

# **MOBILIZING PRIVATE FINANCE FOR PUBLIC GOOD: CHALLENGES AND OPPORTUNITIES OF SOCIAL IMPACT BONDS**

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## **Abstract**

Social Impact Investing (SII), defined as investment that aims to create a positive social impact in addition to a financial return, is a promising approach to solving pressing social issues. One of the key topics in this context is a new “pay-for-performance” financing instrument for social services that has been implemented in the UK, the US and Australia to facilitate impact investments: Social Impact Bonds (SIBs). The extension of the scope of the SIB outcomes-based model to achieve improved social outcomes in developing countries implies the use of Developing Impact Bonds (DIBs). The adaption of the SIB approach for developing countries is the most recent financial innovation derived from the impact investing industry. This work using a multiple case study approach, provides an analysis of the role of typical financial instruments of SII in welfare policies through a descriptive and explorative analysis of the contractual scheme and of the technical and economic aspects of some currently existing SIBs and

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DIBs and provides a comparison of SIBs and DIBs by highlighting their similarities, differences, opportunities and challenges. The results offer practical suggestions for professionals and policy makers to support suitable strategies for the evolution of these instruments in the delivery of welfare services.

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**Keywords:** Social Impact Bond, Development Impact Bond, Social and Sustainable Finance

## **Introduction**

Social Impact Investing (SII), defined as investment that aims to create a positive social impact in addition to a financial return, is a promising approach to solving pressing social issues (Hochstadter & Scheck, 2014). This enormous market opportunity covers four mega trends, namely, markets at the bottom of the pyramid, a green economy, the Lifestyle of Health and Sustainability (LOHAS) segment and the reconfiguration of welfare states (Martin, 2013).

One of the key topics in this context is represented in a new “pay-for-performance” financing instrument for welfare services that has been implemented since 2010, especially in the UK, in the US and Australia, to facilitate impact investments: Social Impact Bonds (SIBs) (Social Finance UK, 2014c).

The extension of the scope of the SIB outcomes-based model to achieve improved social outcomes in developing countries implies the use of Developing Impact Bonds (DIBs) (Center for Global Development and Social finance, 2013).

Based on this assumption, our work aims to contribute to the academic debate on SII and to analyse the role of typical financial instruments of SII in welfare policies through a descriptive and explorative analysis of the contractual scheme and of the technical and economic aspects of some currently existing SIBs and DIBs, highlighting their similarities, differences, opportunities and challenges.

The methodology adopted is founded on a multiple case study approach (Yin, 2014).

This study is structured as follows. The next section provides a short literature review on this topic. This is followed by the methodological approach. The subsequent sections provide a brief description of the case studies, the findings, a discussion and a conclusion.

The results offer practical suggestions for professionals and policy makers to support suitable strategies for the evolution of these instruments in the delivery of welfare services.

## **Theoretical and methodological notes**

### **The contribution of social finance to welfare policies: The state of the art**

Over the past two decades – and especially in the aftermath of the most recent economic and financial crisis– the reconfiguration of public expenditures has undergone significant changes that have posed new challenges, opportunities and threats to welfare policies and to their financing. The pressing constraints to public expenditures on welfare policies may be considered one of the main drivers for the development and diffusion of a financial innovation useful for social needs and social innovation (Social Impact Investment Italian Task Force, 2014; Azemati, Belinsky, Gillette, Liebman, Sellman & Wyse, 2013).

Especially in recent years, scholars, practitioners and policy makers have scrutinized the issue of the sustainability of the welfare system. In particular, the identification of new forms of financing and financial instruments able to attract private capital for the public sector in order to sustain (and integrate) social expenditure outline more and interesting questions (Del Giudice, 2015, p. 19).

Social Finance (SF) seems to be a useful construct to address these questions.

However, despite the recent growing interest in the literature towards this new stream of inquiry, there is not a clear understanding of what the term “Social Finance” stands for.

Different definitions of SF have been proposed by many authors.

This work adopts the approach used by Weber (2012), according to which SF can be considered “an umbrella term for financial products and services that strive to achieve a positive social, environmental or sustainability impact” (p.3). A positive social impact includes an impact on society, the environment, or sustainable development. SF attempts to achieve this by offering products and services, such as loans, investments, venture capital, and microfinance (Weber, 2012; Geobey & Weber, 2013). In the broad range of the SF landscape, Impact Investing has gained significant momentum in recent years (Martin, 2013).

Impact Investing is defined by the Canadian Task Force on Social Finance (2010, p. 5) as “the active investment of capital in businesses and funds that generate positive social and/or environmental impacts, as well as financial returns (from principal to above market rate) to the investor”.

The Impact Investing concept goes by many names (Hebb, 2013; Hochstadter & Scheck, 2014) and, as depicted by Hebb (2013), "these include double and triple bottom line, mission related investing, program-related investment, blended-value, economically targeted investing and social finance" (p.71). Impact Investing is an emerging asset class that presents a special risk-return relation (O'Donohoe, Leijonhufvud, Saltuk,

Bugg-Levine and Brandenburg, 2010) and has characteristics similar to those of “*high-yield*” investments (O’Donohoe et al., 2010; Brandstetter & Lehner, 2014; Geobey, Westley, & Weber, 2012).

The first academic studies on social impact investments were published in 2011. The potential market for SII is estimated to be between 1000 and 14000 billion dollars (O’Donohoe et al., 2010), and it represents the most promising approach to solving social challenges (Jackson, 2013, p. 608).

Our recent work (Rizzello, Caré, Migliazza & Trotta, 2015) explores the SII landscape. We provide a better picture of the existing state of the SII academic landscape and note three main “domains” of research in this field: sustainable finance, impact entrepreneurship and public policy in the social sector. SIBs are closely related to the “public policy in the social sector” domain, including other important terms such as Social Policy, Politics of Austerity, Social Outcome, New Public Management, Payment by Results, and Pay for Success, but have a key role in connecting the three domains. For these reasons, SIBs are one of the most promising pillars of the Impact Investing industry.

McHugh, Sinclair, Roy, Huckfield and Donaldson (2013, p. 247) define SIB as a new and innovative model of financial investment that can transform the supply of social services.

Considered one of the many innovative financing schemes garnering increasing attention in the social finance field (Demel, 2012), SIBs represent an expansion of the New Public Management approach into social program delivery through the use of its three main aspects: contracting, performance measurement, and Public-Private Partnerships (PPPs) (Warner, 2013, p. 305).

SIBs are characterized by i) the participation of private and public actors in Public Private Partnership(s); ii) an initial monetary investment; iii) an action program.

However, with respect to SIBs, there are different definitions provided by scholars and practitioners.

Brandstetter and Lehner (2014) highlight that different regions use several terms. In Europe, these financial products are known as Social Impact Bonds. They are also known as Pay-for-success (PFS) in the United States and Social Benefit Bonds (SBBs) in Australia. The latest version of this financing scheme includes Development Impact Bonds (DIBs), which involve external development agencies and governments (Development Impact Bond Working Group, 2013; Saltuk, Bouri & Leug, 2011; Brandstetter & Lehner, 2014). As stated by Wilson, Silva and Ricardson (2015), DIBs are built around the SIB model and are also structured as Pay-for-success schemes focused on developing countries. Wilson (2014) shows that DIBs

"seek to improve the effectiveness of traditional donor-funded projects by shifting the focus on to implementation quality and the delivery of successful results by introducing private sector actors who may be better-positioned than the public sector to take on risks associated with innovation" (p.19).

Several Authors underline that SIBs represent a financing model adaptable to different social needs (Fox & Albertson, 2011; Hedderman, 2013; Fitzgerald, 2013; Stoesz, 2014). According to Schinckus (2015, p.105), "SIBs are not a miracle way of financing welfare, they can significantly contribute to an improvement of society. By redesigning social programs through market-based solutions, SIBs enhance transparency and evaluation of expenditures made by government, and they can stabilize economic activity and they can contribute to the self-realization of disadvantaged people".

In light of this potential, these financial instruments represent one of the most promising fields of research, with many theoretical and empirical implications for the sustainability of welfare systems.

However, the academic literature on SIBs identifies several obstacles to their development *in concreto*. In particular, we underline the metrics of evaluation and the limits of the valuation of this instrument in a portfolio strategy (Brandstetter & Lehner, 2014; Jackson, 2013; Geobey & Weber, 2013; Wood, Thornley & Grace, 2013; Geobey et al., 2012; Bugg-Levine, Kogut & Kulatilaka, 2012).

Furthermore, Saltuk et al. (2011) affirm that the lack of a track record of investment success is the major obstacle to this sector's development.

Further studies in the academic debate are needed in order to analyse crucial matters and technical aspects.

### **Methodological notes**

This study uses a qualitative approach in order to achieve an exploratory analysis of Social Impact Bonds and Development Impact Bonds, with the goal of better understanding the differences and similarities between contractual arrangements and, in general, technical and economic aspects of different SIBs.

As stated by Kaczynski, Salmona & Smith (2014), "qualitative research is based on a very different frame of meaning construction that allows the researcher to explore and better understand social science issues at a deeper level" (p. 128). Moving from this point of view –given the wide range of qualitative approaches – the Multiple Case Study (MCS) methodology has been selected.

Eisenhardt (1989) underlines the potential of case studies to capture the dynamics of the studied phenomenon. Referring to the issue of generalization, Yin (1994) stresses the need to distinguish between statistical

generalization (where the researcher infers a population on the basis of empirical data collected on a statistical sample) and analytical generalization, which poses as the incorrect use of the first method to generalize the results of a case study.

In light of these specifications, the cases have been selected with the main aim of providing a better picture – and understanding –of the phenomenon. By using the intensity sampling approach, as described by Patton (2002), four case studies have been analysed.

In particular, in a non-random view, we have selected the following among currently existing SIBs: the “Increasing Employment and Improving Public Safety” Social Impact Bond (New York State – USA); the “Her Majesty’s Prison Peterborough” Social Impact Bond (UK); the “Newpin” Social Benefit Bond (Australia) and the “Sleeping Sickness” Development Impact Bond (Uganda).

The final sample is composed of information from rich cases that represent the phenomenon of interest intensely (but not extremely) (Patton, 2002, p. 234).

To ensure the reliability of our study, we developed a research protocol (Yin, 2014). The research protocol provides the researchers the main sources of reliable data, the reporting procedure and the reporting outline. For the case study analysis, we used three primary data sources: i) official documents explaining technical and economic details (e.g., government documents, intermediary documents, and commissioner documents); ii) interviews with key informants; iii) reports and secondary sources (UK Government, Social Finance US, Social Venture Australia and related websites).

### **The case study analysis**

#### **A descriptive analysis of four case studies.**

This Section, using a multiple case study approach, provides an analysis of the role of typical financial instruments of SII in welfare policies through a descriptive and explorative analysis of the contractual scheme and of the technical and economic aspects of some currently existing SIBs and DIBs.

#### **The case of the “Increasing Employment and Improving Public Safety” Social Impact Bond (New York State – USA).**

During 2012, the State of New York (NYS) launched the policy strategy called "Work for Success"(NYS, 2012). Through this strategy, based on a Pay-for-success financing model for the delivery of rehabilitation services to ex-offenders, the State of New York promoted a Social Impact Bond called “*Increasing Employment and Improving Public Safety*”. New

York State identified Social Finance US<sup>49</sup> as the project designer and manager of this Pay-for-success rehabilitation program. Starting from the analysis of the needs of formerly incarcerated individuals and from due diligence, Social Finance US selected the Center for Employment Opportunities (CEO)<sup>50</sup> as a service provider of the SIB intervention.

From June 2013, NYS, Social Finance, and CEO worked together for the development and implementation of the project, while the NYS Department of Corrections and Community Supervision Division of Program Planning, Research, and Evaluation (NYS DOCCS Research) and the New York State Department of Labor Research (NYS DOL Research) evaluated the outcomes through the Randomized Control Trial (RCT) methodology. Chesapeake Research Associates<sup>51</sup> is the independent validator (Social Finance US, CEO & NYS, 2014).

Table 1 provides an overview of the core technical details of the SIB.

Table 1. *SIB “Increasing Employment and Improving Public Safety” (New York State - USA)*

<i>Location</i>	New York City and Monroe County
<i>Country</i>	USA (New York State)
<i>Start date</i>	September 2013
<i>Contract duration</i>	66 months
<i>Social Issue</i>	Prison recidivism
<i>Outcome metric</i>	<ul style="list-style-type: none"> <li>a) Employment: percentage of formerly incarcerated individuals with positive earnings over the first year from release from prison;</li> <li>b) Recidivism: reduction of days incarcerated per person;</li> <li>c) Transitional Jobs: number of formerly incarcerated individuals who start a CEO Transitional job</li> </ul>
<i>Threshold for payments from the outcome payer</i>	Outcome a): 5% increase in employment; Outcome b): 36.8-day reduction in recidivism. Threshold is established only for outcomes a and b.
<i>Outcome evaluation method and Evaluator</i>	Randomized Control Trial (metrics a and b). Validated administrative data (metric c). NYS Department of Corrections and Community

<sup>49</sup>Founded in 2011, Social Finance US is a nonprofit social impact financing and advisory firm, particularly dealing with the development of Pay for Success (PFS) financing. For further information, see: <http://www.socialfinanceus.org>.

<sup>50</sup>Center for employment opportunities (CEO) is a nonprofit employment service agency for formerly incarcerated individuals. For further information, see: <http://ceoworks.org>.

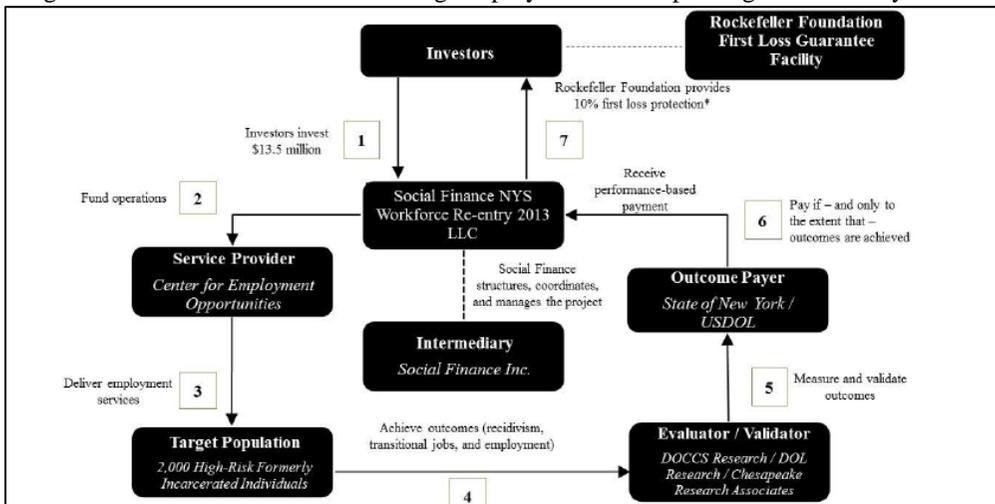
<sup>51</sup>Chesapeake Research Associates is a for-profit company founded in 2002 to provide research and evaluation services to federal and state governments, non-profit organizations, and businesses both in the US and abroad. Its main expertise is in the design, implementation, and reporting of randomized controlled trials (RCT) in education and other social policy areas. For further information, see <http://www.chesapeake-research.com>.

*Validator* Supervision Research and NYS Department of Labor Research are the outcome evaluators; Chesapeake Research Associates.

*Payments beyond threshold* Outcome a): Phase I: \$6,000 x pers.; Phase II: \$6,360 x pers.  
 Outcome b): Phase I: \$85 x day; Phase II: \$90.1 x day.  
 Outcome c): Phase I: \$3,120 x pers.; Phase II: \$3,307 x pers.  
*Source:* Our elaborations.

The total capital raised for this intervention was \$12,180,000, of which more than 90% covered CEO’s employment intervention for 2,000 formerly incarcerated individuals. The remaining funds were for Social Finance’s project and risk management services, Jones Day’s legal work, and Bank of America-Merrill Lynch’s work with impact investors (Social Finance US, CEO & NYS, 2014). Through its financial platform, Bank of America-Merrill Lynch raised the financial resources for the program from more than 40 impact investors and philanthropic foundations. Finally, the Rockefeller Foundation provided a 10% first-loss guarantee for a total amount of \$1,320,000 (Social Finance US, CEO & NYS, 2014). Figure 1 provides an overview of each stakeholder’s role in the project.

Figure 1. Main actors of the “Increasing Employment and Improving Public Safety” SIB.



*Source:* Social Finance US, CEO & NYS, 2014, p. 5

The total performance-based payment is capped at \$21,540,000 overall the two phases. This maximum amount of payments is equivalent, for impact investors, to approximately 12.5% annual implied IRR (Social Finance US, CEO and NYS, 2014). Performance-based payments are tied directly to the public sector savings and benefits estimated to result from the program’s social impact, and for this reason, such payments from

government never exceed the savings and benefits accruing to the public sector (Social Finance US, CEO and NYS, 2014).

The first cycle of the rehabilitation program is currently underway. The final results and, therefore, the first possible outcome-based payments are expected in the second half of 2017.

### **The “HMP Peterborough” Social Impact Bond (United Kingdom).**

In September 2010, the UK Government launched the first Social Impact Bond with the aim of reducing the reconviction rates of short-sentence male prisoners leaving Her Majesty’s Prison (HMP) of Peterborough. The intervention financed by the SIB provides interventions for male adults of at least 18 years old who received custodial sentences of fewer than 12 months and who were released from the HMP Peterborough prison.

The Ministry of Justice of the UK Government commissioned to Social Finance UK<sup>52</sup> the design and management of the project. In March 2010, Social Finance UK finalized the initial contracts for the SIB through the arrangement of the Social Impact Partnership, a Special Purpose Vehicle set up by Social Finance UK, as contracting entity for the SIB. In this contract, the Ministry of Justice and the Big Lottery Fund had the role of outcome payers, and One Service, the organization created by Social Finance UK specifically for the SIB, was the negotiation entity with social enterprise partners (such as St Giles Trust, Ormiston, SOVA, YMCA, and Mind) for providing services. The intervention concerns a package of intensive support services (called ONE Services), including housing assistance, drug and alcohol treatment, employment assistance, parenting assistance and mental health support, and was directed towards 3,000 short-term male prisoners aged 18 and older released from Peterborough Prison (Disley, Rubin, Scraggs, Burrowes & Cullery, 2011). The target population was divided into three cohorts, and each cohort included approximately 1,000 men discharged from short prison sentences at HMP Peterborough. Each cohort closed after two years, or when 1,000 offenders were released (Nicholls & Tomkinson, 2013). It was expected that services would be delivered for approximately seven years<sup>53</sup> (Disley & Rubin, 2014). Two cohorts received intervention. The service for the second cohort terminated on 30 June 2015. Table 2 summarizes the technical information about the Peterborough SIB.

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<sup>52</sup>Founded in 2007, Social Finance UK is a nonprofit social impact financing and advisory firm, particularly aimed at the development of Pay for Success (PFS) financing in the United Kingdom. For further information, see: <http://www.socialfinance.org.uk>.

<sup>53</sup>See section 4.2.1 of the study for a discussion of the reduction in the duration of this SIB.

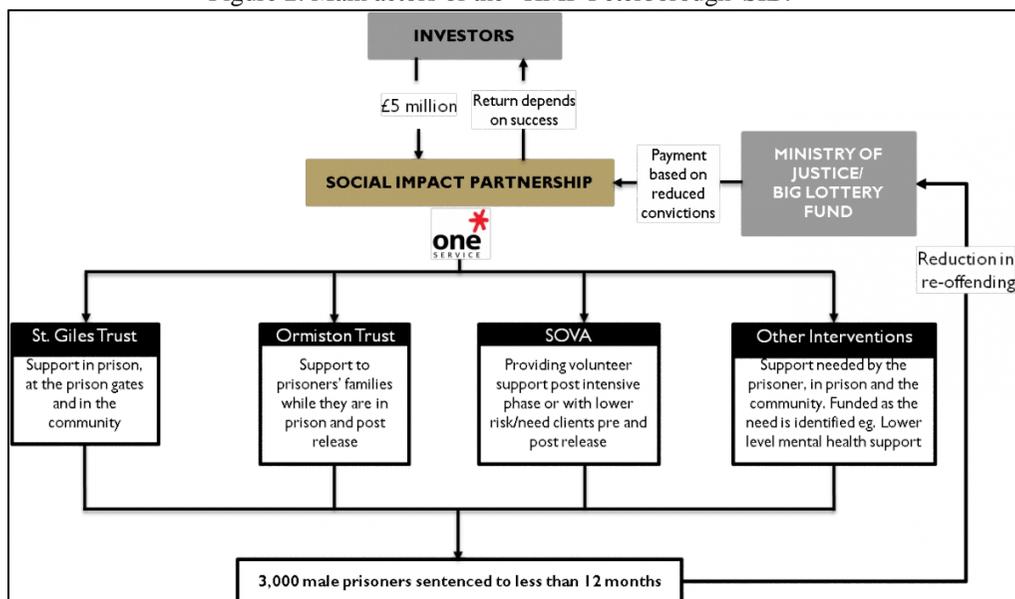
Table 2. SIB “HMP Peterborough” (United Kingdom)

<i>Location</i>	Peterborough, East of England
<i>Country</i>	United Kingdom
<i>Start date</i>	March 2010
<i>Contract duration</i>	96 months
<i>Social Issue</i>	Prison recidivism
<i>Outcome metric</i>	Reduction in the re-offending rate over the 12 months following release from Peterborough Prison
<i>Threshold for payments from the outcome payer</i>	Reduction in re-offending by 10% for any of the three cohorts or 7.5% across all cohorts.
<i>Outcome evaluation method and Evaluator</i>	Matched control group (Quasi-experimental method); Qinetiq and the University of Leicester were selected as evaluator and validator of the results, respectively.
<i>Validator</i>	The evaluator also acted as independent validator.
<i>Payments beyond threshold</i>	Payment is made per re-conviction event reduced, up to a cap of £8 million

Source: Our elaborations.

Figure 2 highlights the main actors involved in the project.

Figure 2. Main actors of the “HMP Peterborough” SIB.



Source: Nicholls & Tomkinson (2013), p. 14

The total investment raised for the SIB was £5 million from 17 investors, and no first-loss guarantee was provided (Disley et al., 2011).

A minimum payment, equivalent to a return of 2.5% per annum, would be released by the MoJ and Big Lottery Fund to the Social Impact Partnership SPV and from this vehicle to investors if the reduction of reconviction events reached the threshold of 10% for any of the three cohorts of 1000 ex-prisoners or 7.5% across the entire 3000.

Outcome-based payments, therefore, are scheduled at the end of each of the three cohorts if reduction in re-offending goes by 10% or, if not, at the end of the program. In the latter case, the threshold of reduction rate in re-offending considered for payments is 7.5% across all cohorts.

Payments are capped at £8 million. This sum of maximum payment is equivalent to a maximum annual implied IRR of approximately 13%.

Actually, the intervention terminated for two cohorts. The evaluation of outcomes for the first cohort was announced from Social Finance UK in August 2014. The first group of 1000 prisoners registered an 8.4% reduction in re-offending relative to the comparable national baseline (Social Finance UK, 2014b). Such results do not imply payments, at this stage, to the investors. However, the outcome payers will make payments to investors in 2016 in the case of a reduction in re-offending of more than 7.5%. As evident from this announcement, Social Finance UK considered the threshold of 7.5% only for the first two cohorts. The change in payment schedule is due to the policy reform called “Transforming Rehabilitation” (Ministry of Justice, 2013) that caused the cancellation of the third cohort of the SIB (Social Finance UK, 2014a).

### **The Newpin Social Benefit Bond (Australia)**

In June 2013, NSW launched the first Australian SBB aimed to fund the maintenance and expansion of *New Parent and Infant Network* (Newpin), an important children and family program run by UnitingCare (Centre for Social Impact Bond, 2013b). Newpin is an intensive therapeutic program for families with children aged less than five years who are either in statutory out-of-home care or are at risk of harm (Centre for Social Impact Bond, 2013a). Between 2008 and 2012, the Newpin program worked with more than 270 families and successfully restored over 120 children who were previously in out-of-home care to their families (Social Ventures Australia, 2013).

Table 3 summarizes the main technical information about the Newpin SBB.

Table 3. *SBB “Newpin” (AUSTRALIA).*

<i>Location</i>	State of New South Wales
<i>Country</i>	Australia
<i>Start date</i>	June 2013
<i>Contract duration</i>	87 months
<i>Social Issue</i>	Prison recidivism
<i>Outcome metric</i>	<p>Outcome Payments (from the Outcome Payer to the Service Provider) are based on the number of participating children who are successfully restored to the care of their family (restoration is determined by the judiciary system), net of the counterfactual.</p> <p>Principal and interest payments made by the Service Provider to Investors are based on the proportion of children attending a Newpin Centre who are successfully restored to the care of their families.</p> <p>Payments from the Outcome Funder to the Service Provider are based upon the number of restorations, net of counterfactual.</p>
<i>Threshold for payments from the outcome payer</i>	<p>For this reason, the threshold is equivalent to the counterfactual.</p> <p>Payments of principal and interest to investors commence above a threshold Restoration Rate of 55%.</p> <p>The evaluation method is based on historical comparison in the first three years and on a quasi-experimental and validated administrative data (from the judiciary system) in the remaining period.</p>
<i>Outcome evaluation method and Evaluator</i>	<p>Deloitte is the independent evaluator.</p> <p>In detail, the counterfactual number of restorations in the first 3 years is 25% of the number of children completing the program (based on historical experience). Starting from the fourth year of implementation, the counterfactual restoration rate will be determined by the outcomes of a matched control group.</p>
<i>Validator</i>	<p>With the goal of determining payments to investors, judiciary data are used to determine the restoration rate.</p> <p>Deloitte.</p>
<i>Payments beyond threshold</i>	<p>Interest payments are based on cumulative restoration rate achieved:</p> <ul style="list-style-type: none"> <li>• Restoration rate &lt;55% - Interest rate 0%</li> <li>• Restoration rate 55% - Interest rate 3%</li> <li>• Restoration rate 60% - Interest rate 7.5%</li> <li>• Restoration rate 65% - Interest rate 12%</li> <li>• Restoration rate 70% - Interest rate 15%</li> </ul> <p>Principal repaid on maturity date - between 50% and 100% depending on restoration rate (100% if restoration rate &gt;55%)</p>

Source: Our elaborations

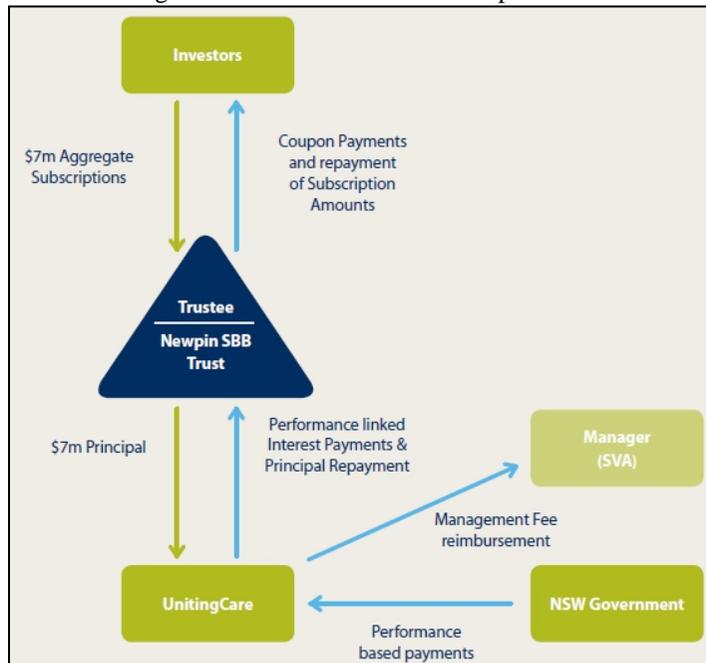
The Newpin SBB reflects a social investment funding partnership between UnitingCare, the NSW Government and private sector investors with the purpose of improving social outcomes in the area of out-of-home

care, thereby producing benefits for the community, the Government, UnitingCare and investors over the expected seven-year delivery term. The funds raised by the Newpin SBB are planned to expand to 10 Newpin centres as well as to support over 700 families, approximately 350 of whom with at least one child age 5 or under who has been in government out of home care for at least 3 months, 175 with at least one child age 5 or under who has been assessed as at risk of serious harm and 175 families with at least one child age 5 or under who has been assessed as needing support.

Social Ventures Australia (SVA) is the entity manager of Newpin SBB. Social Ventures Australia engaged to market the SBB via the SBB Trust, which was created to collect investor funds via the issuance of the Newpin SBB. The 59 investors include UnitingCare Burnside, high-net-worth individuals, family foundations and innovation funds.

The three main financial flows that can occur during the implementation of the SBB are Interest Payments, Principal Repayment and Early Termination Payments. All the financial flows that occur between the actors of the SBB are summarized in Figure 3.

Figure 3. Main actors of the “Newpin”SIB.



Source: Social Ventures Australia (2014), p. 28.

The capital repayment to the investors will be made on the maturity date fixed at 30 September 2020 by UnitingCare in a proportion determined by the restoration rate. More precisely, 100% of the capital invested will be repaid if the restoration rate over the full term is greater than 55% (Social

Ventures Australia, 2014). The early repayment to investors of the Newpin SBB occurs in the case of a low restoration rate or for any other reason that makes the Newpin Program undeliverable. In this case, the maximum potential loss of capital is 25% during the first four years and 50% thereafter (Social Ventures Australia, 2014). Finally, the annual interest payments are subject to a minimum interest rate of 5% p.a. over the first three years, while the maximum interest rate is 15% p.a. over the full term. The amount is related to the restoration rate, as indicated in Table 3. At the end of the first year of SBB implementation, interest payments were 7.5% based on the achieved outcome of 60% in the restoration rate.

### **The “Sleeping Sickness” Development Impact Bond (Uganda)**

In April 2014, the UK Government announced the launch of the first Development Impact Bond (DIB) with the aim of researching and designing a bond to finance a long-term effort to reduce the prevalence and prevention of deadly sleeping sickness in Uganda (UK Gov, 2014).

The intended outcome of the implementation of a DIB is a long-term reduction in the prevalence rates of the sleeping sickness disease known as *Human African Trypanosomiasis* in both cattle and humans. The UK Department for International Development (DFID) promoted the design of an intervention through the DIB model in order to explore the possibility of encouraging social impact with greater efficiency and speed compared to an intervention by the local government or by charities (UK Gov, 2014).

The DIB Inception Programme has been commissioned to Social Finance UK and the Center for Global Development.

The DIB Inception Programme is scheduled to be concluded before the end of 2015. In the first draft of the project, expected results are expressed both as output (number of cattle treated) and outcome (reduction in prevalence of a parasite determined by blood sampling) (DFID, 2014). At the present time, information about the investors, the service provider or the methodologies for measuring impact are unavailable.

### **Main findings**

#### **Prior results and discussion**

The casestudy analysis shows a number of similarities and differences across SIBs and between SIBs and DIBs. The main aspects of each case are summarized in Table 4 and grouped into seven levels (Commissioner, Intervention Area, Financial Intermediary, Evaluator, Outcome Payer, Duration, and Validator). The absence of certain data in case 4 is due to the case's early stage of development.

*Table 4: Case Study analysis*

<b>Case</b>	<b># Case 1</b>	<b># Case 2</b>	<b># Case 3</b>	<b># Case 4</b>
<b>Commissioner</b>	State of New York	British Ministry of Justice	Department of Family and Community Services (FACS)	UK Government and Department for International Development (DFID)
<b>Intervention Area</b>	Rehabilitation Services - Recidivism reduction	Rehabilitation Services - Recidivism reduction	Children	Disease treatment (HAT) The DIB Inception Programme has been commissioned to Social Finance UK and the Center for Global Development
<b>Financial Intermediary</b>	Social Finance US	Social Finance UK	Social Ventures Australia	
<b>Evaluator</b>	NYS Department of Corrections and Community Supervision Research and	QintetiQ and University of Leicester	Deloitte Touche Tohmatsu	*
<b>Outcome payer</b>	NYS Department of Labor Research US Department of Labor and NYS Department of Labor	Ministry of Justice and Big Lottery Fund	Department of Family and Community Services (FACS)	DFID
<b>Duration</b>	66 Months	96 Months	84 Months	*
<b>Validator</b>	Chesapeake Research Associates	The same as the evaluator	The same as the evaluator	*

\* Case 4 is in the design phase. Data are not available.

*Source:* Our elaborations.

The case study of the “*Sleeping sickness*” *Development Impact Bond* shows some differences with respect to the other SIBs. The commissioner is not the local Government, but an international organization or development agency, and the outcome payer is represented by DFID and not by the Country where the intervention will be delivered.

However, starting from the available data, this DIB shows a contractual arrangement derived from those used in the Social Impact Bond model. Consequently, the DIB model requires the presence of impact investors and a market intermediary, such as in the SIB practices.

In case 1, Social Finance US plays a central role in the SIB structure. It designs, coordinates and manages the project through the Special Purpose Vehicle “Social Finance NYS Workforce Re-entry LLC”. It also manages financial flows between impact investors, service providers and outcome payers. The intervention of a financial intermediary in the collection of social impact investments characterizes the start-up phase of this Social Impact Bond.

In the Peterborough SIB, the management model in the start-up phase represents the first case in which the commissioner plays more of a passive role and allows the intermediary to play an active role. Furthermore, in the case study of the United Kingdom, the service provider – One Service – carries out the activities included in the rehabilitation program in order to educate prisoners using the different entities that form it: the intermediary, Social Finance UK, which has control, the investors and the service provider itself. Another typical characteristic of this SIB is the management company, Social Impact Partnership-Limited Partnership, which is owned by Social Finance as the general partner and in which participate, in addition to One Service, 17 different investors who have financed the project.

A further interesting aspect is the method of measurement and validation of results. From the comparison of the case studies (Tab. 4), the validator coincides with the evaluator two out of four times.

With regard to similarities, the analysis shows that i) both models (SIBs and DIBs) are aimed to solve social problems by offering the investors the potential for a return on their investment; ii) both models show similar component structures, such as public engagement, service providers, and investors. Table 5 provides a summary of the main advantages and limiting factors of the SIB and DIB financing models.

*Table 5: Major advantages and limiting factors of Social Impact Bonds*

<b>ADVANTAGES</b>	<b>LIMITING FACTORS</b>
Flexibility in terms of involved stakeholders, supplied services, delivery method, objectives and results, timeline	No track record
Ability to combine "evidence-based" models and tools with financial returns / Immediate connection between outcomes reached and performance	Legal restriction
Several areas of intervention: Health, Education, Criminal Justice, etc.	Financial Returns and cash flows unknown / difficulties in terms of portfolio evaluation No guaranteed funds or insurance for investors
	Risk transfer

*Source:* Our elaborations.

Furthermore, a key dimension of analysis is the relationship between risk and reward. More specifically, through their contractual structure, SIBs move a relevant level of risk to investors, who consequently require appropriate rewards. The analysis of data highlights that risks linked to the success of the program are transferred to private actors, and this aspect generates a significant increase in the yield of the same SIB. These considerations seem to confirm the following proposition by O'Donohoe et al. (2010, p. 66): "impact investing refers to a particular relation between risk and return that allows considering it to be similar to "high-yield" investments".

Table 6 provides a comparison between the implied rates of return available in the cases.

*Table 6: Implied Rate of Return comparison*

	<b><i>“Increasing Employment and Improving Public Safety” (New York State - USA)</i></b>	<b><i>“HMP Peterborough” (UK)</i></b>
<b>Implied IRR</b>	12.5%	13%

*Source:* Our elaborations.

The implied IRRs outlined in Table 6 are higher than the yield of a government bond. This aspect is strictly related to the fact that a government bond ensures that cash will always be available to pay out the bondholders, but this is not true for a SIB in which the rate of return is related to the outcome reached and no guarantees are provided. Furthermore, if we consider the IRR, we evaluate SIBs and DIBs in terms of risk and return, and we can allocate this instrument through the lens of portfolio maximization. However, the investors that chose this type of investment take into consideration a third dimension: social impact.

### **Further lines of research**

This work aimed at analysing the role of SIBs (and DIBs) in welfare policies through a descriptive and explorative analysis of their contractual scheme and technical and economic aspects, highlighting similarities, differences, opportunities and challenges.

The case studies outlined in this work indicate some potential benefit among a wide range of stakeholders from the public and private sectors. In a context of public spending constraints and public debt pressure, many advantages result from the use of new financing models, such as that of SIBs and DIBs, especially by bringing in new players and new capital.

Furthermore, case studies seem to confirm what is stated in the academic debate: SIBs represent a financing model adaptable to different

social needs (Fox & Albertson, 2011; Hedderman, 2013; Fitzgerald, 2013; Stoesz, 2014).

Our results note the weakness outlined in the general literature and relate to the metrics of evaluation and to the financial return uncertainty of SIBs. Similar to traditional investors, "social impact investors" require a measurable return. The presence of public entities – and especially Governments – in the broad range of stakeholders is not enough to ensure the success of the investment.

In addition, we highlight some aspects that need further investigation and that are related to the opportunity to improve standardized but still flexible evaluation tools that are able to take into consideration the financial return, the social impact and the different kinds of risks related to these particular financing schemes. Future research should explore the investment evaluation process not only through the lens of the rational decision-making process but also considering what really drives impact investors' decisions.

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