

**SOCIAL IMPACT BONDS IN CANADA:  
FROM THEORY TO IMPLEMENTATION**

by

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## **Abstract**

Social impact bonds (SIBs) are a new method of generating private investment for preventative social programming in the UK. SIBs generate investment from private sources for social programs by issuing a contract that pays returns to investors based on a percentage of the savings received by government as a result of the program outcomes. This paper analyzes the theoretical underpinnings of this concept and attempts to determine applicability in a Canadian context. No previous substantive study of this kind has been performed in a Canadian context.

This study undertakes empirical research of potential SIB applications in the form of an employment program for persons with disabilities, a social housing program and a preventative healthcare program for hypertension management. My findings suggest that the two latter cases are more suitable for future SIB application than the first.

I develop a general course for implementation and future research of the SIB. I then offer recommendations for future paths of development for the area which include: internationally coordinated research of existing SIB strategies; developing a long-term vision for the concept locally; identifying promising applications through the methods used in this project; identifying, partnering or creating a social impact bond delivery agency to deliver and monitor a SIB.

**Keywords:** Social impact bonds; social finance; social innovation; social service financing.

# Executive Summary

## Background

Social impact bonds (SIBs) are a new method of generating private investment for preventative social programming. SIBs generate investment from private sources for specified social programs by issuing contingent bonds that pay returns to investors based on a percentage of the savings received by government as a result of social programming. Investors in SIBs share both the risks of programming and the rewards from savings to government.

SIBs have yet to be used in North America. In the UK, the first SIB pilot started in March, 2010, to finance social programming (largely life skills development, and job training) to reduce rates of re-offence by recently released prisoners. Investors in the SIBs receive returns on their investments based on the degree of success of reduced re-offence rates.

Internationally this concept is gaining traction. Australia has announced its intention to pilot a SIB, and the US has recently allocated \$100 million towards research, development and implementation of this financing mechanism. In Canada, the concept is emerging on the government of Ontario's policy agenda, while the BC government is in the early stages of exploring pilots in this area.

## Background of theory underpinning SIBs

### *The core rationales for the SIB are:*

- Improved quality of service and better use of resources for social service providers.
- Risk transfer and increased resources for government.
- Facilitation of innovation through cross-sectoral cooperation.

### *Conditions necessary for SIB application are:*

- Presence of a high public cost of intervention combined with potential for significant net benefits through social service program intervention.
- An ability to collect data and undertake analysis that clearly gauges outcomes.
- Strong cooperation among multiple stakeholders.

### *SIBs and private investment methods:*

- Though called a "bond," the SIB mechanism is closest in nature to a debenture, contingent revenue or performance bond.

- The most likely investors in SIBs are not typical for-profit-driven investors; they are more likely to be socially motivated investors seeking social returns on investment as well as minimal financial returns.

***Relation between SIB and venture capital investors:***

- ***Similarities:*** Both provide capital funding for projects with asymmetrical information and higher rates of risk in areas of investor specialization.
- ***Differences:*** SIB investors are passive throughout program operation; venture capitalists are active in business operations.

***Relation between SIBs and P3s:***

- ***Similarities:*** Collaborations between the private and public sectors with risk transferred away from government. Efficiency gains are sought through service delivery outside of government, based on the service provider's level of expertise in the field.
- ***Differences:*** Improving social outcomes rather than creating capital projects, emphasis is on improved operational effectiveness.

**Empirical analysis of potentially feasibility SIB applications**

***Case Study 1:*** A proposed Community Living British Columbia customized employment project for persons with disabilities is found to be not worthwhile for further exploration as a potential SIB application. Though the employment program does have demonstrated effectiveness, it offers little potential for government savings and thus no opportunity for a SIB.

***Case Study 2:*** Fraserside Community Services Society's Bolivar Club social housing project is a possible application in the future, but unlikely to work in the near-term. Placing monetary value on the cost of medical interventions is challenging, and no data exists on the costs of clients on the judicial system. Though there are gaps and limitations in the available data, analysis shows that Bolivar Club does create positive outcomes with associated financial savings. More robust data collection and consultation with the Fraser Health Authority would be needed to create a possible SIB funding mechanism.

***Case Study 3:*** The Heart and Stroke Foundation of Ontario's Hypertension Management Initiative is the best candidate for SIB application of the three case studies. From an effectiveness and economic standpoint, the program is very promising. A pilot of the program has already been rolled out, and it has demonstrated effective results. In addition its costs are low relative to the potential benefits.

***Wider implications of case study findings:***

- There is a need for more specialized SIB feasibility studies in the future.
- Determination of potential SIB applications should take a top-down rather than a bottom-up approach.

- The devil of the SIB is in the details: clear definitions of the terms of repayment, length of contract, investor control and delivery agent are complicated, but important matters to be determined.

### **Recommendations moving forward**

- **Learn from others:** Provincial governments in Canada would do well to learn from the SIB experience of others. For BC, a small research group that could gain access to the leaders of SIB development in the UK, Australia and the US could benefit from practical advice and insights to chart a more efficient trajectory for the SIB in Canada. If several Canadian provinces develop interest in this concept, perhaps a federally sponsored research project or task force could help guide future SIB pilot development in Canada.
- **Develop a long-term vision for the SIB:** Governments interested in committing resources to launching a pilot program require a long term vision for this mechanism. A government could adopt the view that in the future, the SIB will be targeted to charitable or philanthropic organizations. Conversely, it could decide to scale up the concept. To do this, the SIB would have to be designed in a way that offers greater incentives to typical private investors. It would have to develop an SIB mechanism that limits risk, has liquidity and is convenient.
- **Identify promising applications through further research:** Wider application of this project's methods could help determine more suitable projects for the SIB in the future. Similar modes of analysis that focus on outcome data and financial flows should be performed in the future with greater focus on particular social service areas. Analysis of a specific specialized area (i.e. geared only toward social housing or preventative healthcare) could help highlight the best possible applications for an SIB in that field.
- **Partner with or create a Social Impact Bond Delivery Agency (SIBDA):** Partnering or creating with a specialized social financing organization with the administrative capacity to create, produce and evaluate project outcomes is necessary. This would be a similar initiative to the establishment of Partnerships B.C. in British Columbia and Infrastructure Ontario to undertake P3 projects. The focus of such an organization would be to change and refocus from capital investments in social service providers to investments in operational projects.
- **Develop a contract model for the SIB:** Through examining the existing contract model of the UK SIB pilot, together with the expertise developed in P3 project contracts developed by Partnerships B.C. (and/or Infrastructure Ontario), a contract model should be developed to incorporate a structure that would be based on commercial terms and conditions that are generally known and accepted in Canadian financing circles.

## **Dedication**

To my parents.

## **Acknowledgements**

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## **1: Introduction**

With the coming demographic shift toward an aging population, the Canadian government faces two core problems: “maintaining steady improvements in living standards despite increases in the old age dependency ratio; and ensuring that public finances across all levels of government remain sustainable in the long term, especially given the pressures on publicly financed healthcare” (Angus, 2006, p. 1). Increasingly social services in North America are being provided through the work of non-profit organizations (Salamon, 1994). In 2007, the core non-profit institutions sector<sup>1</sup> in Canada accounted for 2.5% of national GDP at \$35.6 billion dollars (Hall, 2010, p. 89). This sector is also experiencing a foundational shift with the rise of social finance and social entrepreneurship. Increasingly, social service providers are mixing business practices with social goals to increase the efficiency of their impact (The Economist, 2006).

With government’s looming financial stresses comes the need for a new arsenal of financial tools and innovative practices. This is a broad, complex problem with no single or simple solution. Given the scale of the problem, I approach the need for new financing and improved outcomes for social services with a narrow focus; I examine the opportunities, challenges and possible implementation of the Social Impact Bond (SIB).

A SIB is a very new method of generating private investment for preventative social programming. In principle, a SIB generates investment in social service programs through private sources of investment. Private investors receive returns on investment from government if the social service provider meets specified performance targets that create savings for government. In the existing pilot of the SIB, private investors play a hands-off role in operations and the social impact bond delivery agency (SIBDA) is

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<sup>1</sup> The core non-profit institutions sector is defined by StatsCan as “non-profit institutions serving households (NPISH) and non-profit institutions classified to the corporate sector” (StatsCan, 2009).

responsible for issuing and monitoring the terms of the bond. Investors in such bonds assume the risks of achieving specific programming outcomes and share the rewards of the resulting savings to government. Conceivably, government can gain by paying for only a portion of the benefits that it receives from the given social program without committing to any up-front costs or the political risks that come with sweeping – rather than incremental – policy change.

The SIB financing method is in its infancy. The first SIB pilot project began in March of 2010 in the UK, with no SIB pilot having been launched in a North American context. Despite the novelty of the concept, SIBs are quickly gaining momentum in public policy circles both internationally and in North America. A string of articles in international media outlets such as *The New York Times*, *The Financial Times*, *The Washington Post* and *The Economist* have highlighted the UK's use and the increasing interest in other regions for the financing mechanism. In February of 2011, President Obama set aside \$100 Million to be invested in seven “pay-for-success-bonds” – a SIB by a different name (The Economist, 2011). The state of New South Wales in Australia has also recently announced funding for SIB trials, with \$25 Million being allocated towards SIB pilots geared towards treating autism (Sky News, 2010; ABC news, 2011).

Social innovation and SIBs are also emerging on the Canadian policy agenda. At the federal level, Human Resources and Social Development Canada (HRSDC) is in the early stages of studying the concept (key informant interview D). At the provincial level, interest has also been emerging recently. In January of 2011, BC announced the establishment of an Advisory Council on Social Entrepreneurship chaired by MLA Gordon Hogg, along with an Assistant Deputy Minister's committee with representatives from across the BC public service. The committee's mandate is to spur social innovation with a particular focus on exploring hybrid business/social models as well as the Social Impact Bond. The BC Ministry of Finance is at the early stages of researching the concept, with the expectation that some form of SIB pilot will be created within the next 18 months (key informant interview, Gordon Hogg, MLA).

Given the novelty and growing support for the SIB, study of its theoretical foundations, potential applications and steps necessary for implementation is essential. From a broad perspective, three key steps are involved in creating a SIB mechanism to fund a social service project: 1) program feasibility analysis; 2) assessment of the wider institutional and private sector partnerships necessary for implementation; 3) creation and delivery of an SIB agreement.

Before addressing the steps required for implementation of the SIB, I first identify both the potential benefits and limitations of the SIB. I then investigate the feasibility of potential applications for SIBs and the steps necessary to ensure successful implementation in a Canadian context. My empirical research focuses on the first step of implementation, program feasibility analysis. From this basis it is possible to propose measures for assessment of wider institutional and private sector partnerships necessary for implementation. I will not attempt to chart a course for creation and delivery of an SIB agreement, though I will outline a set of broader steps that could help facilitate SIB development.

The remainder of this paper will have three principal areas of focus: first is a detailed background of the theory underpinning SIBs; second is an examination of the feasibility of specific SIB applications based on case studies of three social service programs; the third is to determine the general course of action necessary for implementation of the SIB in Canada.

These three topic areas will be covered in detail over this paper's eight substantive sections. Section 2 outlines the origins and theory underpinning the SIB. Section 3 discusses aspects of the SIB model that relate to existing private and public sector investment tools. Section 4 outlines the research process used for this study and the rationale for the case studies. Section 5 outlines the criteria and associated measures used in assessing the feasibility of potential SIB applications. Section 6 explores the feasibility of the three case study organizations based on the criteria matrix developed in the previous section. Section 7 highlights the next steps that need to take place to implement

a SIB. In the final section I offer recommendations to overcome existing obstacles for this financing mechanism.

## **2: Background**

Before exploring the feasibility and implementation of the SIB, I review the background on the concept's historical and theoretical foundations. The purposes of this section are, first, to provide an in-depth background of the SIB's origins and foundations, and second to explain how existing methods of private and public sector investment mechanisms relate to the SIB concept.

### **2.1 Origins of the SIB Concept**

The concept of a SIB has its roots in the wider study of social innovation, a topic that has gained increasing prominence within government in the UK. Social innovation is the “process of inventing, securing support for, and implementing novel solutions to social needs and problems” (Phills et al. 2008, p. 1). This admittedly broad movement addresses the need for innovative ways to control costs and develop new services for social issues in fiscally constrained times. In 2006, the UK government created the Cabinet Office of the Third Sector, charged with leading work across government to support social innovation and the third sector (voluntary and community groups, social enterprises, charities and cooperatives).

In 2007, the Prime Minister's Council on Social Actions (CoSA) was created with funding from the Office of the Third Sector with a mandate to act as an independent advisory group to generate initiatives to stimulate social action. From this group, a set of recommendations were brought forward with an emphasis on alternative funding models for social service delivery; one of these recommendations was the SIB (Draimin, 2010, p. 10-12). Social impact bonds were conceived to enhance social benefits through investment in preventative and early intervention services. SIBs “enable foundations, social sector organisations and government to work together in new partnerships to define social problems and transform the way many social outcomes are achieved” (HM

Government, 2009, p. 31). SIBs were developed to incentivize innovation through creativity and cross-sectoral partnerships, while also generating cost savings for government.

From this basis, CoSA began to examine possible applications of the SIB concept, with a focus on social services that were currently expensive and that could be better addressed focusing on root causes, rather than consequences. The areas of interest to the council were criminal justice, healthcare, mental health, schooling, and foster care. In March of 2010, the first SIB-related contract was announced with the UK Ministry of Justice and is currently being used to finance the reduction of recidivism among released prisoners at Peterborough Prison. The SIB pilot is a joint project involving a social service provider (St. Giles Trust), the Ministry of Justice and Social Finance UK. The pilot was launched in September of 2010 by Social Finance UK facilitated through cooperation with other government agencies.<sup>2</sup> Social Finance UK acts as the intermediary between investors, government and the social service provider.

Most recently in the UK, the Coalition Government has expressed an interest in extending the use of Social Impact Bonds throughout government. The Ministry of Justice announced six more payment-by-results pilots for the Criminal Justice sector. Social Finance is working closely with the Ministry of Justice and other central and local government departments to consider the application of SIBs across a range of social issues ([socialfinance.org.uk](http://socialfinance.org.uk)).

## **2.2 SIB Pilot Program: Peterborough Prison, UK**

The rationale for application of the SIB to reduce recidivism was to reduce cost. Data from the UK have shown that 60% of released prisoners will go on to reoffend within a year of release. With 60,000 short-term prisoners annually, the added costs of crime,

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<sup>2</sup>Social Finance was established in 2007 to develop an effective social investment market in the UK. The organization provides access to capital, designs social finance interventions and offers advice to investors and social sector entities interested in delivering significant social impact ([www.socialfinance.org.uk](http://www.socialfinance.org.uk)).

property damage, policing, legal fees, monitoring and medical treatment are budgetary costs to the UK government are estimated to be as high as £10 billion annually.

The St. Giles Trust program offers intensive support to male prisoners serving less than 12 months. The program prepares short-term prisoners for their lives post-release and works with them to prevent a return to life of crime through a focus on education and training. Research into the effectiveness of the St. Giles Trust program has shown that it created a 40% decline in reoffending and that for every £1 invested in a St. Giles Trust project to support released prisoners saves government £10 based on factors such as reduced court, policing and prison costs (The Economist).

The role of the SIB is to finance the services and operations of the St. Giles Trust program. The SIB pilot is a six to eight year program that has generated £5m in investment to provide services to 3,000 short-term prisoners to help them resettle in their communities. If these services can reduce the rate of reoffending by at least 10%, the investors will receive returns on their investment, the amount rising as the recidivism rate falls. Investors can earn a minimum of internal rate of return of 7.5% if base targets are hit, with a maximum return of 13% if higher targets are attained. Returns on investments will be paid out in years six and eight.

Investors in the SIB pilot are primarily charitable trusts and foundations. They include the Barrow Cadbury Charitable Trust, Esmée Fairbairn Foundation, Friends Provident Foundation, The Henry Smith Charity, Johansson Family Foundation, Lankelly Chase Foundation, The Monument Trust, Panahpur Charitable Trust, Paul Hamlyn Foundation and the Tudor Trust.

The pilot was further supported by £6.25 million in funding from the Big Lottery Fund. This Fund is part of a UK-wide funding program that aims to target deep-rooted social problems.

Overall, the development of SIBs from conception to implementation took three years in the UK and was facilitated through strong central government and ministry support as well as through partnerships with well-funded, independent support organizations.

### **2.3 Principles and Conditions for the Use of SIBs**

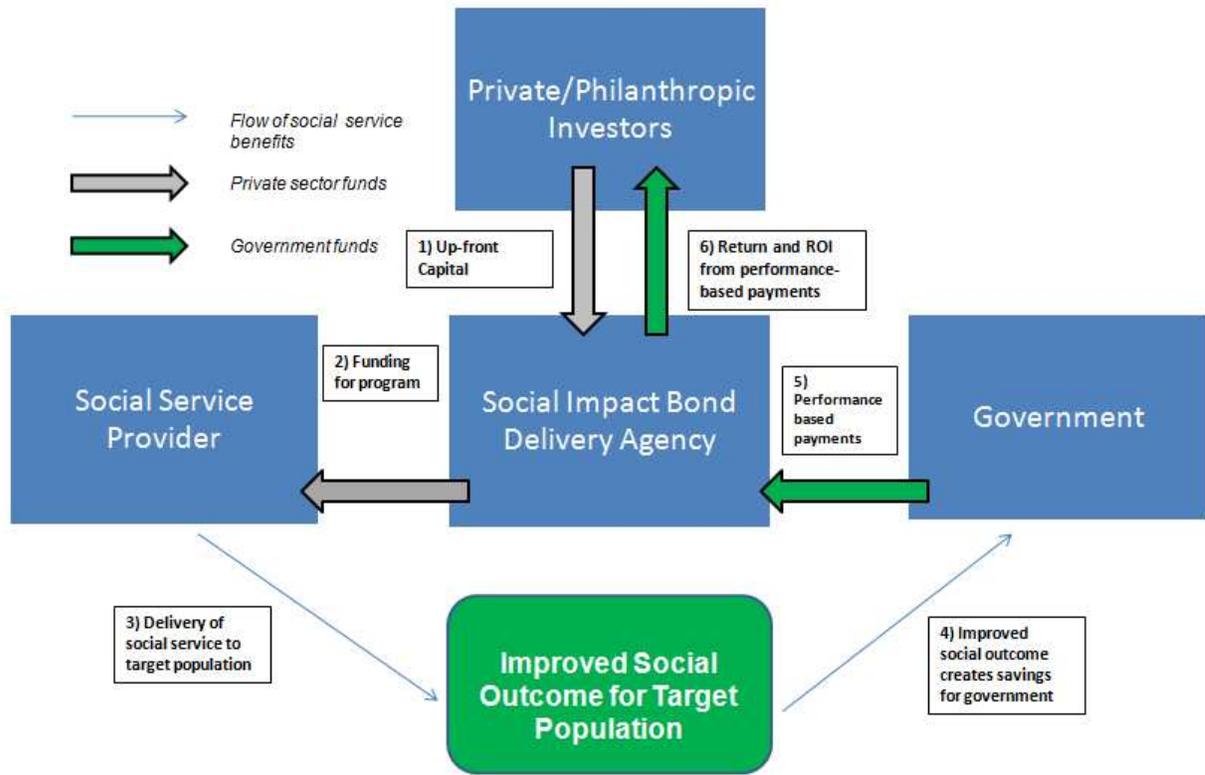
Beyond the origins of the SIB and its current application, it is essential to understand the principles of the SIB concept and the conditions required for their successful application. The recent development of this concept limits the scope of literature on the subject. Nevertheless, examination of existing reports produced on the subject reveals the theoretical basis for the SIB.

Social Finance UK defines SIBs as “based on a commitment from government to use a proportion of the savings that result from improved social outcomes to reward non-government investors that fund the early intervention activities” (Social Finance, 2009, p. 6 ). The SIB is a partnership among four actors – investors, the public sector, a Social Impact Bond Delivery Agency (SIBDA)<sup>3</sup> and a social service provider – where each acts independently with the common goal of creating increased positive social outcomes in a more efficient way. Figure 1 depicts the relationship among the key actors.

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<sup>3</sup> A SIBDA is the issuing organization responsible for the *bond indenture*, a statement of the legal obligations, terms of the agreement and trusteeship of the bonds (Droms, p. 216, 2003).

Figure 1- Financial and operational flows of a SIB



As the flow chart above demonstrates, investors contribute funds to an SIB through a SIBDA. The SIBDA provides funds to service providers that in turn address the needs of the target population. Through improved social outcomes for the target population, government delivers a portion of the savings created to the SIBDA, which in turn, repays investors. Outcomes are the basis of repayment and must be tracked in a form that is agreeable to all actors involved in the contract. In the UK pilot the SIBDA acts as the monitor for outcomes and determines rates of repayments. Further SIB pilots would likely impart the same roles and responsibilities to the respective actors involved.

#### 2.4 Theoretical basis for SIBs producing improved social outcomes

The existing literature on SIBs describes several theoretical rationales for using this financing method. Some of these rationales address specific challenges that non-profit social service providers face, while others relate to the tenets of new public management

theory that emphasizes increased market orientation for the public sector to improve cost efficiency and delivery of services.

***Rationale 1 – Benefit to social service providers: Improved quality of service and better use of resources***

The national survey of charities and non-profits reports that 65% of charities and non-profits have reported problems coping with reductions in government funding, while 67% of pure social service organizations face funding challenges (Imagine Canada, p. 2, 2009). Social service providers in the non-profit sector generally face the combined challenges of meeting specific requirements tied to funding, seeking out new funding opportunities and attempting to meet the social needs of those they serve.

Typically non-profit social service providers receive and seek out funding on a year-to-year basis from a variety of sources which include direct government grants, foundation grants, fundraising and private philanthropy. These funding streams are essential but sometimes problematic. Social service providing organizations must dedicate limited resources to ensuring funding on a year-to-year basis, rather than their social purpose. In addition, the uncertainty of funding prevents multi-year investment decisions and threatens organizational sustainability (Langford, 2010). Moreover, demonstrated social impact does not ensure program funding; strong grant proposals and strong social outcomes are not necessarily synonymous.

A SIB could be of great benefit to certain social service providers because it would ensure long-term funding streams, and more resources could be allocated to improving social outcomes and away from ensuring year to year survival. This funding mechanism could reward those social service providers that can demonstrate social impact.

***Rationale 2 – Government benefit: Risk transfer and increased resources***

A common policy development approach for government is through incrementalism, where policy decisions are based on what is politically feasible rather than what is technically desirable (Howlett et al., 2009, p. 147; Lindblom, 1959). This policy process

leads to decisions only marginally different from those that already exist because of aversion to risk of policy failure. Under a SIB, risk is transferred away from government. New strategies for social change are undertaken by the non-profit sector, meaning that if a given pilot does not work, government does not face public scrutiny. Conversely, if a project is a demonstrated success, government can adopt policy change with the benefit of proof.

Central to the SIB approach is the need for rigorous and ongoing evaluation of program effectiveness which can accelerate knowledge on the approaches that work and do not (Liebman, 2011, p. 3). Government could benefit from the innovation that successful pilot programs might bring. For example, an SIB contract for a new preventative program that proves its effectiveness through the course of the pilot could save government much more by being applied on a larger scale over a longer period.

Because private investment funds programming, government benefits by paying for only a portion of what it receives in tangible benefits. This method of financing offers government the opportunity to avoid up-front and administrative costs while receiving the benefits of the programming in the future (Social Finance, 2009). Similarly, this allows government to avoid further strains on already limited budgets. Funds are not taken away from current programming to invest in preventative measures that might carry risk. Instead, prevention is funded through outside sources allowing government funding to be maintained at current levels (Social Finance, 2009).

### ***Rationale 3: Facilitates innovation through cooperation***

The concept of innovation in social service program provision is generally described as the creation of novel approaches to program structures that solve social problems. Definitions of innovation in this sector include the “process of creating value by combining resources in new ways” (Mair and Marti, 2006, p. 37); “the creation of something new rather than simply the replication of existing enterprises or practices” (Austin et al., 2006, p. 2); as exhibiting significant levels of social opportunity recognition, pro-activeness as well as risk tolerance (Sullivan et al., 2003); as the novel,

creation of performance improvements that are implemented or adopted and have magnitude (Phills, 2009). Such definitions generally characterize innovation in this sector as the creation of new practices to enhance social impact. From this basis, it is logical to inquire about the source of innovation in this field, and how innovation can be translated in to an SIB that can be implemented.

The sources of innovation in this sector are potentially multiple. From an operational perspective, the potential for innovation can come from collaboration of ideas and practices among actors in the social service, government and private sector.

Organizations from the private, public and non-profit sectors can draw on their relative strengths. Innovation in this sector could come from a social service provider with a new approach to treating a social problem that works better than other similar organizations or from government-led or think tanks with experience, research or proposals for new approaches to programming. Innovation in this sector will likely travel in many directions, between multiple actors.

This conceived method for sparking innovation is closely related to the concept of cross-sectoral partnerships. This theory suggests that public, private, and non-profit organizations each possess distinctive advantages that can enhance the effectiveness, efficiency, and equity of public agencies' efforts to address social issues (Andrews, 2010). Because the SIB creates a financial partnership among multiple actors, potential silos between actors with similar goals can be broken down to improve social impact (Social Finance, 2009).

### ***Summary***

Overall, the central benefits of the SIB financing method are the mechanism's ability to diffuse risk, create new funding streams, and spark innovative practices for social service providers and government alike. Before moving forward, however, I must emphasize that the SIB concept should not be interpreted as a rationale to offload all government funding of social services in favour of private sector investment. The benefits of the SIB are attainable only when applied in specific circumstances with a SIB meeting a detailed set

of conditions. The SIB is not a panacea, but rather a potentially valuable tool to use in particular situations.

## **2.5 Conditions necessary for SIB application**

The benefits of the SIB can be achieved only when applied after satisfying a set of rigorous conditions. Social Finance UK, the Young Foundation and Social Innovation Generation all discuss the necessary conditions for application of an SIB. Broadly, three core components must be in place for an SIB to work:<sup>4</sup>

### ***i) A high public cost and potential for significant NET BENEFITS through social service program intervention***

There must be a strong potential for the preventative social service to reduce future costs to government significantly.

Current expenditures in the area of the intervention must be considerable and justify the risks of the programming. The intervention must be able to prove that it has the potential to make a significant impact in the problem area to a point where reduced costs are high enough to generate significant savings for government. These savings must not necessarily be direct however. The concept of Net Social Benefit is central to the measurement of the benefits that SIBs can offer. The following formula describes Net Social Benefit:

$$\text{Net Social Benefit} = \text{Direct Effects} + \text{Net Effect of Externalities}$$

Because SIBs are performance-based payments, they can potentially allocate existing funding streams more effectively and can produce cost savings (i.e. direct benefits such as less money spent on social service programming by government) as well as performance gains (i.e. positive externalities/indirect benefits, such as more

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<sup>4</sup> In the criteria section, a wider discussion of the specific conditions necessary for each of the components listed above will be provided.

productive members of society or reduced costs to other social services through targeted programming). This means that the direct benefits created by SIBs need not necessarily exceed their costs, if the net positive effect of externalities is high enough to compensate for the discrepancy in cost (Liebman, p. 19, 2011).

At the early stages of implementation, there must be a long-term vision for initial SIB pilots. The SIB application should be implemented in a targeted environment where pilot success and positive externalities could lead to further expansions and benefits in the future.

*ii) Clear and measurable outcomes must be available*

A direct link between the social service and the outcome is needed in order for the SIB mechanism to be manageable. Methods for the measurement of client baselines, client costs, program costs and program savings must be attainable with undisputable metrics. Metrics are the basis for flows between the social service sector and government. An SIB is compromised when the metrics that specify achievement of outcomes are open to dispute.

To illustrate this point, a program that aims to reduce smoking by running public service announcements would not be a strong candidate for the SIB. Too many factors outside of the social service could be responsible for reductions in smoking. Without clear and accurate measurement of metrics, skewed repayment rates and false outcomes could create significant damages to the stakeholders involved in an SIB.

To ensure accurate data collection, program impact evaluation<sup>5</sup> must be possible. Rather than simply assessing whether given targets have been achieved, impact evaluation must be performed to compare what has actually happened with what

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<sup>5</sup> Program impact evaluation is a very broad category of study with many areas of specialization. For the purpose of brevity and focus, I am performing a cursory overview of the concept to highlight the need for more specific impact evaluation in future stages of SIB implementation.

would have happened in the absence of the program intervention (World Bank Evaluation Group).

Given the range of wider environmental/societal factors associated with social service programs, a range of statistical issues can arise in the attempt to isolate a program's impact. The fundamental problem in evaluation of program impacts is that it is not possible to observe a treatment population simultaneously in only one state of nature at any given point in time (Ravillion, 2001). In other words, it is impossible to know exactly what the change or outcome is for a participant in a program if that person's changes or outcomes without the program are not being tracked.

In the social service sector, further challenges to evaluating program impact arise because programs are often non-randomly placed to specific areas, participants are not generally randomly selected and often volunteer (or self-select) themselves in to program participation. This means that differences in program results can occur because of pre-existing conditions that equate to a selection bias – non-participants in programs can thus act as a deceiving counterfactual (Galasso et al., 2011). In addition, objective measurement of impact can be difficult because social service programs often “cream” or choose participants based on their suitability for a program, rather than vice versa. As an illustration, if a program admitted only high impact individuals, the estimated treatment effect may differ considerably from that which would obtain if the program were implemented on a larger scale (Moffitt, 1991, p.295).

Four theoretical methods can be used to measure the “counterfactual” scenario to overcome the issues of creaming and selection bias in program impact evaluation:

**Randomization:** Individuals, communities or firms are randomly assigned in to program participation which limits selection bias. Drawbacks of this method include ethical issues, possibility of non-compliance of participants and

difficulties in generalizing results of a pilot study to a larger population (Galasso et al., 2011; Moffitt, 1991).

**Matching:** Program participants are matched with non-participants from a larger survey through the assumption that there is a matched comparison group in place. An advantage of this method is that it does not require randomization of participants. Drawbacks are that it entails a lot of assumptions and quality data which are difficult to control in the presence of wider societal influences (Galasso et al., 2011; Moffitt, 1991).

**Difference-in-differences:** Observations are made over time to compare observed changes in the outcomes for a sample of participants and non-participants. This allows for measurement of changes over time between participants and non-participants for program impact. This can be difficult because it requires at least two cross-sections of data (pre and post program), which is difficult if participants are not tracked for given variables prior to participation (Galasso et al., 2011; Moffitt, 1991).

**Instrumental variables:** Identifies variables that affect participants in the program without measurement of outcomes conditional on participation. This allows measurement of outcomes to be identified from within the program itself without having match participants against other baseline or other control groups. A drawback of this method is that the method can only identify the impact of a program for a specific sub-population, which makes testing of its results on a wider scale difficult to validate (Galasso et al., 2011; Moffitt, 1991).

Determination of the appropriate method for program impact evaluation is dependent on the conditions of the specific project being measured. For programs being evaluated for SIB feasibility, the broader set of program impact evaluation mechanisms that must be in place include measurable outcomes (in terms of program

results), a well-defined treatment population and a reliable basis of comparison or control group to measure program outcomes against.

### *iii) Co-operation among multiple stakeholders*

The social service provider, private investor and government must all be in agreement as to the services being provided, the baselines for improvement and the resulting repayment rates. An SIB can function only if the measures, results and actions of multiple stakeholders are coordinated properly. This is facilitated by a Social Impact Bond Delivery Agency (SIBDA) — an entity responsible for developing and supervising the terms of the social impact bond, the agreement between the public sector and the service provider and negotiating the terms with the private investors.

Beyond these three broad conditions, many specific criteria under each of these categories must be satisfied in order for an application to be feasible. Factors such as the cost of the given intervention, the cost saving opportunity, transaction costs, fixed vs. variable costs, prevention probability, risk factors and unintended consequences of the application are most important in moving the SIB from concept to investment mechanism. In short, the positive aspects of the concept must be tempered by the practicality of the application and the associated details of the SIB contract. In section 5 on criteria, I will outline a more specific set of conditions tailored to the requirements of particular applications. Determination of more specific conditions for SIB applications is necessary based on the individual SIB application evaluated.

## **2.6 Applications of the SIB Concept**

Despite the potential, no existing study of SIBs has moved beyond basic identification of opportunity areas for SIBs. Proposed areas of application for the SIB cited by the Young Foundation and SIG are the fields of criminal justice, healthcare, education, job-training, childcare, foster care, and the disabilities sector (i.e. elderly care, home care for the chronically sick, care for those with developmental and physical disabilities). The sectors listed offer potential for the use of SIBs because of high social need and the high level of

current costs to government. Study that assesses the feasibility of specific applications within these areas is limited at this point, but is the basis for analysis in further sections of this paper.

Another gap in existing SIB literature is the future use, scale and longevity of SIB-based programming. SIBs are considered to be an effective mechanism for sparking and supporting innovative programs without risk to the public sector; with this in mind, government must decide its long term approach to using this mechanism. Depending on the priorities of decision makers, the SIB can be viewed as a tool primarily for sparking innovative practices, as a financing mechanism for expansion of service or some combination of both.

SIBs could be viewed primarily as a testing ground for new ideas and methods of social service programming. In this scenario, government or contracted NGOs could use the experience of an SIB-funded program to directly operate a successfully tested program. Alternatively, the SIB could be viewed primarily as an ongoing financing mechanism for social service programs. Government could use the SIB to create and expand successful social service programs regionally or provincially without up-front expenditures.

These two potential uses need not be mutually exclusive. SIBs offer a degree of flexibility over the long-term. Government could choose to use this mechanism only to test innovation or only to finance and expand successful social programming. I believe that government would likely incorporate aspects of both purposes in the early stages of development. In the long run, the results and experience that can come from piloting a SIB will allow decision makers to narrow or expand the role of the SIB.

Before the visionary aspects of the SIB can be addressed, pilots need to be tested. Currently there is limited research and detailed analysis of specific and innovative social service programming applications that can meet the criteria necessary for SIB implementation. My empirical research in later sections is an attempt to address this gap in research.

### **3: Private and Government Sector Investment and the SIB**

To this point, I have discussed the origins, principles, conditions and possible applications of the SIB. Beyond the concept of the SIB, a wider discussion of market and government mechanisms for investment and delivery of services is necessary to demonstrate how current investment practices in various sectors relate to the SIB. In this subsection, I explain how methods of private investment and public-private partnerships (P3s) relate to the SIB concept.

#### **3.1 Similarities and differences of market investment methods to the SIB**

One of the three key actors in the delivery of the SIB is the private sector. In order to explain why the SIB has the potential to appeal to the private sector, I will investigate and analyze various financial vehicles in the private sector and their relation to the SIB. First, I will provide a brief overview of financial investment instruments such as bonds, stocks, debentures, and contingent revenue models that are similar in varying ways to the SIB. Second, I will explain the rationale for private investment in an SIB and the likely candidates for investment, based on a brief review of the social return on investment (SRI) concept. Finally, I will explain the areas of overlap and differentiation between potential SIB investors and venture capital investors.

A SIB is an agreement where a private investor invests in a social service provider through the purchase of a social impact “bond,” the returns of which are dependent on the social service provider’s ability to produce a positive social outcome. In principle, conditional returns based on performance do not fit the definition of a bond. As a result, it is useful to compare the SIB with traditional methods of financing in private markets. The following table outlines the definitions of bonds, revenue bonds, debentures and stocks and their similarities and differences to an SIB.

Table 1: Market Investment mechanisms relative to the SIB

Investment Vehicle	Definition	Similarities to an SIB	Differences to a SIB
<b>Bonds</b>	<p>Bonds are intermediate to long-term debt agreements issued by governments, corporations and other organizations in specified monetary units. Each bond represents two “promises” by the issuing organization: the promise to repay the principal value at maturity and the promise to pay the stated interest rate when due.</p> <p>Bonds are secured, i.e. it is backed up by the pledge of specific assets as collateral. Payment of bonds are guaranteed as bondholders can seize these assets in case of default.</p> <p>(Droms, p. 216, 2003)</p>	<p>The SIB, like a bond is a loan contract used to finance a given corporation, project, agency or government body.</p>	<p>With bonds, investors are paid a <i>guaranteed</i> interest that does not change in value irrespective of the fortunes of the company. In an SIB, payment rates are dependent on the successes of the social service provider. Under an SIB, bondholders could not seize assets in the case of default.</p>
<b>Income / Revenue Bonds</b>	<p>Income bond: Bonds on which interest is paid only when the corporation earns a specified level of income.</p> <p>Revenue bond: A bond backed only by the revenue from the specific project. It guarantees repayment solely from revenues generated by a specified revenue-generating entity associated with the purpose of the bonds.</p> <p>(Droms, p. 217, 2003)</p>	<p>In principle, this is very similar to an SIB. Payment is guaranteed only by the specified revenue-generating entity associated with the purpose of the bond, under an SIB, returns to investors are only achieved when specified outcomes are reached.</p>	<p>The nature of the income or revenue is different under the SIB. In an SIB, the “revenues” are savings from government, not new revenues generated.</p>
<b>Debenture Bond</b>	<p>An unsecured bond that is backed by the full faith and credit of the issuer. No specific assets are pledged as collateral for debentures. It is a means of financing companies through fixed-interest loans secured against company assets. In case of bankruptcy, however, there is no collateral you can claim from the company. To compensate for this, companies generally pay higher interest rates to debenture holders.</p> <p>(Droms, p. 217, 2003)</p>	<p>In case of bankruptcy (or for an SIB, inability to meet specified targets), no collateral can be claimed from the company. To compensate for this, there are generally higher interest rates.</p>	<p>The interest rate or rate of return is fixed and not variable as under the SIB.</p>
<b>Stocks</b>	<p>A financial security issued by a corporation or by a government as a means of raising long-term capital. In some countries, stockholders are the owners of the company, in others, stock is a form of repayable, fixed-interest debt, and stockholders are the creditors of the company not owners.</p> <p>(Pass et. Al., 1991)</p>	<p>In both a stock and a SIB investment, fortunes rise and fall with the success or failure that of the company or organization invested in.</p>	<p>When you buy stocks, you become one of the owners of the company. This is not the case with an SIB, there is no ownership involved.</p> <p>The value of a stock is not always dependent on a company’s results; market perception plays a role in stock valuation. Under the SIB, results are the sole basis for returns.</p> <p>There is more risk associated with a stock because of market failures such as asymmetry of information.</p>

As shown in the table above, the SIB does not fit the strict definition of existing traditional bonds. Bonds entail a guaranteed return to investors—except in the case of bankruptcy, where bondholders stand first in line before shareholders. Bonds have less risk than stocks, debentures and revenue bonds because they are guaranteed. Similarly, because bonds have less risk, they tend to have lower returns on investment.

In reality, the SIB mechanism is closer in definition to a revenue bond, a debenture, and, to a lesser extent, stocks. Stocks are similar to SIBs in that they account for investor risk, but they are fundamentally different because stocks involve ownership, where SIBs do

not. Depending on the SIB contract drafted, SIBs are closest to debentures and revenue bonds. If an SIB contract involved a fixed rate of return based on the social service provider's ability to meet outcome baselines, the SIB would be most similar to a debenture. If an SIB contract involved variable rates of return based on the levels of outcome achieved, the SIB would be comparable to a revenue bond. The SIB pilot in the UK discussed previously is most similar to a revenue bond. The agreement involves variable rates of return ranging as high as 13% depending on how far the baseline outcome thresholds are surpassed.

The SIB is closest in structure to an income or revenue bond because if given outcomes are not achieved, there is no interest paid on investment and the initial capital could be at risk (depending on the bond indenture). Conversely, if outcomes are achieved or exceeded, rates of return can be significantly higher.

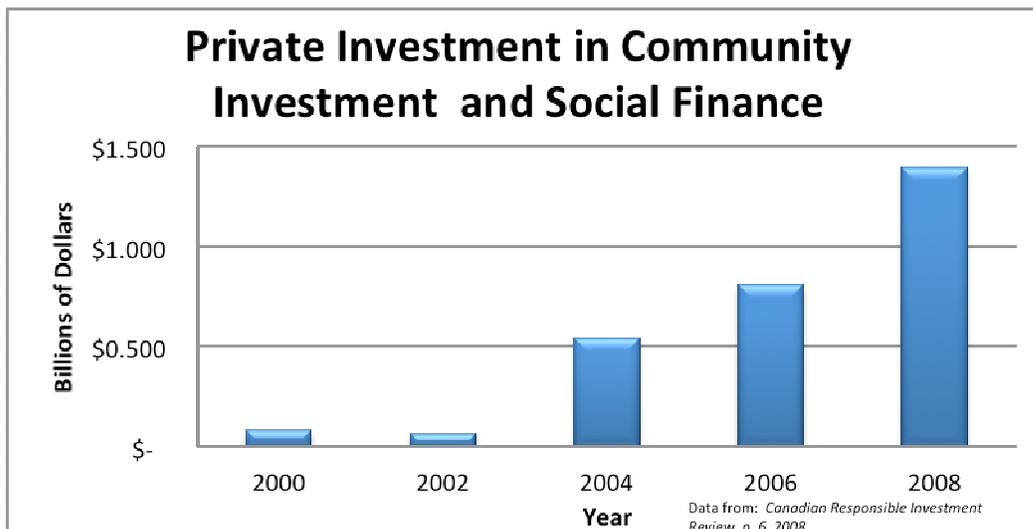
### **3.2 SIBs and Socially Responsible Investment**

In terms of potential investors in the initial pilots of SIBs, charitable institutions are the most likely to be first to invest. In the UK, a group of trusts and foundations were the lead investors in the program. Such organizations are more likely to be linked through personal and mission-related connections to an SIB pilot than profit-driven private investors. Looking beyond a small group of well-connected and mission-driven foundations, a longer-term investment strategy from individual private investors is possible. There is a growing market in the area of socially responsible investment (SRI). SRI incorporates ESG principles (factors related to Environmental sustainability, Social responsibility and corporate Governance) in tandem with traditional investment analysis to intertwine financial goals with personal values (Royal Bank of Canada Asset Management, 2010). The goal of SRI is to offer double bottom line returns which are "hybrid investments that aim to produce financial returns and mission-related impacts" (Clark, 2009, p. 6), where social and financial outcomes are achieved through investment.

The distinguishing features in core SRI strategies are “the dominance of ethical values in the selection and management of investments. This includes three main strategies: screening based on exclusionary or inclusionary criteria; community investment; and socially responsible lending” (Canadian Socially Responsible Investment review, 2008, p. 7). Under SRI, individual financial advisors and investors have varying preferences for exclusionary and inclusionary criteria and socially responsible lending for investments. For example, investors could stipulate that there be no investment in tobacco companies or investment only in companies that use renewable energy.

Investment in SIBs from the private sector is a possible progression of the SRI investment strategy. As of 2008 in Canada, assets invested according to strict socially responsible guidelines totaled more than \$ 54.2 billion and SRI investments specifically in the fields of community investment and social finance were \$1.4 billion (Canada Socially Responsible Investment review, , 2008, p. 5-6). The following table shows the rapid progression of community investment and social finance in Canada:

*Table 2: Private investment in Community Investment and Social Finance*



Community investment and social finance investment is “the placement of capital into local loan or equity vehicles targeting community development or serving low-income or disadvantaged groups. Investors in community investment or social finance vehicles are

motivated out of a desire to improve the economic and social development of particular communities” (Canadian Socially Responsible Investment Review, 2008, p. 7). This area of SRI is closest in nature to the SIB. SIBs are targeted investment tools for specific groups, with a general objective of improving the well-being of segments of the population and the community at large. In the future, the SIB could be a valuable device within the SRI toolbox.

Despite such promising conditions for social investment, the likelihood of mainstream investment in an SIB offering is low. From discussions with key informants from the commercial banking and project financing sector, the concept of the SIB was deemed unattractive for the following reasons:

- The principal on investment is not guaranteed to be returned unless outcome baselines are met; this is too risky for investor tastes.
- The returns would likely be too low given the risk. With uncertainty on principal, a return of 20% or higher is likely needed; this is unlikely if considering the UK pilot’s return of 0-13% as an approximation for future projects.
- The liquidity of the investment is questionable; investments are likely to be locked in to an uncertain situation, with no way of re-selling or walking away from the investment.

*(Key informants B and C)*

Mainstream private investors tastes are to maximize profit and minimize risk. SIBs should not be sold as a possible mainstream private investment vehicle.

The logical investors for SIBs in Canada are individuals and organizations primarily seeking social impact with some financial returns on investment. Investment from charitable organizations and foundations that emphasize impacts as well as profits would be the logical target for investment in pilot SIB programming. In Canada, venture

philanthropy firms such as Lift Philanthropy Partners<sup>6</sup> and Social Capital Partners<sup>7</sup> are examples of social financial organizations with both socially and financially driven investment goals. Under an SIB structure, foundations that typically give grants or donations to social service providers could consider investment in the SIB instead. The SIB could be a more attractive alternative because of the possibility of returns on investment. Such returns could allow for increased scope of future socially motivated donations and investments.

### **3.3 Venture Capital and the SIB**

Venture capital is generally defined as equity or equity-linked investments in young, privately held companies, where the investor is a financial intermediary who is typically active as a director, an advisor or even manager of the firm (Kortum and Lerner, 2000, p. 676). Essentially, venture capital offers the opportunity for an outside investor to enter into an implicit contract over control of a firm and goes beyond the limits of traditional financial intermediaries (Black and Gilson, 1997). Venture capital investment has links to a variety of professionalization measures, such as human resource planning, marketing and replacing core leadership (Helmann and Puri, 2002). Theoretically, venture capital works in industries having greater information asymmetries and thus more risk. Empirical study of venture capital in Canada has shown that venture capitalists: operate in environments where their relative efficiency in selecting and monitoring investments gives them a comparative advantage over other investors; invest in organizations with some track record of success over pure-start ups to limit informational asymmetry; perceive information asymmetries as costly, but less costly than other investors; maximize profit by fostering quality public offerings; perform best when investors have a higher stake in the company (Amit et al., 1998).

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<sup>6</sup> Lift Philanthropy Partners is a a venture philanthropy organization that aims to improve the impact, accountability and effectiveness of not-for-profit organizations in Canada through investment and research planning ([www.liftpartners.ca](http://www.liftpartners.ca)).

<sup>7</sup> Social Capital Partners is a national organization that arranges for growth financing for organizations that are driven by a social mission ([www.socialcapitalpartners.ca](http://www.socialcapitalpartners.ca)).

Relative to investment in an SIB, there is some overlap as well as certain fundamental differences. Like venture capitalists, investors in SIBs are taking on risk through investment in a field with specialized expertise or interest. Investors in the UK's SIB pilot were all charitable trusts and foundations with some link, interest or expertise in the area of prisoner care. The role of asymmetrical information is also relevant to SIB investors – though not to the same extent as venture capitalists. Significant uncertainty exists in a SIB investment that can be reduced with due diligence and prior research in to the social service program and its track record. A venture capitalist, like a SIB investor is more likely to invest in organization with some track record of success, but a venture capitalist is more likely to be an expert in the field with the ability to make managerial contributions that add value to operations.

SIBs differ from venture capitalists in terms of duties and returns on investment. In venture capital, a core advantage is the ability for the investor to have direct control in the human resource management of the organization in the attempt to increase the value of the company throughout the term of its investment. Under an SIB, investors do not have any direct control over program operations. Beyond contractual input from investors at the SIB contract development stage, investors in SIBs would have no ongoing management or guidance role throughout the course of the social service provider's operations. SIB investors are more passive, while venture capitalists are more active. Finally, the payoffs are much different under the SIB. SIB investors provide capital and receive returns based on a pre-agreed upon contract, while venture capitalists seek to increase the value of their company as much as possible in the attempt to maximize profit through a public offering.

### **3.4 P3s and the SIB**

A public-private partnership (P3) is a legally binding contract between government and business for the provision of assets and the delivery of services that allocates responsibilities and business risks among the partners (Partnerships BC, 2003, p. 1). At a glance, P3s are very similar to a SIB; both financing mechanisms are cross-sectoral partnerships that combine finance, development and operation of a service or project for

the public good. Despite this similarity, the two mechanisms and the SIB possess fundamental differences. In this subsection, I will explore the P3 concept highlighting its strengths and pitfalls in relation to the SIB.

### ***P3s: Rationale and potential benefits***

In a P3 arrangement, the private sector is responsible for the commercial functions and associated financing of the project design, construction, and operations, while government also remains involved throughout the project's life cycle to set standards and monitor performance surrounding a multitude of public goods such as land, resource use and legality (Partnerships BC, 2003). P3s have been in use in Canada for 30 years and are typically used for major infrastructure projects such as roads, bridges, hospitals, schools and sports complexes (Infrastructure Investor Canada, 2010, p. 11). Under P3s, government provides a design and specification template, receives proposals from the private sector and then enters in to a contract with the best possible service provider specifying the terms of ownership, operation, maintenance and revenue sharing.

Government has three rationales for engaging in P3s which overlap considerably with those for the SIB. The first is "timeliness" and "value for money," which derives from the private sector's ability to provide both infrastructure and services at a lower cost due to economies of scale, more experience, better incentives and greater ability to innovate. The second rationale is "transfer of financial risk," which is the government's desire to reduce risk, especially during the design and construction phase, but also during the operating phase (Boardman and Vining, 2008, p. 12-14; Partnerships BC, p. 3, 2003; PPP Canada, p. 2, 2010). The third rationale is the minimization of on-budget government expenditures and/or the desire not to increase current debt levels which is linked to the issue of political feasibility.

### ***Criticisms of P3s***

Ideally P3s offer a "win-win" scenario for public service provision: government's risk is diffused, efficiency is gained and the private sector is given more opportunity to prosper.

In practice, the benefits of P3s are more opaque. Criticisms of P3s typically question the extent of possible benefits. Study of the benefits and limitations of the more advanced P3 vehicle creates a useful bridge to understanding the comparatively untested SIB.

### ***Cost savings disputed***

In regard to a P3's alleged ability to deliver "value for money," several concerns arise. Some argue that the true costs of these mechanisms are under-valued because they do not properly account for the operational, monitoring and legal expenses incurred by government (Williamson, 1975; Boardman and Vining, 2008). Others argue that value for money in itself is the wrong criterion for evaluation of a P3, citing the need to maximize total social welfare rather than deliver the least costly product (Globerman and Vining, 1996; Boardman and Vining, 2008).

From a politically strategic standpoint, governments "have a desire to provide services but not have the costs show up in the budget ... [C]urrent politicians can provide voters with benefits of projects but can defer the costs to future politicians and/or future users" (Boardman and Vining, p. 12, 2008). A limitation of the P3 model is that it creates opportunities for current governments to act irresponsibly in the short term at the expense of society's future well-being.

From a financing perspective, it is also argued that getting public expenditures "off budget" may in fact be detrimental to society from a cost-efficiency perspective. This is based on the fact that government can borrow at lower interest rates than the private sector and government has the ability to spread risk over a larger number of projects (Boardman and Vining, p. 15, 2008).

### ***Limitations on risk transfer***

A core rationale for P3s relates to the government's desire to reduce risk. Government typically tries to transfer the uncertainty of project revenues or potentially unforeseen costs to the private sector. In execution, this potential benefit is limited by the nature of the project. In a Canadian context, the higher the revenue uncertainty, the lower the

transfer of revenue risk to the private sector (Boardman and Vining, 2008, p. 36). Government can try to offload revenue risk, but beyond certain thresholds, risk that is unpalatable for government is equally distasteful to the private sector. The basic principle advocated by private sector contractors is that risk should be allocated to the party that can best manage it. Design, construction, commissioning, operations and maintenance risks are fundamentally seen as more easily managed by the private sector, while government regulatory risks (changes in law) and project revenue (with the exclusion of toll roads) is largely controlled by government policy and regulation.

As P3 projects become more specialized, assets become more expensive, construction needs become more complex and revenue uncertainty can increase. As this occurs, project costs can spiral upwards even further if government tries to transfer construction cost risk and operating revenue risk (Boardman and Vining, p. 37, 2008). Transaction costs go up for large scale projects and rise with the levels of project specialization and complexity. P3s are an attempt to transfer risk, but also a means of defining the total costs and insulating government from changes and increases in cost after the project has started.

### ***Similarities and differences to the SIB***

In many ways, P3s bear a strong resemblance to the SIB. A P3, like a SIB, is a collaboration between the private and public sectors where risk is transferred away from government. Efficiency gains are sought through service delivery outside of government, based on the service provider's level of expertise in the field. For the most part P3s are based on capital construction as the primary area of risk transfer; with a secondary focus on maintenance of the capital assets, and a tertiary area of risk transfer providing operational services over long-term periods for the capital infrastructure. The new direction that can be achieved through SIBs is to make program operations the central focus rather than capital construction.

A SIB differentiates itself from a P3 in terms of its focus and financial flows. A SIB fundamentally lends itself to social service oriented projects. The nature of risk under an

SIB is whether the intervention will create downstream savings for government to the point where private investors can be compensated for their investment. Under a P3 risk is generally based on whether revenue streams will be high enough to offset the costs of construction. Paradoxically, government would likely be a more willing participant in an SIB with an uncertain outcome than a P3 with an uncertain outcome. An SIB is advantageous for government because it could concurrently test a program without any up-front financial investment while potentially diffusing the risk of future negative social outcomes. Correspondingly, the willingness of private sector investment in an SIB with higher levels of uncertainty would decrease. It would be impossible to entice private investment in to a social impact bond where outcomes and thus repayment are uncertain.

Overall, many of the positive and negative arguments for the traditional cross-sectoral partnership vehicles re-enforce the importance of accuracy in measures for evaluating SIBs. Uncertainty and risk can be reduced with robust data, but not guaranteed to investors. This is problematic to most private investors, where certainty drives investment. As discussed previously, foundations, trusts and social philanthropists are more likely to invest in this mechanism than private investors. Furthermore, this same group of investors are more likely to invest in an SIB application with as little uncertainty in outcomes as possible.

## **4: Methodology**

Three case studies of organizations interested in the SIB concept and associated analysis of the case studies form the basis for the remaining sections of this paper. The research methods used in these case studies were qualitative key informant interviews and quantitative data analysis provided by informants from each of the case study organizations. Analysis in the following sections was informed by a series of informal discussions throughout the course of the research with individuals knowledgeable in various aspects of this topic area. Informal discussions have been necessary because of the novelty of the topic area and the rapid developments occurring in this field.

The primary aspect of my research involved case studies of three organizations that demonstrated both interest and potential practicality for an SIB application. The goal of the case studies was to determine the best possible application of an SIB according to a criteria matrix that I have developed and will present in the next section. The organizations were chosen based on willingness to participate in research, share organizational information and a demonstrated interest in use of the SIB-financing concept prior to the initiation of this project.

Community Living BC, Fraserside Community Services Society and the Heart and Stroke Foundation of Ontario emerged as willing and suitable participants for research. The case studies involved key informant discussions with program coordinators, directors and executive directors of the organizations in order to gain as much information as possible on the operations of the programs studied. Cooperation by these organizations allowed me to assess their current operations and opportunities for potential SIB application. I was able to obtain financial statements on program operations, costs, and program participant data to determine program feasibility for SIB application.

## **5: Criteria for Evaluation**

Assessing the feasibility of a social service program for the future development of an SIB towards implementation is a multi-step process. For an implementation plan to be developed, the initiative must be deemed feasible before analysis of the conditions required for implementation is possible. As discussed in the introduction, the overall process of creating a SIB mechanism to fund a social service project entails three steps: 1) program feasibility analysis; 2) assessment of the wider institutional and private sector partnerships necessary for implementation; 3) creation and delivery of an SIB agreement.

The criteria for evaluation set out in this section will act as a tool for evaluation of the first step toward SIB application: program feasibility analysis. By evaluating how and why certain programs are better suited than others for the SIB, it becomes possible to analyze the dynamics required to move a given project toward implementation.

### ***Program feasibility criteria***

The first step for feasibility analysis is to determine an appropriate program and associated social service provider. This analysis must answer the basic question: How compatible is a given social service program for the use of an SIB funding mechanism? A prospective SIB project must meet a variety of criteria to pass this feasibility test.

As is shown in the criteria matrix in Table 3, ordinal measures are allocated to value different benchmarks under each criterion. Economic feasibility is the most important criteria measure and was allocated double the weighting of the other criteria measures. In addition, if the economic feasibility criteria are not met, the SIB application has no potential for being a feasible application. The bent arrow in the matrix below signifies this as the first threshold for measurement. A score greater than 3 signifies that this

criterion has been met. If this criterion is not met, further analysis of the application based on further criteria is of no consequence.

Table 3: Feasibility Criteria Matrix

Criterion	Rationale	Threshold	Measurement
Economic feasibility	Encourages development of more cost-effective outcome delivery models.	The value of an outcome must be the basis of the success measurement. I.e. The value of avoiding a negative outcome must be possible to monetize. The savings from avoiding a negative outcome must be significantly higher than the costs of achieving this.	6= It is possible to measure outcomes based on value as well as expenditures. The outcome is financially and socially positive. 3= It is possible determine potential cost savings from the program, but not fully capture the value of the outcome. The outcome is likely to be financially and socially positive. 1= cost savings and value of outcomes are unclear, financial or social outcomes are likely to be positive. 0= No aspect of criterion met.
Level of data/research needed before implementation	A detailed study of outcomes using the principles of program impact evaluation may be necessary in many cases because specific data needed is often not already in place or monitored.	It is necessary to determine the extent of new data that must be collected to ensure feasibility of the application.	3= Conclusive data that can prove feasibility is currently in place. 2= Most data required to prove feasibility is in place, but more robust data is needed and possible to gain through specialized channels in the near future. 1= A high level of research is needed to ensure data is strong enough for SIB application. 0= No aspect of criterion met.
Targeted population and reliability of data	To ensure that outcomes are attributable to the success of the interventions and not factors outside their control. Controls to assure outcome attribution is not through external factors	Baseline measures and control group outcome data must be available <sup>8</sup> . The metric is clearly defined and easily measureable to capture improvements for client group.	3 = Data available is undisputable, thorough and can be relied upon by independent actors. Data is in reference to a specified population. 2= Program data gives a strong approximation of necessary benchmarks are, but some information is lacking. 1= There are not baseline versus control group measures in place, but there is a general sense of what potential outcomes are. 0= No aspect of criterion met.
Equity	Rewards based on outcomes avoid perverse incentives. Encourages service providers to work with the entire target population, not the most advantageous for profitability. Ensures that investors are rewarded for all the value they create.	The entire population targeted is treated in the equally in the program's operations. There are both cost and social outcome measures that balance against perverse outcomes.	3= All program clients are treated equally, receive same services and are not re-distributed to improve success. Financial costs and social outcome measures are present. 2= There is a possibility that some clients could be favoured more than others based on the financial incentives associated with the program. But, can be overcome through strong monitoring. 1= There is clear disparity in services to program participants. 0= No aspect of criterion met.

\*Elements of this criteria matrix were informed by “Social Impact Bonds: The Tomorrow Project and Scotland’s Futures Forum”. November 22<sup>nd</sup>, 2010.

<sup>8</sup> It is assumed that the different standards of baseline and outcome measures would undergo different types of program impact evaluations depending on the nature of the program.

A combined score of 15 for a given program would make it an optimal choice to move towards implementation analysis. A score of 12 would make an application a moderate choice to move toward implementation analysis. Any score under 9 would mean that the program is not compatible with the SIB and would not be worthwhile to assess further for implementation.

## **6: Applicability Analysis**

In this section I highlight and provide a brief background of the three case studies of potential SIB applications. In each case study I provide a brief background of the organization, explain their rationale for exploring the SIB concept and then explain their proposed SIB application. Using data and other relevant information gained from each case study organization, I then explore the feasibility of each organization's prospective SIB project by applying the feasibility criteria matrix.

### **6.1 Case Study 1: Community Living British Columbia (CLBC) - The Personalized Supports Initiative (PSI)**

#### ***Organizational Background***

Community Living BC (CLBC) is a provincial crown agency established in 2005 with a mandate to deliver supports and services to adults with developmental disabilities and their families in British Columbia. CLBC's vision is to develop and enable positive relationships, financial security, employment opportunities and community inclusion for people with developmental disabilities. CLBC creates policy for services and programs, determines eligibility for the supports it provides and acts as the point of contact for the families and adults it serves. CLBC works closely with the Ministry of Children and Family Development and the Ministry of Social Development in policy development and transitioning of clients. CLBC provides funding to local community living non-profits to support adults who are eligible for CLBC supports and also runs the Personalized Supports Initiative (PSI) program. PSI provides services and supports for adults with significant limitations in adaptive functioning and either a diagnosis of Fetal Alcohol Spectrum Disorder (FASD) or a Pervasive Development Disorder (PDD).

#### ***Rationale for exploring the SIB***

CLBC's rationale for exploring the SIB funding mechanism is based on its desire to expand its services to the community while becoming more self-sustaining. CLBC hopes

to achieve this in the following ways: 1) leverage funding and attract additional financial partners; 2) integrate government funded programs with the community, philanthropic and business sectors; and 3) move from “charity” models of providing social service supports to a social investment model that requires demonstration of success.

### ***Proposed SIB application***

Through the course of several conversations with members of CLBC’s senior management team, the CLBC staff and I conceived that the most likely program as a candidate for SIB application was the organization’s Customized Employment Initiative (CEI) for the Personalized Supports Initiative employment program. The goal of PSI is to provide an individualized and personalized approach to meeting the needs of eligible adults. By coordinating existing community supports to help people to maintain or increase independence, CEI would develop employment opportunities for clients of the program.

In theory, this program could be a strong SIB application candidate because it has the potential to move clients away from disability payments and towards employment. This would save government money through reduced transfer payments to members of the client group, while creating better financial opportunities and increased independence for adults with disabilities. Conceivably, private investors would invest in the employment program and would receive returns on their investment based on a portion of the savings by government created by reduced disabilities payments to clients.

In order for this application to work, data must be collected to show whether the costs of programming to help those on PSI receive jobs through the CEI are significantly less than savings in costs of the disabilities payments that those clients receive. For an SIB application to work in this area, a clear link must be established showing that CEI programming leads to cost savings for government based on reduced transfer payments.

### **Criteria Analysis**

**Criterion 1:** Economic Feasibility

**Burden of Proof:**

*A) Are average annual individual salaries of program participants in the CEI > Average annual individual program costs of CEI?*

*B) Are average individual wages of program participants on the CEI > Average disabilities benefits?*

*C) Based on the answers to questions A) and B), is this program likely to be economically feasible?*

**Analysis**

**A)**

Existing data shows that CEI participants can average in the range of \$8 to \$12.50 per hour and work in the range 2-30 hours per week. Table 4 displays the types of employment available through the cost of the customized employment initiative.

*Table 4: Employment and wages, CLBC clients*

<b>Employment Type</b>	<b>Salary (per hour)</b>
Assistant/Receptionist	\$ 8
Clerk	\$ 8.50
Golf Course Worker	\$ 9.00
Cashier	\$ 9.25
Inventory	\$ 11.40
Youth Mentor	\$ 12.50

The average cost per person of the program is \$12,800 per person. The following graph demonstrates the annual salary at varying wage levels for one year of work measured against the Comprehensive Employment Initiative program cost:

Figure 2 : Annual salary by wage measured against employment program cost, CLBC



The graph above shows that, at \$8.50 per hour, the program can only generate cost savings provided the work week is at least 30 hours over 52 weeks. At lower wage levels and hours of work per week, the costs of the employment program are greater than the salaries gained by program participants. If the program could ensure that all program participants could work 30-hour work weeks at wage levels above \$8.50, the program could save significant amount of money and be a good candidate for an SIB. However, given the ranges of possible salaries, employment opportunities and varying abilities of clients to complete long work weeks, it is unlikely that this program could generate cost savings. Cost savings are an essential component of the payment mechanism for the SIB.

If the costs of the program are evaluated over a longer period of time, for example, over the course of 8 years (similar to the second of two repayment schedules in the UK pilot), the results become much different. Based on the following set of assumptions<sup>9</sup>, it is possible to calculate the net present value (NPV) of future benefits of the program:

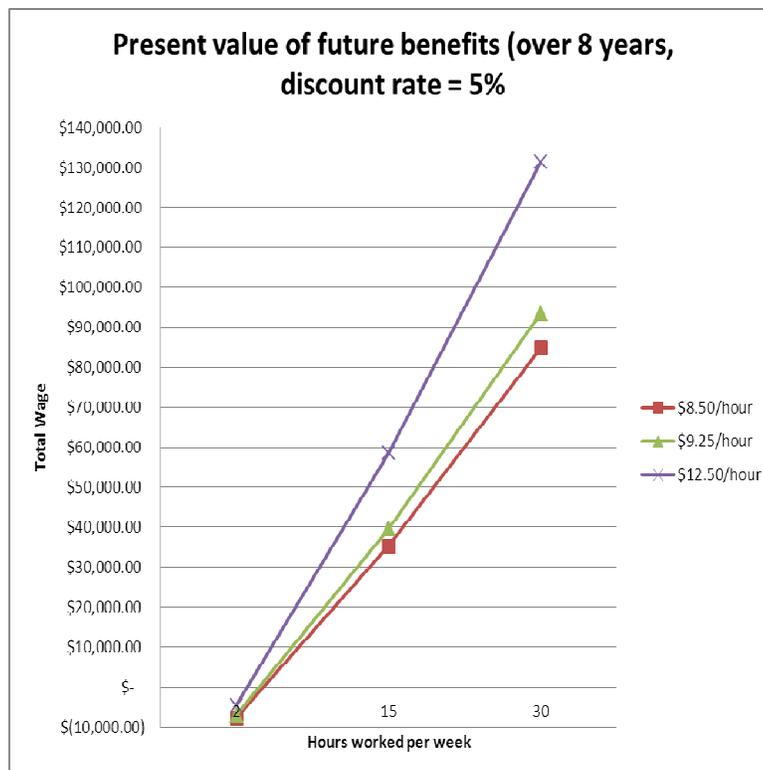
- 1) An individual will continue working for an extended period of time (8 years).

<sup>9</sup> The assumptions are rough approximations to illustrate possible benefits from the employment program. Empirical measures for this program (such as length of time spent working in a specific job) are not yet available which makes estimations necessary for the calculations. The resulting NPV figures should not be interpreted as accurate, but should be viewed as a general illustration of possible benefits given the assumptions listed.

- 2) There is a fixed training cost of \$12,800 in year 0 of the program, and further training costs in years 3 and 6 of \$1000.
- 3) The discount rate to be used will be 5%<sup>10</sup>.

The following graph has been constructed using wage levels of \$8, \$9.25 and \$12 with hours of work at 2, 15 and 30 hours per week. Figure 3 demonstrates the net present value (NPV) of the benefits of the employment program over an 8-year time period:

Figure 3- NPV of benefits associated with the employment program over 8 years – Discount Rate = 5%.



The above figure demonstrates that at any wage level, a positive net present value can be achieved as long as 15 hours per week are worked. At the highest level of wage and hours worked, the CEI could create benefits of up to \$131,000 over eight years.

<sup>10</sup> A 5% discount rate is admittedly low, as a discount rate increases, there is a drop in future benefits. If the assumption were a 10% rate, the resulting graphs would have a similar shape, but lower total wage values.

The benefits of this program must be interpreted with some caution. The benefits are not exact, but are approximate indications of the nature of benefits created by the program. This modelling does not account for the fact that clients might experience extended periods of unemployment, nor that clients could gain higher levels of employment with higher wages. The variable costs included in this analysis did account for some costs of re-training, but the extent and frequencies of those costs are unknown. In addition, this model did not account for larger economic factors such as inflation or deflation, increases or decreases in interest rates or the possibility of higher minimum wage levels. The models provided are “best guesses,” but nonetheless demonstrate that it would be possible to demonstrate clear financial savings because of CEI programming. Given this demonstration of value creation shown in these models, it seems economically feasible given the assumptions of available data that there is an economic opportunity for a SIB. If erring on the side of caution, at the least this data suggests a window of opportunity in the area that could be opened through further study with more robust data.

**B)**

A single person with disabilities can receive up to \$906 monthly for shelter and support services and is allowed a monthly earnings exemption up to \$500 (Ministry of Social Development, BC). Thus, a single person with disabilities who makes over \$500 per month faces 100% clawback on their disabilities benefits on incremental earnings. For earnings above \$500, there is a disincentive to work as benefits that can be earned without having to work are taken away.

Incomes that exceed this limit create an opportunity for increased taxation for government. This increased taxation is an opportunity for government savings under the SIB financing mechanism. Despite this possibility, there is little opportunity for an SIB in this area because all income that exceeds \$500 is clawed back from disabilities benefits. Because of clawbacks, it is only at a wage rate of \$12.50 per hour over a 30 hour work week that earnings outstrip government subsidization of persons with disabilities. Only for individuals working at or above this high wage and weekly hours might savings for government be attained. According to the SIB structure, increased levels of taxation

achieved by the program would signify an improved outcome for government to act as a basis of repayment for investors. Only when high wages and high hours of work per week are assumed, does the program suit the economic feasibility for the SIB. Such assumptions about individual earnings potential would be misguided given current information. Overall, this is not an economically feasible SIB application. Though the CEI program does demonstrate that it is a cost-effective program, the potential government benefits are limited.

### **Final Analysis - Criterion 1**

Economic feasibility is not met; therefore no further analysis of further criteria will be analyzed for this case study. A rank of 0 is assigned to this program for economic feasibility; this not a feasible SIB application.

## **6.2 Case Study 2: Fraserside Community Services Society – The Supported Housing Program**

### ***Organizational Background***

Fraserside Community Services Society (FCSS) was founded in 1972 in New Westminister, BC. FCSS has transitioned from a support group to help people cope with personal difficulties into a non-profit society geared toward serving those with developmental disabilities and other disadvantaged individuals. FCSS' mission is to "build stronger communities by creating opportunities and partnerships that make a difference in people's lives" (Fraserside Community Services Society, 2010). FCSS provides a broad range of services in New Westminister, Burnaby, Delta, Surrey and the Tri-Cities which includes: assistance to low income families, an employment resource centre, services for adults with developmental disabilities, services for adults with mental health issues, counselling, emergency shelters and housing support. The organization is funded by the provincial government and corporate and community donations.

### ***Rationale for exploring the SIB***

FCSS' strategic plan has a three-tiered and complementary approach which involves building a strong reputation within the community. It emphasizes managed growth that

balances growth in services with sustainability and maintaining a high level of employee satisfaction. The SIB is an attractive funding mechanism for FCSS because it has the potential to offer new funding streams for sustainable growth while also boosting its reputation as a leader in its field.

***Proposed SIB application***

The proposed SIB application is targeted at FCSS' Mental Health Supported Housing Programs. Currently the program provides living arrangements and a support system to adults with barriers such as mental health issues, who are unable to sustain stable housing in the community. The program offers opportunities for tenants to live in a stabilized housing situation while acquiring the necessary daily living skills to live independently. The program currently operates five long-term supported housing units in Coquitlam, New Westminister, Port Coquitlam and Delta and serves 52 individuals. The stability that clients gain from this program helps to reduce their strain on the wider emergency health and judicial systems.

This program has the potential for a SIB application because expansion of the program through investment could lead to increased program capacity, allowing more clients to be served and thus reducing the strain on health and judicial systems. The savings generated by prevention of such negative outcomes could be the basis of repayment from government to investors.

For this application to work, one would have to demonstrate that the Mental Health and Supported Housing Program significantly reduces the incidence of emergency visits and nights spent in jail and thus costs to the public service (i.e. reductions in costs in the tens of thousands of dollars). If this condition is met, it would be possible to issue an SIB based on outcomes to increase the sustainability, quality and impact of the program. Going further, if the savings on costs to the public service and the costs of operating the program were lower than the initial costs of clients prior to the program, the SIB application could be used to expand the amount of service provided by FCSS. This case study will be based on one Mental Health and Supported Housing unit called Bolivar Club.

## Criteria Analysis

### Criterion 1: Economic Feasibility

#### Burden of Proof

- A) How many nights were spent in the emergency room and/or prison by clients of the Mental Health Supported Housing Programs in the year prior to their involvement in the program? What were the costs of these emergency interventions?*
- B) How many nights were spent in the emergency ward and/or prison by clients of the Mental Health Supported Housing Programs in the year<sup>11</sup> during their involvement in the program? What were the costs of these emergency interventions?*
- C) Do significant savings result from the program: i.e. are answers to A) greater to the answers of B) by a large margin (i.e. tens of thousands of dollars)?*
- D) What are the costs of operating the program on a yearly basis?*
- E) Based on cost savings and operating costs, is there an opportunity for a SIB financing mechanism?*

#### Analysis

##### A)

The following table outlines the number of emergency room admissions and hospital visits by clients of Bolivar club in the year prior to admission:

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<sup>11</sup> The figures being tracked are based only on results of one year, because the program carries annual variable costs such as rent and staffing. For longer term benefits to be measured, it would be necessary to track results of clients after leaving the program. At this point data of this nature is not available.

Table 5: Bolivar club client interaction with healthcare system, FCSS (2009 data)

Client #	Hospital Admits	E.R. Admits	Mental Health Ward (Riverview) Admits	All admits combined
1	0	5	0	
2	4	3	0	
3	0	9	0	
4	1	1	0	
5	0	6	0	
6	1	5	0	
7	0	0	0	
8	3	5	0	
9	0	4	0	
10	0	1	0	
11	4	7	0	
12	2	1	0	
13	1	7	0	
14	0	0	1	
15	2	3	0	
16	3	0	0	
17	1	1	0	
<b>Totals</b>	<b>22</b>	<b>58</b>	<b>1</b>	<b>81</b>
<b>Average # of visits per client per year</b>	<b>1.29</b>	<b>3.41</b>	<b>-</b>	<b>4.7</b>

The following table outlines the associated costs of different interactions with the healthcare system:

Table 6: Cost breakdown to the public service of interactions with the Healthcare and Judicial system, FCSS

Type of Social Service Provision	Unit of Analysis	Public Service Cost
<b>Hospital Care</b>		
General Admission	days	\$ 601.85
Intensive nursing unit	days	\$ 2,024.34
Psychiatric Admission	days	\$ 446.69
Psychiatric Nursing Unit	days	\$ 423.73
Laboratory	visit	\$ 19.09
Ambulance	trip	\$ 396.00
<b>Criminal Justice Services</b>		
Provincial	days	\$ 223.01
Correctional facility/holding cell	days	\$ 119.77
Probation officer	contact	\$ 81.83
Lawyer	case	\$ 651.36

Source: (Kopala, et al., 2006)

Unfortunately, FCSS does not have any data on interaction with the judicial system among clients of Bolivar Club. If such data were available, the costs of clients in the year prior to programming would likely be higher. The following table demonstrates the approximate costs to the public service of Bolivar Club clients in their year prior to admission:

Table 7: Costs to the public service from Bolivar Court clients prior to program admission, FCSS

Public Service Category	Public Service Costs
General Hospital Admissions	\$ 13,240.70
Mental Health Ward Admissions	\$ 446
Emergency Room Admissions (Based on intensive nursing unit costs)	\$ 117,411.72
*Emergency Room Admissions + Ambulance Costs (# based on 1/2 ER trips)	\$ 128,895.72
<b>Totals</b>	
<b>Conservative Estimate of Total Hospital Admissions Costs (using only E.R. Admissions)</b>	<b>\$ 131,098.42</b>
<b>Moderate Estimate of Total Hospital Admission Costs (including ambulance costs)</b>	<b>\$ 142,582.42</b>

B) The average number of emergency ward visits by all Bolivar club clients during a single year are shown in the following table:

Table 8 - # of client visits to hospital during stay at Bolivar Club

Year	Total admissions to hospital (E.R. included) (17 clients per year - aggregated)
2007	10
2008	6
2009	11
2010	4
<b>Average # of total client visits to hospital/year</b>	<b>8</b>
<b>Average # of client visits to hospital/per year</b>	<b>0.47</b>

The above table includes average number of visits to hospital while at Bolivar Club because of the disparity of hospital visits. Unfortunately, available data could not distinguish between hospital and emergency room visits. Nonetheless, it is clear that the total number of visits to hospital by program participants decreased roughly ten-fold while in Bolivar Court.

Determining the likely costs on the medical system of clients in the Bolivar program is slightly more difficult than determining costs of clients prior to the program because available data on clients in the program does not differentiate between a visit to hospital and a night spent in the emergency room. As a result, a conservative estimate of costs will assume that all trips to the hospital were general admission (lowest cost). A moderate estimate will assume the same proportion of visits to the hospital and emergency room as under admits of clients to hospital prior to program admission; it also assumes that one trip to hospital was taken by ambulance. Under this assumption, 28% of visits will be assumed to be general hospital admission, while 72% of visits will be assumed to be to the emergency room. These estimated costs are shown in Table 9.

*Table 9- Cost Estimate of clients on health care system while in program*

Conservative estimate of costs	Moderate estimate of costs
\$ 4,814.80	\$ 13,973.34

C) The cost savings to the healthcare system are as follows:

	Costs of participants prior to program	Costs of participants on healthcare system while in program	Cost Savings
Conservative Estimate	\$131,098.42	\$4,814.80	\$126,283.62
Moderate Estimate	\$142,582.42	\$13,973.34	\$128,609.08

There are significant cost savings to the healthcare system because of the Bolivar Court Program.

**D)**

The total costs of the Bolivar Court program for one year (2010) are as follows:

*Table 10: Bolivar Club Budget, 2010, FCSS*

	Source of revenue or expenditure	Bolivar Club - Budget 2010
Revenues	<i>Fraser Health Authority</i>	\$223,488
Expenses – Wages & Benefits	<i>Wages, sick pay, vacation pay, meetings, CPP, benefits, etc.</i>	\$186,698
Expenses – Operating Costs	<i>Administration, amortization, audit, program supplies, equipment, program manager, transportation.</i>	\$43,852
Total Expenses		\$230,550
Excess(Deficiency) of Revenue Over Expenses		(\$7,062)

**E)**

Whether an SIB meets the financial criterion is unclear in this situation. The housing program does generate avoided costs for the healthcare system. These cost savings are possibly as high as \$128,000.

In the presence of these avoided costs from programming, Bolivar Court is running a deficit of \$7,602. The total operating cost of the Bolivar Court program is \$230,550, with \$223,448 in revenues from the Fraser Health Authority.

To implement a SIB, not only is a social benefit to a targeted population needed, there must also be resultant cost savings for government to ensure repayment to investors. Within this specific case study, the opportunity for repayment hinges on the Fraser Health Authority’s view of the cost savings created by the program.

Fraser Health Authority’s view of the savings generated by programming creates two alternative SIB opportunities. If the Fraser Health Authority believes that additional cost savings are created by Bolivar Court programming, there is an opportunity for the

government to pay returns to investors based on the additional savings generated by the programming. If the Fraser Health Authority sees its investment in Bolivar Court as a direct return on investment, government could replace its own funding or scale down its amount of funding to the organization and supplement it with private investor funds. A portion of the direct savings could subsequently be transferred to investors. In addition, a wider view of the benefits of the Bolivar Court program could be performed to determine whether in addition to reduced hospital visits, there has been a reduction in policy related incidents/arrests/imprisonment.

**Final Analysis – Criterion 1:** Though some questions as to the nature of government savings exist, this program could be an economically feasible SIB application based on further research findings. A score of 4 will be assigned for this criterion, meaning that further criteria will be analyzed for this case study.

***Criterion 2: Level of data/research needed before implementation***

As discussed in analysis of the economic feasibility criteria, more research from key stakeholders involved with funding the program would be necessary. High-level discussions with the Fraser Health Authority would be needed to assess how they view the nature of their funding. This would require a high level of research as well as cooperation from government to move this project forward. As a result, a score of 1 is assigned to this criterion.

***Criterion 3: Targeted population and reliability of data***

The existing data is not sufficient to determine whether an SIB is possible. The current data gives a reasonable approximation of costs and a reasonable sense of the potential outcomes. Increased study in terms of control groups and additional costs to the wider social system (such as costs of program participants on the judicial system) are needed to capture the full scope of this issue area. A score of 1.5 is assigned to this criterion.

***Criterion 4: Equity***

This program is highly equitable. The Bolivar Club has an incentive to house people at risk and with disabilities. In this case the basis of SIB success and program goals are linked. The possibility of perverse incentives in programming are inherently avoided because keeping clients out of danger situations is the basis of cost-savings. A score of 3 is assigned to this criterion.

**Ranking Summary:**

Table 11: Case study feasibility analysis summary

<b>Criterion</b>	<b>Measures</b>	<b>Rank</b>
Economic Feasibility	6= It is possible to measure outcomes based on value as well as expenditures. The outcome is financially and socially positive. 3= It is possible determine potential cost savings from the program, but not fully capture the value of the outcome. The outcome is likely to be financially and socially positive. 1= cost savings and value of outcomes are unclear, financial or social outcomes are likely to be positive. 0= No aspect of criterion met.	4
Level of data/research needed before implementation	3= Conclusive data that can prove feasibility is currently in place. 2= Most data required to prove feasibility is in place, but more robust data is needed and possible to gain through specialized channels in the near future. 1= A high level of research is needed to ensure data is strong enough for SIB application. 0= No aspect of criterion met.	1
Targeted population and reliability of data	3 = Data available is undisputable, thorough and can be relied upon by independent actors. Data is in reference to a specified population. 2= Program data gives a strong approximation of necessary benchmarks are, but some information is lacking. 1= There are not baseline versus control group measures in place, but there is a general sense of what potential outcomes are. 0= No aspect of criterion met.	1.5
Equity	3= All program clients are treated equally, receive same services and are not re-distributed to improve success. Financial costs and social outcome measures are present. 2= There is a possibility that some clients could be favoured more than others based on the financial incentives associated with the program. But, can be overcome through strong monitoring. 1= There is clear disparity in services to program participants. 0= No aspect of criterion met.	3
<b>Total</b>	<b>Status:</b> Unlikely to be a candidate for implementation at this point in time, but possible in the future through further research and wider institutional support	9.5

### **6.3 Case Study 3 – Heart and Stroke Foundation of Ontario – Hypertension Management Initiative**

**Organizational Background:** The Heart and Stroke Foundation is a volunteer-based health charity founded in 1952 that aims to eliminate heart disease and stroke and reduce impact through the advancement of research and its application; the promotion of healthy living and community based programming; and advocacy (Heart and Stroke Foundation of Ontario, 2010). It is a national organization with provincial bodies across Canada, with funding from the provincial government, lottery revenues, fundraising and charitable donations.

**Rationale for exploring the SIB:** The Heart and Stroke Foundation of Ontario (HSFO) is exploring the SIB as a financing method for an already piloted program called the Hypertension Management Initiative. The SIB is an attractive application for this program because it could act as a funding mechanism to expand the breadth and impact of the program.

**Proposed SIB application:** Hypertension (high blood pressure) is a major indicator of cardiovascular and cerebrovascular risk and is the single largest contributory factor to diseases such as diabetes, kidney disease, heart disease and stroke with estimated direct costs of \$2.3 billion in Canada annually (Heart and Stroke Foundation of Ontario, 2010). The Hypertension Management Initiative (HMI) is an interdisciplinary collaboration and systematic approach to treat and reduce the impacts of hypertension. It involves facilitating evidence-based, inter-professional, collaborative approaches to the identification and management of hypertension and providing patient and healthcare provider supports and tools.

Initial funding for the project came through a partnership between the HSFO and the Ontario Ministry of Health and Long-Term Care. The role of funding was to cover the costs of professional services offered under this pilot by pharmacists to patients. Such services include: provision of blood pressure checks, medication prompts, follow-up

advice and referral to MedsCheck,<sup>12</sup> and assistance in choices regarding home blood pressure monitors, their effectiveness and correct use (Heart and Stroke Foundation, p. 11, 2010).

**Criteria Analysis:**

This case study will be framed in a different light than the two previous cases because a pilot program with strict data measurement has already taken place. This analysis is based on actual figures provided by the HSFO on the HMI. As a result, an added level of description is possible in this analysis versus the other case studies.

The HMI pilot worked with 10 Family Health Teams and 1 Community Health Centre and was designed to enhance the capacity of primary care to effectively manage and control hypertension. In the other two case studies, data has been assembled based on measurement of existing program and additional financial estimates. Unlike the other two case studies analyzed, the HMI has been designed and operated to track data and outcomes of operations for the specific purpose of being expanded in the future (based on positive outcomes).

**Criterion 1: Economic Feasibility**

**Burden of Proof:**

- A) What are the impacts of the program?*
- B) What are the costs of the program?*
- C) What are the cost savings as a result of the program?*

**Analysis:**

**A)**

As a general guideline, Table 14 outlines general baselines for blood pressure levels, medical diagnosis and associated medical advice.

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<sup>12</sup> MedsCheck is an Ontario Ministry of Health and Long-Term Care program that allows individuals to schedule an annual discussion with a pharmacist to discuss how to use prescriptions and alternative medications most effectively (Ontario Ministry of Health and Long-Term Care, 2007).

Table 12: General baseline blood pressure levels

Top number (systolic) in mm Hg	Bottom number (diastolic) in mm Hg	Medical Diagnosis	General Medical Advice
Below 120	Below 80	Normal blood pressure	Maintain or adopt a healthy lifestyle.
120-139	80-89	Pre-hypertension	Maintain or adopt a healthy lifestyle.
140-159	90-99	Stage 1 hypertension	Maintain or adopt a healthy lifestyle. If blood pressure goal isn't reached in about six months, talk to your doctor about taking one or more medications.
160 or more	100 or more	Stage 2 hypertension	Maintain or adopt a healthy lifestyle. Talk to your doctor about taking more than one medication.

Source: Mayo Clinic, 2010

Aside from the baselines, it has been shown that a reduction of 5mm Hg systolic in blood pressure (measure in left column) translates to a 14% drop in stroke mortality, 9% drop in mortality from coronary heart disease and a 7% reduction on overall mortality (Whelton, 2002).

Preliminary Analysis of the HMI program has achieved the following results:

- Sustained reduction of 6.4/3.8 mm Hg in overall mean blood pressure since baseline.
- Reduction of 34.6/20.8 mm Hg among those hypertensive patients with the highest blood pressure baselines (those with stage 2 hypertension).
- A 41% increase in the number of patients with stage 1 hypertension who are controlled to target.
- A 60% increase in the number of patients with stage 2 hypertension who are controlled to target.

(Heart and Stroke Foundation, p. 5, 2010)

Based on these results, the Toronto Health Economics and Technology Assessment Collaborative (THETA) and the Institute for Clinical Evaluative Studies (ICES) has demonstrated that the HMI approach results in an 11% reduction in the 10 year risk of cardiovascular disease with comparable reductions in heart failure, stroke, CHD and PVD, and an 18% reduction in end-stage renal disease.

**B)**

The initial pilot program for the HMI initiative in Ontario cost approximately \$2 million. This pilot program included 10 family health teams and 1 community health centre in Ontario. THETA/ICES analysis shows that the incremental cost effectiveness ratio (ICER) is \$4,939/Quality adjusted life year (QALY) gained. The estimated cost per 30 days, per patient is \$0.61.

**C)**

Cost estimates from the UK National Health Service and the National Institute for Clinical Health and Excellence (NICE) estimates that increasing detection levels for hypertension management and control results in \$750,000 in direct annual system savings for every 100,000 patients whose hypertension is moved from unmanaged to managed. In addition, the study did not take in to account the overall impact of effective hypertension management in conjunction with other conditions such as diabetes (HSFO, p. 10, 2010). Studies on the full range of cost savings are not complete to date, but it is highly likely that such research could show even further cost savings.

**Final Analysis – Criterion 1:** This is very likely to be an economically feasible application, the score associated with this criterion is 6.

**Criterion 2:** *Level of data/research needed before implementation*

Further research as to the wider cost savings created by the HMI program could yield even stronger support for an SIB financing mechanism. Through further demonstration of cost savings, such as quantifying the cost savings of risk reductions for factors such as stroke or heart attack, comes a greater possibility of garnering support from government and investors for investment in the program. Given that a significant amount of research

has been done in the area and that some further research is still needed, the score allocated to this criterion is 2.

**Criterion 3: Targeted population and reliability of data**

The HSFO has already undertaken significant research in this area. Data on the specific program (not projections of likely program results as in other case studies cited) has already been gained through research on the already implemented pilot program. In addition, this program addresses a targeted population and there is a high level of outcome attribution for the intervention. The score allocated to this criterion is 3.

**Criterion 4: Equity**

Outcomes and cost savings generated by the program are closely linked. Those with the most severe conditions are likely to gain most from programming and create the most significant cost savings. The score allocated to this criterion is 3.

**Ranking Summary**

*Table 13: Hypertension Management Initiative feasibility analysis summary*

<b>Criterion</b>	<b>Information Required</b>	<b>Rank</b>
Economic Feasibility	6= It is possible to measure outcomes based on value as well as expenditures. The outcome is financially and socially positive. 3= It is possible determine potential cost savings from the program, but not fully capture the value of the outcome. The outcome is likely to be financially and socially positive. 1= cost savings and value of outcomes are unclear, financial or social outcomes are likely to be positive. 0= No aspect of criterion met.	6
Level of data/research needed before implementation	3= Conclusive data that can prove feasibility is currently in place. 2= Most data required to prove feasibility is in place, but more robust data is needed and possible to gain through specialized channels in the near future. 1= A high level of research is needed to ensure data is strong enough for SIB application. 0= No aspect of criterion met.	2
Targeted Population and Strength of outcome attribution	3 = Data available is undisputable, thorough and can be relied upon by independent actors. Data is in reference to a specified population. 2= Program data gives a strong approximation of necessary benchmarks are, but some information is lacking. 1= There are not baseline versus control group measures in place, but there is a general sense of what potential outcomes are. 0= No aspect of criterion met.	3
Equity	3= All program clients are treated equally, receive same services and are not re-distributed to	3

	<p>improve success. Financial costs and social outcome measures are present.</p> <p>2= There is a possibility that some clients could be favoured more than others based on the financial incentives associated with the program. But, can be overcome through strong monitoring.</p> <p>1= There is clear disparity in services to program participants.</p> <p>0= No aspect of criterion met.</p>	
<b>Total</b>	<b>Status:</b> This application should absolutely be further explored for implementation.	14

### Summary of Findings

This section has shown the relative merits of three social service programs in three distinct social service areas. The proposed CLBC application is not worthwhile to explore as a potential SIB application because it is not economically feasible. Though the employment program does have demonstrated effectiveness, it shows little potential for government savings and thus no opportunity for a SIB. The clawback associated with earned income past a certain threshold for those with disabilities provides little incentive for additional work. This also provides little opportunity for government to save as a result of programming.

Fraser Health Authority's Bolivar Club social housing application is a possible application in the future, but unlikely to work in the nearer term. Placing monetary value on the cost of medical interventions is somewhat imprecise, and no data exists on the costs of clients to the judicial system. Without accurate measurement of these costs, determination of positive impacts and their value is difficult. Despite these challenges, the application is somewhat promising. Though the available data has gaps and limitations, my analysis has shown that Bolivar Club does create positive outcomes with associated financial savings. More robust data collection and consultation with the Fraser Health Authority to explore the nature of a possible SIB application would be needed to explore the possibility of an SIB for this program.

The Heart and Stroke of Ontario's HMI program is the best candidate for SIB application of the three case studies. From an effectiveness and economic standpoint, the program is very promising. A pilot of the program has already been rolled out, and it has demonstrated effective results. In addition its costs are low relative to the scope of

impact. Currently estimates on some but not all of the direct impacts are available. As a result, some further research in to the prospective cost savings would be useful.

## **Lessons Learned**

### ***1) Wider implications of research findings***

Though the CLBC was not deemed a feasible SIB application, the wider scope of employment training programs should not be completely discarded. Research on the CLBC's employment program demonstrated significant possible benefits from a training program. The limitation in that scenario was the negative effect of the clawback on the incentive to work. A targeted employment training program for other disadvantaged groups (such as aboriginal groups in rural areas) who have the potential to have higher levels of earnings with the development of specialized skills could be a potential SIB application. As an example, private sources of financing for innovative and possibly untested programs could create long-term benefits for a specific population, and positive outcomes (such as increased tax collection) could be the basis for repayment.

The results of future study of Fraserside Community Services Society's Bolivar Club could also carry wider implications in the field of social housing. If direct cost savings to healthcare and judicial systems can be proved as a result of social housing, the SIB could be a valuable financing mechanism to increase capital investment in this area.

Finally, research on the Heart and Stroke Foundation's HMI program demonstrates the wider suitability of SIB applications to the preventative healthcare field. With healthcare costs likely to rise over the foreseeable future, targeted programs that mitigate future costs could be financed through the SIB mechanism.

### ***2) Searching for the right SIB application should be top down, not bottom up***

In the UK, SIB applications were developed through a partnership between a think-tank type organization and specific levels of government who were seeking organizations to partner with. The approach of researchers in this field in Canada is the exact opposite.

Because of limited time and resources, the case studies that I have researched were chosen based on their demonstrated interest of the SIB. This means that the most *interested* candidates were explored for SIB feasibility, not the most *likely*. It would be more effective for government or a think-tank with dedicated resources to identify a specific priority area for reducing expenditures and then seek out social service providers to analyze for feasibility. The Australian state of New South Wales has identified treatment of autism as its priority in the implementation of a Social Impact Bond. The US government has dedicated significant resources to further research in the area.

If a level of government (whether provincial or federal) wants the SIB as a financial vehicle for the future, it needs to take a leadership role in the development of the concept. This requires significant background research, coordinated involvement of many actors inside and outside of government. BC's Ministry of Finance is examining this concept and will likely need to follow the UK's approach to launching an SIB. In the UK, various ministries worked in partnership to develop this concept. In addition, the government supported the establishment of a social finance bank dedicated to social finance and innovation. Similar government initiatives would be necessary to move this concept forward.

### ***3) The devil is in the details: implementation of the SIB requires advanced financial assessments***

The framework that I have used for determining application feasibility and the framework I have outlined for assessing the likelihood of developing wider institutional and private sector partnerships are helpful, but actual implementation of the SIB requires advanced financial assessments. At a conceptual level the SIB is a win-win situation for all parties involved. Improved social outcomes and financial returns are both possible conceptually, but in what specific circumstances? To move this concept forward, advanced financial modelling that can determine the details of the investment must be put in place. Examples of such details that need to be developed are:

- Specifying who the SIB delivery agency will be.
- Determining who will be the guarantor of the SIB.

- Assessing the level of investor control on investment (i.e. are the investors closer to shareholders or closer to bond holders?).
- Determining rates and terms of returns to investors.
- Assessing levels of liquidity – are investments absolutely locked in or can they be re-sold?
- Determining rates of return and levels of risk for the investment.
- Determining a repayment schedule for returns.
- Determining credit ratings for the investment.

Much of these questions are obviously highly dependent on the type of SIB application initially piloted. Nonetheless, these factors are important to consider moving forward. Decisions on all of these factors will have a large influence on the level of investment and the type of investor that is attracted to the SIB over the long term.

## **7: Beyond feasibility and toward implementation**

To this point, my analysis has focused on assessing the economic feasibility of SIB applications. As outlined previously, this is only the first step in a broader three step-process to implement a SIB. The second step I have identified is to assess the wider institutional and private sector partnerships necessary to move a possible application to the creation and delivery of a SIB agreement.

Based on the lessons learned from my research findings, the second step towards implementation requires creating a scenario where the three key actors (a government agency, a social impact bond delivery agency and a group of investors) could come to a SIB financing agreement to support a social service provider's program.

Development of a SIB pilot would require the actions from the three actors in the chronological order shown in Table 14.

Table 14- Implementation process for a SIB

Stage in implementation process	Actor	Duties
1	A coordinated body of government	<ul style="list-style-type: none"> <li>- Assessment of priorities for SIB pilot.</li> <li>- Background research and dedicated support resources.</li> <li>- Coordination of institutional support for a pilot.</li> <li>- Create financing agreement with a SIBDA (if an existing financial institution does not emerge, consider the creation of one).</li> </ul>
2	A social impact bond delivery agency (SIBDA), ex. A specialized branch of financial institution / A social financing organization	<ul style="list-style-type: none"> <li>- Administration of the agreement (issuing the SIB, determination of the terms of the agreement, collecting investment, distribution of funds, returns to investors).</li> <li>- Monitoring of outcomes.</li> </ul>
3	Private Investors (likely foundations and venture philanthropists)	<ul style="list-style-type: none"> <li>- Financial investment.</li> <li>- Returns on investment in the future.</li> </ul>

Government would first have to take the lead in developing and prioritizing the concept followed by the creation of a SIBDA that would administer the agreement. From this, investors could enter into a SIB agreement to invest in a social service provider.

Putting this into a conceptual framework, policy development of the SIB requires the stages of development sketched in Table 15.

Table 15- Responsibilities for Policy Development of the SIB

Stage of Policy Development	Key Actors Involved
1. Agenda-Setting	Policy Universe: Social Service providers, target population, investors, SIBDA, government, think tanks
2. Policy Formulation	Policy Subsystem: Government agency, social service providers, SIBDA.
3. Decision-Making	Authoritative Government Decision Makers: Ministers, Deputy Ministers, Assistant Deputy Ministers
4. Policy Implementation	Policy Subsystem: Ministers, Deputy Ministers, Assistant Deputy Ministers
5. Policy Evaluation	Policy Universe: Social Service providers, target population, investors, SIBDA, government, think tanks
<b>Result:</b>	<b>Policy Output: SIB</b>

(Adapted from Howlett et. Al p. 12-13, 2009)

The range of actors involved in the decision making process for a given policy cycle is said to follow an hourglass model, where the initial stages of policy development have a wider number of actors. This is gradually narrowed until an authoritative government decision maker comes to a decision, at which point the number of actors involved in a policy increases as implementation of the policy takes place (Howlett et al., 2009, p. 13).

In British Columbia, the likelihood of a SIB emerging appears higher than in Ontario. British Columbia, as previously mentioned, has political will and resources dedicated to exploring the SIB, while Ontario does not<sup>13</sup> (Key informant D). British Columbia is currently at the second stage of policy development, while Ontario is still at the first stage

<sup>13</sup> Through discussions with a key informant from a social finance consultant firm familiar with the HSFO's HMI initiative who is well connected to SIB,

of policy development. Moving forward, it is up to key actors within the BC government to advance the implementation of the SIB. In Ontario, it is up actors within the “policy universe” to promote the SIB to further stages of policy development. Public officials in Ontario then must decide if this proposed policy warrants action.

## 8: Recommendations

To this point, my findings have highlighted that the SIB is still a work in progress, with the potential to be an advantageous policy tool in the future. I have examined the rationales for the SIB, assessed the merits of possible applications and mapped a general course of action for the SIB's future development.

My research has the perspective that an overall strategy for development of the mechanism is not yet in place, but that government will act in this area in the future; government action in BC and international developments in this area support this point of view. In this final section I outline a set of recommendations to advance the implementation of the SIB mechanism in a Canadian context.

Based on my research I recommend that provincial and federal levels of Canadian government interested in implementing this concept take the following measures in future implementation of the SIB:

- 1) **Learn from others:** If a provincial government in Canada is going to commit to the SIB, they would do well to learn from the experience of others. For BC, a small research group that could gain access to the leaders of SIB development in the UK, Australia and the US could benefit from practical advice and insights to chart a more efficient trajectory for the SIB in Canada. If several Canadian provinces develop interest in this concept, perhaps a federally sponsored research project or task force could help guide future SIB pilot development in Canada.
- 2) **Develop a long-term vision for the SIB:** If government is committed to dedicating resources to launching a pilot program, this must be accompanied by a long-term vision for this mechanism. Government could adopt the view that in the future, the SIB will be primarily targeted to charitable or philanthropic

organizations. Such organizations have a larger risk appetite and lower desire for returns because of their preference for social impact. This is beneficial for government because it limits their own risk in the area. On the other hand, resources from this sector are limited. To scale up this concept, the SIB would have to be designed in a way that offers greater incentives to typical private investors. It would have to develop SIB applications that limit risk, offer liquidity, and are structured to make them generally trustworthy to private investors.

- 3) Identify promising applications through further research:** My criteria and case study analysis sought to examine the merits of various potential SIB applications. My project examined three selected case studies. Wider application of this project's methods could help determine a higher number of suitable projects for the SIB. Similar modes of analysis that focus on outcome data and financial flows should be performed in the future with greater focus in particular social service areas. Analysis of one specialized area (i.e. geared toward social housing or preventative healthcare) could help highlight the best possible applications for an SIB in a particular field. Support for this type of research must come in the form of investment in human and capital resources.
- 4) Partner with or create a SIBDA:** Partnering with or creating a specialized social financing organization with the administrative capacity to formulate, produce and evaluate project outcomes is necessary. This would be a similar initiative to the establishment of Partnerships B.C. and Infrastructure Ontario to undertake P3 projects. The focus of such an organization should be to change and refocus from capital investments in social service providers to investments in operational projects.
- 5) Develop a contract model for the SIB:** Through examining the existing contract model of the UK SIB pilot, together with the expertise developed in P3 project contracts developed by Partnerships B.C. (and/or Infrastructure Ontario) a contract model should be developed. This contract model could incorporate a structure be based on commercial terms and conditions that are generally

understood and accepted in Canadian financing circles. This model could be based on the operational aspects of current P3 contracts.

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## **10: Key Informants**

The following key informants contributed insights to this project. Those who requested anonymity have not been listed by name and instead by a reference their position in the field.

**Key informant A** – Gordon Hogg, MLA, Surrey-Whiterock, Parliamentary secretary for Social Entrepreneurship.

**Key informant B** – An investment manager familiar with social enterprise for a leading financial institution in BC.

**Key informant C** – Director, Plenary Group, an organization responsible for investing, operating and developing public private partnerships.

**Key informant D** – A social finance consultant and executive in a leading social financial organization in Ontario.