

# The Creation of Social Impact Credits: Funding for Social Profit Organizations

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## 9.1 INTRODUCTION: IMPORTANCE AND PURPOSE

The authors sit on several nonprofit boards and have listened to a combined several decades of budget cycles and approvals. Each budgeting cycle for a nonprofit involves the inevitable discussion of grants applied for and awarded (lost), donations sought and general trends, and, in some cases, fees for services. There may be a discussion about the annual fund raising event that involves an inordinate amount of effort relative to the very low return for the amount of energy invested. Given this funding model, the majority of revenue brought into the organization is restricted by the terms of the grant or institutional investors. The restrictions placed on the funds force the nonprofits to have many planning meetings about how to increase their non-restricted funds for long-term growth. While the quest for growth is a strategic issue mostly the concern of for-profit entities, the sources of funding and legacy donors restrict the strategic choices of nonprofit

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organizations. Further, the economic downturn of 2007 forced many nonprofits and donors to rethink their funding models and put additional pressures on organization. Given this context, there is increased need to rethink the nonprofit sector and funding mechanisms.

Most nonprofits are faced with the dilemmas of how to pay for the development of their human assets, how to maintain their facilities, pay for oversight and management, invest in new program exploration, and provide support. In short, all those items that are covered in the secondary activities of for-profit organizations' value chain are generally excluded from restricted funds to nonprofits. Donors expect all of the funds to go directly to services without consideration of how the organization is providing the means for the support. To this end, the motivations behind this chapter are to provide a framework wherein a financial instrument is developed that provides the organizations with the managerial discretion to execute on the programs and projects necessary to be effective. Given the proposed investment instrument, we seek to provide a sustainable means for these organizations to diversify their revenue portfolios. Further, we wish to promote the reclassification of the nonprofit sector to the social profit sector. The former language bars the sector from investment in necessary enabling activities and has a pejorative connotation while the latter suggests the creation of social utility that deserves investment.

The market for thinking about funding for the social profit sector and social benefit is already changing. In 2012, Goldman Sachs announced the signing of a SIB worth \$9.6 million in support of recidivism-reducing therapy for Rikers Island juvenile prisoners. This SIB was the very first one issued in the United States and only the second one in the world (Dagher 2013; PBS NewsHour 2013). With the SIB, the risk is directed away from taxpayers and toward the donor. In this relationship, Goldman Sachs, the donor, invests the money through an intermediary, to the desired program. The intermediary assures the outcomes of the desired program. If the program achieves the espoused goals as evaluated by the third party then the Government "pays" for the success in the form of "profit" but if the program fails to achieve the desired end results, then the donor takes the loss and the Government has no responsibility.

Since the Goldman Sachs investment, there has been a surge of attention toward social-financial mechanisms that reduce risk to taxpayers and social benefit and address public policy priorities. For instance, the state of Massachusetts announced its desire to negotiate a SIB to help solve the issues of homelessness and juvenile crime (Center for American Progress 2012a),

both issues of social and public policy concern. More broadly, SIB interest has expanded beyond the United Kingdom and the United States to other countries such as Australia, Canada, Colombia, India, Ireland, and Israel (Azemati et al. 2013) who have also seen the potential benefits of SIBs. While not directly espoused as a reason to invest in SIBs, there is the added benefit that these programs align interest through an increase in oversight by the third parties, due diligence by the donors, and input by the various Governments through policy inputs.

However, we recognize that not all in the nonprofit arena are in favor of the SIB; there is some vocal criticism about the instrument. Those in support of SIBs note that the increased capital provided to nonprofit organizations and social-based companies can immensely broaden their societal benefit (Bugg-Levine et al. 2012). Alternatively, those who oppose the SIB instrument state that it promotes “anti-philanthropy” sentimentality due to potential increase in payments that the Government returns to the investor in the form of principal and interest upon successful completion of the contract (Macdonald 2013, p. 37). During a presentation at the Allegheny Harvard Yale Princeton Club in 2013, one participant commented that such mechanisms cannot work due to the differences in various sectors of the nonprofit industry and further, that market dynamics cannot be applied to this sector. It is our belief and the argument that we will present herein that there are better funding instruments available to the social profit sector which align interests, reward performers, and increase total social benefit, and we present one such instrument.

In the following section, we present a more detailed discussion of social impact bonds, the concept that we extend to social profit credits. Since SIBs are a relatively recent financial instrument introduction, there is sparse information on the actual long-term market performance: social and economic. The newness of this instrument provides opportunity for improvement and to this end, we introduce the concept of the social profit credit (SPC). Following the discussion of the SPC, we present a case study that applies the SPC model as an example of how it may work in practice. The data of the case study as well as the building of the SPC within the library industry is presented followed by a discussion and limitations.

## 9.2 SOCIAL IMPACT BONDS

As previously stated, social impact bonds (SIBs) are a relatively new type of financial instrument first introduced in 2000 by New Zealand economist Ronnie Horesh. However, it was a full decade later that the first SIB was issued in the United Kingdom (Shiller 2013). The SIB allows a private investor, typically a large corporation, to fund a social profit organization's operations. If the funded organization achieves the espoused targets at the end of a specified time period as verified by a third-party auditor which will need to be identified but may be firms such as accounting firms, then the investor receives back their investment with interest from the government. The government is willing to pay the investor the principal plus interest from savings that the government realizes through reductions that it would otherwise have spent but has no obligation for repayment if the organization fails to meet the metrics. However, should the funded organization fail to reach its goal, then the discount rate the following year will be greater since the *risk* of return is increased. The interest rate associated with the SIB is determined by the actual performance of the social profit organization and is subject to variability; hence, like the market, some SIB performance may be more volatile than others. Further, there is a risk of loss to the investor. If the funded organization does not meet the metrics dictated by the SIB, the government is not required to pay back the investor (Dagher 2013). The investor receives a profit only in the event that the organization exceeds the stated metric of the SIB. Hence, the SIB is known as a "pay for success" initiative (Pettus 2013). Baliga (2013) stated that this flips the traditional model of the government funding inputs to one that funds outcomes.

The issuance of the SIB involves a variety of stakeholders as depicted in Fig. 9.1: *Social Impact Bond Network*. As illustrated in Fig. 9.1, the successful issuance of the SIB requires:

1. society has a need that is not otherwise met by for-profit market dynamics;
2. the Government has a need and desire to promote the programs that society demands and for which the actions will increase the overall utility of its constituents;
3. nonprofit providers who are willing to deliver on the necessary programs;

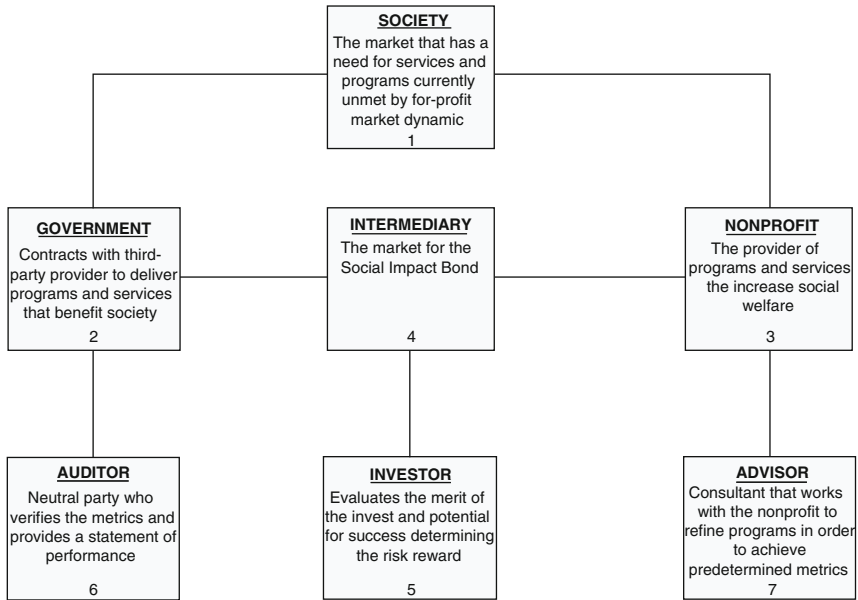


Fig. 9.1 Network of stakeholders

4. an intermediary acts to develop, valuate, and issue the SIB and repayments as necessary between the Government, the nonprofit organization, and the investors;
5. investors who are willing to *risk* some level of financial capital in the SIB instrument;
6. auditors working with the Government issuing statements of assurance and performance for which the Government will repay or not the SIB
7. finally, advisors working with the nonprofit firms to assure compliance with the contract and achievement of the predetermined benchmarks.

In particular, the Government, nonprofit organizations, and investors all have to be aware and agree to the terms of the instrument outlined in the social impact bond as they would in any financial issuance (McKinsey & Company 2012). Additionally, there needs to be a separate agency to issue the bond and manage the funding. Unbiased data analysts are also required

to track the nonprofit's progress during and at the close of the social impact bond agreement (McKinsey & Company 2012).

Perhaps the most important part of a social impact bond is having somebody willing to invest. Unlike the typical corporate or individual donation, the SIB has the potential of non-performance which implies the risk of loss (McKinsey & Company 2012); with a donation, the donor is assured at least a tax write-off, whereas with the SIB, the investor may lose all monetary value. This market for investors is reduced to those who are both philanthropic and socially oriented and who have a propensity to subsidize programs and services that achieve social goals (Center for American Progress 2011). In theory, these "socially minded investors" should be willing to accept a smaller return on the social project compared to other possible investment options. If a potential investor applies market investment decision criteria to the SIB market, then a "typical" investor may opt for market investments in anticipation for larger returns. The *expected return* of the SIB is largely a function of the amount that the Government expects to realize in savings from the social project and thereby commute to the investor (Pettus 2013). The return to the investor is an increasing function beyond the achievement of the predetermined metrics but is typically capped (Azemati et al. 2013). The overall transaction costs of each SIB are costly since the metrics, programs, and investors all have to be independently negotiated. The transaction costs associated with each issuance suggest that the size of the SIB has to be rather large to make the effort meaningful.

Each of the SIBs is open to interpretation since each one is negotiated on an individual basis. Much like the issuance of an initial public offering, the investor has to receive disclosures of potential investment risks as well as the measures of performance to which end the metric must be based upon real, measurable social outcomes (Center for American Progress 2012a). Therefore, the SIB contract must give the following specific information: target population, termination date, and a goal percentage or measurement to meet minimum acceptable performance (Center for American Progress 2012b). Additionally, the data for the nonprofit must be accessible and reliable to calculate the performance measurements (Center for American Progress 2012b), hence the need for third-party assurance of performance statements.

While there are clearly risks to the investors and high transaction costs, there is good reason to implement the SIB since there may be upsides associated with the instrument. For example, this is a way for nonprofit

organizations to acquire necessary capital resources to deliver on their programs beyond the traditional annual appeals. Since the SIB requires performance, society is assured that only those organizations that are able to meet the expectations apply thereby rewarding high-performing nonprofits. Hence, driven by a need to attract investors, the nonprofits that are the most efficient and effective in developing solutions to social problems will be the ones that utilize this instrument and social utility will be increased (Fox and Albertson 2011). Efficiency will also be increased through the best allocation of the capital achieved through the bond. Through the competitive pressures put on the nonprofit, they will be able to naturally evolve their business plans and management styles to focus on outcomes (Fox and Albertson 2011). Additionally, the contracts are normally set for an extended period of time (typically two to four years), which gives nonprofits ample time to realize the efforts invested into their programs (Vogel and Klissurski 2013).

There are clearly upsides for both the investor and the nonprofit organization, but there are also reasons why the government benefits from participation in the SIB. The programs provided by the nonprofit organization under the SIB contract are privately funded, and therefore the risk is privatized and protects the taxpayer from having to cover the losses that may occur if the programs fail or do not reach the necessary targets to be economically justified (Sheffield 2013). The government only “pays for success”. Because it only pays for the outcomes, the government does not have to make the decision for what programs it wants to fund or how it wants to allocate its budget (Center for American Progress 2010).

Social impact bonds are certainly an innovative financial instrument to fund social programs and services. However, as suggested, the nature of the one-off development of each bond makes the transaction costs associated with them unattractive in most situations. Further, the bonds are used to fund specific programs and not the organization as a whole. The funding of specific programs has the result of restricting the use of the funds to the program under question. Many nonprofits have a “bucket” or programs that they engage in which also need funding and support. In fact, it is the synergy in the related services provided that often results in the overall benefit created by the organization. What the organization needs is a source of unrestricted funding that can be used as the leadership deems necessary to achieve the overall organizational needs. In the following section, we build on the concept of the social impact bond and suggest a

financial instrument that can be used across a social profit industry in support of overall operations with a lower overall transaction cost: the social profit credit.

### 9.3 SOCIAL PROFIT CREDITS

Conceptually, we support the concept of the social impact bond. However, given the high transaction costs and restrictive nature of the SIB, we propose the creation of social profit credits (SPC). The SPC has all of the benefits of the SIB while reducing the costs associated with them and broadens the applicability. Like the SIB, the SPC shifts the risk from taxpayers to the market. The SPC is also focused on social issues and helps to conceptually reinforce that organizations in this segment of society are creating profit albeit social and not necessarily economic profit. Further, the SPC too has the potential to return gains to the investor beyond the investment amount.

However, unlike the SIB the development of the metrics is agreed upon by the industry segment and applicable to all organizations operating in that segment. For instance, if an organization is operating in the housing segment (e.g. emergency housing or housing for homelessness) then all organizations in the housing area will be evaluated against some agreed-upon metric. Perhaps the metric in the previous example is the ratio of those individuals who maintain permanent residence in five years to those placed. In this way, small-size organizations can “compete” with larger organizations, and this addresses the overall quality of the placement. Since the agreed-upon measure applies to all firms within the segment, there is no need to negotiate a different metric for each organization and issuance of the financial instrument thereby lowering the transaction costs. Additionally, there is no need for an intermediary to negotiate the metric. The evaluation criteria can be developed in concert with the appropriate governmental agency and the segment trade organizations.

In the case of the SPC, the intermediary serves the purpose of broker who issues, reissues, and trades in the SPC. The intermediary takes the issuance to market for sale on behalf of the social profit organization. Investors are free to buy and sell their SPC freely in the market and may make the decision to buy a small amount of the issuance or all issues. Like many other investment instruments, the SPC is issued as a “certificate” that has some value of which the organization may decide to issue one certificate with a large value or many certificates with smaller values attracting a larger pool of potential investors. Unlike stock, this SPC does not signify



ownership in the organization so much as an investment in the organization for a specified period of time.

Like the SIB, the SPC has the potential for loss. However, unlike the SIB performance is not directly refunded by the Government. In the case that the SPC exceeds expected performance, the Government does not refund the investment to the investor through repayment by taxpayers. Rather, the investor is able to write off the face value of the certificate on the individual or corporate returns and claim the gains as a fully “refundable” credit. The result is that there is either a reduction in tax obligation or refund of overpayment.

With respect to the SIB, the investor is locked into the investment until termination of the investment period. With respect to the SPC however, the investor has the opportunity to liquidate his or her holdings of the credit in the market prior to the completion date. The SPC allows for the creation of a secondary market for the credits. Additionally, the social profit organization may decide to hold onto some portion of its credits for future sale. If the organization needs to stagger or stage the receipt of income to manage cash flow or if it believes that the value of the credit in the market will increase in the future due to increases in performance, then it may decide to withhold some of it issue. This aligns the social profit organization’s interests more fully with society and the market’s interest.

There are still more differences between the SIB and the SPC. We include an example in the remainder of the paper to illustrate the difference, demonstrate proof of concept, and discuss some of the key challenges. In the following section we discuss the library system and a measure of performance. We then build a social profit credit for the industry, discuss the results, and present the potential application. Finally, we discuss the results and challenges with moving forward.

#### 9.4 THE PUBLIC LIBRARY SYSTEM IN THE UNITED STATES

Public libraries have long been considered a public and social good. Andrew Carnegie used his wealth to create the Carnegie library system with the recognition that everyone should have access to material to improve their position in society. The Little Free Library movement at [littlefreelibrary.org](http://littlefreelibrary.org) boasts more than 50,000 community-driven libraries. Nonetheless, like most social profit organizations, libraries constantly struggle with budget constraints. Further, we recognize that not all libraries live up to the same standards. Our choice to use the public library system in the United States

differs from where most applications of social impact bonds have been applied. As reported by Azemati et al. (2013), globally the application of social impact bonds have been applied to programs that deal with issues such as homelessness, unemployment, youth outcomes, and early childhood education. In this regard, our work differs from previous application but builds on the work done therein. However, our work extends the application of SIBs beyond previous applications to a national system of programs and applies the credit concept instead of a bond approach. For this study, the public library system was used to demonstrate exactly how such a framework would operate and the effects it would have on the entire industry, society, and government. While the performance measurement applied here is specific to libraries, there is no reason why the social impact credit framework could not be implemented in any social profit sector, including public schools and hospitals.

The public library system was selected for the demonstration of the SPC because there is a cast amount of credible data available for libraries and there is an existing body of discourse around performance of libraries. The Institute of Museum and Library Services has a data file available for each fiscal year that includes information about print and electronic materials, circulations, population service area, employees, budgets and expenditures, and income. Additionally, libraries inherently provide value to society. It is generally accepted that literacy rate is one indicator of the overall level of 'successes' for a society. Higher level of literacy is associated with better quality of life, better informed citizenry, increased economic development, and overall life satisfaction. Through the programs and books available through the libraries, knowledge and excitement about the world, outreach, connection, and public good are developed. Literacy and knowledge are the social profit that is created through the public libraries that can be measured through the data that is available from the IMLS.

The Government has limited fiscal means to support society through the national library system. Further, repayment to investors of the SIB may be equally difficult to achieve. The economic downturn in 2007 demonstrated how difficult it can be to fund nonprofit activities. The limited resources that the Government has to provide and the lack of donations available during periods of economic struggle make instruments like SPCs much more appealing. Potential investors for these types of instruments are looking for a way to make their investments go further; to this end, the SPC allows the investor the potential to realize a capital gain while serving a social good.

To date, however, there is no clear consensus on a single measure of library performance which may account for the lack of application of SIBs to this segment. Data is available for the books, media, circulations, employees, expenses, revenues, and programs of almost every public library in the country through the Institute of Museum and Library Services. The database includes information on total resources (electronic and hard copy books), programs offered by libraries, revenues and expenditures of the libraries, and full-time library employee information (Institute of Museum and Library Services 2013). While all of this data exist, there is not currently a shared agreement on how to aggregate the data to measure overall success. We use this existing data to demonstrate proof of concept but recognize that we are sampling data for convenience rather than collecting data to capture what a shared meaning of performance is (Lance and Cox 2000). Put another way, we are building theory from existing data rather than collecting data to test a theory. Thus stated, there are two measurements that can be used to evaluate a public library, both based off of the IMLS data.

The first index is the Hennen's American Public Library Ratings (HAPLR) which was created by Thomas Hennen, Jr. and has been published since 1999. The HAPLR weighs 15 input and output variables for each public library about its circulations, employees, visits, and materials (Scheppke 1999). One potential criticism of the HAPLR is that it over-emphasizes circulations and excludes any electronic media that can contribute to a library's social value (Lyons 2007). This index has been criticized because it does not provide enough data to decision makers to make well-informed choices (Nelson 2007). The HAPLR does make a statement about libraries, but that statement is elusive since the ratings may be too approximated, based on skewed data, wrongly interpreted, or insufficient measures of impact (Lyons and Kaske 2008).

The Library Journal Index (LJI) was created in 2008 as a response to the dissatisfaction with the HAPLR index. The LJI combines four per capita measurements: visits, circulations, program attendance, and users of electronic services (Lance and Lyons 2008). One may criticize the LJI in that it scores libraries based only on the quantity of services that a library provides with respect to its service population. However, the LJI uses only available data, makes a value judgment that all of its categories are equal, and groups and ranks the libraries based on the amount that they spend and not the population size like the HAPLR.

Recognizing the limitations of both measurement systems, we selected the HAPLR data to build an example of the potential functioning of the SPC. In the next section, we present the data collected from the HAPLR as well as modifications that we made to the calculations. In reality, once the model is adopted more broadly, a panel of informed decision makers would be assembled to fully develop the metric by which the library segment of the social profit market would be evaluated against.

## 9.5 DATA

In order to demonstrate the concept that we have promoted within this chapter, we selected the HAPLR Index as the basis for evaluation to determine social profit creation (loss) by each library relative to the overall library industry. While some might claim that the HAPLR is not the best measure of performance for libraries, it was not the intent of this work to prove the efficacy of the measure but rather to demonstrate the functionality of the financial instrument. The HAPLR Index makes use of various categories that are believed to achieve library social missions. These categories include items such as the following:

- Material expenditures which presumably is an indicator of how much of a library's budget goes to programs and mission
- Full-time staff, a number that suggest the level of service that might be provided to the patron
- The number of periodicals
- Volumes
- Visits
- Circulation
- Expenses

It would be unreasonable to assume that all libraries in all locations have similar abilities to perform on their mission. For instance, libraries in larger cities might well have greater numbers of visits not because they are better libraries but because they merely have larger populations. Hence, it is necessary to normalize the data in order to facilitate the comparison of libraries in less populated areas with libraries in more populated areas. This should hold true in any segment of the social profit industry. Therefore, we ensured that all of the data was normalized instead of using the population categories the HAPLR provides.

**Table 9.1** Variables and calculations using Institute of Museum and Library Services fields available at <https://www.ims.gov/>. Weights are from Hennen’s HAPLR calculation found at <http://haplr-index.com>

i	$x_i$	$c_i$	<i>IMLS data categories</i>
1	Material expenditures per capita	2	$\frac{PRMATEXP+ELMATEXP+OTHMATEXP}{POPULSA}$
2	FTE staff per capita per 1000	2	$\frac{TOTSTAFF}{POPULSA/1000}$
3	Periodicals per capita per 1000	1	$\frac{SUBSCRIP}{POPULSA/1000}$
4	Volumes per capita	1	$\frac{BKVOL}{POPULSA}$
5	Visits per capita	3	$\frac{VISITS}{POPULSA}$
6	Collection turnover ratio	2	$\frac{TOTCIR}{BKVOL}$
7	Circulation per FTE staff hour	2	$\frac{TOTCIR}{TOTSTAFF \times 52 \times 40}$
8	Circulation per capita	2	$\frac{TOTCIR}{POPULSA}$
9	Reference per capita	2	$\frac{REFERENC}{POPULSA}$
10	Circulation per hour	2	$\frac{TOTCIR}{HRSOPEN}$
11	Visits per hour	1	$\frac{VISITS}{HRSOPEN}$
12	Circulation per visit	1	$\frac{TOTCIR}{VISITS}$
13	Expenditures per capita	3	$\frac{TOTOPEXP}{POPULSA}$
14	Budget to materials ratio	2	$\frac{PRMATEXP+ELMATEXP+OTHMATEXP}{TOTOPEXP}$
15	Expenditure per circulation	3	$\frac{TOTCIR}{TOTOPEXP}$

Further, as might be expected, Hennen did not believe that all items contributed equally to the performance of the library and weights each item relative to its contribution to meeting the mission of the library. We pulled the final data needed to calculate the HAPLR score from the Institute of Museum and Library Services, applied the HAPLR categories and weight, and normalized them for population size. A full list of the variable, weights, and calculations is presented in Table 9.1.

The modified HAPLR score is calculated as follows:

$$modified\ HAPLR = \frac{\sum_1^{12} x_i c_i}{\sum_{13}^{15} x_i c_i};$$

where  $x_i$  refers to each category and  $c_i$  refers to the weight of that category. Functionally, this ratio is similar to a Tobin’s  $Q$  value or an asset to debt ratio. With this function, libraries that are above parity, HAPLR greater than 1, are producing social profit while libraries that are below parity are producing a social loss. Diving into the overall factors, one might be able to

determine the source of the high (poor) performance, but it is more important to note that it is the sum of the activities that the library is engaged in and the way in which it allocates its resources and capabilities that accounts for the performance. Hence, like their for-profit counterparts, it is the decision to engage in some activities at the exclusion of others and the way in which they are engaged that produces the performance that is demonstrated.

In theory, society should like to reallocate resources from those organizations that are creating a social loss to those organizations that are better performing. One might suggest that the libraries in areas with smaller populations have less of an opportunity to get funds, but the data does not suggest this. The results suggest that performance is randomly scattered with respect to population density. Likewise, one might suggest that underperforming libraries need the funding to improve services, yet we see underperforming libraries that receive a lot of funding which suggests that funding itself is not the issue. We do not mean to suggest the removal of the library that is underperforming from its community since it is providing a service that is necessary but perhaps the merger or acquisition (consolidation) of the poorer performing library with the better performer. The HAPLR is a lagging indicator and suggests how a firm has performed in the previous period. Hence, in this regard, we are making the assumption that previous performance is suggestive of future performance. The current model does not contain leading indicators that would be more suggestive of future performance which may be considered in the future.

Results suggest that the average library is performing well overall. Of the 9084 libraries in the sample, the mean is 1.48. However, the minimum value is 0.001. A value of 0.001 suggests that the library has a great deal of improvement to accomplish and may well be suited for acquisition or change in management. The library that has the 0.001 HAPLR is by no means alone; more than 3370 libraries had scores below 1.00. There are many that were at the 0.99 mark, and one may well argue that those on the cusp may be afforded the opportunity to improve themselves. Conversely, there are a great many libraries whose score is well above 1.00. The maximum score in the sample is 34.68 which suggests that this library is realizing operational efficiencies that others are not able to realize. From a utility perspective, society would want this institution to take operational control of the lower performers or find mechanisms to transfer the knowledge to the underperforming firms. Demonstrating that one does not have

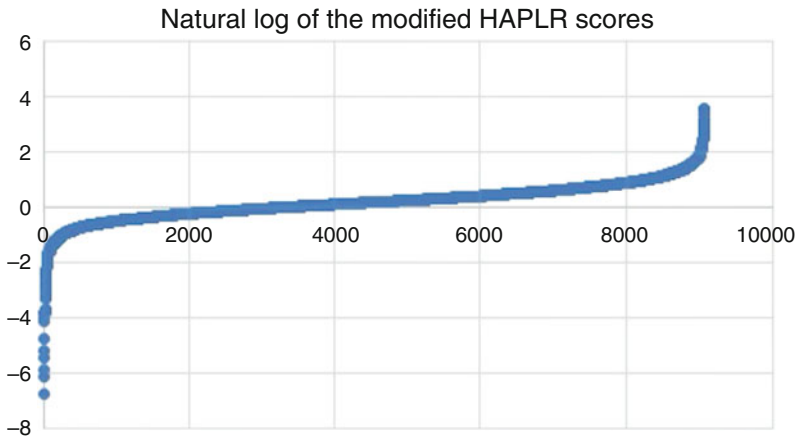
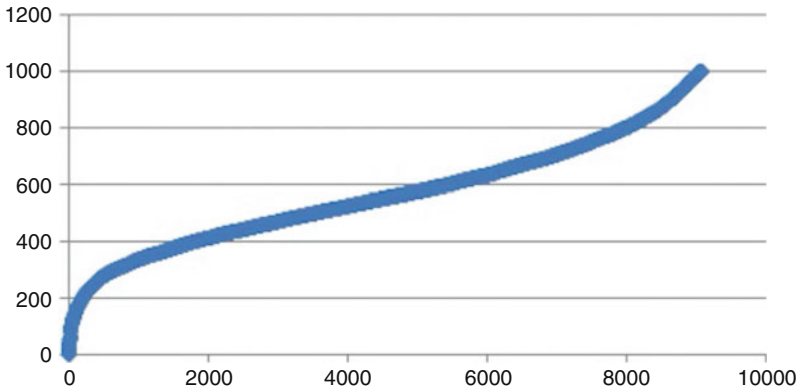


Fig. 9.2 Natural log of HAPLR

to be large to perform well, among the top 25 performers using this score is a bookmobile.

Figure 9.2 presents the results of plotting the natural log of the modified HAPLR scores. If we were to apply this model to the for-profit industry, we would be able to see where firms were realizing gains relative to others within their industry through the ability to charge higher prices, realize lower costs, or both. However, in the social profit sector, we are only able to fully monetize the cost of programs delivered; it is much more difficult to determine the price of the services provided. Hence, a “scoring” mechanism allows the industry to evaluate overall performance. In Fig. 9.2, the plots of the 9085 records of library HAPLR scores allow us to visualize the relative performance of each of the libraries. The benefit of the score is that the market is able to evaluate the libraries’ performance irrespective of size or location since the score is normalized.

Those libraries in Fig. 9.2 whose score is above “0” we would state have created a “social profit” while those libraries whose score is below “0” we would claim have created a “social loss”. This is not to say that the libraries whose score is below “0” have not served a social good. Rather, the claim that we make is that they have underperformed relative to the other libraries in the sector. This claim is that, *ceteris paribus*, society would prefer to divert the resource to those libraries that have better utilization and create greater social profit.



**Fig. 9.3** Credit price

Figure 9.3 presents the results of the price that an investor would pay for the credit in the initial market. The credit price takes into consideration a number of aspects of the stakeholders: the library performance and risk, investor expectations, the market in general, and the issuer. To determine the prices of the credit, several steps have to be taken. First, we assume that the face value of the credit is \$1000. Of course, larger and smaller face values are possible but for sake of demonstration, we selected the \$1000 instrument. An investor who pays full face value for the credit is communicating that there is no risk and expectation that the full face value will be “returned” at the end of the investment period. It may be worth issuing larger denomination credit instruments in cases where one desires a smaller number of investors for a larger project. However, one might argue that it is easier to get the community to invest in the credits if the face value is lower.

Second, each of the libraries was ranked based on each individual performance. Figure 9.3 suggests the distribution and shape of the ranking. The rankings ranged from 1 to 9085, and the larger the HAPLR score, the better the relative performance. The next step in determining the price of the credits was to calculate the undiscounted value which corresponds to the “write-off” amount. The write-off amount is the corresponding value that the investor would be able to claim on the tax return as a credit if the organization performs as expected. For purposes of this demonstration, we calculated the write-off value as follows:



$$\text{Write-Off} = (\text{Face Value}) * (\text{Rank})$$

Finally, the issue value of each certificate is determined by taking the write-off value and applying a risk-free rate plus a risk premium—functionally, this is analogous to an investor deciding to donate the money rather than investing in the instrument. We then subtract a commission fee that we assume will be imposed by the issuing agent. The final calculation is applied to each of the libraries to determine the credit:

$$\text{Social Impact Credit Value} = \left[ \frac{1000 \times \text{Percentile}}{1 + r_f + r} \times (1 + r_c) \right] + \text{Fee}$$

Where  $r_f$  is the risk-free rate,  $r$  is the risk premium, and  $r_c$  is the expected return of the credit. For illustrative purposes, we assume a fee of \$1.00 per credit, a risk premium and rate of credit return of 0.10, and the risk-free rate of 0.11. It is important to note that the issue price of the credit is a lagging value and that the actual performance of the credit is dependent upon the realized performance of the social profit institution, the library in this case. Hence, the issue value of a credit in time  $t$  is based on the performance of library  $x$  in the most recent period and reflects investor expectation of the  $x$ 's performance in some period of time in the future. While our model considered one-year credit instruments, we can envision the use of three- and five-year instruments as well. To validate the actual value of the credit amount, the issuing agency will need to verify the results. We imagine that the investor would then receive something like an Internal Revenue Service form 1099 with gains or losses.

## 9.6 DISCUSSION

We focus on discussing the implications for the library system, but the discussion could apply to any social profit segment equally. How it is applied in any particular example in the social profit industry (i.e. museums, homelessness, food, etc.) will need to be worked out. This provides an opportunity for the community and the segment to have a dialogue around what they consider to be a good “performance” measure. For instance, with respect to homelessness, the measure may be a ratio of dollars given to people housed with an inclusion of recidivism. In the case presented, the libraries receive the capital from the sale of the social impact credits minus

the commission and fees. As soon as the library receives the capital, we predict that it will feel pressure to perform so as to meet market expectations. The library will also want to perform well so as to attract additional investors to raise further capital and appreciate the value of those credits held for future sale. As a result, there could be an acceptance of a set of best practices and mergers and acquisitions in this nonprofit yet competitive sector. We anticipate that this performance-driven segment will result in a continually rising level of performance as best practices diffuse throughout the segment. Currently, there are websites such as <http://www.libsuccess.org> that maintain a compilation of ideas to make libraries successful, but there seems to be a lack of an official set of best practices. After some time, libraries may start keeping track of what they do to increase their visitors or expand their reach in the community. Other libraries, driven by competition, may decide to actively adopt the practices that more successful libraries have, and thus the total social benefits to society would increase.

Others have stated that the governance and funding of libraries tends to be political (Hennen 2005). Stated differently, the funds that a library receives are determined in part by their relationship with national and municipal consideration. How much difference library consolidation may have on overall social impact is unknown (Hennen 2005). We propose that the social impact credit framework may remove political rationalization regarding funding behind the potential mergers and acquisitions between libraries that may happen. In this regime, mergers would occur when a library sees an opportunity to grow and create more social good and not because they were forced to consolidate due to public financing that was insufficient to operate alone. Mergers of libraries and larger systems create efficiency in the library system as an Ohio librarian believes, and Ohio has some of the best performing libraries in the country (Klentzin 2010). Hence, mergers, coupled with increased funds, mean even more societal benefits; we propose that this would happen in any segment of the social profit industry similarly.

While social impact credits remove a lot of risk for the government, they create a lot of work and future regulation. Even though they do not have to worry about paying a lump sum to the investor, they do have to worry about not getting as much revenue. It only makes sense that the lower the taxable income is for an investor, the less the amount of taxes paid. However, if the government was able to raise enough funds for the library system through social impact credits, then it would not matter that the taxes were less than expected. On average, the net to the tax base should be positive since the

sum of the gains and losses may be near zero but the gains in savings from grants not provided will be greater. Hence, the net impact to society ought to result in a positive utility function. Of course, tax codes need to be meticulously revised for social impact credits to work in this way. At the end of each fiscal year, the Government would have to make sure that each library submitted their data so that the credit holders would have the information in enough time to submit their taxes. It would be a rather quick turnaround time, so trusted data collectors and auditors may have to be hired to make sure the process is completed with integrity and in a timely manner. As with corporate bonds, we recognize that this system is inherently biased toward larger organizations given the cost of issuance. However, this system does not preclude the continuance of smaller, individual donations. It is likely that there will be consolidation of smaller organizations by larger ones which may result in greater synergies as systems are established rather than individual operations.

Whether the government body in control of the social impact credits is the federal, state, or local government has yet to be determined. Could different states have different rates of returns on their credits? If an investor lived in Pennsylvania, could he or she purchase a credit for a library in Ohio or California? These are the types of questions that legislators would have to answer when creating the laws for the social impact credit.

We fully recognize that *social profit and value cannot be perfectly measured*. Although social value is not simply an abstract concept and can be generated by nonprofits through operationalizing their mission, assigning a financial value to the output of a nonprofit organization's activity is not a common practice (Quarter and Richmond 2001). If the social value is generated through operationalizing their mission, it is still hard to measure even if you know the mission of the nonprofit organization. There are so many ways that a library promotes social growth that it cannot be narrowed down into one category. This is going to be an issue for social impact credits in general. In the Riker's Island example presented at the beginning of this chapter, is measuring recidivism the best way to see the social impact and success of the program? Just because the program participants did not get sent to jail at the end of the bond duration does not mean that they will not be caught in the future or even that they are not committing crimes anymore. Until society is certain that the metric used to measure the social value of a social profit company is reasonable and/or accurate as a representation, then this framework has limited or no merit as a social-financial mechanism.

A hypothetical example with easy numbers where an investor may not be willing to invest in a social impact credit:

Assume a social impact credit for Library A is currently priced at \$100 and an investor has \$100,000 to donate to Library A. After the commission and fees, the credit is valued at \$90. So, the investor can buy 1000 social impact credits for Library A. \$90,000 of the investment goes to the library, and the remaining \$10,000 is put toward paying commission and fees.

In order for this to work, the investors have to be willing to pay the issue fees and commission and accept the possibility of a loss. If the investor was particularly philanthropic, he or she may want to just donate the \$100,000 to library for two reasons: (1) the library would get all of the money, and (2) he or she would be guaranteed to write the entire amount off as a donation.

If Library A was able to perform well enough using the \$90,000 investment, then perhaps their write-off value at the end of the year would be \$200. This means that the investor could write off \$200 for each of his 1000 credits for a grand total of \$200,000.

On the other hand, if Library A was not able to perform well, their write-off value at the end of the year may only be \$50. Unfortunately, the investor could only write off \$50 for each credit for a total of \$50,000, an amount equal to only half of the original investment. Then, they also have to pay taxes on the \$50,000 they were not able to realize as a loss.

Investors have to have faith that the library that they choose will do better than the year before. This may lead to hands-on type of environment where investors want to be able to have a say in the programs and materials the library has to offer. This would undoubtedly make the libraries better for society and promote literacy throughout the country.

In order to attract more investors, the commission may have to be set lower than intended or planned. The investors who want to participate for philanthropic reasons as well probably want as much money as possible to go toward their library.

Another possibility to make the social impact credit more attractive is to increase the risk premium. Perhaps these credits are riskier than the 10% assumed in the study. In theory, increasing the risk premium would not lower the amount of funds brought in. If an investor only has \$100,000 to donate, that is all he or she will invest. It might bring in more money because the downside risk and amount you might lose would be minimized. However, it might be a fine balance between what would sell more social

impact credits and what would lower federal and state government income too much compared to the library funding received.

An additional point to note is that due to the risk involved, the investor may not be a person but possibly a corporation who wishes to lower their high taxes. Corporations have more flexibility and could possibly be able to afford to take on the risk of not writing as much money off as they expected.

One of the more exciting consequences is that this nonprofit-based system opens itself into a financial market. This means that there is the possibility for selling options on social impact credits like calls, puts, swaps, spreads, futures, and so on. It has the potential to be a fully functioning miniature stock market where investors have the opportunity to hedge their risks, making the whole idea of a social impact credit more attractive.

A possible negative consequence is that the drive to perform to increase the modified HAPLR score could take over the quality of social impact. Libraries could just start focusing on circulating as many books as possible. However, more circulations do imply that they are providing more social worth to their service population, but it could come at a cost to their programs or electronic sources. If a score is used that does accurately measure a broad spectrum of social impact aspects, then this should theoretically be a nonissue.

## 9.7 CONCLUSION

This work was motivated by a number of issues. First, our work with nonprofits has driven us to help to change the way the industry is viewed and help others come to see the industry as created utility albeit utility not necessarily in economic terms but in social profit. Therefore, we urge others to use the terms social profit enterprises instead of nonprofit firms, the former possessing more positive connotations than the latter. Second, motivated by the frustration that we have heard from the industry over the limitations placed upon it by restricted funds, we proposed a mechanism that will allow for the development of greater amounts of non-restricted funds that a social profit firm could place in operational areas that have the potential to deliver greater social gains. Further, the mechanism proposed has the added benefit of greater alignment of “donors” economic interest with public interest through better vetting of the management of the social profit firm. Third, the instrument proposed within this chapter has the potential to incentivize the creation of a secondary market wherein the social profit firm as well as initial investors can negotiate new issues or

reselling of the social profit credit to raise additional capital and signal intention. Fourth, we presented the development of the social bond and its application in the social profit sector to demonstrate an analog of our proposed model. Finally, we illustrated how market dynamics associated with this type of instrument will contribute to continuous improvement in the sector.

In an early presentation of this work, one participant vocalized a concern that individuals motivated by profits think that market dynamics can be applied to any sector. We are not, however, naïve nor are we driven purely by market dynamics. We recognize that within any segment of the economy, there exists frictions and inefficiencies that put limits on performance; this holds true throughout. As a society, what we would like to do is ensure that overall utility is increased and all individuals experience the satisfaction appropriate to them. Money is merely a measure of overall utility. To that end, we were motivated to develop an instrument that would further reduce the friction and inefficiencies in the social profit sector through the alignment of interests and provide a better mechanism to communicate the degree to which one organization within a sector is better increasing utility than another and then reinforcing those actions contributing to the success. While this may appear on the surface as “cold capitalism” in a sector motivated by “human touch”, it is in fact driven more by the desire to see total utility increased.

Since the perceived value of money is not uniform, economists like to talk in terms of *utility*. If sustainable development is about the continued increase in overall social utility, then the social profit credit provides a mechanism to help facilitate the total number of utilities in the system. As stated previously, where for-profit models have yet to be developed to serve social needs, the social profit sector steps in to serve the social demand. The social profit credit acts as an instrument to reward those that are performing greater thereby continuing development in a way that is sustainable.

Given the proceeding, we recognize that there is still a great deal of work to be completed; this is only the start but a good one we hope. First, we recognize that we presented a model here that was built on the HAPLR by a team in isolation from the library community. While we did draw on the existing literature in the domain, the measure chosen was selected for convenience and for demonstration purposes only. Further, we modified the HAPLR measure and does not necessarily reflect consensus within the

library community. Therefore, as a starting point, the library community needs to reach a general consensus on the measure against which it will accept to develop the credits around. Second, this score is not appropriate to all sectors within the social profit industry. Each segment will need to develop its own measures; what is appropriate for organizations providing shelter is very different from a museum which is very different than healthcare. Third, there has to be the development of third-party organizations that will measure, issue, and certify the results. We are inclined to believe that auditing and financial firms are ready to step into this area but may need to be reconsidered. Finally, the Internal Revenue Service and the Securities and Exchange Commission need to be brought into the conversation to ensure public safety and proper tax codes are developed.

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