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Marco A. Marini  
University of Rome "La Sapienza"

# Is a social empowerment of PPP for infrastructure delivery possible? Lessons from Social Impact Bonds\*.

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## 1. Introduction

To win the challenge of “doing more with less”, i.e. improving the outcomes derived from the delivery of public services in a context of curtailed budgets, in the last two decades Public Authorities have been experimenting several mechanisms, among them public-private partnership (PPP) contracts, which allows to leverage capitals and the (potential) innovation capacity of the private sector. In this context, the long-term infrastructure PPP model has been prominent (Hodge & Greve, 2017) and it is now a routine form for infrastructure financing, construction and management in countries such as Australia, Canada, the United Kingdom, as well as the European Union (Greve & Hodge, 2013). This model, used for contracting-out the delivery of timely new hard physical facilities and as a political alternative to privatization, originated in the UK in the early 1990s in the framework of the New Public Management (NPM) movement (Broadbent & Laughlin, 2003). Despite the emphasis placed on cost-efficiency, risk-transfer and incentives (Iossa & Martimort, 2015), value for money (VfM), affordability and desirability of PPP remain widely contested (Hellowell & Vecchi, 2015; Reeves, 2013; Siemiatycki, 2011). Especially in the case of social infrastructure, PPP represented for the many countries that have followed the PFI (Private Finance Initiative) model only a different procurement option, based on a bundled mechanism with an instalment-based payment, to build and maintain hospital buildings and to provide a variable range of non-core services (the so-called “accommodation model”). Actually, the main benefits attributable to this model are the on-time, on-budget and on-quality construction (Vecchi & Cusumano, 2018), which have been used as the main advantages of PPP in the measurement of value for money against the traditional procurement option (Boardman & Hellowell, 2017). Since the standard PPP approach seems to have failed to achieve superior level of efficiency and, above all, effectiveness, it is worth understanding whether the PPP model can be innovated to support the current policy challenges and to overcome the criticism and the loss of faith in the approach, which both emerge in the current political and public debate.

This question can be framed in the academic debate about the shift from NPM to the concepts of New Public Governance (NPG) (Osborne, 2010; Osborne & Strokosch, 2013) and Public Value (PV) (Moore, 1995; O’Flynn, 2007), which reconsider the way in which the public and private sectors are engaged in the delivery of public services to achieve superior social impacts. In this context, can the PPP model be reconceived to become a solution not only for reaching (supposedly) greater economy and efficiency, but also for generating effectiveness in terms of higher benefits for the society? This issue is not new in the academic debate. Hodge & Greve (2017) argue that the “success” of the PPP model cannot be determined without asking “success for whom”. Hellowell & Pollock (2010) claim that, if the economic and fiscal arguments for PPP have not been fully justified, this procurement model should have, at least, a positive impact on the public interest. According to Hueskes, Verhoest, & Block (2017), there is a recognized need to incorporate sustainability considerations in infrastructure projects delivered through PPP. Boardman & Hellowell (2017) indicate that PPP should be considered as a VfM option only if it achieves specific government goals and maximizes the value to society.

To use the PPP as a policy option to reach more effectiveness in the delivery of public services, especially the social ones, it requires a change in the contractual perimeter, moving away from the traditional PFI-accommodation model towards an outcome-based PPP model, where the payment of the economic operator is based on its capacity to reach service outcomes.

This new approach could be welcome by the private sector, which, in recent years, has been more and more incorporating society and environment in its investment decisions. This has originated the emergence of different social impact investment approaches, such as venture philanthropy, impact investing, responsible or ESG (environmental, society and governance) investments, shared value creation (Bénabou & Tirole, 2010; Buckland, Hehenberger, & Hay, 2013; Freireich & Fulton, 2009; Grabenwarter & Liechtenstein, 2011; Porter & Kramer, 2011)

A form of social impact investing is Social Impact Bond (SIB), which can be defined as a public – private plural partnership, to use the words of Henry Mintzberg (Mintzberg, 2015; Mintzberg et al., 2005), with a contractual structure very similar to the PFI model, aimed at financing and delivering welfare services (Jackson, 2013; Stoesz, 2014). SIBs, indeed, have been conceived not only to overcome the shortcomings of traditional public and third-sector service provision, i.e. lack of capital, performance management, efficiency and accountability, but also to bring more innovation in service design and delivery and encourage key stakeholders to focus on the achievement of higher social outcomes (Fraser, Tan, Lagarde, & Mays, 2018; Leventhal, 2012).

Drawing on the evidences emerged so far by the first experiences of SIB across the world, this seminal paper attempts to pave the way to both academic discussion and real-life experimentation, by discussing at what extent the SIB model can represent a reference point to innovate the infrastructure-based PPP model by introducing more focus on the outcome achievement and therefore on the social value generation.

The rest of the paper is organized as follows: section 2 describes SIBs as a form for of PPP; section 3 presents the main evidences from SIB international experiences; section 4 discusses the SIB model and section 5 attempt to draw some preliminary conclusion to fuel the debate among scholars and practitioners.

## **2. Social Impact Bonds as Public-Private (Plural) Partnerships**

SIBs are innovative contractual and financing mechanism in which governments or commissioners enter into agreements with social service providers, such as social enterprises or non-profit organizations, and private investors to pay for the delivery of pre-defined social outcomes (OECD, 2016; Social Finance, 2011). SIBs are also known as Pay-for-Success Bonds (USA) or Pay-for-Benefits Bonds (Australia) (Liebman & Sellman, 2013). After the first SIB project was launched in the UK in 2010, more than 90 projects, for a total of € 255 million, have been implemented at international level to date and more than 70 are in the development phase<sup>1</sup>. Even if they have been mainly applied in developed countries, they have been experimented also in developing countries as Development Impact Bonds (DIBs) (UNDP, 2016).

SIBs involve, in essence, a set of contracts, the basis of which is an agreement by government to pay for an improvement in a specific social outcome once it has been achieved. Investors provide the up-front capital to deliver the intervention, thus assuming the financial risk. These funds are passed to service providers, generally through an intermediary, to cover their investment and/or operating costs to deliver an intervention to a selected target group of beneficiaries. If the measurable outcomes agreed up-front are achieved, government will repay the investors for their initial investment plus a return for the financial risks they took. In case of lower or higher performance in the achievement of the target outcomes, the payment will be, respectively, higher or lower; in the latter case, no payment is secured in case no outcome is generated. In other words, if the intermediary and subcontractors are not able to generate the expected outcomes, the payment done by the authority is cut or cancelled and no return on the investment is generated. Considered this financial structure, in spite of their names, SIBs are not bonds in the conventional sense, since the capital, which can be assimilated to an equity investment, is generally provided by one or few investors (Cox, 2011; Liang, Mansberger, & Spieler, 2014; McHugh, Sinclair, Roy, Huckfield, & Donaldson, 2013; Warner, 2013).

Given the set of contracts involved, the up-front capital provided by private investors and the payment made by the government if pre-determined performance standards are met, SIBs have been considered as an expansion of the long-term infrastructure PPP model into social program delivery (Joy & Shields, 2013; Warner, 2013). However, the focus of this form of partnership is no more an infrastructure-based service, as it is in the traditional PPP/PFI scheme, but social issues that require new approaches to be tackled. And,

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<sup>1</sup> Source: Social Finance, as at May 2018. <https://www.socialfinance.org.uk>

indeed, the SIB model fosters not only efficiency in terms of on-time, on-budget and on-quality delivery, but also, effectiveness in terms of value generated for the society. The SIB model encourages social innovation, which occurs, as emphasized by Mulgan (2006), at the intersection of the public, private, and social sectors. Within a SIB, a plurality of stakeholders are involved: on one hand, private investors invest upfront capital and non-profit service providers bring unique expertise in innovative service delivery approaches; on the other hand, the public sector has the capacity to develop an overarching coordination framework. Co-production with service users, families, and voluntary carers is also encouraged (Joy & Shields, 2013). For these reasons, the SIB model can be ascribed to the paradigmatic shift from NPM towards NPG (Osborne, 2010; Osborne & Stokosch, 2013) and PV (O’Flynn, 2007), where the creation of PV bases its practice in the systems of dialogue, exchange and co-creation among relevant interest groups (Stoker, 2006). The fundamental underpinning mechanism of SIBs relies upon the measurement of social outcomes and the realization of cashable savings as a consequence of improved outcomes (e.g. lower recidivism rates will accrue savings in police, courts, prison, probation, etc.). The savings in public service budgets are used to fund the repayment of the intervention plus the financial return to private investors. Experiences, such as the Rikers Island SIB (Olson & Phillips, 2013), demonstrates that, anyways, the fundamental condition to pay the private counterpart is the achievement of the social outcomes. This mechanism has been regarded as a way to improve performance management and measurement in social service delivery, introduce greater efficiency and accountability between commissioners and service providers and increase innovation and personalization of services (Fraser et al., 2018; Jackson, 2013; Liebman & Sellman, 2013). However, this mechanism has raised some concerns on the viability of SIBs. On one hand, establishing a direct casual link between an intervention and its outcome is generally complex (Arvidson, Lyon, McKay, & Moro, 2013; Godfrey, 2001; Pawson, 2002; Stoesz, 2014) and, on the other hand, cashable savings may be difficult to be estimated as they may be achieved in the long-term and results may not be clearly attributable to one single authority’s budget (Fox & Albertson, 2012; Jackson, 2013; Liang et al., 2014). However, what is appreciable for the scope of this paper is the existence of private investors willing to take the risk to reach social outcomes.

This is in line with the greater emphasis put on social and public value creation by the private sector during the last decade (Meynhardt, 2009). As Jørgensen & Bozeman (2007) argue, PV is not just governmental. And indeed, in recent years, we have assisted to the rise of a new breed of private corporates and investors, who increasingly seek to achieve more than monetary returns with their investment activities and see a value in driving social impact (Bugg-Levine & Goldstein, 2009; Donohoe & Bugg-Levine, 2010). This has been done under different approaches, i.e. venture philanthropy, impact investing, ESG investments, shared value creation, total societal impact (Bénabou & Tirole, 2010; Buckland et al., 2013; Freireich & Fulton, 2009; Grabenwarter & Liechtenstein, 2011; Porter & Kramer, 2011). However, the creation of PV cannot be rented out to the market, since the selection of social priorities can’t be delegated to a private investment decision (Bishop, 2013; McGoey, 2014), contrary to what have been stated by Kramer & Porter (2011) in their seminal paper on Shared Value Creation. Public-private-plural partnership – by using Henry Mintzberg words (Mintzberg et al., 2005; Mintzberg, 2015), such as SIBs, could represent the right vehicle, on one side, to capture the increasing social awareness of private investors, and, on the other side, to support the public sector to achieve more effectiveness and equity in its action, and of course more efficiency and accountability (Hood, 1991; D. Osborne & Gaebler, 1992).

### **3. Social Impact Bonds: emerging features from international experiences**

#### ***Mapping methodology***

SIB implementation has spanned across various policy and geographical areas. However, besides the number of SIBs launched worldwide, the market is still in a phase of development and there is no standardised approach on how to design and set up these projects (Arena, Bengo, Calderini, & Chiodo, 2016).

In order to understand the emerging features, we have mapped the main experiences developed across the world. Our database of SIBs includes only the initiatives that have been explicitly defined as “SIBs” and whose relevant contracts had been already signed as at December 2017. It does not include SIBs in a phase of development, due to the limited information publicly available. An extensive desk research was conducted

to collect the relevant information, using Social Finance online resources<sup>2</sup> as first sources of information and complementing them through the analysis of academic and grey literature, projects' reports, factsheets and press releases.

In our database we classified SIBs according to three main dimensions:

- 1) Country, which is the nation where the SIB has been implemented and where the public outcome funder and the target beneficiaries are located;
- 2) Year, which is the year in which the SIB's relevant contracts have been signed;
- 3) Social issue, which is the area in which the SIB tackles the social challenge.

For each observation, the following information was sourced: target population, contract length, investment raised and maximum outcome payment, target and maximum IRR (internal rate of return), availability of a guarantee to reduce capital loss, outcome payer, service provider, intermediary and investors. It must be noted that, in many cases, the target IRR and the availability of guarantees to reduce capital loss are not disclosed, therefore such data is available only for the 30% and the 57% of observations, respectively.

### ***SIBs features: evidences from international experiences***

As shown in Table 1, after the first SIB was launched in 2010, the number of deals has grown consistently, with the majority of projects concentrated in the last three years.

Table 2 shows that such initiatives have been mainly developed in Europe and North America. The highest number of SIBs is found in the UK, where their implementation has been policy-driven (*top-down* approach): the Government, leveraging the money coming from the Big Lottery Fund, set up seven investment funds with a total funding of £191 million<sup>3</sup>, which commissioning authorities can apply for to cover SIB outcome payments. SIBs are also used in the US, Australia, and Canada, as well as in continental Europe's countries such as Portugal and the Netherlands. In these countries, SIBs have been mainly developed with a *bottom-up* approach, i.e. promoted by private partners, mainly philanthropic investors such as foundations and charities.

In Europe, SIBs have been used to tackle social problems in the area of workforce development, with a particular focus on youth and refugee unemployment, and homelessness, with projects mainly focusing on housing as well as support provision to vulnerable people; while, in the US, they have been applied in the area of criminal justice, to reduce prisoners' recidivism. In some cases, the services conceived within the SIBs can be considered *innovative* (i.e. a program based on a new configuration, approach, therapy, etc.), while, in other cases, they are based on an *expansion* of existing practices (i.e. a program already tested which is scaled up and applied to other target beneficiaries). The unmet social issues that SIBs have addressed so far were either already *covered* by existing, though ineffective, public services, or *uncovered*. In the former case, the commissioning authority has a budget that can be used to pay the investors and a base-line of current costs to estimate potential savings. In the latter case, no budget is available and therefore extra-resources have to be budgeted to cover SIB outcome payments.

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Insert Table 1 about here

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Insert Table 2 about here

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Table 3 shows the average project contractual length, amount of investment raised, percentage of outcome payment compared to investment raised, and target and maximum IRR, per social issue area.

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<sup>2</sup> Social Finance is a not for profit organisation that partners with the UK Government, the social sector and the financial community with the mission to find better ways of tackling social problems. They have set up the first SIB in Peterborough and actively contributed to the spread of the SIB model at international level. They manage the largest database of SIBs, publicly accessible at this link: <https://sibdatabase.socialfinance.org.uk>

<sup>3</sup> <https://www.gov.uk/guidance/social-impact-bonds>

SIBs structured so far have an average length of 4.4 years. This short length is due to the small size of the upfront investment. Actually, the average financial value of implemented SIBs has been, on average, €3.2 million, but 50% of projects has a value of less than €1.5 million. This confirms that SIBs are *low capital-intensive* (as they focus on service instead of infrastructure provision) and they have been mainly applied on *small scale* initiatives

In terms of financial structure, despite the name, SIBs are not bond-like instruments, as previously written, but they have been mainly funded with private debt and equity. The type of security used and, in many cases, the *issue of a guarantee* provided either by public authorities or private philanthropic investors have significantly affected the *risk profile of SIBs*. The UK-based SIB have been generally structured like equity investments, while in the US and Continental Europe debt-like structures secured with a guarantee are more common. The drawdown of the upfront capital and the payment of the outcome fee have followed different structures and schedules, accordingly to the timing of the activities and the outcome measurement<sup>4</sup>, affecting also the return earned by private investors.

The return profile has been quite variable and, in many cases, undisclosed. In case the social outcome is achieved, the outcome payment has been set, on average, at the 190.4% compared to the initial investment, within a range that goes from the 100% (i.e. just capital reimbursement) to the 500% (i.e. a payment five times greater than the investment). In case of under-performance, in some projects the payment is cut to zero, while, in other projects, a guarantee covers up to a maximum of 95% of the initial investment. Furthermore, in terms of IRR, implemented SIBs have targeted, on average, a 5.20% on an annual basis, within a range that goes from 1% to 12%. In most cases, if the social outcome achieved is above the target, the actual IRR is higher than the target IRR, but a maximum IRR (i.e. a cap) is defined.

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Insert Table 3 about here  
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Table 4 reports a number of 238 active investors in SIBs. Investors are mainly represented by the following categories:

- 1) *Foundations, charitable organizations and religious institutions*: they represent the majority of SIB investors;
- 2) *Impact investors*: impact investing firms are specialized asset managers with the mandate to commit capital to enterprises and projects that pursue both social and financial returns; they represent the second largest group of investors in SIBs;
- 3) *Mainstream investors*: banks and traditional financial intermediaries are involved only in few projects; they commit money within their CSR policies or, when protected by guarantees, within their standard asset management portfolios; the latter case is often a way to provide alternative investment opportunities to their high net worth individual investors.

Foundations and impact investing firms have acted, in the majority of cases, as *hands-on* investors, meaning that they have played as originator of the SIB as well as anchor investor (i.e. they have conceived and designed the project and looked for other investors). Impact investing firms are a perfect fit for SIBs: in the majority of cases, these investors manage dedicated SIB funds, which invest on a commercial basis, with clear target financial IRR. Foundations, given their concerted focus on addressing key social challenges and their availability of non-repayable money, have not invested in SIB on a commercial basis; in some cases, they have not only provided the funding to cover part of the cost of the intervention, but also provided a guarantee to reduce other investors' capital losses. When guarantees are provided by philanthropic organizations, like in the case of the Rikers Island SIB, they have stimulated mainstream investors to experiment SIB investments, which would otherwise not be possible given the lower risk appetite of this type of investors. Other relevant constraints, such as SIB small average deals' size and fit within their usual asset allocation framework, prevent many mainstream investors from allocating capital into these instruments.

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<sup>4</sup> If the service is delivered to more than one cohort of beneficiaries over a period of more than one year, payments have been usually made in multiple tranches. If no intermediate output is set and it is expected that results are achieved and measured at the end, or even after the end, of the intervention, the repayment has been made in one single tranche at the maturity.

So far investors in SIBs have been mainly foundations, motivated by testing out the instrument rather than setting optimal contractual and financial incentives. As a consequence, as discussed above, the return profile of SIBs is quite variable and there is no evidence on how these returns have been calculated. In many cases, foundations have acted as *intermediary* organizations, facilitating the selection of the most appropriate, efficient and effective service provider. In other cases, the intermediary has been a specialized organization or an SPV (i.e. *special purpose vehicle*, a specific legal entity created *ad hoc* to implement the project). In some cases, service providers have played as shareholders of the SPV, even though, in the majority of cases, they have generally acted as mere subcontractors.

Even though SIBs developed so far across the world show common elements (i.e. payment for target outcomes, impact measurement, involvement of a plurality of public and private stakeholder), at the same time, there is a considerable variance in the way in which these initiatives have been initiated and structured (i.e. project's promoters, level of innovation of the intervention, financial structure and return, type of investors involved). Box 1 below highlights the differences between two cases of implemented SIBs.

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Insert Table 4 about here  
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### Box 1. A comparison of two SIB experiences

In this box, we show two cases of SIBs: the first implemented in Birmingham (UK) in the area of young homelessness and unemployment, the second on Rikers Island (NY, USA) in the area of criminal justice. The Birmingham SIB follows the UK standard model: it was commissioned with a top-down approach, the scope of the intervention can be regarded as innovative and the financial structure consists of an unsecured equity investment. On the contrary, the Rikers Island SIB is an example of bottom-up approach, expansion of existing interventions and debt-like structure secured with a guarantee provided by a philanthropic investor. While the Birmingham SIB was funded by Bridges Ventures, the largest impact investing firm worldwide, the Rikers Island SIB received money from Goldman Sachs, one of the biggest American investment banks.

#### ***Birmingham SIB***<sup>5</sup>

This SIB was commissioned by the UK Department for Communities and Local Government (DCLG) and Cabinet Office as part of the Fair Chance Fund. Focused on Birmingham, Coventry, Walsall & Solihull, its aim was to support around 300 of the most vulnerable young people into accommodation, education, training and employment. Social Finance played like the intermediary company, while the non-profit organization St. Basils delivered the service. A pool of impact investors provided the upfront capital to cover the cost of the intervention. This SIB reached the end on 31st December 2017. Outcomes were particularly strong compared to targets, with 102 young people entering full or part-time employment against a target of 75, 290 young people entering stable accommodation against a target of 250.

**Program:** The Rewriting Futures program supported 300 young people aged 18-24. The program consisted in providing a housing solution as well as an innovative personal coaching, thereby providing a relevant and supportive link into education, employment and the community.

**Target outcomes:** Out of the treated 300 young people, the program aimed to support at least 250 into accommodation, 200 into education and 75 into sustained employment. Measurement of results was made quarterly.

**Financial structure:** Bridges Ventures, Big Issue Invest, CAF Venturesome, Barrow Cadbury Trust and The Key Fund provided £1 million equity to fund the intervention. In case of success, the maximum aggregate payment made by the DCLG to investors would have been £2.5 million.

#### ***Rikers Island SIB***<sup>6</sup>

<sup>5</sup> Sources: <http://www.bridgesfundmanagement.com/portfolio/st-basils/>, <https://www.socialfinance.org.uk/projects/fair-chance-fund--st-basils>, <https://www.gov.uk/government/news/23-million-to-help-homeless-turn-around-their-lives>

The project launched in 2012 to support the delivery of therapeutic services to 16- to 18-year-olds incarcerated on Rikers Island was the first SIB implemented in the United States. It represented a partnership between the City of New York (commissioning authority), the Department of Correction (the paying authority), Bloomberg Philanthropies (foundation that promoted the project and provided a guarantee to reduce the risk borne by private investor), Goldman Sachs (private investor), MDRC (intermediary), the Osborne Association and Friends of Island Academy (non-profit service providers). In 2015, the Vera Institute of Justice (independent evaluator) concluded that the intervention had failed to reduce the recidivism rate as targeted. The initiative was therefore discontinued and no payments were made to Goldman Sachs, thus triggering the guarantee provided by Bloomberg Philanthropies.

**Program:** The Adolescent Behavioral Learning Experience (ABLE) program involved 4,458 young men aged 16-18 entering the NYC jail on Rikers Island and at risk of reoffending. The ABLE program was designed following the Moral Reconciliation Therapy, developed in 1985 and widely used in prisons, jails, residential juvenile facilities, drug courts, probation programs, and schools.

**Target outcomes:** The treated cohort had to reduce recidivism rate at least by 10% compared to the historical group. This would have generated a maximum of \$20 million long-term savings for the City of New York.

**Financial structure:** Goldman Sachs provided a \$9.6 million loan to fund the intervention. Bloomberg Philanthropies guaranteed \$7.2M of this investment. In case of success, the payment made by the Department of Correction to Goldman Sachs would have been \$11.7 million, equal to a 5.1% IRR.

#### 4. Some critical reflections on SIBs

The main rationale for introducing SIBs is the need to improve the outcome delivery, through innovation in social service provision. However, international experiences show that the majority of SIBs are based on already implemented and well-established models delivered by service providers with proven track record (Arena et al., 2016; Gustafsson-Wright, Gardiner, & Putcha, 2015). One possible explanation of this scarce innovations could be that investors motivated by a return on investment have little incentive to fund risky innovative experiments (Roy, McHugh, & Sinclair, 2018). McHugh et al. (2013) argue that SIBs merely represent the continuation of the effort of successive UK governments to reduce direct public intervention in social services whilst simultaneously encouraging increased investment from the private sector and “marketising” the third sector. Since social innovation is risky, as it happens for high-tech innovation (Martin & Scott, 2000), it should imply a strategic role of the government, even with some forms of financial support or risk sharing, which is exactly the opposite of the SIB model, based, on the contrary, on a complete risks’ transfer to the private sector. Actually, SIB international experiences show that, in many cases, private investors do not bear the risk of achieving the social outcomes, since commissioning public authorities or, more frequently, philanthropic investors, such as foundations, provided guarantees to cover up to the 95% of capital losses. Drawing on the PPP literature, it must be noted that, if guarantees of any kind are provided, the probability of adverse selection (Saussier, 2013) and moral hazard (Engel, Fischer, & Galetovic, 2009; Hellowell, Vecchi, & Caselli, 2015) increases, therefore investors may lose any incentive to reach the target social outcome. However, well designed guarantees may be important to mitigate the risks associated to innovative experiments and sustain the attraction of private capital into SIBs, especially in their early phase of development, as it has been recommended for PPP for infrastructure development (Vecchi, Hellowell, Della Croce, & Gatti, 2016).

Another key rationale behind SIBs is that, within an incentive-based contract, private stakeholders would be able to generate higher social outcomes rather than the public sector alone, which would turn in reduced cost for the public sector and increased value for the society (Jackson, 2013). The underpinning mechanism of SIBs relies upon the realization of savings, for the public sector, as a consequence of improved outcomes, which would be ultimately used to deliver a higher financial return to private investors. In order to assess the

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<sup>6</sup> Sources: [www.nyc.gov/html/om/pdf/2012/sib\\_fact\\_sheet.pdf](http://www.nyc.gov/html/om/pdf/2012/sib_fact_sheet.pdf), <https://www.frbsf.org/community-development/files/rikers-island-first-social-impact-bond-united-states.pdf>,

desirability of a SIB and quantify the savings for the commissioning authority, international experiences show that a VfM analysis has been usually carried out. While the traditional VfM applied to PPP/PFI typically focuses solely on the financial costs (risk-adjusted) of the different investment options (Boardman & Hellowell, 2017), the VfM methodology applied to SIB represents a first attempt to go beyond the mere financial value and quantify, in monetary terms, the impact of improved outcomes. However, it must be noticed that the focus has been much more on the realization of savings in the public budget as a consequence of improved outcomes rather than on the improved outcomes themselves (e.g. savings in police, courts, prison, probation, etc., as a consequence of lower recidivism rates, rather than the value for the society of lower recidivism rates). This approach could make governments and delivery organizations to prefer more standard programs, which may generate short-term savings but limited long-term social impacts. The short-term perspective may be preferred also by investors, because results are easier to be quantified and the risk of default is lower (Disley & Rubin, 2014; Fox & Albertson, 2012).

## 5. Conclusion

In the last ten years we have assisted to two trends: in the public sector, a shift from the NPM paradigm, which put the emphasis on results and efficiency, towards the achievement of the broader goal of PV creation; in the private sector, a higher concern of the society and the environment. This has resulted, among others, in the experimentation of new type of partnership, such as SIBs.

Despite the different nuances, SIBs could be regarded as an experiment to test the feasibility of linking the investors' payment to social outcomes and therefore as a scheme that could be extended back (since we have argued that SIBs have been originated from an evolution of the PPP/PFI) to infrastructure-based PPP contracts. And, therefore, can a "SIB-like" PPP be the solution to attract private investors able to bring the financial resources to close the infrastructure gap with projects able to maximize the public value?

From the analysis of SIBs international experiences, it has emerged that, even if they have been developed in a "protected" environment, thanks to the commitment, also financial, of philanthropic organizations, the model has been generally applied to small scale projects, at local level, with limited risk transfer to financial investors and, despite that, innovation. Drawing of these evidences, we may deduce that the amount of money requested to develop hard infrastructure, the long-term perspective to generate social results, the risk-adverse profile of long-term investors generally involved in infrastructure projects (Vecchi et al., 2016), and their preference for standardized solutions could prevent the application of the SIB model to infrastructure-based PPP. Furthermore, to make the SIB model consistent to infrastructure projects – especially in the social field – and to reach superior social outcomes, the private operator should be involved in the delivery of core services, which, in general, have remained under the responsibility of the public sector in PFI-like approaches. Actually, a social outcome could be reached only through a service and not merely a building or an infrastructure; further, without the involvement of the private operator in the delivery of the infrastructure-based service, it would be rather impossible to link the financial return to social outcomes, which is the essence of a SIB. Since PPP/PFI has generated many critics among politicians and the public opinion, it may be difficult to extend the experimentation of the SIB model to social infrastructure, if one of the prerequisite is the extension of the contract perimeter to core services. Perhaps, small-scale PPP initiatives, such as in the field of medical equipment, could leverage the SIB experience, and, actually, it must be noted that there are industrial investors ready to be paid on the basis of the health-value achieved (Porter, 2009). These small-scale experimentations, supported by a tight collaboration between scholars and practitioners, can be useful to understand at what extent it is possible to innovate the PFI/PPP with a model in which financial returns are related to the achievement of social outcome. In other words, if social impact investing principles, on which SIBs have been conceived, can be suitable for the infrastructure sector.

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## List of Tables

**Table 1. Number and percentage of SIBs implemented per year, 2010-2017**

Year	Total per year N	Total per Year %
2010	1	1.1%
2012	13	14.4%
2013	8	8.9%
2014	8	8.9%
2015	24	26.7%
2016	18	20.0%
2017	18	20.0%
<b>Total</b>	<b>90</b>	<b>100.0%</b>

**Table 2. Number and percentage of SIBs implemented per geographic and social issue area, 2010-2017**

	Child and family welfare	Criminal Justice	Education	Environment	Health	Homelessness	Workforce development	Total per Geography N	Total per Geography %
<b>Asia Pacific</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>14</b>	<b>15.6%</b>
<i>Australia</i>	3	1	-	-	1	1	-	6	6.7%
<i>India</i>	-	-	1	-	1	-	-	2	2.2%
<i>Japan</i>	-	-	-	-	3	-	-	3	3.3%
<i>New Zealand</i>	-	-	-	-	-	-	1	1	1.1%
<i>South Korea</i>	-	-	1	-	-	-	1	2	2.2%
<b>Europe</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>3</b>	<b>9</b>	<b>29</b>	<b>53</b>	<b>58.9%</b>
<i>Austria</i>	1	-	-	-	-	-	-	1	1.1%
<i>Belgium</i>	-	-	-	-	-	-	1	1	1.1%
<i>Finland</i>	-	-	-	-	-	-	2	2	2.2%
<i>France</i>	-	-	-	-	-	-	2	2	2.2%
<i>Germany</i>	-	-	-	-	-	-	1	1	1.1%
<i>Netherlands</i>	-	1	-	-	-	-	6	7	7.8%
<i>Portugal</i>	1	-	1	-	-	-	2	4	4.4%
<i>Sweden</i>	-	-	1	-	-	-	-	1	1.1%
<i>Switzerland</i>	-	-	-	-	-	-	1	1	1.1%
<i>United Kingdom</i>	6	1	-	-	3	9	14	33	36.7%
<b>Middle East</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>2.2%</b>
<i>Israel</i>	-	-	-	-	1	-	1	2	2.2%
<b>North America</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>20</b>	<b>22.2%</b>
<i>Canada</i>	1	-	1	-	1	-	1	4	4.4%
<i>United States</i>	2	5	2	1	1	4	1	16	17.8%
<b>South America</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>1.1%</b>
<i>Peru</i>	-	-	-	-	-	-	1	1	1.1%
<b>Total per Social Issue N</b>	<b>14</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>11</b>	<b>14</b>	<b>35</b>	<b>90</b>	<b>100.0%</b>
<b>Total per Social Issue %</b>	<b>15.6%</b>	<b>8.9%</b>	<b>7.8%</b>	<b>1.1%</b>	<b>12.2%</b>	<b>15.6%</b>	<b>38.9%</b>	<b>100.0%</b>	

**Table 3. Project duration, investment raised, outcome payment and IRR per social issue area, 2010-2017**

Social Issue Area	Average project duration (years)	Average investment raised (EUR M)	Average outcome payment/ Investment raised %	Average Target IRR %	Average Max IRR %
Child and family welfare	5.50	2.99	167.21%	6.43%	12.50%
Criminal Justice	5.10	6.70	133.24%	5.50%	10.13%
Education	3.90	3.27	138.74%	3.26%	13.67%
Environment	5.00	21.00	113.20%	3.43%	n/a
Health	4.50	5.30	189.35%	6.27%	9.75%
Homelessness	4.18	2.38	237.41%	5.25%	9.15%
Workforce development	4.01	1.66	209.93%	5.00%	8.75%
<b>Total</b>	<b>4.43</b>	<b>3.19</b>	<b>190.38%</b>	<b>5.20%</b>	<b>10.44%</b>

**Table 4. Number and percentage of SIBs implemented per geographic and social issue area, 2010-2017**

Type of investor	Active investors N	Active investors %
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Foundation / Charitable organization	83	34.87%
Impact Investor	67	28.15%
Individual investor	12	5.04%
Mainstream investor	27	11.34%
Public investor	30	12.61%
Service Provider	19	7.98%
<b>Total</b>	<b>238</b>	<b>100.00%</b>