Journal of Business Venturing Insights 21 (2024) e00435

Contents lists available at ScienceDirect

Journal of Business Venturing Insights

journal homepage: www.elsevier.com/locate/jbvi

How do impact investors leverage non-financial strategies to create value? An impact-oriented value framework☆

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A B S T R A C T

One of the ways to understand the success of impact investing firms is to examine how they add value to the social enterprises they invest. Did their investment boost social and/or environmental change? And what type of support, beyond financial capital, can they provide to enhance impact? Drawing on a design-based methodology, we seek to address some of these questions by developing a tool called the Impact Oriented Value Framework. Putting impact at the centre of the funds' purpose, the framework provides actionable solutions to infuse impact into investors' non-financial support strategies and activities, enhancing their additionality to portfolio companies as well as their contribution to the impact ecosystem.

1. Problem Domain

Impact investing (II) has emerged in recent years as an innovative form of investing that generates social and environmental impact alongside financial returns. Fuelled by the vast amount of funding required to achieve United Nations (UN) Sustainable Development Goals by 2030, the sector has gained significant momentum, growing from $10.6 billion in 2014 to over $1 trillion in assets under management by 2022 (Hand et al., 2022).

The success of an impact (investment) fund (IF) is intricately tied to performance of the social enterprises they back (Huybrechts and Nicholls, 2013) and to the fund's additionality (Hockerts et al., 2022) that is, to its contribution to boosting such performance. To that end, IFs need to not only provide financial capital (Agrawal, 2018; Lyon and Owen, 2019), but also add value through non-financial support (Agrawal, 2018; Scarlata and Alemany, 2010). For example, studies show that, similar to traditional venture capitalists, IFs engage in non-financial support services related to process optimization, human resources, marketing and communications or network access (Bengo et al., 2021; Leborgne-Bonassié et al., 2019; Mayer and Scheck, 2018).

While the growing literature on impact investing acknowledges the importance of non-financial activities, it tends to neglect how these activities are guided by IF's key distinctive feature: their focus on social and/or environmental impact maximization (Scarlata and Alemany, 2010). Indeed, and with one notable exception (Holtslag et al., 2021), little work exists that provides clarity on whether and how the non-financial practices of impact investors can be leveraged to maximize impact. This neglect is important because the mere provision of non-financial support aimed at social enterprise's growth do not guarantee, per se, a higher impact; this support also needs to be geared towards boosting their social and environmental performance.

This gap is highlighted in the practitioner literature. As they begin to explore the implementation of II practices, many investors lament the lack of common frameworks to appropriately design and execute this new type of investment and obtain a social return on investment (Addis et al., 2013; Faster Capital, 2023). Experts also question the sector's ability to produce the desired positive impact

☆ The authors gratefully acknowledge the funding provided by Impact Bridge Asset Management SGIIC SA, and their generous support of the Impact Bridge- IE Chair of Social Entrepreneurship and Impact Investing. Research Reported in this paper was also partially funded by MCIN/ AEI/10.13039/501100011033 Grant No. PID2020-112849RB-I00

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https://doi.org/10.1016/j.jbvi.2023.e00435
Received 18 May 2023; Received in revised form 19 September 2023; Accepted 30 October 2023
2352-6734/

on society or the environment results, making of mission-drift and "impact washing" genuine concerns among stakeholders (Findlay and Moran, 2019; Cheung, 2022). The future of II hinges therefore on unveiling concrete practices and strategies that help IFs safeguard and further their investees' impact.

In this paper we tackle this challenge by asking the following question: *What type of non*-financial support *practices do impact* funds *provide to maximize their social and/or environmental return on investment?* We apply a Design Science (DS) approach focused on developing a conceptual framework that reflects impact-oriented non-financial practices unique to IFs. Our Impact Oriented Value Creation framework (IOVC) complements mainstream investment methodologies and illustrates ten distinct strategies, which in combination, allow to expand IF's scope for generating social and environmental value. It provides actionable solutions to infuse impact into investors' non-financial support strategies and activities, enhancing their additionality to portfolio companies throughout the investment lifetime and beyond.

2. Methodological approach

To develop and test our framework, we rely on DS, a type of applied research oriented towards solving practical problems. Using this method, we introduce a new actionable artifact that ensures IF's additionality and impact-orientation. Leveraging the existing complementarity between DS and mainstream entrepreneurship research methodologies (Dimov et al., 2022), we organized our study into four research stages: First, we reviewed and synthesized extant literature, producing an initial set of basic design insights. Second, we gathered new data through qualitative interviews, analysed it and engaged in theorizing to establish the building blocks of our artifact. Interviewees' responses were coded and structured into what we have named the IOVC Framework. Third, we shifted our focus to examine whether our initial prototype could help solve the challenges we aimed to address. To do so, we contrasted the artifact with the real world and engaged with practice-oriented professionals and students to evaluate its effectiveness and appropriateness. This led us to the fourth and last stage of our research which consisted in further improving the artifact (see Appendix 1 for additional details on the different stages of our design efforts).

3. Initial design insights: the IOVC framework

In what follows we detail the constitutive dimensions of the initial prototype resulting from the two first stages of our research, which we support with illustrative quotes from our interviewees (see Table 5 for a detailed structure analysis and Table 6 for additional quotes). At this stage, the IOVC prototype is composed of three main overall dimensions: investee, fund, and community level (see Fig. 1, Early prototype). Around the core – impact – we find impact management strategies that are undertaken at the social enterprise itself (i.e., the investee level). Here, IFs focus on helping their investees plan their social and environmental impact, measure it, ensure it is locked within the business model, and finally, report it to stakeholders. In the outer ring of the framework sit the impact-oriented strategies undertaken outside of the social enterprise. Specifically, within the fund itself, IFs design impact-driven clauses, policies or processes, which include legal, governance, talent and carried interest matters. Practices at the community level encompass increasing impact by fostering collaborations among its investees and between them and other stakeholders.

3.1. Investee level

3.1.1. Impact planning

At the beginning of an investment's life, most of the IFs we interviewed focus on impact planning to be on the same page with their investee when it comes to what kind of impact it is trying to generate, why it wants to do it and how. It mitigates the risk that impact is overlooked by other investors in future funding rounds in which the original IF is not the lead investor. To that end, many of our respondents organize workshops where they help their investees define an impact thesis through impact mapping tools such as the Theory of Change (Jackson, 2013). Others designate an "impact champion" at each social enterprise who is responsible of ensuring that the mission is accounted for in key decisions. That person also guarantees the implementation of necessary impact-related procedures such as keeping close contact with beneficiaries, or looking for bottlenecks and opportunities related to impact, etc.

> *"So, first post investment, we do an impact deep dive where we clearly set the scene and what we expect. It's a four-page report, which is shared with portfolio companies where they fully agree on where we see them." (IF 4)*

> *"The way we characterize the intended impact to be achieved is through an impact thesis. So, we have this guide, which leads (investees) through the process of the logic model and the theory of change. We may have these iterations, these workshops to build or finalize these impact pieces together." (IF 15)*

3.1.2. Impact measuring

In a second step, IFs work with their investees on establishing clear Key Performance Indicators (KPIs) to measure impact. Deriving KPIs not only helps differentiate the company's actual impact from Environmental, Social and Governance (ESG) endeavours. It can also ensure compliance with a lock-step business model – i.e., that the scalability in the enterprise's profits is correlated with that of the impact achieved (EVPA Knowledge Centre, 2018). Third, KPIs measured before and after the investment provide evidence of the IF's additionality (Hockerts et al., 2022; Thirion et al., 2022). Specifically, IFs help the investees identify metrics used before the investment, benchmark them to its portfolio standards and assess gaps or room for improvement. Finally, because negative externalities may occur in parallel to positive impact (Doherty et al., 2014), some of our interviewees seek to identify and minimize such potential externalities, with the aim of reaching a net positive impact.

"*ESG is really about the internal health, the internal policies of the investment, while impact is about the products and services they have and how they bring positive change to the environment and society. The importance of identifying clear KPIs for both ESG and impact also allows them to connect this to the business model." (IF 4)*

"[…] for the materiality of the impact, of course, you need to identify […] what are the positive and the negative impacts that the activity of the company has? Because it would be nonsense to think that the company has zero negative impact." (IF 6)

3.1.3. Impact reporting

Unsurprisingly, all our respondents cited the well-known benefits of reporting the impact generated (Sunderji and Ringel, 2022). These include transparency and accountability to stakeholders, building legitimacy (Holtslag et al., 2021), and securing more funding and partnerships (Bell et al., 2018). To collect this information and ensure closer monitoring, some IFs rely on their own impact reporting committee while others require reports from their investees. Some of the most sophisticated IFs use reporting to standardize best practices among investees and boost impact generation across the whole portfolio:

"*We monitor ourselves all those data as we monitor the financial data*". (IF 19)

"*And in addition to the standard annual report, we're also setting a requirement that the funds give us an impact report on an annual basis." (IF 9)*

"What we also do is we have peer learning sessions. So, we bring them together, we present aggregate data, it's anonymized and then we show, okay, this is the data. What questions does it trigger? How would this data be useful to you? […] Let's take a look at how the data can answer this question for you. So, on the surface it just looks like, yeah, it's data collection, it's data analysis, it's reporting back." (IF 12)

3.2. Fund level

3.2.1. Legal

An IF can codify impact in formal investment and legal documents to ensure long-lasting additionality (Sunderji and Ringel, 2022). For example, including a mission drift clause in the investment contract or a shared values manifesto ensures that the investee will continue to target the same impact agreed-upon during the planification processes, which is especially helpful when social enterprises are young, and particularly exposed to mission drift (Siebold et al., 2019). These clauses might bind not only current, but also future shareholders, and describes the rules of engagement between the fund and the investee to guarantee impact.

"*A mission drift clause applies if the company changes direction to something which is materially different from what they set out to initially do (impact wise), then we have the right to be repaid immediately on that loan or receive an impact interest premium. They get penalized with more interest if they don't deliver on certain impact KPIs that they specify." (IF 2)*

3.2.2. Governance

To secure impact, our interviews often act on three main elements of their fund's governance: their investment thesis, their presence in boards and the length of their investment. Encapsulating the main principles based on which a portfolio is selected, an investment thesis is generally defined by some combination of stage, geography, and sector (Allman, 2015; GIIN, 2023). Our findings suggest that the interviewees' IOVC philosophy and their internal capabilities were a significant driver of their corresponding investment thesis, and in particular their level of specialization by sector or geography. For example, those IFs operating in countries with an immature social enterprise ecosystem generally chose to be sector-agnostic. Casting a wider nest of enterprises to source from would indeed allow them to select the most promising ones, based on other filters such as business model lock-in, impact potential or team strength. For other IFs, specializing in a particular social sector was essential to their ability to bring additional value. The fund's growing expertise makes it increasingly attractive for investee companies, creating a virtuous circle, and further allowing them to select the best deals.

"*The capital is flowing into the region faster than the deals. And so, […] the easiest way to react is to broaden your scope*." *(IF 2)*

"So, our ability to bring value to the portfolio companies is a little bit more limited and also in terms of origination. If you have a broad thesis, then it also affects your ability to actually source very good transactions, very good deals." (IF 1)

Presence in boards is another IOVC tool used by many the investors interviewed in this study. Depending on whether they were lead investors or not, they would hold a seat on the board of the social enterprise, create an Impact Board, or hold regular meetings with the investee.

"*We have monthly investor meetings, and the investor meeting is a de facto board meeting. There's no voting, but there's some experienced people having a chat about strategic issues. And of course, almost everybody who's around the table have impact front of mind." (IF 2)*

"*[…] we take a seat in a supervisory board or a non-executive board membership […] or depending on the company structure, we organize regular meetings with the management so that we stay involved.*" *(IF 7)*

Another levier for securing impact was IF's long-term engagement. Most often, a social enterprise's impact occurs in the long-term, does not lead to immediately measurable benefits and has potentially declining effect (Phillips and Johnson, 2021). This poses a significant challenge for IFs who want to guarantee significant and lasting value. To this end, many of our interviewees rely on multiple financing rounds, formulating a customized financing structure for each of their investments, and maximizing both their business potential and their impact at each growth stage. An extreme case is the evergreen fund, which has an indefinite life and therefore has no time pressure to achieve certain results (Hayes and Berry-Johnson, 2021).

> "*We have an innovative financing structure where we don't need to look for exit. We can do multiple rounds of financing all the way from seed to maturity, […] starting small, but also doing tickets that are 20 million all the way across the lifecycle." (IF 16)*

> "The investment vehicle we manage is evergreen […] We do not rush for exits, basically. So, we have a more long-term perspective." (IF 11)

3.2.3. *Talent management*

Social enterprises face unique human resource management challenges (Dorado et al., 2022), often having to choose between embedding impact across all their employees or hiring a dedicated social versus finance-focused staff (Battilana and Dorado, 2010). The absence of established staffing models also applies to II as our respondents disagreed on whether they should have impact-dedicated employees or not. For some, hiring a dedicated impact professional is essential to ensure that all impact-related values, processes, and activities are completed with diligence. It also helps standardize processes and gives portfolio-level view on the impact generated and reported. For others, however, IFs are not just a traditional fund with a few people performing the impact work. Instead, all employees should be equally impact-driven and capable of carrying out impact-related activities. To that end, some funds organize regular impact training sessions for their employees, ensuring that everyone is on the same page regarding the importance of and core values around impact.

> "*It is great to have an overview of the impact across the portfolio and to raise the bar on how we do impact and to have something that is systematic, consistent, replicable. We need to bring more structure analysis, and this is a lot of work. So, we have two people of the team that are dedicating a lot of resources to developing this and putting it in place." (IF 1)*

> "H*aving the whole team focused on impact is inherent in the overall strategy of the fund." (IF 9)*

3.2.4. *Fund manager's carried interest*

Many IFs we interviewed incorporate impact into their manager's financial incentives, a practice known as impact oriented carried interest, or carry (Chen, 2022). This trend is boosted by the increasing demand for impact vehicles and the incursion of traditional venture capitalists into the space, pushing IFs to use carry as a differentiating factor signalling "authentic impact".

> "When we look at investments on the market, usually we are in front of generalist funds who don't care necessarily about impact. We have to compete with tier one funds who have a great reputation, more assets under management than what we do. It's important to differentiate from these guys and convince that we can bring as much value as they can." (IF 20)

> "We have adopted a mechanism that includes impact performance as a key eligibility criterion for any remuneration. In essence, we are only entitled to our performance fee, if, and only if, we reach a minimum threshold of impact across our portfolio." (IF 5)

The proportion of the carry that should be attributed to impact (the "Impact hurdle") is yet debated and varies widely across the funds we interviewed. Among the stricter ones, we find those who fall under the European Investment Fund umbrella, which requires the funds it supports to have a 50:50 split between financial and impact returns in their carried interest (Grabenwarter, 2014). This is where earnings and impact are totally interconnected and incentivize the fund to maximize in a sustainable way (Miguel, 2021). The funds in our samples also varied in the techniques used to calculate the "impact multiple" of each venture, that is "the ratio between the [impact-related] target goals established at the time of investment and the performance at the time of calculation," (Fernando, 2022), some being stricter than others. Similarly, practices differed as to the use of the money that was originally allocated for the impact part of the carry adopted when the impact hurdle was not achieved, with a few choosing to donate it to a social cause.

> "If the impact indicator is 0.5 [of what was initially targeted], that would mean that we only have three quarters of the carry. If it's zero, we only have 50%. If it is 1, we have 100% and so that's how we link our remuneration with our fund impact." (IF 20)

> "Identifying KPIs at portfolio company level, building targets for these KPIs and monitoring on a yearly basis. Weighting this at the fund level based on the investment tickets made in each portfolio company gives a global impact ratio. If it's above a certain threshold, we distribute the carry. If it's below, we give it to the foundation." (IF 19)

3.3. *Community level*

3.3.1. *Investee community-building*

Many of our respondents highlighted the benefits stemming from collaboration among their investees, which they encouraged through a variety of practices that can be classified into two distinct categories: a) sector-specific practices versus sector-agnostic practices, and b) fostering synergies among investees. First, our findings suggest that an IF's scope of action influences the type of synergies that can be achieved through community building. Specifically, sector-agnostic funds emphasize the advantages of bringing together social enterprise working in different industries. In contrast, specialized ones focus on interactions and discussions that can be niche and technical enough to spark very concrete exchange of expertise and collaborations. Leveraging the complementarity of their investees, some of these funds sought to help create supplier-buyer relationship or shared value-chains within the same sector.

> "*[…] if I have five companies within the same vertical talking, the potential for synergistic outputs is greater. But from the point of view of sharing best practices, learning, getting inspired, there's more magic out of people from different backgrounds, industries, and approaches. And companies share a lot of the problems." (IF 1)*

> "[…] when there's an evident synergy … we do the direct connection. So that, hey, guys, you're in the same market. Please share what you know about this. And if you're not competing with each other, is there a synergic way of value delivery? We have a supplier buyer relationship between our portfolio companies in some instances." (IF 15)

Other impact-oriented synergies, stemming from the hybridity of their investees (Viviani and Maurel, 2019), can be achieved by IFs regardless of their size and scope of action. For example, some of our interviewees focused on issues idiosyncratic to social enterprises such as obtaining a B Corp certification or scaling while avoiding mission drift (Siebold et al., 2019).

> "But then some of the companies share a lot of the problems that companies face. Hey, I'm scaling, […] How do you do it? […]. Hey, what about B Corp? " (IF 1)

3.3.2. Non-investee community engagement

Outside of investment portfolios, value can be created by connecting social enterprises with different stakeholders (Viviani and Maurel, 2019), such as investors or Limited Partners (LPs), corporations, and non-profit organizations or pro-bono mentors. Some IFs also organize events where their investees meet with and receive advice from other investors, facilitating also future financing opportunities for these social enterprises (Chowdhry et al., 2015). Our interviewees also often encourage partnerships between investees and corporate partners to boost the financial sustainability of their former, while driving the second closer towards impact. Beyond integrating the investee into their value chain, acquiring them at the end of the fund's investment term is growing trend in mature ecosystems (Sarason and Dean, 2019).

> "We have an ecosystem of big companies we work with to help them be more socially responsible. So, this works through helping them in their supply chain to also buy more responsibly […] And the goal of this event is to put in relationship purchase director of huge companies in relation with small social entrepreneurs." (IF 22)

4. Refining the artifact

Based on the feedback obtained from experts, impact investors as well as academics, several amendments were introduced to our artifact (see Fig. 1, Final artifact). First, to account for the evolving nature of impact, we added a practice in the investee-level dimension, which we labelled "*Managing*". As their relationship with investees matures over time, IFs should go beyond mere accountability mechanisms (measuring and reporting) to also encourage organizational learning (Lall, 2019), and manage impact on a continuous basis. Three impact investors met during a conference explained for example that they often work with their investees on revising KPIs to adjust them to new circumstances (e.g., COVID-19 pandemic, a modification in the Theory of Change or the occurrence of an early exit[1]). Securing impact's continuity after exit was also mentioned as an impact management practice where IFs assist their investee in negotiating contract acquisitions with corporations to preserve their impact. In that regard, IFs play the role of an "impact guardian" during the whole lifetime of the investment and beyond. Finally, helping failed social enterprises close business while causing the minimum negative impact also emerged as a valuable non-financial support practice. Second, we modified the "*Carried interest*" dimension previously included under the "Legal" category. When testing the validity of our artifact we also realized that the use of the "*Carried interest*" strategy had to be expanded into a broader "*Financial incentives*" category. Here we account for several practices to ensure fund manager's commitment towards impact: carried interest, impact bonuses, or a hybrid of the two (Thirion et al., 2022). To avoid agency problems related to impact-based compensation (such setting low impact targets), experts also mentioned setting the Fund's impact KPIs by a Fund's Advisory Committee or LPs, instead of fund managers themselves. This would be an additional strategy to include under the "*Governance*" dimension. Finally, efforts directed at consolidating the entire impact investing ecosystem and increasing its legitimacy appeared as important strategies that go beyond "*Non-investee community engagement*". We therefore reframed our community categories into "*Portfolio engagement*" and "*Ecosystem building*".

5. Conclusions and Paths for future research

As the impact investing sector continues its remarkable growth, the need to bridge the divide between IFs financial investments and their intended additionality becomes increasingly evident. In response to this imperative, we have crafted the IOVC framework, an artifact that systematically delineates ten impact-oriented strategies utilized by IFs at three levels - the investee, fund, and community. In doing so, our research advances scholarly knowledge and offers actionable insights to practitioners in several significant ways which we outline below.

First, we respond to calls for a deeper understanding of the role of non-financial support in impact investing (Holtslag et al., 2021; Schlütter et al., 2023). Acknowledging the underrepresentation of this topic in existing literature, our study contributes to an emerg-

[1] In the first case, the investee might need to modify its impact indicators to adjust to an external circumstance, such as an economic downturn or COVID, which forced many social enterprises to lower or modify their impact expectations. Also, IFs investing in early-stage social enterprises often see their investees project radically change over time (refining the business model or theory of change), with implications for the KPIs they need to measure and report. In the case of an early exit of the investee (due for example to the sale to a corporation), this impact targets might not be yet completely achieved, yet the exist can be considered as a successful one, forcing the IF to revise its initial metrics. In that sense, an impact investor met at a conference explained that her fund tended to revise their targets every 3 years on average.

ing understanding of the pivotal role of IFs in driving positive change. Through the IOVC framework, we broaden the horizons of academic knowledge on impact investing by revealing further pathways through which IFs can “save the world” (Kölbel et al., 2020). For instance, our study underscores the critical importance of impact planning at the investee level, aligning investees' and IFs' goals and expectations for social and environmental impact. This contribution resonates with and extends the broader literature on impact measurement and management (e.g., Islam, 2022; Rawhouser et al., 2019).

Regarding the fund level, we provide a comprehensive approach to impact investing governance (e.g., Bakker et al., 2014) by highlighting how IFs can leverage legal mechanisms and governance structures to maintain investees' commitment to impact objectives, a critical practice for long-term impact sustainability. Insights from our study also enrich the ongoing discourse on talent management for impact (Battilana and Dorado, 2010; Dorado et al., 2022). Specifically, we bring to light the role of dedicated impact professionals within IFs and emphasize the importance of aligning all the fund's employees with impact-driven values. Finally, we build on emerging research on managerial compensation in impact investing (Thirion et al., 2022; Thirion, 2020) by emphasizing the role of financial incentives, including carried interest with an impact focus, in motivating IFs to prioritize impact alongside financial returns.

On the community level, our IOVC framework elucidates strategies for nurturing collaboration among investees and between IFs and other stakeholders, this enhancing the depth of impact. Acknowledging the broader context, our research underscores the pivotal role of IFs in consolidating and legitimizing the entire impact investing ecosystem. In doing so, we complement extant research on social entrepreneurial ecosystems which focuses on how investors use these ecosystems to reduce risks and transaction costs and to obtain information about investees (Schlutter et al., 2023). We posit that ecosystems go beyond investee information search and can be harnessed to enhance a fund's additionality and impact. We also extend recent research suggesting that impact investors emphasize developing a supportive social impact ecosystem in response to the COVID-19 pandemic (Islam and Habib, 2022), and propose that ecosystem building can serve as an impact strategy beyond acute crisis.

Second, we bridge the conceptual divide between venture philanthropy and impact investing. While prior studies on impact investing have often focused on financial capital provision, akin to venture capital funds, we underscore the importance of non-financial support. We question the implicit assumption that IFs, unlike Philanthropic Venture Capitalists (PVCs), predominantly add value through financial means. Acknowledging that IFs have a dual mandate of seeking both financial returns and societal impact, our study underscores the importance of non-financial strategies for achieving “intentional impact creation rather than a passive side effect” (Schlütter et al., 2023, p.5), a topic relatively underexplored in the literature. Our paper demonstrates that non-financial support is a critical lever allowing IFs to enhance the impact focus of the social enterprises they support. Specifically, we demonstrate that IFs commonly boost their investees’ impact through 10 specific impact-oriented non-financial strategies.

Thirdly, our study yields practical implications for the impact investing sector. The IOVC framework offers a comprehensive roadmap for integrating impact into non-financial support strategies, thus enhancing the capacity of IFs to augment their investees' social and environmental impact throughout the investment lifecycle. These insights are not only valuable for IFs but also extend their utility to other impact-oriented organizations concerned about mission drift. For example, foundations considering a shift from donation-based financing to impact investing (Bernal et al., 2021; Berry, 2016; Zolfaghari and Hand, 2021) can leverage our research to guide their practices and decision-making.

This study established a strong foundation for future research on IF's non-financial strategies. Future scholars may for example delve deeper into the practical implementation and effectiveness of the IOVC framework in impact-first IFs compared to finance-first ones. This is important because the relative emphasis on impact has implications on the constellation of decision-making options and specific resources available to a fund (Saebi et al., 2019), likely influencing its overall capacity for creating impact-oriented value. For example, finance-first funds, whose managers often come from a mainstream investing background, and with limited experience in the social sector, might face a higher risk of mission drift than their impact-first peers (Cetindamar and Ozkazanc-Pan, 2017). Assigning an impact specialist to these funds might therefore be particularly important to safeguard impact. Conversely, impact-first funds might have more leeway to leverage financial incentives tied to impact (Thirion, 2020). Second, our artifact can be adjusted to the maturity of the market in which an IF is operating. In some markets with a longer II tradition, such as France, IFs benefit from a denser and more diverse ecosystem, and some elements of the framework might be already well codified, requiring less attention (for example, measurement). In contrast, an IF operating in the context of emerging economies, where II ecosystems are still embryonic (Gustafsson-Wright et al., 2017), might need to start by educating both their investees and its ecosystem about impact, how to measure, manage and report it. Similarly, some governance tools included in our framework might be difficult to implement in countries lakcing a supporting institutional environment (Mair et al., 2007). By exploring the suitability of our IOVC framework in these contexts, future studies would align with the calls for research to explore the nuances of II in developing countries (Agrawal, 2018). Finally, because “there is no universally applied method for measuring the importance of different value creation drivers” (Achleitner et al., 2010), our framework refrains from ranking IFs practices in terms of importance or value brought. This opens up a promising avenue for further research to delve into the relative value of each of the 10 non-financial strategies, which may depend, among other factors, on the fund's idiosyncratic nature, its portfolio and the ecosystem in which it operates.

Author statement

Pola Nachyla: Conceptualization, Writing-Original Draft, Data Collection and Analysis, & editing; Rachida Justo: Conceptualization, Writing-Original Draft, Data Analysis, Writing-review &; editing, Project administration.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Rachida Justo reports financial support was provided by Impact Bridge Asset Management SGIIC SA.

Data availability

Data will be made available on request.

Appendix 1. Methodology

We combine a qualitative research approach with design science methods in developing an IOVC framework that serves the needs of existing and prospective impact funds. The appendix details the methodology followed in each of the four research stages of the study, the corresponding data collected, and type of insights derived from data analysis.

A- Designing the first prototype

Stage 1: Literature review

In stage 1, we performed a systemic literature review (SLR) on the topic of impact investing. This literature review was part of a larger research project on the topic, aimed at identifying white spots that our research team could search answers for. We first started by checking if there were already any SLR on impact investing and found 5 publications (Agrawal and Hockerts, 2019; Islam, 2022, Schlütter et al., 2023; Shome et al., 2023; Strano et al., 2022). We also found SLR that dealt with topics closely related to impact investing, such as, sustainable finance (Kumar et al., 2022), impact measurement (Kah and Akenroye, 2020; Rawhouser et al., 2019) and social entrepreneurship (Doherty et al., 2014; Hietschold et al., 2022). This allowed us to perform a first synthesis of the existing literature and confirm the scarcity of studies on the topic of impact funds and impact investors' non-financial value creation. Because the reviews identified did not focus on the specific research question of interest in this paper and stopped in year 2021 (Islam 2022; Strano et al., 2022), we decided to complement them with our own SLR, and both extend our search to more current years and verify if some earlier papers were also important for our subject of study.

To identify the studies, we followed standard procedures in top journals by conducting our search mainly via recognized online databases (Kraus et al., 2020; Bacq et al., 2022), specifically, Scopus and Web of Science. In order to identify the most relevant articles, we employed a keyword search that included keywords such as "impact investing", "impact investment", "social impact investment" and "impact invest*". As of December 2022, this search yielded a total of 512 results for the period 2000–2022.

To further refine our search, we incorporated the following exclusion criteria: we eliminated articles that were not in English and those that did not correspond to academic sources (non-peer-reviewed articles, book notes, reports, conference proceedings, etc). As explained below, we maintained a separate record of grey literature to complement the academic literature review. Additionally, we proceeded with an initial filtering stage by examining titles and keywords, resulting in the elimination of duplicate articles and those not relevant to impact investing. Consequently, a total of 217 academic articles remained in our dataset.

Subsequently, we downloaded and thoroughly read each article and a secondary filtering process was conducted, segregating articles that only tangentially addressed the research topic, leaving a total of 162 articles in our database. In addition, to ensure that we did not exclude any relevant articles out of this research, we employed the snowballing technique to include those relevant articles that had been missed. We first, conducted a targeted search of premier journals using the Financial Times (FT) list of 50 top journals in business for relevant articles (Mmbaga et al., 2020). In order to ensure the rigor and comprehensiveness of our review, we expanded our search to encompass additional journals that focus on management and entrepreneurship. These journals were not included in the FT top 50 journal list but were considered because they could potentially contain relevant articles for our review. Just as in the case of the SLR of Islam (2022), these additional studies were not identified in the initial search because the journal titles were not listed in the databases used or search terms were missing in the article title, abstract, and keywords.

As a result, we added 45 papers and our literature review led to us to analyse a total of 207 papers[2] out of which only 6 examined the non-financial support provided by impact investing funds (Jones and Turner, 2014; Ingstad et al., 2014; Ormiston et al., 2015; Bengo et al., 2021; Andersen and Tekula, 2022; Carroux et al., 2022). Our findings are supported by Schlütter et al.'s review (2023), which identifies "non-financial support" as one of the least researched topics within the impact investing literature, and only identify four papers on this sub-topic, even though their inclusion criteria are broader than ours.[3]

Additionally, it is noteworthy that, with one exception (Holtslag et al., 2021), these papers discuss generic non-financial support practices, without identifying those aimed at creating social or environmental value. While some studies highlight the relevance of non-financial support provided by impact investors (Ingstad et al., 2014; Jones and Turner 2014; Kroeger and Weber, 2014), they do not identify concrete actions that could be adopted by IFs. Holtslag et al.'s work (2021) is the first attempt to examine the specificities of IF's practices and how they differ from those of traditional venture capitalist funds. The authors define the role of impact investors in terms of accompanying and advising investees, in addition to their financing activities. Through a series of interviews, they identify a few non-financial practices IF's use to support their investees. For example, they emphasize the importance of impact measurement

[2] A detailed list of papers reviewed is viable upon request.

[3] For example, they include Leborgne-Bonassié et al. (2019) a paper focusing on venture philanthropy, and which makes a cursory mention to financial support, mainly emphasizing its importance.

as a means of legitimizing the company. In our study we therefore use Holtslag et al.'s work (2021) as a springboard to examine IF's impact-oriented activities. Fig. 1 visually describes the systematic review process of academic research.

While we focused initially on peer-reviewed journal articles (as this ensures the highest standards of transparency), we quickly realized that the novelty of the topic of impact investing and the scarcity of academic research on impact funds strategies for impact value creation made it impossible to perform a critical appraisal of a topic with published journal articles only. Therefore, we added in a second step grey literature (mainly non-academic books and practitioner reports), found through Google and Google Scholar, searching for keywords such as "impact investing", "impact investment", "impact investor" and "non-financial support". We found reports from organizations such as the Stanford Innovation Review (SSIR), the European Venture Philanthropy Association (EVPA), Global Impact Investing network (GIIN), the International Finance Corporation (IFC) and the Organization for Economic Cooperation and Development (OECD) among others. We identified a total of 84 reports, out of which 8 discussed impact investor's non-financial actions (Born and Brest, 2013; Hehenberger et al., 2013; Boiardi and Hehenberger, 2015; Bell et al., 2018; EVPA Knowledge Centre, 2018; Ely and Hearn, 2021; MacMillan et al., 1985; Hand et al., 2022).

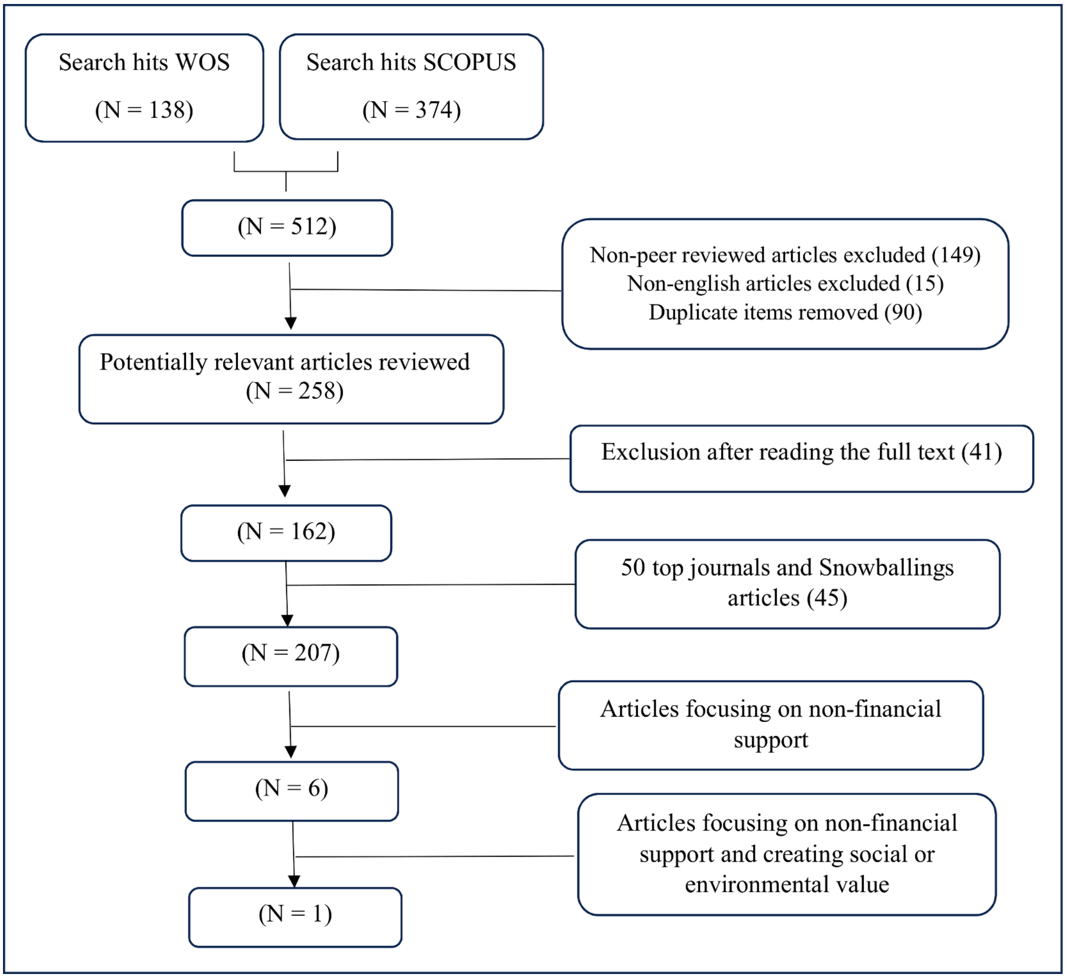

Fig. 1. Systematic Literature Review process (Academic Literature)

In analysing the literature, we leveraged the first co-author previous experience working in an impact fund at the early start of her career, where she participated in meetings with social enterprises, with other impact funds and their stakeholders, as well as in evaluating portfolio management practices within impact investing. This exposure to the actual practices of impact investors, combined with the second co-author academic expertise in the field of social entrepreneurship, was useful in identifying the main insights stemming from extent academic and grey literature on the topic as well as the remaining blind spots and challenges faced by impact funds when trying to infuse their value creation strategy with an impact orientation.

Table 1 summarizes the initial design insights emerging from the most relevant academic and non-academic articles reviewed. In addition to the papers focusing on non-financial support provided by IFs, we included in this table an article dealing with Value Creation of Venture capital funds in general, (Large and Muegge, 2008) which points to the complex multifaceted nature of value creation.

TABLE 1
INITIAL DESIGN INSIGHTS FROM THE LITERATURE

Study	Finds and Contribution	Design insights
Large and Muegge (2008)	Identifies Value Creation as a complex multifaceted concept that needs to be defined in order to be analysed	Value creation has multiple dimensions and each of them must be analysed in order to understand the impact it has on Investees
Hand et al. (2022)	The non-financial support provided to investees by impact investors plays a different role from the one offered by traditional investors	Impact investors provide unique types of non-financial support which need to be identified
MacMillan et al. (1985)	Non-financial support to social enterprises is identified as a relevant item that influences their success. Such support is described in a generic way (for example, by referring to "technical assistance").	We need to unpack what impact investor's "non-financial support" involves in practice. Additionally, we need to identify which of these practices are aimed at boosting investees' impact.
Holtslag et al. (2021)	The legitimacy of impact investing is undermined by the multitude of challenges associated with impact measurement and reporting that challenge transparency and accountability	"Impact" (whether measurement, of reporting) represents a key component of IF's legitimacy.
	In IFs, Managing Partners often seek to recruit employees combining financial skills and impact orientation	"Hybrid" talent management and recruitment appears as an essential component of an IF's impact-oriented strategy.
	By demonstrating that sustainable alternatives are commercially viable and desirable, impact investors promote competition and help to develop sustainable value chains	IFs play a relevant role in impact-oriented ecosystem building and provide legitimacy to their investees both in terms of financial sustainability and impact.
	The exit strategy of the company should have similar characteristics to traditional investors, but it is important to avoid mission drift	Mission drift is an important concern for IFs, during the investment lifetime and beyond. It is therefore important to identify which actions allow to avoid mission drift.
	Highlight the need to establish relationships with other agents in the market	IFs might have an important role to play in growing the impact investment field, and collaboration might play a key role in that sense.

These initial insights served as a launchpad to design the second stage of our study: a qualitative study of current practices used by impact investing funds in Europe.

Stage 2: Qualitative study and initial theorizing

In order to understand current practices used by IF to create impact-oriented value, we relied in our qualitative study on both primary data collection (interviews) and secondary data (organizational documents) (See Table 2). To identify IF for potential interviews, and consistent with previous research on philanthropic and socially responsible investment funds (Scarlata et al., 2016), the following criteria had to be met: a) the IF had to have their headquarters in Europe; b) its investments had to be directed towards social enterprises; c) both capital and non-financial services had to be provided to investees and d) it had to define itself as an impact investment fund or market itself as addressing social/environmental issues.

Because impact investing is still an emerging industry in Europe, no official registry of impact investing firms exists. We leveraged our personal networks, identifying IFs that we had personally interacted with in the past through our professional activities. Further, to ensure we covered the fullest possible population of funds in our database we used a snowballing approach, asking for references from other impact investing professionals. Finally, we complemented the resulting list through desktop research, scanning the European funds listed in "Impact Space, 2000", a global open database of impact entrepreneurs, ventures, investors and deals (Impact Space, 2000). We ended with 89 eligible impact funds that we reached out to request an interview.

Twenty-five IFs from 13 countries were interviewed (a response rate of 28%). Most of these funds were located in Western Europe (See Table 3), reflecting the current state of impact investing in Europe, as the Central and Easter European countries developed this type of investment vehicle significantly later than their Western European neighbours, and there are still fewer impact funds present in that region.

The interviews were scheduled and conducted between November 2021 and January 2022 and each interview took between 30 and 45 min. All except for one agreed to be recorded throughout the session. All interviews were conducted in person or online, expect for two impact funds who chose to respond to the interview questions through email. In 41% of cases (9 interviews), the Managing Partner (or equivalent senior position) was interviewed, while in another 41% of cases it was either a director or Manager-level professional. In 18% of cases (4 interviews), it was a person with an impact-specific position, for example an Impact Principal or Impact Partner.

We complemented our data by interviewing eight external informants whom we selected for their experience in the impact investing ecosystem. We label insights from these external informants EI-1, EI-2, etc. (see Table 4). The aim of these interviews was twofold. The first set of interviews, conducted with informants E1, E2 and E3, between December 2021 and March 2022, helped understand the overall context of impact investing (Flick, 2009) and the key players operating in this space in Europe. The second set of interviews as explained stage 4 below, below helped us situate our findings in the broader context of impact investing inside and outside Europe and contrast the validity of our prototype with key experts in the topic. These interviews, with informants E4-to E8 were conducted between June 2022 until April 2023.

Finally, we triangulated the primary data with secondary data consisting of company annual reports, impact reports and presentations obtained from the IF websites, marketing materials, company presentations, expert's case studies and press releases. The more than 24 documents we collected helped us to deepen our insights from interviews and provided important insights into whether and how the IFs communicated to stakeholders their impact-oriented value creation approaches and practices. The use of secondary data sources in addition to interview accounts also helped mitigate respondent and retrospective bias as well as potential social desirability bias, as the data were constantly compared and validated (Miles and Huberman 1994; Siebold et al., 2019). When relevant, we provided examples of company statements that validate et support impact-oriented practices mentioned during the interview (See, in Table 5, quotes categorised as “Company document” or “Company website”).

TABLE 2
DESCRIPTION OF DATA SOURCES

Data Type	Amount	Minutes/Pages	Total
Primary Data			
Interviews with Impact Funds	25	539 Minutes resulting in 174 pages of transcript	31 interviews
Interviews with External Informants	8	200 min resulting in 10 pages of transcript	739 Minutes 184 pages
Secondary Data			
Annual Reports & Case Studies	22	1659	**1681 Archival documents**
Newsletters	2	9	
Flyers & Presentations	2	13	

Only two interviews with external informants were recorded and transcribed. The authors took written notes of the main ideas stemming from the interviews with the rest of informants.

The findings emerging from our qualitative study and resulting theoretical insights are summarized in Tables 5 and 6

TABLE 3
LIST OF COMPANIES IN OUR SAMPLE

Impact Fund #	Country	Size (Employees)	Founding year	Investment Strategy	Interviewee(s) Position
1	Spain	7	2007	Agnostic: sustainability, education, social inclusion, healthcare.	Managing Partner
2	Czech Republic	8	2018	Tech solutions for both environment (circular economy) and society.	Manager
3	Luxembourg	7	2016	Focus on social impact: inclusion, education etc.	Managing Partner
4	Belgium	35	2017	Agrotech and Foodtech	1 Analyst/ Associate Impact Principal/ Partner
5	Portugal	28	2018	Agnostic: both focus on social and environmental impact.	Manager
6	Netherlands	223	1997	Agnostic: different funds for different impact areas.	Manager
7	Belgium	18	2010	Focus on social impact.	Managing Partner
8	Spain	4	2020	Agnostic: sustainability, health, education.	Managing Partner
9	Norway	9	1998	Sustainability: energy, sustainable cities, ocean, general impact.	Director
10	Estonia	6	2003	Social inclusion and education	Managing Partner
11	Belgium	22	2015	Agnostic: focuses on “systemic” change in climate, society, poverty, mental health etc.	Analyst/Associate
12	Netherlands	394	1975	Financial inclusion.	Impact Principal/ Partner
13	Switzerland	7	2007	Energy transition and sustainable development.	Managing Partner
14	France	10	2017	Just energy transition (energy in developing countries).	Managing Partner
15	Hungary	10	2018	Agnostic: both focus on social and environmental impact.	Manager
16	Belgium	64	2016	Farming in developing countries.	Managing Partner
17	Netherlands	31	2013	Aquaculture	Managing Partner
18	France	13	2018	Agnostic but with a focus on alternative proteins, healthy lifestyle etc.	Impact Principal/ Partner
19	France	8	2013	Agnostic: considers all SDGs.	Impact Principal/ Partner
20	France	18	2008	Mainly social impact (inclusion, empowerment and healthcare) and “regenerative economy” (circular economy, climate, energy).	Manager
21	UK	88	2002	Agnostic, focusing on both people and planet	Manager
22	France	64	2007	Agnostic: both focus on social and environmental impact.	1 Director 1 Analyst/ Associate
23	France	14	2012	Agnostic: health, education, water, energy, circular economy.	Director
24	Italy	18	2006	Agnostic: “healthier people, empowered people, cleaner society".	Manager
25	Germany	23	2010	Agnostic, mainly healthcare, education, sustainability and inclusion.	Analyst/Associate

TABLE 4
LIST OF EXPERT INFORMANTS INTERVIEWED

External Informant (Pseudonym)	Organization name or type	Position	Location	Interview Type	Length	Main Interview Topics		
						Investee Level	Fund Level	Community Level
EI-1	European Investment Fund	Director of Equity Investments	Luxembourg	Virtual	30 min		✓	
EI-2	Triodos	Impact Investment Manager	Netherlands	Virtual	20 min	✓	✓	
EI-3	Triodos	Impact Data Specialist	Netherlands	Virtual	20 min	✓		
EI-4	European Venture Philanthropy Association	Central Eastern Europe Manager	Poland	Virtual	30 min	✓	✓	✓
EI-5	Impact Bridge Asset Management	Head of Research	Spain	In person	20 min	✓	✓	✓
EI-6	Several impact investing funds	Board Director and Senior Advisor	Switzerland	In person	20 min	✓	✓	✓
EI-7	Impact Partner	Managing Director	Tunisia	In person	30 min	✓	✓	✓
EI-8	SocialNest	Head of Strategy and Impact	Spain	Virtual	30 min	✓	✓	✓

TABLE 5
DATA STRUCTURE

First-Order Categories	Second-Order Themes	Aggregate Dimensions
Choosing an impact champion at the social enterprise to be the person responsible for planning, assessing, and communicating impact back to the fund.	Planning	Investee Level
Running an impact workshop with the enterprise team to align goals and introduce impact concepts such as Theory of Change and Impact Thesis.		
Establishing clear impact KPIs and differentiating impact from ESG.	Measuring	
Enforcing a lock-step model.		
Having a standardized and regular processes for reporting impact metrics, with the same rigor as financial data is gathered and communicated to stakeholders.	Reporting	
Codifying impact in formal investment and legal documents	Legal	Fund Level
Maintaining regular check-ins with founders in formal and informal settings	Governance	
Ensuring the impact fund is on the Board or has a designated impact champion in the social enterprise.		
Delegating an impact specific person at the fund if it is necessary to keep all impact related operations in check, while ensuring every team member is able to carry out impact related operations as well.	Talent	
Structuring the split between finance and impact related carried interest in accordance with targets	Compensation	
Promoting regular discussions on topics universal to early social enterprises as well as the progress made, especially in informal settings.	Investee Community Engagement	Community Level
Identifying synergies from the hybridity of investees, especially in the case of sector specific funds.		
Connecting social enterprises with both current and potential LPs to reduce agency problems as well as exchange knowledge that can benefit both sides.	Non-Investee Community Engagement	
Challenging the investees by engaging them with larger non-impact corporations, to identify business opportunities, partnerships or exits.		

TABLE 6
ADDITIONAL REPRESENTATIVE QUOTES*

Theme	Representative quotes**
Investee level: setting foundations and expectations with the investee, running an impact workshop	“We are finding that doing a small workshop [*on planning and measuring impact*] is very helpful and having a series of conversations is very helpful as well.” (Interview IF 1) “What we do in the companies where we invest is that we designate an impact champion, and we have an impact plan. So, …an impact champion is the person at the company that is the guardian of impact.” (Interview IF 1) “[…] for the materiality of the impact, of course, you need to identify […] what are the positive and the negative impacts that the activity of the company has. Because it would be nonsense to think that the company has zero negative impact.” (Interview IF 6) “Either we ask them to engage an external consultant, or we engage ourselves in doing the analysis with them. And doing an analysis is a couple of workshops to analyse what changes *[they have created]*, who the stakeholders are, what their stakeholders experience from their service or products, and doing interviews of their stakeholders with them, et cetera. And so we guide them step by step through the process to get to an outcome and to make them understand how it works.” (Interview IF 7) “[IF name] uses its numerous contacts with the executives of the portfolio companies to stimulate changes in the interests of sustainability. The basis for this engagement is primarily derived from the impact analyses” (Company document, IF 13, 2021, page 6) “We provide impact workshops/training to our portfolio companies. Usually, we schedule a workshop soon after the investment where we help the company to define the impact KPIs, yearly impact targets and long-term impact targets and how to measure and report them. This is an iterative and collaborative process between the portfolio company, the investment manager and [IF]'s advisory committee which authorizes the impact KPIs. Not only does this process result in useful measurement tools for us as a fund, but the impact management and measurement strategy also create insights on how to improve value creation for the company's customers. For example, impact KPIs usually help our founders to understand their customers' demand even better. Upon request, we are happy to offer these impact workshops as part of the pre-investment due diligence process as well.” (Interview IF 25)
Investee Level: finding the right impact measurement framework and reporting practices	“ […] we believe that those two (financial return and generated impact) go hand in hand. […] if a company doesn't scale, it will only have a potential impact and not a real impact. Or at least the impact will be quite small because it doesn't scale. And similarly, if a company doesn't scale, it will probably never be a very good financial investment. This where we see [Fund's name] value and contribution.” (Interview IF 9) “And so we have selected a set of 20 or 30 KPIs from [the FAST] methodology, which we then again adapt to the needs of the deal.” (Interview IF 16) “We define the social KPIs and annual targets with the management team, as a proxy for the impact generated by the company” (Company document, IF 24, 2020, page 6) “We're always trying to measure the (impact) contribution of the company to the SDGs [and link their revenue generating activities to them].” (Interview IF 19) “Measurement is essential to progress: in its ESG policy, [IF name] pledges to measure its investments' ESG performance and to support portfolio companies in their change trajectory. (Company document, IF 19, 2022, page 31)” “Yes, we offer a 90-min impact workshop after investing in the company and request quarterly impact reporting.” (Interview IF 5) “Impact targets for the KPIs are set for the investment period – each KPI is measured, monitored and revised on a yearly basis together with the portfolio companies” (Company webpage, IF 25, 2021) “In the final stage of the investment onboarding process, we build a detailed Impact Assessment Report for each new investee. This report is reviewed with the portfolio companies to establish the definitive impact KPIs, their weighting and their targets. It then serves as a basis for the continuous impact collaboration throughout the company's time in our portfolio.” (Company document, IF 25, 2021, page 11)
Fund level: establishing legal clauses and procedures	“[IF name] develops customized indicators starting from the SPO's [Social Purpose Organization] business model highlighting realistic and relevant KPIs to be measured periodically. Impact strategies are always attached in the contract as an annex together with impact goals.” (Company case study, IF 2, 2022, page 7) “When there is a significant level of risk perceived that the SPO could diverge from the intended impact potential, a mission-drift clause can be introduced as part of the investment contract defining the repayment/redemption of shares in case of a mission drift.” (Company case study, IF 2, 2022, page 10) “… the impact mission of each venture is added to the Articles of Association, (so that) each impact metric, against the established goals, is embedded in contractual agreements at the point of the investment” (IF 5). “Impact monitoring is also important where social impact premium or other incentive mechanisms are used as part of the investment contracts.” (Company case study, IF 2, page 9) “We require our investees to set goals through a social business charter and impact indicators that will strengthen their mission as social enterprises (Company document, IF 16, 2021, page 6) “We have a condition that needs all its companies to reach its impact goals to get a carry related to impact. It is part of the Limited Partnership Agreement (LPA).” (Interview IF 18) “… a Shared Values Manifesto … which is a document that describes how (they) are going to work together across the portfolio, but also what (their) long term sustainability vision is” (Interview IF 17). “For each investment that it makes, [IF name] secures a commitment from the management to implement the Impact Business Plan and endeavors to align the management's compensation with non-financial criteria, if this is allowed by the fund-raising terms. The achievement of impact objectives will trigger a management package, giving room to an increase of a % of the capital for the benefit of the founders.” (Company document, IF 19, 2022, page 16) “We lock in the impact mission through the Impact Requirement Clause” (Company webpage, IF 25, 2021)

(*continued on next page*)

TABLE 6 (*continued*)

Theme	Representative quotes**
Fund level: broadening sector and geographic scope, majority stakes and presence in the Board or committees	"The capital is flowing into the region faster than the deals. And so, it's creating an inflation within impact deals. And you can react to that in a few ways. Probably the easiest way to react is to broaden your scope. Both geographically and sector wise, because if you narrow your geographic scope and then your thesis scope, then you basically have nothing in your pipeline and the likelihood that you'll get a good deal from that very thin deal flow is highly unlikely." (IF 2) "For example, when we decide to invest in a company in precedency, we organize kind of a board meeting each month […]. First year we onboard the founders, help them on the strategy, build everything, create the most [*impact*] value we can. So that's really the idea. And then second year we organize like four board meetings each year, for example." (Interview IF 18) "Clear impact objectives are defined and examined ex-ante by the Impact Committee for each company as it will be detailed in the Impact Principles 2, 3 and 6. The Impact Committee is composed by 3 [IF name] members and 3 external/advisory members to ensure a diverse and challenging vision." (Company document, IF 19, 2022, page 14)
Fund level: allocating full time responsibility to impact	"She is our kind of impact manager. So, it is her job at a portfolio level. She kind of parachutes in with each company, and she runs this process of defining the impact and everything. My thinking is sort of that impact is so in our DNA as a fund that it should be all our responsibility, and we're all looking for impact deals. We're all treating impact first, we all are able to monitor and report on impact as well as finance." (Interview IF 2) "We also do internal impact sessions, to actually get everyone on the same page … up to date on the latest breakthroughs … but also on how we actually integrate these KPIs and impact criteria in the investment team. Just to be sure that everyone is aligned with the goals and the actual mission that we have." (IF 4).
Fund level: embedding impact in the fund team's DNA	"Sure, the most important to think about is that even if my title is impact, the whole team is impact. […] the way we look for solutions is already our DNA. Yes, I am here to make sure that the framework is there that we have the right KPIs and everything, but it is really part of the whole team. However, […] this is a focused impact team just to make sure that we have the right resources. It is more question of resources, because when I joined two and a half years ago, we were really small, so I can only dedicate 50% of my time on impact, and I had to do investment as well. " (Interview IF 4) "A whole team because impact is inherent to the overall strategy of the funds. So that requires every person on the team to be quite focused on it. But then large funds, like (another IF name), for instance, could have persons that would not exist in a non-impact fund. They would have, for instance, an environmental research director." (Interview IF 9) "For us it is important that all the investment team is in charge of impact-related matters. So, they are following all these KPIs and the negotiation with the owners. But in addition to that, we have someone in the team who is really dedicated to impact measurement management. So, he has the broader overview and ensure that it's well done, coordinated around all the portfolio companies." (Interview IF 19) "[IF name] Impact Management team works closely alongside our investment teams, supporting across the deal cycle and leading impact-driven value creation initiatives. [IF name] was one of the first investment firms in the world to create a specialist impact function, back in 2011. (Company document, IF 21, 2021. Pag 10)
Fund level: impact linked financial incentives	"[IF name] applies an impact carried at the fund level: fund managers have linked a carried, a motivational scheme for reaching impact" (Company case study, IF 2, 2022, page 4) "We use ourselves an impact hurdle for the front manager. So, the front [*manager*] gets the return from the sale of a company. He gets a bonus, and the bonus of the front manager is linked to a financial hurdle. So, let's say the money should come back and the investors should get a return of 2% on top of their capital. And if there is more return than the 2%, then from the excess return, there is 10% bonus for the front manager. However, the bonus is not paid if the social hurdle is not met. Say that our social hurdle is two. Then our SROI should be above two. And if it is not, then the bonus is not the front manager. It will then be granted to a social course." (Interview IF 7) " So, yeah, if we have €100 million subject to carry and we only achieved around 40% of the impact planned and which was approved by our investors, then we would receive nothing and we would have to donate that to social enterprises to make up for the loss of social impact. Donated the social enterprises within your portfolio? Not necessarily. […] I would not necessarily donate it to our portfolio companies because I think if the decision is just social impact, then there are more impactful projects on the spectrum, like non-profit solutions. " (Interview IF 15) "We have a condition […] all its companies need to reach its impact goals [*for us*] to get a carry related to impact. It is part of the Limited Partnership Agreement (LPA)." (Interview IF 18) "The Manager shall have a process to manage impact achievement on a portfolio basis. The objective of the process is to establish and monitor impact performance for the whole portfolio, while recognizing that impact may vary across individual investments in the portfolio. As part of the process, the Manager shall consider aligning staff incentive systems with the achievement of impact, as well as with financial performance." (Company document, IF 19, 2022, page 16) "We linked our carried interest (the amount of money we take after returns to investors) to both financial goals and also to quantifiable impact achievements of our portfolio companies (Company webpage, IF 25, 2021)" "[IF name] long term incentive program is dependent upon the impact performance of our Fund. If we fail to deliver on our impact creation mission, up to 30% of the team's carried interest compensation will be distributed to NGOs and charities selected by [IF name], a process overseen by the Fund's Advisory Committee." (Company document, IF 25, 2022, page 10) "Linking our carried interest compensation to the positive impact generation of our companies is an essential element of our commitment to impact. To ensure transparency and accountability, the selection of impact KPIs, as well as targets and weightings, are discussed and validated with the Fund's Advisory Committee." (Company document, IF 25, 2022, page 11).
Community level: building synergetic collaboration between investees and for-profit companies	"What we hope to do is that we can create synergies between these investment areas and portfolio companies. And that could be, for instance, an early-stage company from the impact portfolio has a service or a product that one of the more larger and mature portfolio companies […] could use as a first customer […]. And the reason why we see quite many synergies, of course, is that non-impact investments are not quite non-impact anymore. Right. So, impact is an important part of their agenda as well." (IF 9) "We're really trying to build bridges between all our partners and the portfolio companies to help them further develop on a commercial standpoint. And the real value that we're bringing is to try, on the impact side, to leverage the environmental and social related matters in the sense that it really creates value for the companies … [We are] organizing a yearly prize […]to award the best cooperation between a large corporate and a startup. For instance, […] one of our investment portfolio companies […] that provides liquid bulk solution to stores got the third price because it cooperated with […] a large corporation that sells cosmetics globally. It used the system of [the social enterprise], so it enabled it to expand internationally." (IF 19)

* Words in brackets and italics were added by the authors to clarify some sentences.
** Quotes extracted from interviews with Impact Fund representatives were cited as "Interview IF #". Those extracted from company reports of marketing material were cited as "Company document, IF #, year, page #", "Company case study, IF #, year, page #" or "Company webpage, IF #, year".

B- Evaluating and refining the prototype

Stage 3: Evaluating the prototype

The findings emerging from the two first stages of our research led us to create the initial prototype of what we have named the IOVC (Impact-Oriented Value Creation) framework (see Fig. 1, Early prototype). The framework was used by the first co-author as part of her master thesis defence, which she presented in May 2022 (Nachyła and Krieger, 2022) in front of a jury composed of two academics and two practitioners. Based on the feedback received, the co-authors went back to the literature to complement the initial theorizing with more current literature on Impact investing as well as with complementary literature and decided to engage with the impact investing ecosystem to assess the validity and usefulness of their prototype.

Specifically, early drafts of the prototype and paper were informally shared with all our interview participants. Almost half of the 25 of the impact funds representatives contacted responded with feedback, all of which was positive regarding the usefulness of the artifact and the degree to which it accurately reflected their practices. As mentioned above, we further discussed the artifact with four external informants, which allowed us to explore potential issues with the framework and assess its pertinence and prospective applicability in the real world.

Between July and December 2022, the artifact was also tested with two cohorts of MBA students attending one of the co-authors' Social Entrepreneurship & Impact Investing courses. During an impact fund management workshop, students were encouraged to find different ways to create social/environmental value through impact investing. In a first step, they had to search the web for extent impact funds and identify the practices which were oriented towards impact. This first part of the exercise allowed us to realize that, except for investee-related practices of planning, measuring and reporting, it was not common for IFs to disclose publicly the impact-oriented practices they implement at the fund or community level, and students had a hard time finding available evidence of these practices online. This might explain why many of these practices, while bearing obvious potential for ensuring additionality and impact, have not yet become part of any known toolkit of best practices in the impact investing space. Student's initial findings were in a second step complemented by detailed information provided by the professor on three different "imaginary" impact funds (i.e., funds that were inspired from real funds operating in Europe). Students' answers and ideas matched in many instances the different elements of the IOVC artifact, further validating the framework from a practical standpoint.

Finally, the IOVC framework was shared in public presentations at two impact investing conferences in May 2023 and April 2023, respectively. In addition to academics, both conferences were attended by asset owners and venture capital as well as impact investing fund managers. Discussions with the audience during and after the presentation confirmed that. Despite real enthusiasm for engaging in impact investing, concerns about the lack of role models and known frameworks exist among stakeholders. Additionally, prospective entrants were alert to impact investing opportunities, although put off by extant uncertainties around the sector and suspicions of impact washing. This also explains the sheer interest they have expressed for our artifact, which we leveraged to try to test and further refine it. Here, for example, we realized that more clarity was required in terms of diagnostic categories and whether there were differing levels of importance or prioritisation (as explained in chapters 4 and 5 of the manuscript).

When refining the model, we also went back to the literature, and to the data previously collected to contrast it with these new insights. In many instances, we found confirming evidence that lend support to such new insights. This is the case for example of the importance of managing investee's impact and IF's role as impact guardians, as illustrated by the following statements found in our secondary data:

> *"Especially when co-investing, [IF name] serves as impact guardian in order to preserve the impact mission and potential of the SPO." (Company document, IF 2, 2022, page 2).*

> *"[IF name] can also introduce a right to approve the subsequent acquisition in the investment contract. In one case they specified together with the investee what a permitted acquisition would be by defining the type of the follow-on investor and that this investor undertakes to continue fulfilling the targeted impact strategy to protect the mission of the SPO." (Company document, IF 2, 2022, page 10).*

Appendix 2. Findings

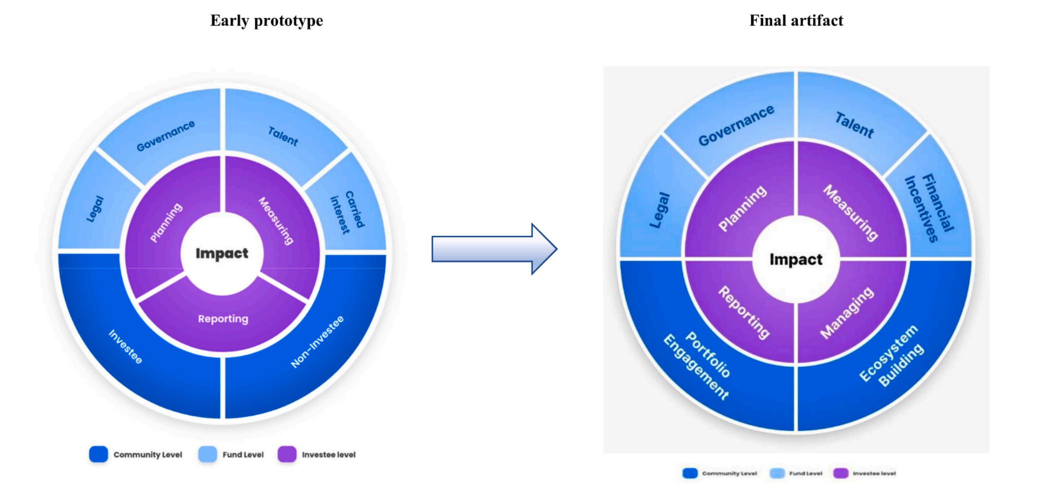

Fig. 2. the impact – oriented value creation (IOVC) framework

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