

Social Impact Bonds: A Potential Innovative and Effective Solution for Social Problems

Chien-Chung Huang, Blair Donner, and Shuang Lu

Rutgers University and Hong Kong University

Abstract

Within the past decade, there has been an increased interest in utilizing social impact bonds (SIBs) to finance social service initiatives. SIBs are essentially public-private partnerships that rely on private capitals to deliver public services. While some SIBs have successfully generated investor returns, others have been terminated in earlier stages. By analyzing three case studies in Peterborough UK, and New York and Chicago, USA, this paper investigates the factors that contribute to the success of SIBs. The results indicate that comprehensive services, evidence-based program, and early intervention are the key to successful SIBs. Policy implications, particularly for China, are discussed.

Keywords: Social Impact Bond, innovative, investment, private, capital.

Introduction

In the past, service organizations, or organizations that aim to make progress within a critical social issue, have followed a traditional financing framework. Under this framework, the service organization first secures funding from individual donors, foundations, or federal and state governments and then implements a program to tackle a critical social issue of interest. The problem with this method is that both inherit structural obstacles and funding constraints often lead to inadequate public services. More specifically, political pressures to meet in-demand issues also prevent decision makers from bringing effective public services to marginalized population segments. Social impact bonds (SIBs) are a potential solution to these problems embedded in traditional social financing. On the most basic level, SIBs are a three-way public-private partnership between a donor, investor, and service organization. It is through the added element of an investor that SIBs induce results-oriented service programs (Bridges Impact+, 2014; Dear et al., 2016).

SIB arrangements follow similar core operating structures, though slight variations exist. The flow of capital usually begins with a financial provision to a service organization by an investor entity, which is particularly important as service organizations often lack adequate funds. The investor's capital enables the service organization to focus on delivering a social service that targets a specific cause, community, or population segment instead of on fundraising. If the service organization is successful, the donor or government entity enjoys an improved social environment and thus makes a return payment to the investors. In this way, the investors benefit from the initial investment in the social project (Nicholls & Tomkinson, 2013). The key advantage of the SIB financing model is that it harmonizes the incentives of all three entities involved (donors or governments, service organizations, and investors) (Bridges Impact+, 2014). Figure 1 demonstrates this dynamic. SIBs accordingly follow a performance-based or pay-for-

results model, meaning that only social programs which achieved a desired result are rewarded. Given the Pay for Success component of SIBs, they are sometimes referred to as Pay for Success initiatives. Evaluation of the SIB project is critical because it determines how returns are allocated (Bridges Impact+, 2014).

SIBs therefore unlock the opportunity for achieving better outcomes and, as a result, a better social system (Bridges Impact+, 2014). Freer allocation of resources and larger program scopes are a cornerstone of SIB success. Through the SIB model, donors and governments are enabled to allocate their limited financial resources in ways that focus on project outcomes instead of project funding. Simultaneously, involved donors and government entities can also pursue related innovative preventative services because they not required to immediately pay for the SIB project (Bridges Impact+, 2014). Service organizations are likewise enabled by SIBs to expand the focus of their efforts beyond their existing focal points. In other words, the capital provided by investors enables the service organization to channel the maximum amount of time and finances towards constructing innovative, results-oriented programs and solutions. Likewise, investor participants are enabled to witness progress on a social cause of their liking and obtain a return on investment. The payment-by-results component of the SIB incentivizes the investor to seek out the most promising solution to a pressing social issue (Nicholls & Tomkinson, 2013). While SIB investors must have a high risk tolerance, a successful program can lead to generous repayment from the involved donor or government. Advocates of SIBs argue that they empower outcome payers and service organizations to channel the majority of their resources toward solving critical social issues and encourage less operational distractions (Bridges Impact+, 2014).

In short, SIBs solutions approach critical social issues through a unique public-private partnership. Unlike a traditional social finance model, SIBs introduce the investor component.

Investor capital is more flexible and can overcome structural barriers that deter governments and service organizations from investing in critically needed social projects. Since investor returns are contingent on project success, a results-oriented approach is emphasized during SIB projects. Given its advantages, SIBs have become an increasingly appealing option in the U.S., especially due to current budget deficits.

As SIBs are a relatively new innovation, there has been little research on the determinants of successful SIBs. Thus, the research question of this paper is *what factors contribute to the success of SIBs?* Success is defined as reaching a threshold for which the targeted social problem is alleviated by an agreed amount. The paper starts with a brief history, recent development, and emerging structures of SIBs. Following this are explanations of the methodology and case studies. The final part of this paper includes a discussion and implication section. It closes with an acknowledgement of limitations.

A Brief History: Development of SIBs Over Time (2010 – 2016)

SIBs were born out of the need to overcome structural barriers that prevent important social services from reaching marginalized populations and communities. SIBs are still a relatively new concept; the first SIB was implemented less than a decade ago in September of 2010 (Bridges Impact+, 2014; Dear et al., 2016). The first entity to introduce the SIB financing model was Social Finance UK, an organization established in 2007 with the goal of exploiting untapped opportunities that lie in the relationship between social progress and capital markets. Social Finance UK initiated the very first SIB in response to the discovery that scarce resources prevent governments from funding innovative social programs and from evaluating the methodologies and outcomes of their previous programs. This pioneer SIB was launched in Peterborough, UK during September of 2010 and was designed to reduce local cyclical

recidivism patterns (see below case study for detailed design of the SIB). Currently, the case of the Peterborough SIB continues to inspire countries worldwide to experiment with SIB financing. Shortly after the implementation of this first SIB, a series of other SIBs were launched throughout the UK in 2012 covering a range of topics from the education of disadvantaged young people to homelessness. Social Finance US was subsequently founded in 2011 and Social Finance Israel was founded in 2013, both of which aim to provide social and financial returns by linking investors with service organizations and governments. Following this, the first SIB was launched in the United States in 2013 and the first Israeli SIB in 2015. Other countries that have adopted SIB solutions include Germany (2013), Canada (2014), India (2015), Switzerland (2015), and Sweden (2016) (Dear et al., 2016).

In the grand context of social reform, SIBs fit into recent shift away from centralized, neo-Keynesian social welfare solutions and towards market-based approaches. In the aftermath of the global Great Recession of 2008 to 2010, a number of key countries were forced to follow strict austerity programs, and so the effectiveness of limited government expenditure became increasingly paramount. SIB models, under this context, are an appealing option because the results-based SIB structure unlocks drastic savings for financially strained governing institutions (Nicholls & Tomkinson, 2014). In the less advantaged areas of China, especially western regions, attractive SIB models might help expand the scope of social services when government budgets leave gaps. As of June 2016, a total of 60 SIBs have been launched in 15 different countries. Data is available for the first 22 SIB projects, and of these, 21 projects (95%) report that the SIB yielded positive social outcomes, 12 projects (54%) report that they have made outcome payments, and 4 projects (18%) claim to have fully repaid investor capita. As for the remaining 38 projects, recall that since many of these were just recently implemented they will

not reach maturity for another few years. As data for existing SIB projects are made available, these statistics will reflect a more accurate depiction of SIB financing (Dear et al., 2016).

Recent SIB Developments

Evaluation techniques are among the most critical components of the SIB. Without properly measuring the results of the programs, it is not only challenging to determine the investors' returns but also it is challenging to determine the effectiveness of the SIB-funded project. Consequently, as an increasing number of SIBs are implemented, methodologies to analyze their social impact and evaluate related data are becoming increasingly sophisticated. SIBs are essentially playing a leading role in forging the useful connections between data, research, and decision making. Readily available databases are being developed as a direct result of SIB needs so that policy makers can access key statistical indicators during the decision-making process. One example of this is the UK government's Unit Cost Database, an online resource which aims to support the SIB movement and provides over 600 estimates of social issue costs. In the future, it is hoped that entities and organizations interested in implementing social projects can utilize the data and evaluative techniques developed from SIB models in assessing the potential of their own programs (Center for Social Impact Bonds, n.d.).

There is still more to ascertain about their operations, functions, impact, and optimal applications. Currently, a major SIB trend is operational designs that maximize investor capital turnover rates. Already, in just the past half-decade or so, there has been tremendous progress in bringing returns as quickly as possible to investors. The very first SIB project in Peterborough required that investors wait four years before possible repayment, but subsequent SIB projects have provided investors with pay as soon as the project exhibited signs of early success through measurable statistics. Moreover, the scope of areas covered by SIB projects has expanded over

the years. While the first SIB focused on recidivism, later SIB projects have tackled critical social issues like homelessness and education for the disadvantaged. Certainly, there is ample room for researching the most impactful and cost-effective areas to implement SIB financing. It would also be useful to ascertain which social issues SIB financing alleviates most effectively. As knowledge and understanding of SIB programs and their specific impact expands, it can be expected that SIB-financed social programs will cater to upcoming discoveries and evaluations (Bridges Impact+, 2014; Gustafsson-Wright et al., 2015; Dear et al., 2016).

Emerging Structures of SIBs

There are three emerging SIB structures: direct, intermediated, and managed structures (Bridges Impact+, 2014; Gustafsson-Wright et al., 2015; Ramsden, 2016). The direct SIB is a direct contract between the outcome payer and the service provider wherein contract funding is provided by an investor. Capital flows from the investor to the service provider and investment returns are contingent on the evaluation of the SIB program. Approximately 29% of SIBs utilize a direct structure (Bridges Impact+, 2014). One unique feature of the direct structure is that the service provider adopts a leading role. For instance, under this framework, performance management is conducted in-house by the service provider (Gustafsson-Wright et al., 2015).

Intermediated SIB constitutes the most common type of SIB. Approximately 48% of all SIBs are classified as intermediate structure. The intermediated structure involves an investor-owned special purpose vehicle whose function is to intercept the direct relationship between the outcomes payer and service provider. Capital flows begin with an investor group, who contribute contract funding to the special purpose vehicle. The special purpose vehicle then directs the capital to both a performance manager and a prime service provider. The outcomes payer directs

capital flows to the special purpose vehicle contingent on project evaluation, which in turn is directed to the investors (Bridges Impact+, 2014; Ramsden, 2016).

With respect to the managed SIB, an outcomes payer hires a prime contractor, like an intermediary, which is responsible for contracting service providers. The prime contractor also mobilizes contract funding from investors towards a contracted service provider or any sub-contracted service providers. The outcome payer forwards return to the prime contractor based on the success of the SIB project. The intermediary agency intercepts return capital flows from the outcomes payer to the investors. About 23% of SIBs are categorized as managed SIB structure. For outcome payers interested in out-sourcing as much of the SIB performance management as possible, the managed SIB structure is the optimal route (Bridges Impact+, 2014).

Methodology

Based on the exploratory nature of this study, we adopted a case study approach to investigate factors associated with the success of SIBs. This is an approach that allows in-depth analysis of specific cases and identification of emerging concepts (Strauss & Corbin, 1998; Thomas, 2011). Using purposeful sampling, we selected three notable SIB cases among the 21 SIBs with empirical data (Dear et al., 2016). Two of these case studies, the UK (the Peterborough project) and the USA (the Rikers Island project), were included for their historical significance as the first SIB projects to be launched in the UK and USA respectively. Given that the services of both of these historical SIBs targeted ex-offenders, we diversified our cases by adding the Chicago child-focus project in the USA. All three of the SIB cases were managed structure, which enables our analysis to control for factors arising from differences in structures (i.e. program management, capital flow, evaluation procedures, etc.). Secondary-data analyses

that contained journal articles, books, reports, and internet sources were used to gather information and to construct and compare the similarities and differences of the three SIBs, as first-hand data are not public available. The analyses were conducted between December 2016 and August 2017.

Case Studies

Case Study 1 – The Peterborough SIB

The idea for the first SIB pilot, which would eventually become the Peterborough SIB, was engendered from discussions among the Council on Social Action, a committee organized by the UK Labour government to spearhead social action initiatives. Alongside policy-makers, a multitude of organizations were invited to partake in the discussions, including Social Finance UK. Among the topics discussed by government and organizational representatives, financing social action became an increasingly important issue (Nicholls & Tomkinson, 2013). By 2008, the Council on Social Action initiated a conversation with two of the participating directors of Social Finance UK. Topics discussed concerned the feasibility of a social finance model funded via government savings and derived from measurable outcomes. Through over 300 hours of pro bono legal discussions with professional advisors, Social Finance UK cooperated with government contacts to develop the early frameworks of what would later become the world's first SIB (Nicholls & Tomkinson, 2013).

One of the first challenges faced by Social Finance UK was to locate a social issue that not only imposed high costs on society, but was also open to innovative preventative programs. Per the research of UK experts, criminal justice was presented as an optimal choice; the 2008 statistics showed that just after one year, around 60% of released UK prisoners were guilty of committing another offense. Social Finance UK addressed this issue through close collaboration

with the UK Ministry of Justice and Her Majesty's Treasury, criminal justice experts, relevant organizations, prison personnel, and investors (Nicholls & Tomkinson, 2013). These early conversations and referrals helped engage target communities and build connections that were critical to the Peterborough project's success (Bridges Impact+, 2014). As the pilot SIB continued to develop, public entities such as the Justice Committee and the Labour government garnered legal support. In 2010, Peterborough was announced by the UK Ministry of Justice as the SIB's target location. The Big Lottery Fund, a non-departmental public body, following the UK Ministry of Justice's lead, allocated a 5 million euro budget to the project (Nicholls & Tomkinson, 2013; Big Lottery, n.d.).

As seen through Figure 5, the first SIB in Peterborough involved outcome payers, service providers, and investors. According to its structure, Social Impact Partnership, a special purpose vehicle created for the new SIB, would receive payments from the UK Ministry of Justice and the Big Lottery Fund conditional on at least a 7.5% reduction in recidivism rates among male, short-sentenced prisoners from Her Majesty's Prison in Peterborough (Nicholls & Tomkinson, 2013; Social Finance Limited, 2014). Social Finance UK also created One Service to manage support services for prisoners both within the Peterborough prison and within the communities upon release (Bridges Impact+, 2014). Through financial resources contributed by a total of 17 investors and foundations, One Service provided living, health, employment, and drug rehabilitation services to offenders throughout the life of the SIB pilot (Social Finance Limited, 2014). In particular, 3,000 male ex-offenders over the age of 21 who had been sentenced for less than a year were the target of One Service's programs (Gustafsson-Wright et al., 2015; Nicholls & Tomkinson, 2013). The group of 3,000 offenders was separated into three segments: the first took place after two years or upon the discharge of 1,000 prisoners, the second took place after

the first ended, and the third would have taken place after the second. In total, the project was expected to last an approximate seven years (Nicholls & Tomkinson, 2013; Social Finance Limited, 2014).

In September of 2010, the SIB project was officially launched. As expected, the first cohort of 1,000 lasted two years from September 2010 until May 2012 (Social Finance Limited, 2014). At the start of the Peterborough SIB, only 100 prisoners were qualified for the SIB services and One Service initially aimed to interact with approximately 30% of them (Nicholls and Tomkinson, 2013, pg. 14). As the project evolved, its leaders, enabled by flexible investor funding, steadily increased engagement levels, or the rates of offenders who voluntarily utilized One Service support and resources. They also adapted the program design's shortcomings by working with One Service and its partners to create agencies focused on prisoner accommodation, mental health, and job search (Social Finance, 2014). These services were modeled via through the gate support, or an intervention process that begins within prison and continues upon release. One Service employed four main agencies to obtain through the gate support: St. Giles Trust, Sova, Ormiston, and Mind. St. Giles Trust provided knowledge, direction, advice and support, and prisoner risk-assessment, Sova offered volunteer mentor services, Ormiston provided services focusing on maintaining family ties for prisoners and their families, and Mind provided therapeutic sessions to prisoners (Disley & Rubin, 2014; Nicholls & Tomkinson, 2013). Over the course of each segment, engagement levels in cohort 1 rose from 37% to 74% and engagement levels in cohort 2 rose from 71% to 86% (Social Finance, 2014). Innovative developments were also introduced into the SIB services after the initial project implementation. A flagging system in collaboration with the police, for instance, aided One Service to keep ex-offenders engaged. Through the flagging system, if a police officer

encountered an ex-offender, the phone number of One Service would automatically appear next to the ex-offender's name on the Police National Computer database.

The Peterborough SIB leadership also found that regular conversations with prison staff further ensured high engagement levels and the overall effectiveness of One Service's programs (Nicholls & Tomkinson, 2013). Evaluation was conducted by the Rand Corporation Europe and commissioned by the UK Ministry of Justice (Ramsden, 2016). According to statistics from cohort 1 and cohort 2, the most important need of prisoners met by One Service and its partners was accommodation (40%), followed by finance and debt services (39%), education and job search (36%), addiction (25%), health (19%), and family support (15%) (Disley et al., 2015).

Concerning cohort 1, the Peterborough SIB achieved an 8.4% reduction in the frequency of reconviction among the prisoners (Dear et al., 2016). Although this reduction was below the 10% target required for triggering an outcome payment for the first cohort, it was above the 7.5% target required for an outcome payment for the final combined cohort (Disley, Giacomantonio, & Kruithof, 2015). Cohort 2 achieved a recidivism rate among offenders that was 3.3% lower than the 2009 baseline year recidivism rates, but since this figure did not pass the 5% requirement needed to instigate outcome payments the project was discontinued (Ministry of Justice, 2015). Due to this failure as well as a UK Ministry of Justice decision to restructure national probation services, the remaining funding costs of cohort 2 were transferred to public accounts as well as the Big Lottery Fund. Service provision for cohort 3 was to be continued on the UK Ministry of Justice's dime until the implementation of statutory provision services for short sentence offenders (Social Finance Limited, 2014). **The transition of cohort 2's services from a public-private partnership to a public entity explains why the format of its statistical**

measurements differ from that of cohort 1. [what does this mean? I though measurement change occurred first?]

This first SIB pilot of Peterborough serves as an exemplary model in the history of SIB financing. Flexible funding and adaptive service models are two important contributions to social finance designs that have stemmed from the Peterborough experiment (Disley et al., 2015). So while the Peterborough SIB pilot was not completed as originally intended, it is generally perceived as an example among the social finance community and has served as a foundation for subsequent worldwide SIB projects.

Case Study 2 – The Rikers Island SIB

In the United States, the Obama administration considered SIBs as a potential public services financing solution. For American politicians and government entities, SIBs are a useful tool that can be used to understand which social programs and services are effective without risking resources (Costa, 2014). The Adolescent Behavioral Learning Experience (ABLE) program funded by the Rikers Island 2013 SIB, the very first SIB in the United States, served as a pilot that helped investors and policy makers understand the impacts of SIB financing within the American context (Porter, 2015). Both the design and purpose of the Rikers Island SIB was inspired by earlier SIB projects throughout Europe. In particular, its financing scheme was modeled after the Peterborough SIB (City of New York, 2012).

The Goldman Sachs' Urban Investment Group (UIG) provided a \$9.6 million fund in support of the SIB services. Essentially, the Goldman Sachs fund was given to an intermediary organization, Manpower Demonstration Research Corporation (MDRC), and was guaranteed by a \$7.2 million grant from Bloomberg Philanthropies also given to MDRC (City of New York, 2012). In turn, MDRC directed the Goldman Sachs funds to the Osborne Association, which

specializes in providing services to incarcerated youths. Vera Institute of Justice then evaluated and measured the treatment impact.

The amount of return acquired by Goldman Sachs depended on the savings realized by the New York City Department of Correction. These returns were projected to range widely, from as little to as much as \$11.7 million depending level of actual reduction (Porter, 2015; Olsan & Phillips, 2013). If the Rikers Island SIB achieve a 10% reduction in recidivism, a break-even point, among youths in the experimental group, New York City would instigate a payment of \$9.6 million to MDCR and a subsequent transfer payment to Goldman Sachs, and the city would also benefit from \$1 million in long-term savings. In the best case scenario, a 20% reduction in recidivism would have been realized, which would have led New York City to enjoy long-term savings of at least \$20 million and accordingly would have instigated a maximum \$11.7 million payment to MDCR and a transfer to Goldman Sachs. Figure 6 provides a depiction of involved parties and their place in the Rikers Island SIB design.

The Rikers Island SIB aimed to reduce recidivism rates among young inmates of New York City's Rikers Island jail through ABLE. Under the ABLE program, an experimental group was treated with Moral Reconciliation Therapy (MRT), or an intervention strategy that aims to improve social skills, responsibility, and decision-making (Vera Institute of Justice, 2015). The MRT intervention strategy has previously been used in jails and residential juvenile facilities. It was chosen for the Rikers Island facility because of the model's flexibility. Originally designed by the Correctional Counseling, Inc. in 1985, the MRT curriculum aims to improve moral reasoning among participants and separates moral development into eight stages. The moral reasoning abilities of participants are addressed for each stage on a step by step basis. Advancement is achieved when the participant indicates he has internalized the current moral

stage, usually through sharing a testimony or delivering a presentation about themselves. The program itself has a flexible pace and is led under the guidance of a trained facilitator.

Additionally, participants work in open groups and utilize a workbook. The workbook enables participants to record their progress as they advance through the eight moral stages (Rudd, et al., 2013). The ABLE program was chosen due to prior academic research showing its ability to reduce recidivism rates at statistically significant levels. In fact, a 2005 study from the *Cognitive-Behavioral Treatment Review* reviewed nine published MRT studies and found consistent statistically significant reductions in recidivism. In total, 7 studies tested adults and 2 tested juvenile individuals (Little, 2005).

The Rikers Island SIB experimental group consisted of a total of 1,470 male youths between the ages of 16 and 18 years old. The number of days this group was held in jail was then compared to data from 2006 until 2010 for groups of youths with similar backgrounds. Unlike the breadth of engagement services incorporated into the Peterborough SIB pilot, the Rikers Island SIB focused mainly on the ABLE program (Vera Institute of Justice, 2015).

Ultimately, the evaluation from Vera Institute of Justice revealed that in comparing the incarcerated youths with previous years' data, the ABLE program yielded no statistically significant reductions in recidivism rates among the 16 and 18-year-old participants. Engagement levels with the experimental group seem not to have been the issue, as the evaluation also found that 87% of sample adolescents of Rikers Island did participate in at least one ABLE intervention (VERA Institute of Justice, 2015). As a result, the Rikers Island SIB was terminated on August 31, 2015 before the full program could be completed. Goldman Sachs at that point had invested \$7.2 million into the project, activating a \$6 million guarantee from Bloomberg Philanthropies per contract details (Dear et al., 2016; Porter, 2015). Although the Rikers Island SIB might be

seen as a failure, the SIB financing model enabled the New York City government to test a potential public service without investing taxpayer's money and the experience offers valuable lessons for the constructive role SIB can play in supporting innovation in public services.

Case Study 3 – The Chicago Pay for Success (PFS)

The Chicago PFS initiative is the fifth SIB project to be launched within the United States. It was passed under Chicago Mayor Rahm Emanuel who is known for pushing a series of reforms to Chicago's public school system (Dear et al., 2016; Blum et al., 2015). The Chicago PFS initiative implemented the Child Parent Center (CPC) education program, which supports the access of a total of 2,620 at-risk public school children to quality pre-kindergarten education (Mayor's Press Office, 2014). The CPC program is financed through an SIB financing scheme and provides services to the families of the enrolled children to encourage strong engagement and additional support. Evidence from previous studies indicates that the CPC early-education program is effective on improving child outcomes. Not only has it been shown to yield a 41% decrease in the need for special education programs, but also it has been shown that society receives an \$11 dollar return for each dollar invested over the lifetime of each child that participates in the CPC program (Blum et al., 2015). Currently, results are available for the first cohort of students who participated in the Chicago PFS initiative during the years of 2014 and 2015 (Gaylor et al., 2016).

The first stage of this SIB financing structure begins with the funding partners, or investors, who in total gave \$17 million. Senior lenders include the Goldman Sachs Social Impact Fund and Northern Trust whereas subordinate lenders include the J.B. and M.K. Pritzker Family Foundation (Mayor's Press Office, 2014). The funding partners' resources are allocated to a project coordinator IFF, which acts a liaison between the funders, the City of Chicago, the

CPC classrooms, independent evaluators, and Metropolitan Family Services (MFS) (Mayor's Press Office, 2014). Metropolitan Family Services acts as a program intermediary to guide and advise leaders of the Chicago public school system in parental support and training (Blum et al., 2015). Figure 7 demonstrates the partnership dynamic of the Chicago PFS initiative.

The CPC model is an award-winning educational model that was established in 1967 and is specifically designed for low-income families (National Institute of Justice, 2012).

Participating children will have access to half and full day pre-school programs. Additionally, parents of these children, whose participation is understood as crucial, will have access to support services (Blum et al., 2015). The CPC model follows the Creative Curriculum, an award-winning curriculum based on 38 development and learning objectives, which fall under categories like language, cognitive abilities, mathematics, and literacy among others (Office of Early Childhood Education, 2016). Students are expected to attend school five days a week and for three hours each day (National Institute of Justice, 2012). Parents are required to engage in parent involvement programs for at least two and a half hours each week (Office of Early Childhood Education, 2016). Parent involvement programs include opportunities to volunteer as a classroom aide, serve as a supervisor on field trips, partake in parent reading groups, and aid teachers during library visits. Home visits, health services, and parent training programs are also included in the parent services package. The CPC program also requires that all classroom teachers possess both a bachelor's degree and a certification in early childhood education (National Institute of Justice, 2012). Schools are supervised by three leaders: a Head Teacher who manages teacher development and curriculum implementation, a Parent Resource Teacher who ensures the fulfillment of the aforementioned parent programs, and School Community

Representative who connects families with community resources (Office of Early Childhood Education, 2016).

The ultimate target of the Chicago PFS initiative is to reduce the rates of children who depend on public special education services, including emotional, mild learning, and speech delay services. In doing so, it is also hoped that there will also be an increase in kindergarten readiness and third grade literacy rates (Blum et al., 2015). In the short term, success of the project will be determined in two ways. First, each student is to be examined at the completion of kindergarten using the Teaching Strategies Gold (TS Gold) instrument, which ascertains a child's capabilities in literacy, language, math, cognitive development, socio-emotional development, and physical health. A child's kindergarten readiness is based on whether the child exceeds or meets a national average in at least five of these areas. Second, at the completion of third grade, each student must partake in the Partnership for Assessment of Readiness for College and Careers (PARCC) exam. Scoring at the 25th percentile or above indicates that the child is at a third-grade reading level while scoring at the 75th percentile or above indicates the child is above a third-grade reading level (SRI International, 2014). Repayment to the funding partners is thus based upon decreases in special education, increases in kindergarten readiness, and increases in third grade literacy, compared to control group. For additional student of the CPC program that does not use a special education facility, \$9,100 is repaid per student compounded annually. For additional student that is deemed ready for kindergarten under the TS Gold program, \$2,900 is repaid per student. Last, for additional student that scores above the national average on the PARCC exam, \$750 is repaid (Mayor's Press Office, 2014).

By 2016, SRI International (SRI) was selected by IFF to conduct independent evaluations of the Chicago PFS initiative. At the time of writing, results are only available for the first cohort

of 328 preschoolers. So far it has been found that 59% of the children who participated in the CPC program between 2014 and 2015 were ready for kindergarten. In other words, more than half of the children in the first cohort were performing at levels that exceeded or met the national average in areas of literacy, language, mathematics, cognitive development, socio-emotional, and physical health (Gaylor et al., 2016; Eldridge & Kreefer, 2016). Children who did not attend a CPC pre-K classroom for at least two-thirds of all school days and children with severe disabilities were excluded from the evaluation process (Gaylor et al., 2016). Moreover, a total of 49% of children met the six of the TS Gold requirement areas, 10% met five areas, 9% met four areas, 11% met three areas, 7% met two areas, 3% met one area, and 11% met no areas. Children of the CPC program were most likely to excel in the area of cognitive development (80%), followed by math (78%), socio-emotional development (77%), literacy (72%), language (64%), and last physical development (58%) (Gaylor et al., 2016). Based off these numbers, the Chicago PFS initiative has reason to continue. The following report in the second year of the program will include special education enrollment statistics for cohort 1 as well as kindergarten readiness statistics for cohort 2 (Gaylor et al., 2016). Already, as of 2016, investors have been repaid a \$500,000 success payment due to the early achievements of the program.

Discussion

SIB financing is innovative. It incorporates financing and operational structures that are not present in traditional public service financing. The Peterborough SIB pilot, as the very first of its kind, is an innovative springboard delivery model. Since the funding for intervention services at Her Majesty's Prison in Peterborough was derived from private investors rather than public resources, the structure of the SIB's services was more flexible; it adapted in accordance with the shortcomings of the project design. Traditional sources of funding tend not to be as

flexible, due to, for example, procurement rules and processes or the need to spend funds within a given time period. Under other financing models, limited government resources along with political pressures might also limit the applications and the allocation of public resources (Disley et al., 2015). However, even if SIB financing breaks traditional conceptions of nonprofit financing and private-public sector relationships, it does not guarantee that every SIB will be successful. This was observed through the results of the Rikers Island SIBs and the second stage of the Peterborough SIB.

Comprehensive service is more likely to increase the chances of an SIB's success rather than a single service. That is, an SIB that addresses and considers the many different aspects of a social problem through multiple services is more likely to be successful than an SIB which narrows in on a specific problem. The Peterborough SIB's One Service established through the gate programs that deeply involved prisoners in a multitude of areas, and even offered post-release support. The services included risk-assessment, mentor support, case management, family support, and mental health services. Likewise, the Chicago PFS program involved the children five days a week in a comprehensive curriculum and incorporated parents into the process. On the other hand, the Rikers Island SIB focused solely on MRT intervention. As ex-offenders are challenged by an array of economic and cultural barriers, moral reconnection therapy alone is unlikely to conquer all of the difficulties they face. The extent of service may explain the success of first cohort of the Peterborough SIB and the failure of the Rikers Island SIB.

Thus, there is evidence to suggest that solving a complicated social issue with an SIB program is not just a matter of arranging a new financing mechanism, but rather is a process of designing service solutions which consider the complexity of societal issues with a multi-pronged approach. Here "complexity" refers to the fact while many social issues may seem

simple on the surface, they are often entangled with other underlying issues. For instance, the Peterborough SIB was not just a project about helping the incarcerated, but also a project that explored issues like family ties and mental health through its service package.

One shortcoming of the failed Rikers Island SIB is a lack of evidence on fitness of the ABLÉ program, particularly MRT, for the adolescents in Rikers Island prison. Although MRT was quite successful in adult studies it was only tested twice among juvenile populations (Little, 2005). Indeed, the Rikers Island ABLÉ curriculum accommodates the churing population of Rikers Island through its flexible nature, open groups, and self-determined pacing. However, since the majority of these adolescents are un-sentenced detainees with cases that are pending in court it is hard to sustain steady participation. In fact, although 87% of the sample adolescents did participate the program at least once, it is difficult to enforce completion of the program, especially since the duration of the adolescents in Rikers Island is uncertain. In contrast, the targeted incarcerated of Her Majesty's Prison was carefully researched and classified as a social issue with potential for improvement (Nicholls & Tomkinson, 2013). The CPC program of the Chicago PFS also had evidence-based curriculum for the target population (Blum, et al., 2015). In order for an SIB to be successful, it is of paramount importance that the service chosen is not only comprehensive in that it creates a multi-faceted, supportive environment, but also in that it has empirical evidence of proven success in aiding the target population. Of course, it is also important to experiment with new social service designs. Perhaps those who wish to implement SIBs in the future might consider testing a new service in pilot design first.

In this sense, an important feature of the SIB model is its self-corrective nature. Contracts for the Peterborough SIB provided for frequent review and evaluation of the services provided as well as the flexibility to adapt the services as needed. Throughout the pilot, needs reported by

cohort members were mapped against services, and steps were taken to fill gaps where the needs were not being met. Increased cooperation with prison staff and measures like including One Service's phone number on the Police National Computer database, for instance, were both important developments throughout the process of the Peterborough SIB because their implementation was based on previous findings of the project's shortcomings (Nicholls & Tomkinson, 2013). Moreover, even though the Rikers Island SIB did not undergo this self-correction process, it did help the City of New York understand that the MRT methodology does not help lower recidivism among incarcerated youths in Rikers Island (Porter, 2015). In this way, the Rikers Island and the Peterborough both led to a self-correcting process, just the former was instigated after the project's termination and the latter during the project's progress. Given the early successes of the Chicago PFS SIB, it has yet to undergo the full extent of the self-correcting processes.

The results between the ex-offender SIBs and the Chicago PFS initiatives also highlight the importance of early intervention. The barriers and challenges of a vulnerable population are more likely to be addressed at early stage of childhood as shown in the Chicago PFS initiatives. As time advances, the social problems they face become complex and the individual is less impressionable. As shown in the ex-offender SIBs, intervention later in life faces more challenges than counterpart one.

The results between the first and second cohorts of the Peterborough SIB are worthy of further investigation. Although the design of the Peterborough SIB program was consistent in each cohort, the methodology used to measure recidivism changed between cohorts. Recidivism was measured by frequency of reconviction during cohort 1, whereas recidivism was measured by the occurrence of reconviction among offenders during cohort 2. This may suggest that the

Peterborough SIB was more effective towards severe and frequent offenders than their counterparts.

A final important point is that SIB models promote the collection and use of management information collated into a specially developed database, which can be used for project evaluation and future analysis. In fact, interviews with those involved in the very first Peterborough SIB suggest that a universally accessible case management database enabled them to identify early indications of success, support caseworkers in day-to-day activities, and to monitor providers (Disley et al., 2015). While shared databases are not a feature unique to public services, SIBs facilitate the creation of collective databases for social issues where no previous data existed. At the time of the Peterborough SIB's implementation, collective databases were uncommon not only in Peterborough but also in most areas of UK criminal justice public services (Disley et al., 2015). Additionally, just like the Peterborough SIB, the Rikers Island SIB and Chicago PFS initiative contributed and continue to contribute to data collection in the areas of recidivism and early childhood education.

SIBs have been a hot topic in China recently. The development of SIBs in China has potential to help vulnerable population, as well as to build up a sound ecosystem of nonprofit sector in China. With the progression of Chinese economy in the past decades, China has embraced an increasing numbers of wealthy individuals and foundations, who are potential investors of SIBs (Huang, et al., 2014; Clark & Huang, 2015; Lu, Rios, & Huang, 2016). SIBs serve as a new mechanism of investment, and can provide a way for both wealthy persons and foundations of China to invest their money in a way that may potentially result in financial returns and may also benefit vulnerable populations in China.

Although the development of the nonprofit sector has been relatively rapid, barriers still exist in terms of conducting robust programs and facing transparency and accountability issues (Huang, et al., 2014; Deng, Lu, & Huang, 2015). As the main service providers of SIBs, nonprofit agencies will be required to conduct an evidence-based program and provide empirical data to show effectiveness of the services. As a result, this would improve program planning, delivery, evaluation, and accountability of nonprofit sector in China.

With respect to outcome payers, the government in China may use SIBs as a mechanism to assure the success of the program. This is important as China's government is intensively increasing resources for contract-out services, which are largely not based on evidence-based program and are without sound evaluation. If the program is not successful, the government is not required to pay for the service, as shown in the Rikers Island SIB. This feature improves the accountability of tax payers' money. In short, SIBs have potential to improve the ecosystem of the nonprofit sector in China. As new capital is to be injected into programs for vulnerable populations, the demand for robust program planning, delivery, and evaluation rises as well and the capacity of nonprofit sector is accordingly increased.

Conclusion

SIBs are the combined result of constrained economic conditions and the need for governments to solve critically important social issues. Although over 60 SIB projects have been implemented on an international scale within the past decade, participating governments, investors, and service partners are still constantly evolving the SIB financing model and design. The findings of this paper indicate that successful SIBs need to incorporate critical components such as comprehensive services, evidence-base program, and early intervention. It is important if the services provided in the SIB model promote a comprehensive and early intervention.

Successful SIBs are more likely if the services can address not just the surface of the social problem, but also the embedded economic, cultural, and mental health problems during early stages. It is also vital that thorough research is invested into the service program so that suitable program design could be identified.

There are limitations to this study. First, our case studies are small and all based on managed SIB structure; this may affect the ability of generalization of our findings to other SIBs. In order to increase the generalizability of the research, future researchers may include larger sample sizes and that consider samples across different SIB structures. Second, our study utilized secondary-data analysis, which limits our ability to further examine key issues found in the research process such as the different results between the first and second cohorts of the Rikers Island SIB. Future studies may adopt interviews and surveys to collect rich information on the relevant issues. Despite the limitations above, this study provides latest information on the development and the application of SIBs by shedding light on factors that contribute to the success of SIBs.

Figure 1: Key Components of SIB

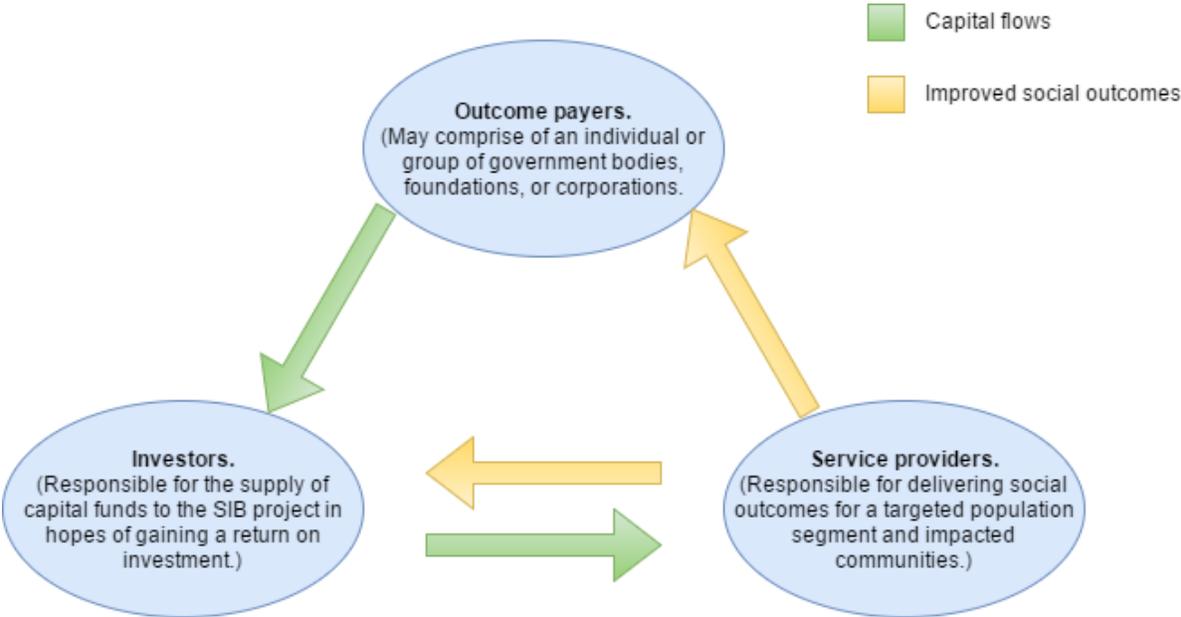
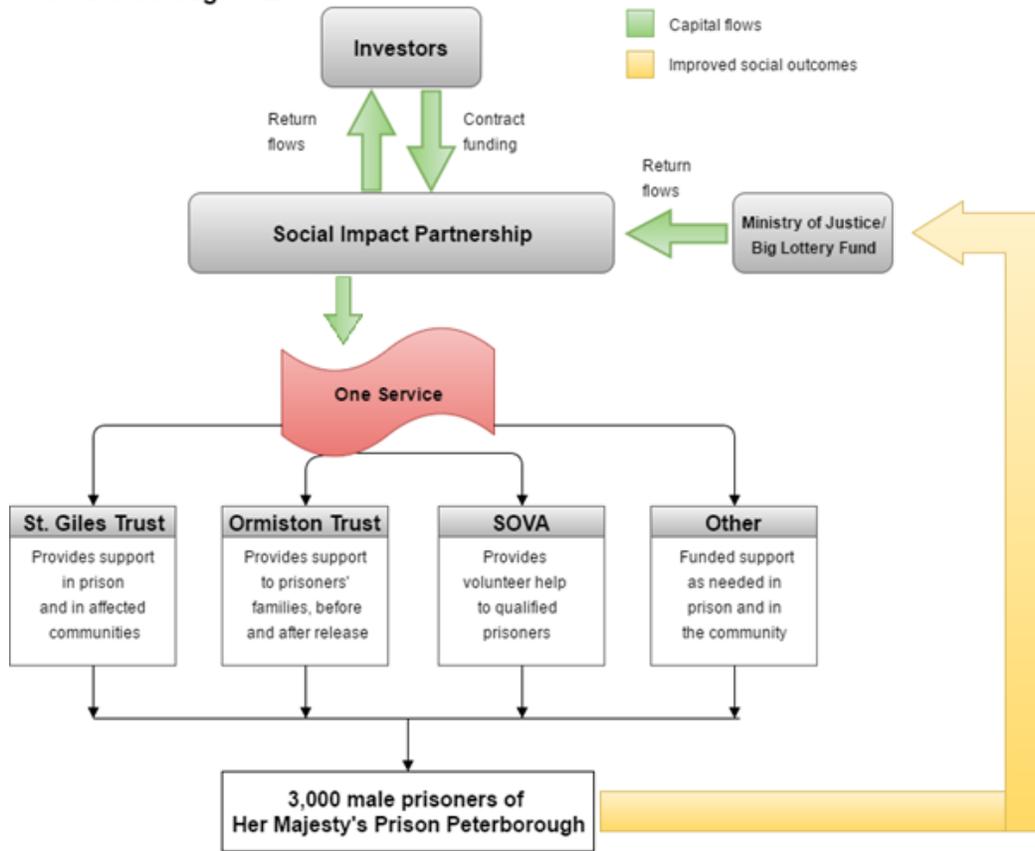


Figure 2:

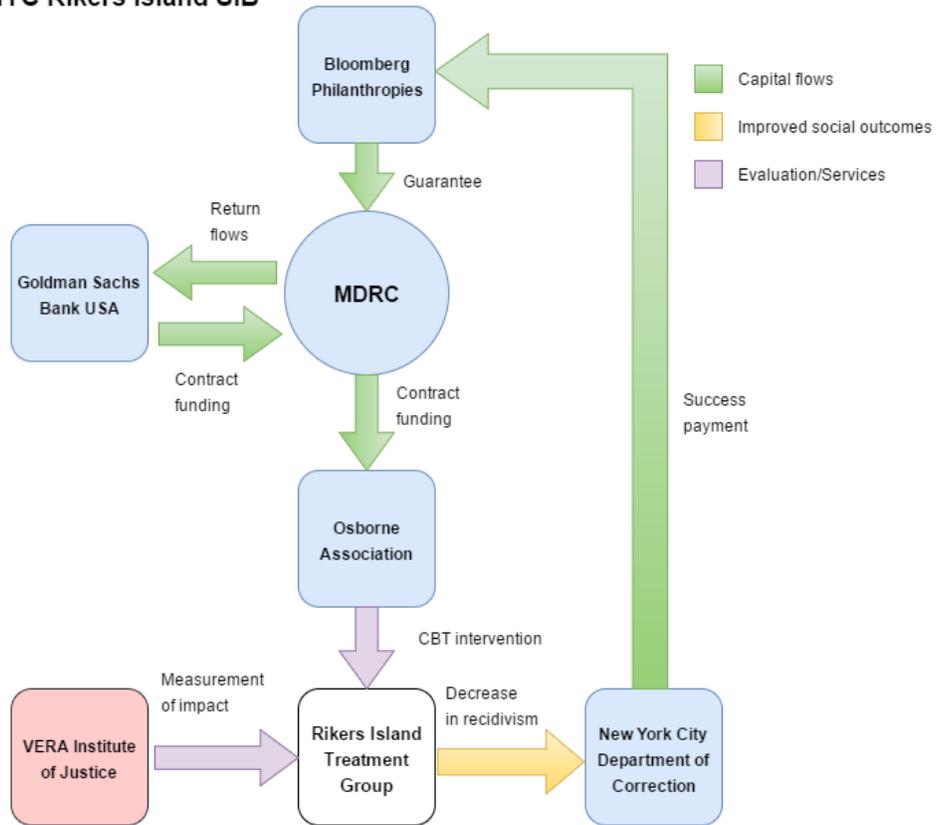
The Peterborough SIB



Source: The Peterborough Pilot Social Impact Bond (p. 14) by Nicholls and Tomkinson, 2013, London, UK: Oxford University.

Figure 3

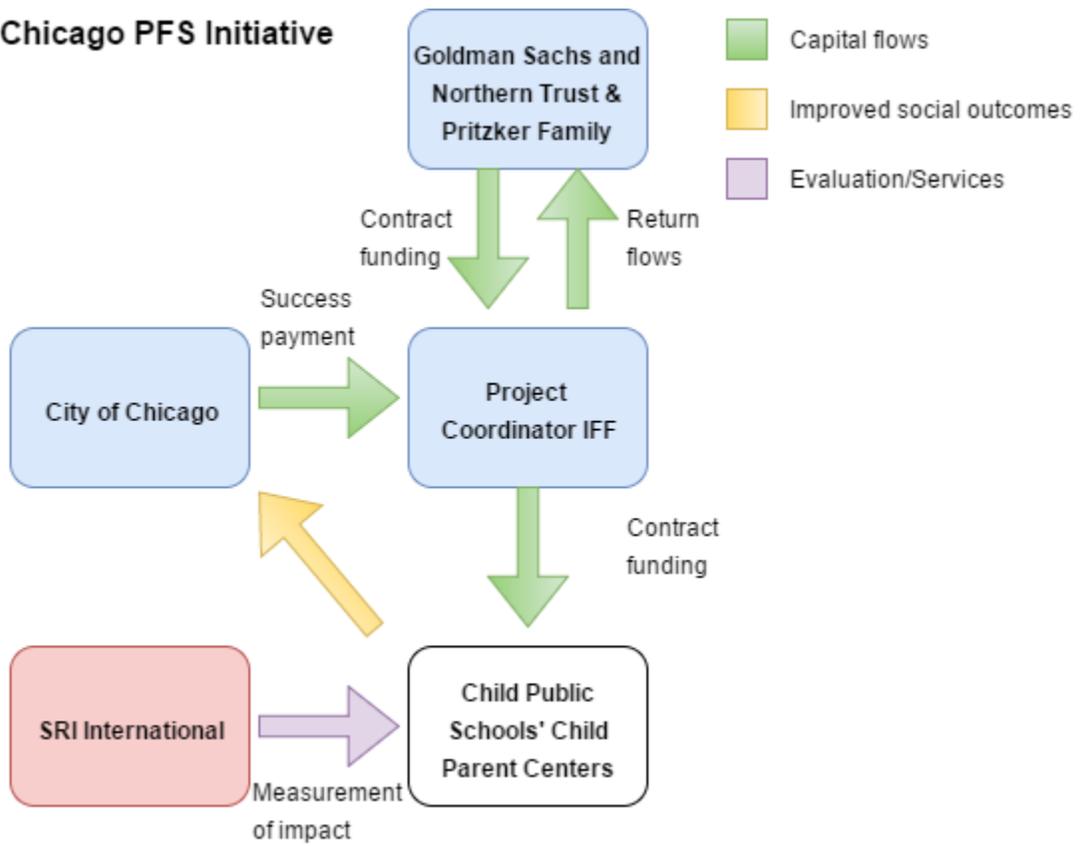
The NYC Rikers Island SIB



Source: Rikers Island: The First Social Impact Bond in the United States (p. 99) by Olson and Phillips, 2013, San Francisco, CA: Federal Reserve Bank of San Francisco

Figure 4

The Chicago PFS Initiative



Source: Mayor Emanuel Announces Expansion of Pre_K to More than 2,600 Chicago Public School Children (p. 6), by Mayor’s Press Office, 2014, Chicago, IL.

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