First, our sampling strategy was limited to fund managers and industry insiders as informants. Interviewing limited partners (investors) in impact funds could provide a more complete picture of the tensions involved in establishing dual-objective incentives to fund managers. Second, as outlined in our boundary conditions, impact-first funds,^ and venture philanthropists were not considered in this study. Although these actors typically do not return capital to investors, there is substantial experimentation in the use of non-financial incentives in these fields that could yield valuable insights into contractual incentives tied to impact. Finally, we need to acknowledge that impact measurement is still in early stages of development. As impact measurement becomes more standardized, the role of impact fidelity may be reduced as intrinsic motivation could give way to procedures and methodologies from specialized agencies emerge that can cost-effectively monitor the impact performance of fund managers.

FUTURE RESEARCH DIRECTIONS

This research does not provide an exhaustive list of possibilities in which a financial reward may be tied to impact performance, but rather a hands-on identification and description of the challenges that will arise, and suggestions on how these tensions may be addressed. As our informant testimonies rely heavily upon the agent side of the equation, we believe that a qualitative assessment from the investors in impact funds would be of considerable value. Given the central role of impact management, we must also face the complex problem of measurability. In addition

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to the principal-agent tensions explored in this paper, there are similar multi-task principal-agent tensions at the impact fund-portfolio company level that need to be addressed. There are still few conventions on what evidence is sufficient to demonstrate proof of impact at the portfolio company level and even less about how to aggregate that information at the fund level.

Regarding the design of impact-based rewards more specifically, we believe that lab settings offer a unique avenue for future research. By isolating and manipulating variables such as the reliability of impact reporting, third-party verification of impact performance, and other impact-based reward features, would allow for more insight into the perceived fairness of impact-based compensation. Additional qualitative work could attempt to identify and articulate tools that would help to aggregate the vast impact landscape into a set of "impact asset classes." The combination of impactbased compensation scheme and impact asset class could help investors quickly identify suitable impact funds in line with their social preferences and return expectations. Finally, we believe that variable-based compensation mechanisms in blended finance arrangements, and particularly cases where private, non-profit and public actors collaborate, offers a rich context to explore principal-agent tensions from a broader perspective.

Conclusion

Impact investing is part of an important movement toward a financial system that aims to deliver both financial sustainability and valuable social and environmental improvements. As the field of impact investing expands, it will likely shape the expectations and best practices regarding the funding options of mission-driven organizations (Irene et al., 2016). To date, the pursuit of an impact strategy alongside financial expectations has required impact investors to adapt the profit-oriented tools and practices of traditional PE/VC to better account for impact objectives (Bugg-Levine & Emerson, 2011).

Nevertheless, impact investors have started developing tools that position impact performance at the center of their processes, of which impact-based carried interest and impact-based bonus schemes are an example. By tying a financial reward to the achievement of impact objectives, these frameworks complement the more general trend toward the use of non-financial measures to monitor and reward the performance of managers and corporate executives (O'Connell & O'Sullivan, 2014; Cho et al., 2019; Flammer et al., 2019).

In this study, we have identified and described the role of non-financial economic incentives to alleviate goal incongruity between fund managers and impact investors. Our results indicate that an agency theory approach can alleviate some of the underlying ethical tensions between principals and agents in impact investing, particularly during fund creation where the establishment of impact-based compensation can serve as a forum for fund managers and investors to create a shared set of language and reporting tools to articulate impact objectives.

However, due to informational asymmetries and subjective performance measures related to impact, fund managers have the ability to subvert non-financial performance measures to their

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advantage and thereby undermine the original impact preferences of the investor. Thus, our research indicates the usefulness of both extrinsic and intrinsic incentive mechanisms, which we integrate through the concept of impact fidelity. Impact fidelity imparts an ethical duty on fund managers to use impact management to balance trade-offs between alignment and perverse effects.

Impact-based financial reward schemes for fund managers, such as impact-based carried interest or impact-based bonuses, are still very early-stage frameworks. The scarcity of academic literature on the topic currently prevents clear conclusions from emerging on the added value of such schemes and implementation best practices. Our research indicates the importance of both intrinsic and extrinsic motivations to set fund objectives and create the reporting tools and procedures that can help impact investing differentiate itself from traditional fund management.

APPENDIX A: INTERVIEW QUESTIONS

Have you included the impact performance of your organization (or of the funds you manage) in your compensation scheme?

A. If no, why not?

1. What is your state of reflection / proposition on the topic? To what extent have/would 2.you consider including the impact performance of an impact investing fund in the financial reward scheme for the fund's ma3.naging team?
2. Do you believe that it would be interesting for you? How would it be perceived by the different stakeholders (investors, team, investees)?
3. What do you need/miss to implement such scheme?
4. What is your opinion on the challenges described below? I.e., challenges in terms of setting impact targets and metrics, impact audit and reporting, stakeholders' involvement...

B. If yes, how is it structured?

I. Detailed impact-based compensation structure.

1. Can you describe the mechanisms of your impact-based compensation structure?
   i. Is it part of a bonus or carried? To what extent do financial and impact performance, respectively, contribute to the financial reward? What's the threshold and what is then the minimal/maximal possible reward?
   ii. How often can the financial reward be received? Is it fixed (all or nothing, e.g., in case of targets achievement, over-achievement...) or does it increase according to the level of targets achievement (e.g., when various impact scenarios are tied to specific levels of compensation)?
   iii. Where does the financial amount foreseen for the reward go if not distributed? *E.g., Does it return to investors, or is it donated to a third-party pursuing similar impact objectives?*
2. What are the biggest difficulties you encountered in setting up such scheme (defining thresholds, impact metrics, reporting, auditing, acceptance from team members/investors.)?

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II. Lessons learned on defining metrics.

How does the integration of impact-based incentives in your remuneration structure affect the impact assessment process?

I.e., trade-off between the extra impact assessment burden and the incentivized incremental performance.

1. When assessing the impact of your organization, do you set targets and measures at the investee level, the fund level or both?
2. If you consider impact at the investee level, to what extent are impact objectives included in your contractual relationships with investees?
   i. Do you contractually impose impact targets to your investees? If so, do you allow for flexibility according to investee's capabilities?
   ii. How do you make sure that those targets are stretched, yet realistic? To what extent are you able to review the targets if they seem unrealistic vs. unchallenging? How do you proceed?
   iii. To what extent and how do you expect investees to report on specific impact measures? Do you provide tools for them to report on their impact, or do you assess their impact achievements directly?
   iv. Do you consider impact generated by investees, or the incremental impact generated thanks to your investment only? *I.e., the actual impact* generated *by your investment thanks to your organization's financial resources and expertise*
3. If you consider impact at the portfolio level, how do you ensure a common set of metrics applicable or comparable across the portfolio?

   Do you have a set of indicators at portfolio level that is applied as such for each investment, or do you aggregate investments in a way that allows for a variety of distinct metrics?

III. Lessons learned on reporting/audit challenges.

How do you include impact performance in your reporting system from portfolio companies and to investors/ clients?

What are the biggest challenges you are facing when it comes to reporting and the quality of reporting? How do you manage those?

1. How does the integration of impact-based incentives in your remuneration structure affect reporting to your cli- ents/investors and how do you manage it? *I.e., trade-off between the extra reporting burden and increased value for clients/investors as it demonstrates that their money was used effectively toward achievement of the targeted impact.*
2. To what extent are clients/investors involved in the process of setting clear impact goals, defining impact indicators, performance measurement and incentives? What's their view on/demand for an impact-based incentive structure?

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3. How do you ensure the quality, reliability, and transparency of reporting?
   i. What are the human and financial resources needed for your impact assessment?
   ii. Is a third-party needed to assess impact performance (professional external auditor or external advisor, independent review.)?
   iii. How often is impact monitored? How often is the amount of the variable compensation determined and paid?
4. How often do you revise your incentive system?
   i. What data needs to be collected? How and how often is it collected?
   ii. Have you developed a specific expertise and/or specific tools in order to be able to measure and assess the impact delivered by your organization?
   iii. Who is involved in the impact performance evaluation and how?
   iv. What are the reporting requirements for investees? Which human and financial resources do you expect them to dedicate to their impact assessment and reporting?

IV. Team dynamics and motivation.

How does the integration of impact-based incentives in your financial structure contribute to alignment of all stakeholders (managing team, investees and investors) toward impact achievements?

1. To what extent does the integration of impact-based incentives in the compensation structure incentivize the fund's managing team to go the extra mile?
   i. What are the expected results regarding motivation of the fund's managing team and resulting fund's performance?
   ii. To what extent does it drive the impact investing fund's portfolio efficiency?
2. To what extent are investees incentivized on the same targets?
   i. To what extent does it secure alignment between your organization's impact targets and investees' activities?
   ii. To what extent does it instill motivation and increase performance among investees?

V. Other

Are there, in your opinion, any additional advantages, disadvantages and/or challenges regarding the implementation of impact-based incentives? Is there anything more you would like to add?

Which other financial or non-financial mechanisms have you set up in order to incentivize your impact investing fund's managing team?

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Status : Postprint (Author's version)

References

Agrawal, A., & Hockerts, K. (2019a). Impact investing: Review and research agenda. *Journal of Small Business & Entrepreneurship, 15*, 1-29.

Agrawal, A., & Hockerts, K. (2019b). Impact investing strategy: Managing conflicts between impact investor and investee social enterprise. *Sustainability, 11*(15), 4117.

Akerlof, G. (1970). The market for lemons: Quality uncertainty and the market mechanism. *Quarterly Journal of Economics, 84*, 488-500.

Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal, 100*(401), 464-477.

Argyris, C. (1964). *Integrating the Individual and the Organization*. Wiley.

Auer, B. R. (2016). Do socially responsible investment policies add or destroy European stock portfolio value? *Journal of Business Ethics, 135*(2), 381-397.

Balandina, J. (2016). *Catalyzing wealth for change. guide to impact investing*. Libertas Pascal.

Barreda-Tarrazona, I., Matalrin-Saez, J. C., & Balaguer-Franch, M. R. (2011). Measuring investors' socially responsible preferences in mutual funds. *Journal of Business Ethics, 103*(2), 305-330.

Baron, D. P. (2008). Managerial contracting and corporate social responsibility. *Journal of Public Economics, 92*(1-2), 268-288.

Bebchuk, L. A., Fried, J. M., & Walker, D. I. (2002). Managerial power and rent extraction in the design of executive compensation. *University of Chicago Law Review, 69*(3), 751-846.

Berle, A. S., Jr., & Means, G. C. (1932). *The modern corporation and private property*. MacMillan.

Besley, T., & Ghatak, M. (2005). Competition and incentives with motivated agents. *American Economic Review, 95*(3), 616-636.

Bøhren, ø. (1998). The agent's ethics in the principal-agent model. *Journal of Business Ethics, 17*(7), 745-755.

Brest, P., & Born, K. (2013). Up for debate: When can impact investing create real impact? *Stanford Social Innovation Review, 11*(4), 22-31.

Bugg-Levine, A., & Emerson, J. (2011). Impact investing: Transforming how we make money while making a difference. *Innovations, 6*(3), 9-18.

Cetindamar, D., & Ozkazanc-Pan, B. (2017). Assessing mission drift at venture capital impact investors. *Business Ethics, 26*(3), 257-270.

Charmaz, K. (2014). *Constructing grounded theory*. Sage Publications.

Chen, C. X., Matsumura, E. M., Shin, J. Y., & Wu, S. Y. C. (2015). The effect of competition intensity and competition type on the use of customer satisfaction measures in executive annual bonus contracts. *The Accounting Review, 90*(1), 229-263.

Cho, M., Ibrahim, S., & Yan, Y. (2019). The use of nonfinancial performance measures in CEO bonus compensation. *Corporate Governance, 27*(4), 301-316.

Cornée, S., Jegers, M., & Szafarz. A. (2018). A theory of social finance. Working paper

Published in : Journal of Business Ethics (2022)
DOI: 10.1007/s10551-022-05155-5
Status : Postprint (Author's version)

Cornforth, C. (2014). Understanding and combating mission drift in social enterprises. *Social Enterprise Journal, 10*(1), 3-20.

Cuevas Rodríguez, G., Gomez-Mejia, L. R., & Wiseman, R. M. (2012). Has agency theory run its course?: Making the theory more flexible to inform the management of reward systems. *Corporate Governance, 20*(6), 526-546.

Dalton, D. R., & Daily, C. M. (2001). Director stock compensation: An invitation to a conspicuous conflict of interests? *Business Ethics Quarterly, 11*, 89-108.

Davies, I. A., & Doherty, B. (2019). Balancing a hybrid business model: The search for equilibrium at Cafedirect. *Journal of Business Ethics, 157*(4), 1043-1066.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review, 22*(1), 20-47.

Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies, 51*(3), 393-414.

Ebrahim, A., Battilana, J., & Mair, J. (2014). The governance of social enterprises: Mission drift and accountability challenges in hybrid organizations. *Research in Organizational Behavior, 34*, 81-100.

Edmondson, A. C., & McManus, S. E. (2007). Methodological fit in management field research. *Academy of Management Review, 32*(4), 1246-1264.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74.

Emerson, J. (2003). The blended value proposition: Integrating social and financial returns. *California Management Review, 45*(4), 35-51.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics, 26*(2), 301-325.

Feltham, G., & Xie, J. (1994). Performance measurement congruity and diversity in multi-task principal/agent relations. *The Accounting Review, 69*(3), 429-453.

Fenn, G., Liang, N., & Prowse, S. (1995). The economics of private equity markets. Staff Study 168, Board of Governors of the Federal Reserve System.

Figge, F., Hahn, T., Schaltegger, S., & Wagner, M. (2002). The sustainability balanced scorecard-linking sustainability management to business strategy. *Business Strategy and the Environment, 11*(5), 269-284.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic Management Journal, 40*(7), 1097-1122.

Frey, B. (1997). *Not just for the money: An economic theory of personal motivation*. Edward Elgar.

Gilson, R. J. (2003). Engineering a venture capital market: Lessons from the American experience. *Stanford Law Review, 55*(4), 1067-1103.

Gioia, D. A. (2004). A renaissance self: Prompting personal and professional revitalization. In R. E. Stablein & P. J. Frost (Eds.), *Renewing research practice* (pp. 97-114). Stanford University Press.

Published in : Journal of Business Ethics (2022)
DOI: 10.1007/s10551-022-05155-5
Status : Postprint (Author's version)

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods, 16*(1), 15-31.

Glac, K. (2009). Understanding socially responsible investing: The effect of decision frames and trade-off options. *Journal of Business Ethics, 87*(1), 41-55.

Global Impact Investing Network (GIIN). (2011). *Impact-based incentive structures, aligning fund manager compensation with social and environmental performance.* A. Bouri, K., Lankaster, G. Leung, M. Meyer, M. Pease, L. Ragin, C. Schmidlapp, & S. Shah.

Global Impact Investing Network (GIIN). (2014). ImpactBase Snapshot, an analysis of 300+ impact investing funds. L. Barra, & A. Mudaliar

Global Impact Investing Network (GIIN). (2018). Annual Impact Investor Survey 2018 (8th edition). New York, NY: R. Bass, A. Cohen, & H. Schiff

Global Impact Investing Network (GIIN). (2019). *Sizing the impact investing market.* H. Dithrich, & A. Mudaliar

Gomez-Mejia, L. R., Tosi, H., & Hinkin, T. (1987). Managerial control, performance, and executive compensation. *Academy of Management Journal, 30*(1), 51-70.

Gompers, P., & Lerner, J. (1999). An analysis of compensation in the US venture capital partnership. *Journal of Financial Economics, 51*(1), 3-44.

Grabenwarter, U., & Liechtenstein, H. (2011). In search of gamma: an unconventional perspective on impact investing. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2120040

Harris, J., & Bromiley, P. (2007). Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organization Science, 18*(3), 350-367.

Hehenberger, L., Mair, J., & Metz, A. (2019). The assembly of a field ideology: An idea-centric perspective on systemic power in impact investing. *Academy of Management Journal, 62*(6), 1672-1704.

Höchstädter, A. K., & Scheck, B. (2015). What's in a name: An analysis of impact investing understandings by academics and practitioners. *Journal of Business Ethics, 132*(2), 449-475.

Holmstrom, B., & Milgrom, P. (1991). Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design. *Journal of Law, Economics & Organization, 7*, 24-52.

Hong, B., Li, Z., & Minor, D. (2016). Corporate governance and executive compensation for corporate social responsibility. *Journal of Business Ethics, 136*(1), 199-213.

Ikram, A., Li, Z. F., & Minor, D. (2019). CSR-contingent executive compensation contracts. *Journal of Banking & Finance, 15*, 1-18.

Ims, K. J., & Zsolnai, L. (2009). Holistic problem solving. In L. Zsolnai & A. Tencati (Eds.), *The future international manager: A vision of the roles and duties of management.* Palgrave MacMillan.

Ims, K. J., Pedersen, L. J. T., & Zsolnai, L. (2014). How economic incentives may destroy social, ecological and existential values: The case of executive compensation. *Journal of Business Ethics, 123*(2), 353-360.

Irene, B., Marika, A., Giovanni, A., & Mario, C. (2016). Indicators and metrics for social business: A review of current approaches. *Journal of Social Entrepreneurship, 7*(1), 1-24.

Published in : Journal of Business Ethics (2022)
DOI: 10.1007/s10551-022-05155-5
Status : Postprint (Author's version)

Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *The Accounting Review, 72*(2), 231-255.

Ittner, C. D., Larcker, D. F., & Meyer, M. W. (2003). Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard. *The Accounting Review, 78*(3), 725-758.

Jääskeläinen, M., Maula, M., & Murray, G. (2007). Profit distribution and compensation structures in publicly and privately funded hybrid venture capital funds. *Research Policy, 36*(7), 913-929.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Perego, P., & Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics, 110*(2), 173-190.

Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review, 24*(4), 691-710.

Lehner, O. M. (Ed.). (2016). *Routledge handbook of social and sustainable finance*. Routledge.

Lerner, J. (1994). The syndication of venture capital investments. *Financial Management, 23*(3), 16-27.

Lydenberg, S. (2014). Reason, rationality, and fiduciary duty. *Journal of Business Ethics, 119*(3), 365-380.

Maas, K. (2018). Do corporate social performance targets in executive compensation contribute to corporate social performance? *Journal of Business Ethics, 148*(3), 573-585.

Martin, W. (2009). Socially responsible investing: Is your fiduciary duty at risk? *Journal of Business Ethics, 90*(4), 549.

McCall, J. J. (2004). Assessing American executive compensation: A cautionary tale for Europeans. *Business Ethics, 13*(4), 243-254.

Millar, R., & Hall, K. (2013). Social return on investment (SROI) and performance measurement: The opportunities and barriers for social enterprises in health and social care. *Public Management Review, 15*(6), 923-941.

Miller, T. L., & Wesley, C. L. (2010). Assessing mission and resources for social change: An organizational identity perspective on social venture capitalists 'decision criteria. *Entrepreneurship Theory & Practice, 34*(4), 705-733.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics, 13*, 187-221.

Neely, A., & Al Najjar, M. (2006). Management learning not management control: The true role of performance measurement? *California Management Review, 48*(3), 101-114.

Nicholls, A., & Emerson, J. (2015). *Social Finance*. Oxford University Press.

Noy, C. (2008). Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *International Journal of Social Research Methodology, 11* (4), 327-344.

O'Connell, V., & O'Sullivan, D. (2014). The influence of lead indicator strength on the use of nonfinancial measures in performance management: Evidence from CEO compensation schemes. *Strategic Management Journal, 35*(6), 826-844.

Published in : Journal of Business Ethics (2022)
DOI: 10.1007/s10551-022-05155-5
Status : Postprint (Author's version)

Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. (2006). Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *Academy of Management Journal, 49*(2), 235-262.

Ramus, T., La Cara, B., Vaccaro, A., & Brusoni, S. (2018). Social or commercial? Innovation strategies in social enterprises at times of turbulence. *Business Ethics Quarterly, 28*(4), 463-492.

Ross, S. A. (1973). The economic theory of agency: The principal's problem. *American Economic Review, 63*(2), 134-139.

Sahlman, W. A. (1990). The structure and governance of venturecapital organizations. *Journal of Financial Economics, 27*(2), 473-521.

Sandberg, J. (2011). Socially responsible investment and fiduciary duty: Putting the freshfields report into perspective. *Journal of Business Ethics, 101*(1), 143-162.

Schwartz, M. S. (2003). The "ethics" of ethical investing. *Journal of Business Ethics, 43*(3), 195-213.

Spiess-Knafl, W., & Scheck, B. (2017). *Impact investing: Instruments, mechanisms and actors* (1st ed.). Springer.

Transform Finance Investor Network. (2016). Tying Fund Manager Compensation to Impact. September 2016 Issue Brief

Trinks, P. J., & Scholtens, B. (2017). The opportunity cost of negative screening in socially responsible investing. *Journal of Business Ethics, 140*(2), 193-208.

Zingales, L. (2015). Presidential address: Does finance benefit society? *The Journal of Finance, 70*(4), 1327-1363.