Global Commerce Scholars Thesis:
A Case Study of the New York State Social Impact Bond

WORKING DRAFT

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I. Executive Summary

Since their launch in 2010, social impact bonds (SIBs) have drawn considerable attention from both the public and private sectors. Against the backdrop of shrinking government budgets, growing demand for social programs, and an increased preference among the private sector for ‘blended investments,’ SIBs have been touted as an innovative alternative to traditional government funding. Typically categorized as public-private partnerships and as Pay-for-Success (PFS) programs, SIBs provide investor capital to non-profit service providers in order to scale their already successful programs. If those programs meet a predetermined threshold for performance, the government pays back investors from the implied public benefit/cost savings that result from these programs. In the example of the New York State SIB, the payments are a function of these implied savings. This means that at lower levels of performance, the benefit and payments would net out; however, at higher levels, a surplus is created for the government.

This paper explores the viability of social impact bonds through the question, “Do social impact bonds address issues faced by governments, which they are not equipped to solve, and are they viable in that investors are willing to purchase them from a strict risk-return perspective?” More specifically, this thesis looks at literature regarding the privatization of government services as well as the efficacy of evidence-based reporting and relates them to the SIBs as an explanation for the theoretical cost savings and purported efficiency of the model. The second piece of the research question targets the motivation of the investors, relying on financial modeling to calculate an expected ROI and compare it to a set of similarly risky investments. In this latter piece, viability is examined from a strict risk-return perspective.

Literature does, despite some limitations, appear to support the ability for social impact bonds to perform more efficiently than other forms of intervention. A number of works cite privatization and contracting out as a way for governments to deliver improved social services at lower costs. This benefit comes primarily from the misalignment of political objectives and lack of oversight which can undermine efficiency of direct government intervention. Moreover, when dealing with non-profits as service providers, using evidence-based reporting has been proven to also increase efficiency. SIBs embody both of these theories, and it is these theories that underpin the potential cost savings, despite some added administrative costs.

In regard to the second piece of analysis, potential payment scenarios were calculated using the intermediary contract as a framework for the computations. Expected IRRs centered around 5%. These numbers do fall in line with the ranges of estimates provided by U.S. Social Finance and other sources; however, an NPV analysis also appears to highlight the potential for considerable upside. These facts seem to support the notion that this investment is priced relatively cheap for investors, and challenge the assumption that SIBs are risky.

Together these pieces of analysis indicate that SIBs are viable as defined by the research question. However, they also raise questions about the financial viability from the perspective of the governments and the structure of this bond, specifically the public benefit calculations.

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1 Shleifer and Vishny; Galiani, Gertler, and Schargrodsky; Feiock, and Jang; "THE PROPER SCOPE OF GOVERNMENT: THEORY AND AN APPLICATION TO PRISONS*."; Baron; Coalition for Evidence-Based Policy; Ebrahim, and Rangan; Triantaphyllis, and Forti
II. Introduction

Just over four years ago, in September 2010, the first social impact bond (SIB) was launched in the United Kingdom to address recidivism in Her Majesty’s Prison (HMP) Peterborough. As of last year, over twenty social impact bonds have been launched, in five countries, totaling more than $100 million in investment. This past June, the worlds’ first development impact bond (DIB) was approved to address education for women in India. States, like Massachusetts, have passed legislation, approving budgets for pay-for-success (PFS) financing programs, and as of last December, Congress is considering the bipartisan Social Impact Bond Act, which would allow the US government to appropriate over $300 million annually to SIBs. As recent as this March, the White House announced 27 awards, through its Social Innovation Fund PFS grant program, to support non-profits and local governments as they develop capacity for (PFS) initiatives.

Less than five years old, the social impact bond is being explored as a new way to source funding for social programs while also satisfying the demand from investors for impact investments, those which blend financial and social returns. A recent study by Baron asserted that for seven out of ten millennials, the top criteria for choosing an investment is the social return generated. This increased focus on “blended returns” as well as the flow of wealth into the millennial generation, has led to the involvement of major banks, like Goldman Sachs and Bank of America Merrill Lynch (BAML), as investors in two of the first US SIBs. Both of these social impact bonds, launched in New York, aim to reduce re-incarceration rates in different state prison populations. To further solidify and quantify these trends, Bank of America published a study of trends amongst high net worth philanthropy, noting that almost ¾ of households are motivated by maximizing impact, and that they are increasingly applying strategies to their giving. For over 12% of donors, these strategies included special vehicles like program-related investments, mission-related investing and social impact bonds.

The purpose of this thesis is to further investigate and outline the landscape for social impact bonds, focusing on the viability of SIB intervention, both from the perspective of governments and investors. Building off previous literature, it will explore the definition of SIBs, highlighting the value they offer to each party as well as their history and potential criticisms. This report will also summarize significant previous work, including both research specific to SIB funding as well as those theories, like privatization and evidence-based policy making, which support its structure. Finally, the reports calculates and compares a range of IRRs for the NYS SIB to in order to assess its financial viability or competitiveness with other investments. The primary goal of this latter piece of analysis is to shed some light on the motivations behind investor participation in SIBs. This motivation potentially relates to the ability of SIBs to proliferate and endure into the future.

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2 "PRESS RELEASE: Payment by Results Prison Pilot Continues to Show Falls in Reoffending." GOV.UK. UK Ministry of Justice, 24 Apr. 2014.
4 Rita Perakis, "First Development Impact Bond Is Launched." Center for Global Development. 17 June 2014.
III. Research Question

The focus for this work is the viability of social impact bonds and, indirectly, the motives behind these financial instruments. The idea of ‘viability’ has been explored in other works and across a number of dimensions. In 2012, McKinsey & Company published a framework for identifying social issues or services that are candidates for SIB intervention. However, this thesis centers more on the value that social impact bonds can provide to the parties involved. A year after the McKinsey report, the Maryland state government did a cost-benefit analysis, comparing the fixed and variable costs associated with a potential SIB to a set of different expectations regarding savings. The report eventually concluded that, even in an optimistic scenario, the fixed costs of the contract would outweigh the cost savings for the government. The hypothetical SIB dealt with recidivism rates and re-entry programs, and introduced the idea of financial feasibility from the perspective of the government.

For the purposes of this paper, the question of viability will build off of the second report by the Maryland state government. Specifically, it asks the question, “Do social impact bonds address issues faced by governments, which they are not equipped to solve, and are they viable in that investors are willing to purchase them from a strict risk-return perspective?” The methods for answering this question will be discussed further in the latter piece of this thesis; however, this question can be broken down into two pieces of analysis.

First, from the government perspective this question focuses on whether the SIB model can save money by addressing inefficiencies in the public sector. It has been posited in a number of works that political objectives can create financial inefficiencies and reduce public welfare. This work analyzes the composition of SIBs by looking at whether incentive and control structures address these inefficiencies. It also focuses attention on the body of literature centering on evidence-based policy and reporting in the public sector. Again, these theories will be explored in depth; however, from a high-level perspective, evidence-based reporting and focusing on performance rather than overhead spending has led to greater innovation in the non-profit sector and improved performance. These theories provide the foundation for the benefits of SIBs in relation to other types of funding. Essentially, this part of the analysis looks to highlight those theories, which support the ability for an SIB to operate more effectively than government intervention.

Second, from the investor perspective, analysis will focus on the variable cash flows to investors and propose a method for creating a risk-adjusted rate of return as a way of understanding what role returns vs. goodwill may play in the existence of these contracts. Furthermore, comparing these returns to similarly risky assets may offer insight into their potential to persist as competitive financial investments. In particular, this report identifies the NY State SIB for Increasing Employment and Improving Public Safety (henceforth referred to as the NYS SIB) as the ideal candidate for a proposed case study, which aims to answer this question.

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11 Shleifer and Vishny; Galiani, Gertler, and Schargrodsky; Feiock, and Jang; "THE PROPER SCOPE OF GOVERNMENT: THEORY AND AN APPLICATION TO PRISONS*.
12 Baron; Coalition for Evidence-Based Policy; Ebrahim, and Rangan; Triantaphyllis, and Forti
IV. Background & Key Terms

Defining and Structuring Social Impact Bonds

Social impact bonds (SIBs) also called “Pay for Success” (PFS) programs are a type of public-private partnership, which takes funds from private investors and gives them to an intermediary. That intermediary, usually a non-profit organization, provides funding to a separate non-profit service provider. For example, UK Social Finance acted as the intermediary in the Peterborough SIB, mentioned above and explored in depth below. They acted as the holding company for the funds, and were responsible for disseminating those funds to non-profits with proven programs for reducing recidivism. Data is collected and validated by a third party, and if certain social goals are achieved, the government pays the private investors their original investment as well as a scalable return. In this case, the returns are scalable in that the payouts increase with the success of the intervention. Usually, those returns are capped, and they are paid out with the savings accumulated by the payor from the program. If the minimum social goal is not met, the government does not pay anything. Currently, SIBs focus exclusively on those social issues for which there are established, successful models for intervention and for which there are measureable impacts with quantifiable savings to the government.13 These assumptions, however, have been challenged by organizations like MDRC, who argue for a tiered classification system of SIBs where returns fluctuate as a function of risk. Part of that risk is derived from the service providers and their ability or inability to provide a given track record. Relating this to financial risk, the lack of a track record implies the potential for greater financial downside or loss. Accordingly, if there exists a social problem for

Figure 1 visualizes the structure of a social impact bond. Note the central role of the intermediary as well as the specific focus on proven, preventative programs.

which no tested method is available, then that SIB would be categorized as a lower tier and the return adjusted upward to reflect that risk.\textsuperscript{14}

Benefits and Limitations of Social Impact Bonds

SIBs were first developed as a solution to the increased demand for social programs, and the reduced government budget for such programs. However, despite their complexity, social impact bonds provide some key benefits or value to each party. By engaging the private sector, social impact bonds provide investors with new opportunities that may align with their values, diversify their portfolios and provide risk-adjusted returns. As previously mentioned, demand for blended investments has grown substantially, especially among high net worth investors/donors, and social impact bonds satisfy this trend. For the government, the SIB model shifts the risk of social programs off the government as well as taxpayers, pays based on outcomes rather than just outputs, and improves the lives of the relevant constituents. The distinction between output/inputs and outcomes plays a key role in understanding the benefits of a SIB. Inputs/outputs, for example, would be the enrollment in or completion of a job-training program. Outcomes would measure the number of participants hired or placed in a job post-completion. There are identifiable benefits to the outcome, but not to an output per say. Additionally, the non-profit service providers have access to more capital as well as greater flexibility in how they use that capital to scale their programs. In some cases, like the Peterborough Pilot SIB, more than one service provider is contracted, encouraging a holistic approach to these social issues and increasing collaboration. For both the government and the non-profit sector, social impact bonds place an emphasis on measureable impact and outcome reporting as opposed to minimizing overhead as a measure of efficiency. As a whole, the SIB is designed to keep all parties accountable. Oversight by investors is integrated as their investment is contingent upon the success of the project, and service providers are incentivized to innovate and meet social goals as a way of securing funds in the long term.

Alternatively, there have been a number of critiques of the SIB model. Namely, the complexity of the model and the added administrative costs are seen as a barrier to adoption. Again, in the example of Maryland, these fixed costs alone precluded the use of SIB intervention, given their assumptions of the cost savings. Other limitations exist in the dependency of social impact bonds on proven methods of intervention and on issues for which there are measureable savings. These constraints limit the applicability of social impact bonds across a broader spectrum of issues, and potentially diminish the emphasis on issues like racial inequality, that do not have an obvious financial benefit. Finally, the focus on profitability may supersede the social motivation, sacrificing additional social benefits in favor for financial considerations. The presence of private investment has also raised concerns from the non-profit sector as well as the dependency on evidence-based interventions.\textsuperscript{15}

Historical Context of Social Impact Bonds

As mentioned, the first social impact bond was launched in the UK in 2010. The Peterborough pilot SIB aimed at reducing reoffending by prisoners in Her Majesty’s Prison (HMP) after serving a

\textsuperscript{14} David Butler, Dan Bloom, and Timothy Rudd, "Using Social Impact Bonds to Spur Innovation, Knowledge Building and Accountability." \textit{Community Development Investment Review}.

sentence of 12 months or less. In this case, of the pilot SIB’s, investors were charitable trusts because they are required by law to invest a certain portion of their endowment, and more willing to take on the risk of a new financial instrument. In total, investors allocated approximately £5 million. At start of the program, 60% of the 40,200 adult short-term offenders would reoffend. For the purposes of the SIB, three samples of 1,000 prisoners were selected and their recidivism rates were measured against three control groups who did not participate in the intervention program.

Over the course of the SIB, recidivism fell 11%, while nationally rates rose over 10%. Government officials described the program as a success; however, the third phase, the third sample, was not run due to larger changes in government prison programs, which would provide the same services outlined in the SIB. Essentially, the U.K. government decided to directly fund a national program modeled after those programs in the Peterborough SIB. A report was commissioned, though, describing some of the key lessons and insights from the Peterborough Pilot SIB. Largely this report confirmed some of the theoretical benefits of SIB funding. For example, flexibility in how/when funds were used allowed for more fluid intervention models and also encouraged collaboration among the service provider and related organizations. Since the pilot was discontinued, ten more social impact bonds have been launched in the UK alone.

Future of the Social Impact Bond

A number of works have analyzed the future of the social impact bond, identifying key variables to the growth or decline of the SIB market and predicting potential scenarios. One such report focuses on the macro-trends in the U.S. government/economy as well as trends in the greater social impact investment space. More specifically, this paper focuses on reduced government budgets, which it argues have catalyzed the focus on prevention programs, effectiveness, and general innovation in how social services are delivered. Additionally, the potential for government turnover creates some motivation for external contracts, as a survey by Pew Research Center has said spending on social programs is the most divisive issue between Republicans and Democrats. From the investor side, much of the future of social impact bonds depends on the risk appetite of investors. If SIBs offer bond-like returns at equity-risk levels, their ability to draw capital from mainstream investors may be limited. One possible solution for addressing this concern, is the tiered system for social impact bonds, previously mentioned. This allows for distinctions between SIBs and more accurate estimating of risk on a case-by-case basis.

Finally, in its research, MDRC argues that in order for SIBs to succeed there must be a relaxing of the definition and requirements, and that governments should focus on any social outcomes they are willing to pay for, not just those that have identifiable cost savings. Currently, however, the lack of history and track record for the general SIB market precludes this sort of flexibility. MDRC goes on to highlight the trend towards evidence-based reporting as a key factor in SIB proliferation. Without this emphasis there remains a shortage of service providers to catalyze immediate investment.

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17 "PRESS RELEASE: Payment by Results Prison Pilot Continues to Show Falls in Reoffending."
19 Hartley, "Social Impact Bonds Are Going Mainstream."
20 Helen Clarkson, James Goodman, and Clare Martynski, "The Future of Social Impact Bonds in the US."
V. Significant Prior Research

Despite the early stage of the social impact bond market, there has been considerable investment into research, especially from foundations and other government or policy-related institutions. This section will summarize the current literature relating specifically to social impact bonds. The previous literature review highlighted some larger “buckets” or themes that seem to apply to most current SIB-specific research: viability studies, case studies, performance relative to other types of financing, and market analysis. For the purposes of this report, this section will zoom in and focus on a handful of the key articles that drove the development of this thesis.

As mentioned in the previous section regarding the research question, ‘viability’ has a number of dimensions. The McKinsey framework approached viability from the perspective of the social issue at hand. Specifically, they identified variables that would make a social issue most attractive to SIB funding and then applied the framework to issues like homelessness and recidivism, which are currently being discussed as potential areas for intervention. The second article, also mentioned previously, was the Maryland government viability study, which looked at whether or not the cost savings from a potential SIB would be able to offset the fixed costs and the risks associated with the model. This article introduced the idea of analyzing the financial viability of an SIB by comparing the fixed costs of the SIB with the potential cost savings under two different recidivism scenarios. It is notably important because, while it only focuses on the perspective of the government, it introduces the idea of a scenario analysis, which was applied in this financial analysis of the NYS SIB.

Due to the ‘newness’ of social impact bonds and their long-term nature, there have not been an abundance of case studies. Harvard Business School has created a case review based on the NYS SIB; however, this case material is meant to encourage students to evaluate the pros and cons of SIB funding, previously outlined here. More in line with this thesis and one that shaped the development of this thesis in terms of structure and analysis, is a case study, conducted by the University of Oxford, on the Peterborough pilot social impact bond. This case study served as a practical application of the social finance theory behind the SIB, and its structure serves as a foundation for this thesis. At a very high level, this paper explored the definition of a social impact bond, the historical context, the specific Peterborough SIB, and the model’s global applications. This thesis applies a similar framework while also incorporating broader supporting theory and adding some financial analysis. Similar reports have been done on the Goldman Sachs’s New York City SIB, incorporating early lessons from the SIB.

A portion of research has begun to investigate social impact bonds outside of strictly their characterization or their viability. Experimental research has compared the incentive structures embedded in different types of contracts and their effects on the underperformance of non-profits. This paper found that, compared to Input-Based (IB) contracts and Performance-Based (PB) contracts, SIBs result in greater social yields because of the increased oversight. However, it is worth

22 Nicholls, “The Peterborough Pilot Social Impact Bond.”
noting that these results occurred in a “first-best,” laboratory setting, limiting applicability to current SIB practices.

Finally a body of research has emerged, looking at the broader SIB market instead of the SIB structure or individual SIBs. A subset of this literature includes the identification of key drivers and predictions of the futures of SIBs, which was explore previously in this paper. Outside that subcategory of research, is a 2012 report on the investor landscape in the social impact bond market. This paper looks at the model and identifies three potential investors: Foundations/Philanthropy, Community Development Financial Institutions, and Commercial Investors. The report highlights the role that foundations, and specifically Program-Related Investing, can play as early investors in SIBs. It also proposes philanthropy’s role as an insurer for commercial investors, which eventually was realized in the NYS and NYC SIBs. Most importantly, however, is that the article looks at the social impact bond from the perspective of a private equity investment. It proposes different tranches of investment, similar to the tranches of debt typically found in a PE investment. While these ideas have not been applied yet in the market, they introduced the broader idea of applying the PE model, the DCF model for valuation, to social impact bonds. This idea serves as the cornerstone for the analysis presented in this thesis, and relates to some of the theoretical work relating to privatization, explored in the next section.

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VI. Theoretical Support for the Social Impact Bond

The social impact bond is predicated on the assumption that governments will operate less efficiently than a contracted service provider. Arguments regarding diminished budget aside, this assumption drives much of the benefits associated with an SIB, namely the cost savings to the government, which are described in Figure 2. Those theories that create this cost benefit are namely related to government inefficiency and the benefits of privatization as well as the growing focus on evidence-based reporting in the public sector.

Private vs. Public Intervention: Basis for Efficiency in Social Impact Bonds

These savings derive from the SIB models’ potential to achieve the stated social goal more efficiently than the government. It is an underlying assumption that has been explored in a breadth of research. In 1986, Donahue reported that the costs for municipal services were significantly lower when contracted out to private companies. Largely, it has been determined that these inefficiencies exist in the public sector due to the fact that public enterprises are guided by political objectives and not, as originally postulated, by public welfare. These political motives both create inefficiencies and also fail to address intended market failures. It is this phenomenon that has led to a trend of contracting out and of privatization of public services both in the United States and abroad. In Argentina, in the 1990s, the privatization of water companies increased efficiency, improved service quality, and encouraged greater investment in infrastructure. The privatization, which targeted 60% of the nations’ population, also improved health conditions, especially in the poorest areas, and reduced child mortality rates. Traditionally, it has been assumed that governments are motivated by the welfare of society; however, these cases indicate that this assumption may not hold up in many situations. Moreover, political behavior, characterized by contracting out to non-profits, has increasingly become a sign of a government’s preferences for efficiency.

Strictly speaking, privatization implies both turning over spending control and ownership of cash flows. In this respect, the social impact bond model is a modified form of privatization—private investors, and the intermediary, take spending control, allocating funds to a non-profit service provider, and also claim ownership of the cash flows or savings. The assumption is that the added cost of administration and investor returns are less than the savings realized by greater efficiency and improved services. When comparing the SIB model to contracting out directly, the primary benefit is derived from placing risk on private investors rather than taxpayers, the emphasis on outcomes, and improved efficiency, which results from greater oversight and flexibility in the funding relative to traditional government contracts.

Finally, articles analyzing the application of privatization to the prison management have highlighted the success of privatization in situations where corruption is a factor and when quality innovations are required. All of these factors complement the current SIB landscape, which has stressed the importance of innovation in light of shrinking federal budgets, reduced confidence in the government, and growing demand for social services.

Reflecting back on the research question, this literature indicates that the SIB model does address the issues currently facing governments, namely inefficiencies in delivering social services that are exacerbated by the current economic and political climate. Moreover, the presence of non-profits as service providers and the SIB models inherent focus on evidence-based interventions serve to reinforce this assertion, and are explored in the following section.

Evidence-Based Reporting: Improving Non-Profit Performance

The concept of “evidence-based” reporting originated in the medical field, where Randomized Control Trials (RCT), or the “gold standard” of reporting, were applied as conclusive evidence of effectiveness. These standards are now being applied to policy-making and increasingly to the non-profit sector. Traditionally, non-profit efficiency has been defined as low overhead spending; however, critics argue this number gives little information about an organization’s ability to meet its social goals. Consequently, organizations such as the Coalition for Evidence-Based Policy (CEBP) and the MacArthur-funded Top-Tier Evidence project have emerged to apply these standards for performance in the public sector. In testimony to the House of Representatives, Jon Baron, Chairman for the CEBP, argued for the effectiveness of RCTs and highlighted their ability to identify interventions, which can both save money and generate a larger impact than current programs. For example, RCTs were used to identify programs like the Nurse-Family Partnership (NFP), a home-visit program for low-income, first-time mothers. The evidence indicated significant improvements in participants’ life outcomes (rates of abuse, educational outcomes, etc.) while saving the government enough money to more than offset the program costs. These types of intervention

32 Jon Baron, "Statement of Jon Baron." House Committee on Ways and Means, Subcommittee on Human Resources Hearing on What Works from Coalition for Evidence-Based Policy, July 17, 2013.
are suited well to the SIB model, which taps into private funds as a means of scaling interventions that the government cannot currently finance, but which has a sound basis for growth.

Accountability has long been a buzzword in the discussion of non-profits; however, the more recent discussion has centered on the idea of “impact.” In for-profit companies, Key Performance Indicators or KPIs measure performance; however, there are not uniform standards that can be applied in the non-profit sector. Despite identifiable obstacles, foundations like the Robin Hood Foundation, Acumen Fund, and the Bill and Melinda Gates Foundation have placed deliberate emphasis on measurement and metrics.33 These trends have been built upon studies, which have identified significant benefits with outcome measurement, namely the abilities to define progress towards meeting an organization’s mission and to demonstrate cost-effectiveness.

However, this trend requires the support of funders—namely funders must incentivize non-profits to invest in impact or outcome measurement.34 In this regard, the SIB model not only provides flexible funding, but also encourages and allows for investment in Measurement and Evaluation (M&E). Already the CEBP has published a series of reports highlighting the ability of applying evidence-based reporting in a number of social sectors and its ability to save money while increasing impact. This literature further supports the potential for SIB funding to more effectively address social issues and in doing so provide net savings to the government, even after paying both fixed costs and investors.

To summarize and synthesize these two areas of literature, privatization has been proven to increase efficiency in the delivery of social services. This is largely due to corruption and other forms of government inefficiency. The SIB is one form of privatization that looks as sourcing non-profits. The question of efficiency in non-profits has been an area of interest in its own right, given the lack of reporting. However, SIBs address that issue by focusing on evidence-based interventions and on scaling these programs, which have already proved a level of efficacy in randomized control trials.

VII. New York State (NYS) Social Impact Bond

This section provides a detailed overview of the New York State (NYS) social impact bond, highlighting the recidivism issue facing New York and identifying the key parties in the contract. Finally, this section also relates these dimensions of the SIB agreement back to the theories explored earlier in this paper.

The NYS Social Impact Bond: Recidivism, the Issue

To give some context on the issue addressed by the social impact bond, recidivism of repeat offenders, the 2013-2014 NY state budget, the Department of Corrections and Community Supervision (DOCCS) was allocated $3.1 billion. The average annual cost of incarceration in NYS is $60,000 per prisoner. Of those formerly incarcerated individuals, over 40% will reoffend within three years their release, and the average high-risk prisoner spends another 460 days in jail post-release. Behind Medicaid, prison spending is the fastest growing expenditure nationally. At the same time, The Center for Employment Opportunities (CEO) has an established, evidence-based program for providing employment services, including job placement and training, to recently released prisoners. Given this backdrop of rising, identifiable cost and established intervention forms, the re-incarceration of high-risk offenders appeared to be a strong candidate for social impact bond funding, and in December 2013 New York State announced the state’s, and the nation’s, first social impact bond—a partnership between the New York state government, CEO, Bank of America Merrill Lynch (BAML), and US Social Finance.

More specifically, the NYS SIB focuses on the marginal costs associated with criminal justice, which fluctuate with the workload (i.e. food, clothing, and medical costs for a prisoner). However, there are also “step” costs or traditionally fixed costs that become marginal after a certain load. An example would be reduction in prisoner staffing due to a large reduction in recidivism.

Figure 3 represents the structure of the NYS SIB. Note the similarities to the generic model as well as some variations, including the insurer.

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The NYS Social Impact Bond: Overview

The NYS SIB is structured similarly to the Peterborough SIB, except for a few key differences. First, the investor in this case is not another foundation but rather Bank of America Merrill Lynch, who pooled together $13.5 million from 40 private and institutional clients, and which will be allocated to the bond. The majority of private, non-institutional clients are high net worth individuals. The Robin Hood Foundation has also invested another $300,000 alongside BAML. At the time, this was the largest investment in an SIB. Second, for this social impact bond (and similarly for the second New York SIB), foundations are insuring portions of the initial investment. In this case, the Rockefeller Foundation is insuring $1.3 million or approximately 10% of the initial investment. For comparison, in the second New York social impact bond, Bloomberg Philanthropies is insuring $7.2 million of the $9.6 million invested by Goldman Sachs. This limits the losses incurred by investors, and highlights another way in which foundations are catalyzing the market.

In total the NYS social impact bond will run five and a half years; however, the SIB will breakdown into two phases. During each phase CEO will provide services to approximately 1,000 inmates who voluntarily agree to participate in the program. Throughout each phase data will be collected by the DOCCS and validated by Chesapeake Research Associates, and this data will determine the payouts to investors at each phase. The relevant metrics, which the service provider will be measured against, are: Employment, Recidivism, and Transitional Jobs. Employment refers to the presence of positive earnings in the fourth quarter, after a prisoner’s release. Recidivism specifically entails “bed days” spent in jail to capture the costs as well as the severity of crimes when compared to a binary system. Finally, the Transitional Job metric is a binary measure for participation in one of CEO’s transitional jobs. These metrics as well as the thresholds and payouts are based on the identifiable, tangible costs to the government, and are negotiated by US Social Finance to balance the interests of both investors and the government.

Figure 4 shows the timeline for the two phases of the NYS SIB. Note the timing for capital draws and payments, which shape the cash flows analysis.

39 Morrison, “U.S. Social Finance Interview.”
Again, the data regarding performance is collected and measured against the thresholds. The payouts are calculated on a metric-by-metric basis, as a function of the public benefit and only when the threshold is met. This means that if the service provider misses the threshold for Employment but meets Recidivism and Transitional Jobs, then they will still receive a payout based on those metrics they have met. In the case of the NYS SIB, the payout by the government is capped at a Phase I + Phase II total of $21,543,843 to the intermediary, in this case Social Finance US. This payout is net of some state administrative costs as well as costs to the data validator.40 Beyond those fixed costs, there exists the Intermediary Success Fee, which can be either a fixed amount in the event of investor repayment or scalable based on performance. In this case, the latter format applies.

These thresholds as well as their payments are negotiated through the intermediary and with the input of both the government and investors, typically in conjunction with other terms of the contract.41 They are based on those identifiable, tangible costs associated with recidivism and balanced by the intermediary to produce the potential for a reasonable return for both parties.

The NYS Social Impact Bond: CEO, the Service Provider

As mentioned above, the Center for Employment Opportunities (CEO) is an employment program for former prisoners. Specifically, CEO provides job training as well as temporary job placement and

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41 Morrison, “U.S. Social Finance Interview.”
other support services to former prisoners.\textsuperscript{42} According to research by the Department of Corrections and Community Supervision (DOCCS), 44\% of inmates, who are unemployed post-release, will return to prison within two years. This numbers is compared to 29\% for those who engage in part-time work and 23\% who receive full employment.\textsuperscript{43}

CEO was chosen from five other potential service providers, primarily due to their existing relationships with the various parties as well as a track record of success using their interventions.\textsuperscript{44} More specifically, CEO underwent a study that used RCT methodology to establish the efficacy of their program. The study, conducted by MDRC, found that CEO substantially increased employment in the initial, follow-up period, relative to more basic interventions; however, these effects faded as the timeline for comparison lengthened. More notable, however, was the relative reduction in recidivism, especially in the group of prisoners treated within three months of release. The study found that CEO reduced recidivism by 9-12\% for all prisoners and by 16-22\% for recently released offenders. These numbers can be compared to the approximate 8\% reduction in recidivism required for minimum payments. The study also included a cost-benefit analysis that highlighted the financial benefits (cost savings as well as increased employment earnings) outweighed the costs for taxpayers, victims, and participants under a wide range of assumptions.\textsuperscript{45}

The NYS Social Impact Bond: U.S. Social Finance, the Intermediary

According to U.S. Social Finance, their mission is to “mobilize investment capital to drive social progress.”\textsuperscript{46} Speaking less broadly, U.S. Social Finance works to design and facilitate public-private partnerships, and more specifically social impact bonds, that tackle complex social issues. In the case of the New York State SIB, U.S. Social Finance’s work can be broken down into three phases: deal construction, contract execution, and performance management.\textsuperscript{47} Deal construction consists of establishing the major terms of the potential contract, balancing all of the parties’ interests. Performance management is an ongoing process that looks both qualitative and quantitative measures relating to CEO’s performance. Again, in the case of the NYS SIB, the intermediary continues to work closely with CEO and BAML as well as the Harvard Kennedy School SIB Lab and more removed partners to monitor the SIB.

More broadly speaking, a number of articles have questioned the general role of the intermediary, citing the additional costs and complexity that it adds to the model. They have further posited that it may be possible to create an SIB without an intermediary or create an SIB where the intermediary role is rolled into the service provider or the financing party. However, conversations with U.S. Social Finance indicate that a primary driver in the existence of these organizations is their ability to be impartial. The SIB structure requires balancing the interests of the three key parties. Additionally, these organizations have a vested interest in the development of the field, motivating them to foster

\textsuperscript{42} Redcross, Millenky, Rudd, and Levshin, "More Than a Job: Final Results from the Evaluation of the Center for Employment Opportunities Transitional Jobs Program."

\textsuperscript{43} "Investing In What Works: NYS "Pay for Success" Project Fact Sheet.

\textsuperscript{44} Morrison, “U.S. Social Finance Interview.”

\textsuperscript{45} Redcross, Millenky, Rudd, and Levshin, "More Than a Job: Final Results from the Evaluation of the Center for Employment Opportunities Transitional Jobs Program."


\textsuperscript{47} Morrison, “U.S. Social Finance Interview.”
discussions with governments and non-profits. These dual characteristics hedge against any variations that might forego an independent intermediary, at least in the foreseeable future.

The NYS Social Impact Bond: Bank of America Merrill Lynch, the Investor

As mentioned, Bank of America Merrill Lynch (BAML) acts as the primary investor in the NYS social impact. In the press release regarding the announcement of the SIB, Andy Sieg, head of Global Wealth and Retirement Solutions said, “One of the most pronounced trends among our clients is for their investments to not only earn a return but also to help drive social change in their communities and in society.” His comments seem to confirm the growing preference or interest among investors for impact investments; however, it still raises the question of whether these investments are viewed as an alternative to philanthropy or as a competitive investment. To an extent that question will be answered through the financial analysis; however, BAML published a paper last March about the trend in clients towards “impact philanthropy.” This term has also come up in the literature review regarding evidence-based interventions; however, this paper implies that investor involvement may be tied more to philanthropy as opposed to an investment strategy. Namely, the article cites that BAML clients, and namely high-net-worth clients, are increasingly developing a strategy for their giving, often applying similar standards or frameworks to both their investments and their charity. The article insinuates that SIBs fall under the developing category of “impact philanthropy” as opposed to an alternative to traditional investments. Discussions with U.S. Social Finance confirm this notion, reporting that SIB funding is an alternative to traditional philanthropy and offers the opportunity for investors to grow the impact of their money. If the SIB is successful, investors can reinvest both the principal as well as the return in other social issues. That being said, U.S. Social Finance argues that the role SIBs play in investors’ portfolios may grow and change into a more traditional investment as the field matures.

The NYS Social Impact Bond: State of New York, the Government

As implied by the name, the payor in this case is the New York state government. However, the state of New York also received a grant from the United States Department of Labor (USDOL), which provides funds to cover at least a portion of the payment. Strictly speaking the role of government within the context of a social impact bond is fairly fixed and self-explanatory. However, governments and policy will play a critical role in the future of the SIB market, as facilitators for new agreements. Even the federal government, which will most likely never act as a direct party in an SIB, is largely influential through its ability to establish policies and provide support that will encourage continued participation in these types of agreements.

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48 Ibid.
50 "Impact Philanthropy: Exciting New Forms of Giving Are Enabling Donors to Match Their Desire to Do Good with a Drive for Measurable, Businesslike Results." Timely Insights from the Private Banking & Investment Group, 2014.
51 Morrison, “U.S. Social Finance Interview.”
52 Ibid.
VIII. Financial Analysis of the NYS Social Impact Bond

Methodology

At a high level, this analysis centers on estimating the cash flows to investors under a variety of conditions, and comparing those to a set of similarly risky assets. The intermediary contract outlines the steps for calculating the investor payments for each of the three metrics:

1. Performance for the treatment group is recorded along each of the three metrics and compared to the control group*
2. Relative performance is compared to the minimum thresholds for payment
3. The public sector benefit is calculated as a function of the performance (outcome)
4. Payments are calculated as a function of the public sector benefit
5. Payments for each metric are summed and capped if necessary

*The contract outlines a fairly detailed process for establishing relative performance that includes the calculation of an ITT measurement (average difference between treatment and control groups), an IV estimate (applied to the ITT and accounts for discrepancies in enrollment between groups), and a scaling factor when applicable.

As mentioned in the steps above, payment is contingent upon performance meeting a set of thresholds. Table 1 summarizes the definition of each metric as well as the thresholds and the public benefit. This benefit is estimated from the costs associated with recidivism. Payments/public sector benefit for the Recidivism and Transitional Job metrics are linked in that both are calculated if the threshold for Recidivism is met.

**Table 1: Public Benefit per Outcome for Relevant Social Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Definition</th>
<th>Threshold</th>
<th>Public Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>Percentage point difference between portions of the treatment and control groups w/ positive income in 4th quarter post-release</td>
<td>5% Increase (over control group)</td>
<td>Phase I: $6,000/person Phase II: $6,360/person</td>
</tr>
<tr>
<td>Recidivism</td>
<td>Difference between treatment and control group’s average number of days incarcerated</td>
<td>36.8 days reduction (approx. 8%)</td>
<td>Phase I: $85/day Phase II: $90.1/day</td>
</tr>
<tr>
<td>Transitional Jobs</td>
<td>Number of treatment group members who start a CEO transitional job in the observed period</td>
<td>Same as Recidivism</td>
<td>Varies based on the average number of hours worked*</td>
</tr>
</tbody>
</table>

*If average hours worked is greater than 111 than the payout is $3,120/$3,307 per person, if below its done as an hourly rate applied to the hours worked.

After calculating the public sector benefit, payments are established based on that benefit. For the Employment dimension, they are set equal; however, the public sector benefit has an individual cap at $2 million dollars. Recidivism and Transitional Job payments are set equal to the public sector benefit until they exceed the capital draw for that phase of the SIB. Payments beyond that cap are calculated as a function of the excess savings. The example below should clarify these constraints.

The maximum IRR for investors, based on the contract is 13.2%. The following calculations confirm that cap and also provide an example of the methodology applied when calculating the cash flows.

Model Cash Flow Calculation

**Assumptions/Contractual Information**

<table>
<thead>
<tr>
<th>Phase 1:</th>
<th>Phase 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitional Job Outcome: 650</td>
<td>Transitional Job Outcome: 650</td>
</tr>
<tr>
<td>Employment Outcome: 4%</td>
<td>Employment Outcome: 4%</td>
</tr>
<tr>
<td>Drawdown: 6,832,000</td>
<td>Drawdown: 5,211,853</td>
</tr>
<tr>
<td>Max Outcome Payment: 11,095,000</td>
<td>Max Outcome Payment: 10,448,853</td>
</tr>
<tr>
<td>Admin/Validator Costs: 905,000</td>
<td>Admin/Validator Costs: 551,147</td>
</tr>
</tbody>
</table>

First, assumptions are given for each of the inputs. In this case, the values are pulled from an example in the contract as a way of checking formulas. Other information, like the drawdown, costs, and caps, are pulled from the contract as well.

**Public Sector Benefit & Outcome Payment Calculation**

<table>
<thead>
<tr>
<th>Phase 1:</th>
<th>Phase 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Sector Benefits:</strong></td>
<td><strong>Public Sector Benefits:</strong></td>
</tr>
<tr>
<td>Recidivism</td>
<td>Recidivism</td>
</tr>
<tr>
<td>16,253,275</td>
<td>17,228,472</td>
</tr>
<tr>
<td>Transitional Job</td>
<td>Transitional Job</td>
</tr>
<tr>
<td>2,028,000</td>
<td>2,149,550</td>
</tr>
<tr>
<td>Employment</td>
<td>Employment</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Public Sector Benefit</td>
<td>Total Public Sector Benefit</td>
</tr>
<tr>
<td>18,281,275</td>
<td>19,378,022</td>
</tr>
<tr>
<td><strong>Investor Payment:</strong></td>
<td><strong>Investor Payment:</strong></td>
</tr>
<tr>
<td>Recidivism/Trans Job I: 6,832,000</td>
<td>Recidivism/Trans Job I: 5,211,853</td>
</tr>
<tr>
<td>Recidivism/Trans Job II: 5,724,638</td>
<td>Recidivism/Trans Job II: 7,083,084</td>
</tr>
<tr>
<td>Recidivism/Trans. Job: 12,556,638</td>
<td>Recidivism/Trans. Job: 12,294,937</td>
</tr>
<tr>
<td>Employment</td>
<td>Employment</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Capped Investor Payment: 11,095,000</td>
<td>Capped Investor Payment: 10,448,853</td>
</tr>
<tr>
<td>Uncapped Investor Payment: 12,556,638</td>
<td>Uncapped Investor Payment: 12,294,937</td>
</tr>
</tbody>
</table>
The public sector benefits from Recidivism and Employment are computed by taking the outcome and multiplying it by the product of the number of participants and the financial benefit in Table 1. For the Trans. Job metric, the outcome is multiplied by the benefit (and not the number of participants). In this case, the minimum threshold for Employment is not met so no payment is calculated for that metric. Also since the public sector benefits for the other two outcomes are greater than the capital drawdown in each phase, the excess benefit is divided in half before being added to the payment. Despite this, the total payment is still in excess of the maximum investor payments, so the caps are applied.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flows</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>(7,737,000)</td>
<td>13.2%</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>(5,763,000)</td>
<td>11,095,000</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>10,448,853</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>13.2%</td>
</tr>
</tbody>
</table>

The resulting IRR for the maximum cash flows are 13.2%. However, these cash flows do not take into account the Intermediary Success Fee. The image below outlines the scalable fees, which are tied directly to the Recidivism outcome. For example, if recidivism is reduced by 85 or more days then the intermediary would take $281,250 or $107,645 depending on the phase.

**Intermediary Success Fee:**

<table>
<thead>
<tr>
<th>Phase 1:</th>
<th>Phase 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.5</td>
<td>93,750</td>
</tr>
<tr>
<td>85</td>
<td>281,250</td>
</tr>
<tr>
<td>93.5</td>
<td>375,000</td>
</tr>
</tbody>
</table>

*Based on recidivism outcome (reduction in bed days)*

After applying the intermediary success fee, in this best-case scenario, the IRR drops down to approximately 12.5%, mirroring the terms of the contract.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flows</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>(7,737,000)</td>
<td>12.5%</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>(5,763,000)</td>
<td>10,720,000</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>10,305,326</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

Model Assumptions

The section above outlines the formulas that were used to create the basic financial model. In this case, returns are driven by thee metrics. In manipulating the model, those variables were estimated according to reports on the performance of CEO conducted by MDRC. Specifically, a paper was published which underlined the results of a RCT, and reported the ability of CEO to address
recidivism and employment. The report looked at the efficacy of CEO in addressing employment and recidivism in a sample of ex-offenders.\textsuperscript{54}

Financial Manipulation #1: Expected Returns

The first approach consisted of creating a range of values for each of the metrics (i.e. Recidivism, Employment, and Transitional Jobs). These ranges were built off of the MRDC report and adjusted to reflect the additional benefit of working with recently released offenders.\textsuperscript{55} Table 2, below, highlights the values for each of the outcomes as well as the rationale.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Rationale</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recidivism</td>
<td>Based on the MDRC report/evaluation. For those inmates who received CEO services within 3 months of release, there was a 16-22% reduction in recidivism (arrest, conviction, or incarceration). 13.7% reduction in strictly bed days. The 7.49% was the minimum reduction of bed (based on all inmates tested, regardless of when they enrolled); however, 13.7% was used because this subsample better represents the SIB samples. According to the MDRC report, 70.1% of the treatment group participated in a transitional job (compared to 3.5%). In this case, the outcome refers to the the number of inmates in the treatment population who participate. Because we don’t know the breakdown of how many inmates are assigned to either group, I make the assumption that 500 will be assigned to each group. If 70.1% was reported, we will build the range around that number. Its also worth noting this number was slightly higher (73.5%) for recently released offenders. The majority of the difference in employment occurs in the first three quarters, inherent to the CEO transitional job program. However, these effects fade by the fourth quarter, which is the time of measurement for this outcome. In order to estimate this number, I pulled employment percentages from quarters 5-8 because individual quarter information was not available. These four quarters were more representative of the fourth quarter results. The difference was 3.9%.</td>
<td>63.32</td>
<td>101.20</td>
</tr>
<tr>
<td>Trans. Job</td>
<td>The majority of the difference in employment occurs in the first three quarters, inherent to the CEO transitional job program. However, these effects fade by the fourth quarter, which is the time of measurement for this outcome. In order to estimate this number, I pulled employment percentages from quarters 5-8 because individual quarter information was not available. These four quarters were more representative of the fourth quarter results. The difference was 3.9%.</td>
<td>367.50</td>
<td>392.50</td>
</tr>
<tr>
<td>Employment</td>
<td>The majority of the difference in employment occurs in the first three quarters, inherent to the CEO transitional job program. However, these effects fade by the fourth quarter, which is the time of measurement for this outcome. In order to estimate this number, I pulled employment percentages from quarters 5-8 because individual quarter information was not available. These four quarters were more representative of the fourth quarter results. The difference was 3.9%.</td>
<td>0.04</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Running these ranges against the model resulted in an expected IRR of approximately 4.8\%-5.1\%. This return was most sensitive to the Recidivism Outcome, and this sensitivity will be the basis for the second analysis. Conversations with Social Finance indicate potential returns for the SIB below 10\% and other academic works cite, more generally, typical returns between 5\% and 9\%.\textsuperscript{56,57} In the Massachusetts anti-recidivism SIB, returns for senior loans are also 5\%, while junior loans receive 2\%.\textsuperscript{58} Looking at this collection of returns, the expected returns calculated appear to be reasonable.

Financial Manipulation #2: Thresholds for Zero-NPV

The second approach focused on calculating the NPV as opposed to the IRR for the SIB. First, two discount rates were calculated. The first, the risk-free rate, of 1.75\% was pulled from the U.S.

\textsuperscript{54} Redcross, Millenky, Rudd, and Levshin, "More Than a Job: Final Results from the Evaluation of the Center for Employment Opportunities Transitional Jobs Program."
\textsuperscript{55} Ibid.
\textsuperscript{56} Morrison, “U.S. Social Finance Interview.”
\textsuperscript{57} Seth Snyder, "Social Impact Bonds." The University of Texas at Austin, McCombs School of Business. 2014.
Treasury and the second including a risk premium, amounted to 4.75%. Two rates were included to reflect two perspectives on SIBs and their inherent financial risk. Next, outcomes for the Employment and Transitional Job outcomes were borrowed from the MDRC report and held constant. Finally, the Recidivism outcome, the most sensitive, was backed out to imply a zero-NPV. The two resulting outcome thresholds were 82.5 “bed days” assuming a risk premium and 72.31 “bed days” using just the risk-free rate.

Table 3: Financial Manipulation #2 Assumptions for Each Phase

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Rationale</th>
<th>Resulting Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recidivism</td>
<td>72.31/82.5 Bed Days</td>
<td>Plug for Zero-NPV</td>
</tr>
<tr>
<td>Phase I: $6,376,825/$7,401,800 Phase II: $6,471,153/$6,894,332</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transitional Job</td>
<td>367.5 participants</td>
<td>Assume 73.5% Participation (from MDRC report)</td>
</tr>
<tr>
<td>Employment</td>
<td>3.9%</td>
<td>From MDRC report</td>
</tr>
<tr>
<td></td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

In the previous RCT, which tested CEO’s efficacy, the subset of recently released offenders saw a relative decrease of around 64 days. However, it should be noted that this report is over five years old now.

Interpreting the Results

The results of the first manipulation appear consistent with other reports, albeit on the lower end of estimates. This could be due to the required assumptions. While a report was available, which outlined the results of an RCT; it was conducted over five years ago. Also conservative assumptions were made in that the model assumed the same performance over the course of both phases. This contradicts the notion, outlined in the Peterborough pilot SIB, of improving and realizing greater success in the latter phases. The second manipulation is built off of the same report, and while it seems reasonable that 72.31 reduction in bed days is realized, without more recent numbers, 82.5 falls in the optimistic, upper range of potential values.

The more interesting implication of these results is their reflection of the nature of the risk of the investment. As has been establish, SIBs are criticized for riskiness and consequently they’re often compared to high yield bonds (whose historic returns fluctuate significantly by average to around 7-8%). However, the rigorous testing that this SIB underwent as well as they relatively low threshold for a zero-NPV indicate that they may have more upside and less risk than originally perceived. The argument can be made, potentially, that this bond is relatively cheaply for investors.
IX. Conclusion

Again, the purpose of this thesis was to answer the question, “Do social impact bonds address issues faced by governments, which they are not equipped to solve, and are they viable in that investors are willing to purchase them from a strict risk-return perspective?” Literature both supports the notion that the SIB model’s characteristics address the inefficiencies and limitations of direct government intervention, and that they build off of the theoretical and applied benefits of evidence-based reporting.

In regard to their financial performance, average returns according to this model are around 5%. This number echoes other estimates, albeit on the lower range of estimates for this particular SIB. This information coupled with the relatively low threshold for returns and the large upside, indicate that the investments maybe less risky than originally thought. Looking strictly at viability, as defined by the research question, it appears that SIBs are viable.

It is worth noting, though, that all reports from Merrill Lynch identify SIBs as a form of impact philanthropy. When this research question was framed, it was done in the context of SIBs as an alternative to other investments, like high yield debt. Coupling the results with these qualitative findings raises interesting question regarding investor motivations, which will be explored in the next section.

Limitations & Directions for Future Research

The New York State SIB was chosen because versions of the contract were available to the public, providing a unique source for analysis. However, a lack of more intimate knowledge does create some limitations to the accuracy of these results. For example, the contract outlines the public benefit provided by each of the outcomes; however, the specific rationale and computations behind those numbers are unavailable. Presumably they trace back to the costs of recidivism but that relationship is not explicit. This piece of information is important in a stand-alone sense; however, even more important when comparing these results to the Maryland state government viability study. The Maryland study makes a strong argument against SIB intervention for recidivism, but also only focuses on the recidivism outcome. In order to fully understand and compare these arguments, the reasoning behind each term is required. The MDRC evaluation of CEO also notes the sensitivity of benefits. Namely, whether or not the marginal reduction allows for a step reduction in fixed costs (i.e. the closing of a facility) largely determines the benefit.

In addition, assumptions were made to both simplify and conduct the financial analysis. There is a detailed process for calculating each of the three performance metrics; however, this report focused on estimating just the final population metric. Estimations were based on actual data; however, that data was collected in a sample that includes prisoners who had been released for more than three months before intervention and was recorded more than five years ago. The report does analyze the subset that received treatment within the three-month window, but this is a smaller sample. The ranges for the metrics were built around the results of the sample, making the assumption that it is indicative or representative of the NYS treatment population.

Finally, in regards to the theoretical underpinning for SIB intervention, it is worth noting that there is a body of literature, which argues against the benefits of both privatization and evidence-based
reporting. Namely one report, focusing on the privatization of Japanese highways, found there were no gains in efficiency post-privatization. Still, this body of research appears overwhelmed by contradictory evidence, like the effect of privatization on prisons, water, and agricultural biotechnology. As it pertains to evidence-based reporting, there are also a number of works, which argue against its potency.

That being said, these critiques provide potential improvements for future research. And beyond those notes, a number of other questions arise from the results of this study. First, if SIBs continue to be classified as an alternative to philanthropy and if they compete in the dimension of giving as opposed to investment, does there exist questions regarding their potential to crowd out traditional charity? Also, if the upside highlighted in this investment is true of other SIBs, why do investors require such a relatively high return for what they categorized as philanthropy? Does this imply that the public benefits for the government are overestimated or overly optimistic, and could it be that these may not be financially viable from the government perspective? On a related note, how does this classification factor into the SIB model’s potential to persist into the future, and will these instruments always be classified as philanthropy? Lastly, the importance of both policy and government in the proliferation of SIBs was noted in both the research and discussions with intermediaries. The question then is how could potential shifts in government, either in the form of partisan changes or budgetary priorities, affect the SIB market?

60 Gregory Graff, Amir Heiman, Cherisa Yarkin, and David Zilbeman. "Privatization and Innovation in Agricultural Biotechnology."
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41. Snyder, Seth. "Social Impact Bonds." The University of Texas at Austin, McCombs School of Business. 2014.


