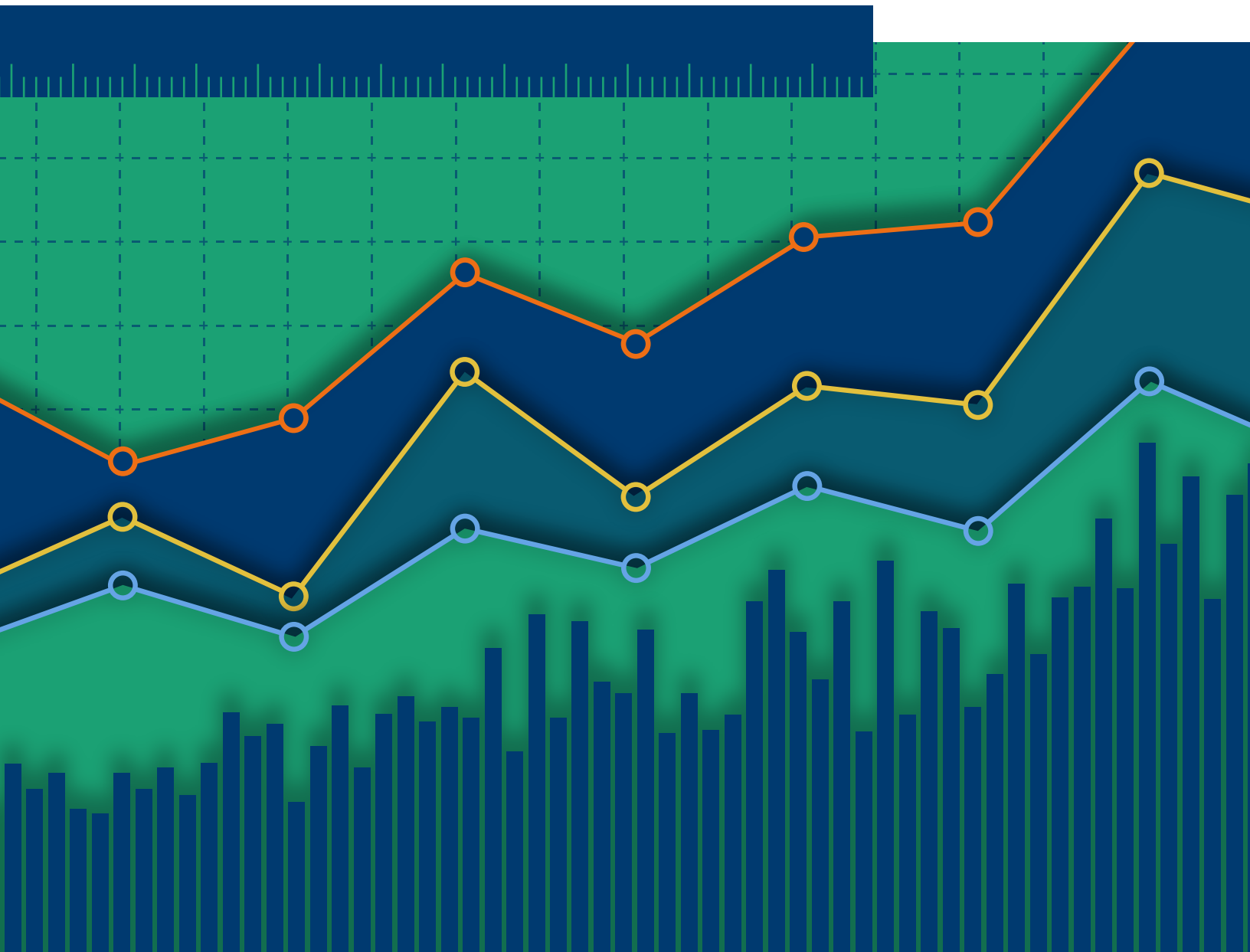


# ARE IMPACT BONDS DELIVERING OUTCOMES AND PAYING OUT RETURNS?



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## Overview

This brief, the third in a series of five analyzing various dimensions of the success of impact bonds, examines available data on outcome achievement and investor returns on completed impact bond projects across the globe. The brief also examines the critical processes in an impact bond of defining and determining outcomes, payment thresholds, and the methods for verification of outcome achievement. The findings show that for the nearly 50 completed impact bonds (out of 194 contracted to date), outcomes have in fact been achieved and investors have been repaid in all cases but two. Most impact bonds that have come to a close fall in the social welfare and employment categories, with outcomes including sustained employment, stable housing, and reunification of families. Investor returns range from around 1 percent to 20 percent of the original investment, with an average return of \$25 million. Anecdotal evidence suggests that the structure of the impact bond model, which encourages collaboration, shifts focus to outcomes, and incentivizes performance management, could effectively drive outcomes achievement. An important caveat is, however, that without a counterfactual, it is not possible to attribute outcome achievement and thereby investor returns to the impact bond model itself. Further research will be necessary to determine this with rigor.

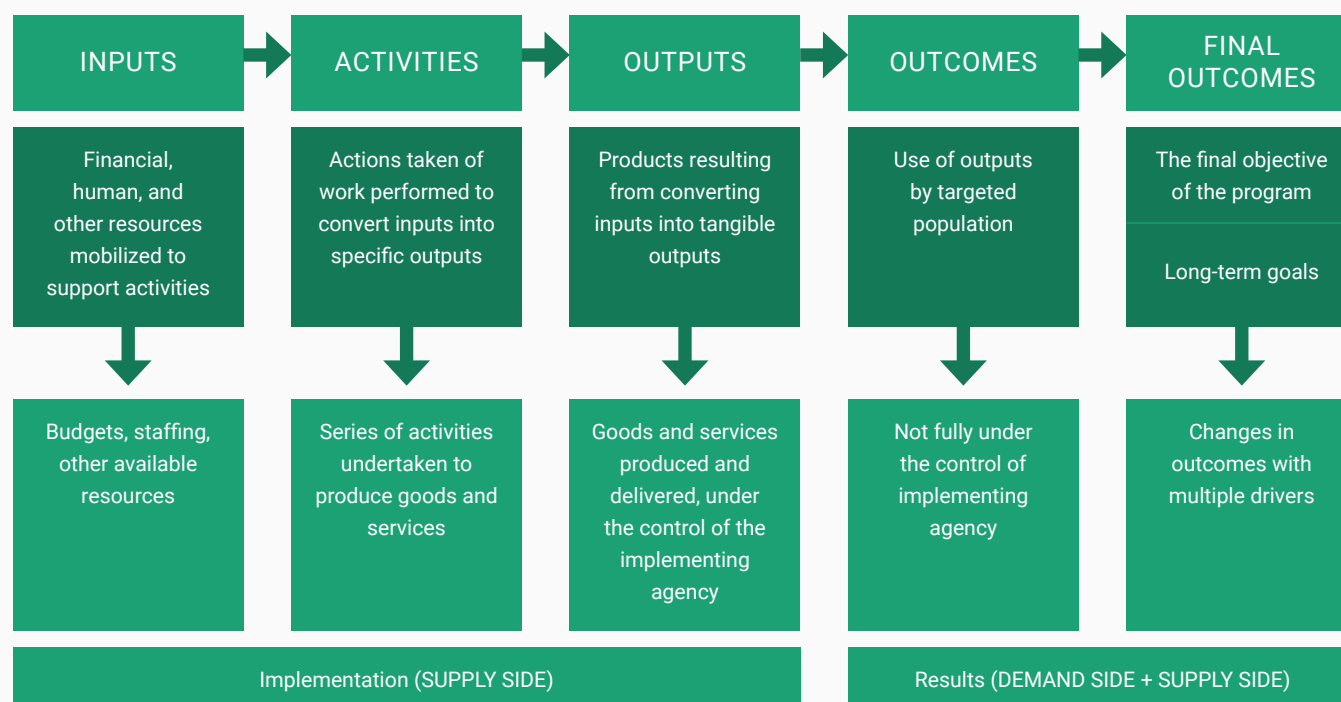
# Defining and determining outcomes

Outcomes determine the metrics for success for each contract and are central to the impact bond model. When achieved, they are a verifiable demonstration of improvements to the lives of the people who participated in the intervention, which dictate whether and how much principal and returns are paid out to investors. Even when outcomes are not achieved, the measures used to track outcomes can still offer valuable information on what works, what does not, and for whom.

Before exploring the detailed evidence on outcome achievement and investor returns, however, it is important to understand what is meant by “outcomes,” and how they differ from other forms of contractual measurement. Historically, much of social service contracting has been dominated by governments and other entities basing payments on inputs, such as labor hours and materials procurement.

More recently, various financing and contracting mechanisms, of which impact bonds are one example, have sought to shift from the input side of the results chain to the output and outcome side. Outputs track the completion of an activity while outcomes are a measure of impact on the individual. For example, an output in an education impact bond could be the number of students enrolled in a program, while an outcome may be the improved achievement scores of those students after completing the program (see Figure 1).

**Figure 1: Results chain**



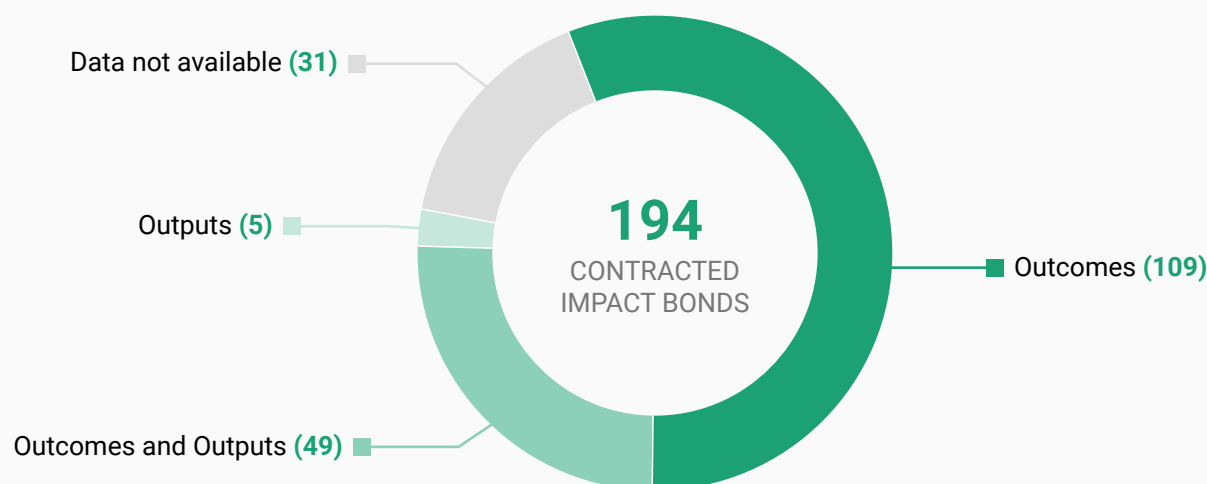
**Source:** Adapted from Gertler et al. 2016

Impact bonds are designed to focus primarily on outcomes and often provide flexibility as to the inputs, activities, and outputs in an intervention. Outcomes can be difficult to measure and control but ultimately, they represent the desired impact on individuals' well-being. However, some investors, depending on their risk and return preferences, may push for repayments to be tied (at least in part) to outputs, as opposed to the more complex outcomes, as it is easier and more straightforward to measure their achievement.

Based on data from the Brookings Global Impact Bonds Database, 109 of the 194 contracted impact bonds tie investor repayment only to outcomes. Forty-nine use a mix of outcomes and outputs, and just five use outputs only (data is not available for the remaining 31); see Figure 2. This is a considerable shift from more traditional results-based

financing, which has overwhelmingly focused on the achievement of outputs, not to mention from input-based financing mechanisms which leave little space for a focus on outcomes.

**Figure 2:** Type (s) of metrics used in impact bonds



**Source:** Brookings Global Impact Bond Database, July 2020

When metrics include a combination of outputs and outcomes, this often occurs over the life of the project, with the outputs and possibly also some outcomes representing interim measurements. For example, a supportive housing impact bond may have as its final outcome that a family is “stably housed for one year” and, for the bond’s interim outcomes, track progress toward this goal—the family is housed for three months, six months, and so on. Even before the achievement of these interim outcomes, metrics could include interim output measures such as completion of a rehabilitation program and entry into stable housing environments. Investor repayments may also be tied to proxy measures that are good predictors of longer-term impact, which can then be measured as part of broader impact on the target population (Williams, 2019).

The selection of metrics and the thresholds on which payments are based (as described in the next section), are critical to both the successful achievement of outcomes and to the credibility of the results. Some evidence shows that, in traditional performance-based contracts, these design aspects, along with poor data, have at times led to failure to achieve outcomes or to overstated impact (Lester, 2016). The impact bond structure has the potential to overcome some of these challenges, as it requires significant negotiation between the investors, service provider(s), outcome payer(s) (typically a government agency or private donor), and other impact bond partners to align interests and risk appetites across all parties. Our research has shown that, for optimal results, metrics should be meaningful (predictive of longer-term improvements in the lives of the people participating), measurable in a specific context (including resource constraints), and malleable (achievable within a reasonable time horizon) (Gustafsson-Wright et al., 2015).



## Box 1: Case studies in outcomes and repayments

### Educate Girls Development Impact Bond

The Educate Girls DIB launched in the Bhilwara district of Rajasthan in 2015 with an investment from the UBS Optimus Foundation (UBSOF). The foundation would receive its payout, including a return, if the selected service provider, Educate Girls, could increase enrollment and learning achievement for a group of 15,000 children in the Bhilwara District of Rajasthan. The repayment metrics were split between outputs and outcomes: Twenty percent of investor repayment would be based on achieving enrollment targets (an output), while the remaining 80 percent would be tied to the learning outcomes. Rajasthan state was chosen as it has particularly poor indicators for girls' education.

The interim results in both enrollment and learning of the first and second year of this impact bond proved interesting. In year one, enrollment levels were at 56 percent of the target, but learning levels were at just 27 percent of the target. This incentivized Educate Girls to make tactical shifts and adapt the program. When the second-year results were released, they demonstrated some improvement, but were not yet on track to reach learning targets, with 88 percent of the enrollment target and 50 percent of the learning target reached at

that point. They continued with their shifts in programming, emphasizing the role of their data and feedback loops to improve service provision—and outlined how they had adapted their curriculum and training to boost learning (UBS Optimus Foundation, 2018). In a communication with the Educate Girls team, they describe this broadly as a systems-shift away from an evaluation system designed around reporting, and toward one which starts with the question “what do we need to know in order to understand if we are achieving outcomes” (A. Bukhari, personal communication, July 2020). These performance management and active monitoring and evaluation processes are further detailed in the fourth brief in this series.

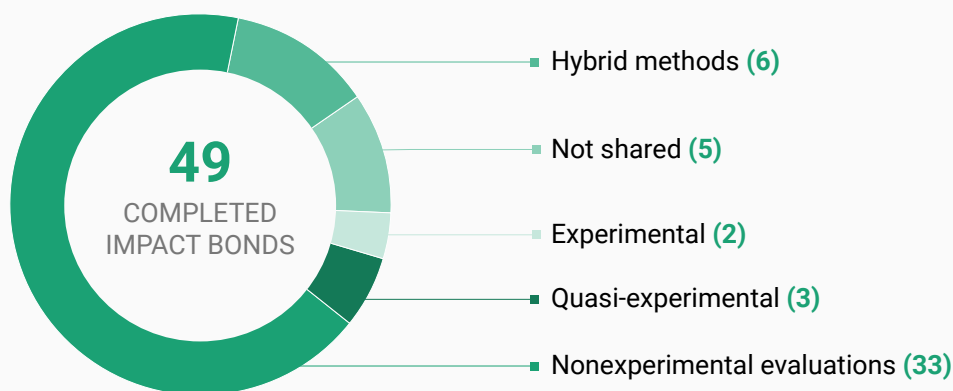
The final results showed dramatic improvements. In its third and final year, Educate Girls achieved 116 percent of the enrollment target and 160 percent of the learning target. CIFF repaid UBSOF its initial \$270,000 investment, plus a 15 percent internal rate of return. UBSOF indicated that Educate Girls, the service provider, would receive 32 percent of the internal returns, with the rest going to other UBSOF development programs (UBS Optimus Foundation & Children's Investment Fund Foundation, 2017).

## How outcomes are measured and tied to payments

In addition to metric type, an impact bond consortium must negotiate thresholds for determining when and how payments are made, and the method of outcome measurement. Payments are often made based on the results of both ongoing monitoring and periodic evaluation. Monitoring is a continuous process of tracking what is happening day-to-day within an intervention and uses the data collected to inform implementation and decision-making, while evaluation is a more formalized assessment of the extent to which an intervention has met its objectives at designated points in time (for example, at annual intervals, mid-way through the program, and/or at the end).

There are a variety of evaluation methodologies, ranging in rigor from a simple verification to a randomized control trial, with corresponding levels of attribution (i.e., the extent to which the outcomes observed can be attributed specifically to the intervention.) It is important to note that an evaluation of an intervention funded through an impact bond

**Figure 3: Evaluation design**



Source: Brookings Global Impact Bond Database, July 2020

measures the impact of the intervention itself, but does not measure whether outcomes can be attributed to the impact bond structure; answering that question would require a rigorous evaluation comparing the impact bond with the same intervention contracted through a different financing structure.

The type of verification method selected is based on several factors, including the outcome funder's goal(s), the impact bond timeline, the evaluation budget, and contextual issues related to the region or target population. Of the 49 completed impact bonds, just two used experimental evaluations,<sup>1</sup> three used quasi-experimental methods, six used hybrid methods and the vast majority (33) used nonexperimental evaluations. The remaining five did not publicly share the evaluation type.

Payments can be calculated in different ways: outputs or outcomes achieved per capita, per the percentage of the total beneficiary population, or per the distance traveled by either an individual or the aggregate participant group; see Table 1. In addition, bonus payments can be made to incentivize the targeting of marginalized groups. The choice of payment structure can have significant impact on both the actual and perceived success of an impact bond. Careful design of thresholds can avoid issues such as the targeting of the easiest to reach (known as “cherry-picking”) or getting close to the edge of a threshold but failing to cross it, leading to no outcome payments despite successful achievement of outcomes for the majority of a cohort. Across the impact bonds market, we observe this wide range of payment structures.

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<sup>1</sup> Experimental evaluations, known as randomized control trials (RCTs), are the preferred methodology for determining with as much certainty as possible how a certain kind of intervention compares to a counterfactual (either no intervention or another kind of intervention) in its ability to deliver outcomes. Quasi-experimental evaluations are considered second best in terms of attributing causality to the intervention and are appropriate if randomized assignment to the intervention is not possible. Nonexperimental evaluations compare validated current data (post-test or pre-test plus post-test) to historical data to evaluate a program where no comparison group is possible to attain or where random assignment poses political or ethical challenges.

**Table 2:** Potential payment structures in impact bonds

Payment Structure	Description	Potential bonus payments structure
Per capita	Payment made for each participant who achieved above a certain score (a test score, for example)	Additional payment made for each participant who falls into a particular (marginalized) group
Binary	Payment amount A is made if more than X% of beneficiary population achieves above a certain score (and no payment made if below X%)	Additional payment made if Y% of a particular group achieve above a certain score
Continuous	Payment amount A is made if more than X% achieve above a certain score; payment amount A + B is made if more than X + Y% percent achieve above a certain score	Additional payment made if Y% of a particular group achieve above a certain score
Distance traveled per capita	Payment made for each individual that increases his/her score by X% (compared to a pre-test for the individual or using matching with historical data)	Additional payment made if Y + beneficiaries increase their score by X%
Distance traveled of beneficiary population	Payment made for achieving X% increase in test score across a beneficiary population contrasted with to some comparison group (historical data or contemporaneous control group)	Additional payment(s) made for greater distance traveled

In the Utah High Quality Preschool Pay for Success project, for instance, the per capita model was used for repayments: A payment was made to the investor for each student who did not require unnecessary special education, based on avoided costs to the state (Urban Institute, n.d.).

The world's first social impact bond, in Peterborough prison in the U.K., used a binary payment structure. Enrollment in the intervention services was voluntary. However, each full cohort represented 1,000 men released who met the inclusion criteria—regardless if they engaged with the services—in order to prevent service providers from “cherry picking” those most open to working with the programming services (as described in the second brief in this series). Evaluators then used this group to develop a matched control group, drawn from similar individuals released from other prisons nationally (Disley et al., 2011). Repayment to investors was based on improvements in the recidivism rate of the full cohort of 1,000 men as compared to the control group (Disley et al., 2015).

Another impact bond, the Essential Skills Social Finance (ESSF) project in Canada, is tied to distance traveled: The target outcome was based on the median participant skills gained as compared to a historical baseline, and the percentage of participants achieving a “points” gain of 25 points or more on an international standard scale. Investors were to be repaid principal and interest according to a sliding scale, with a maximum payout of principal plus a 15 percent return if the highest targets were not only achieved but sustained to a minimum level at a follow-up evaluation with participants twelve months after completing the program. In this instance, as with other impact bonds, the addition of returns or interest on top of principal was also linked to achieving outcomes (Brennan et al., 2015).

## Box 2: Case studies in outcomes and repayments

### Peterborough / ONE Services

The world's first impact bond launched in the U.K. in 2010, with evaluation results released in 2017. Because it was the first, the lessons are instructional for current and future impact bonds.

The Peterborough impact bond targeted three cohorts of 1,000 individuals with short sentences at HM Prison Peterborough with a package of intensive support services (called ONE Service), including housing assistance, drug and alcohol treatment, employment assistance, parenting assistance, and mental health support. A reduction in recidivism of 7.5 percent of the program participants would trigger repayment of the £5 million investment to the 17 investors—mainly trusts and foundations—convened by Social Finance UK (Social Finance, n.d.).

According to the evaluation results, the impact bond exceeded its outcome targets:

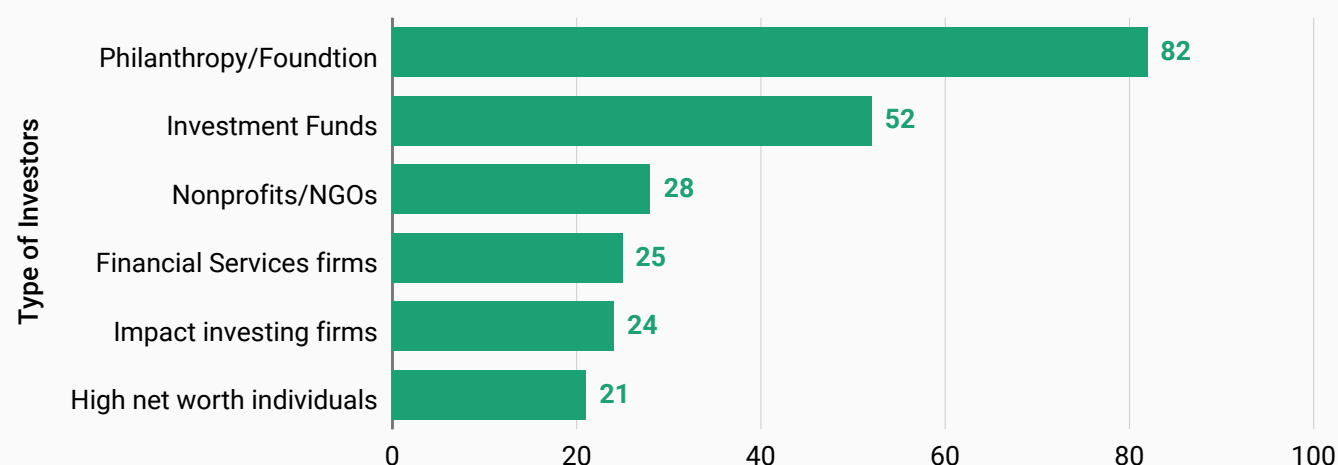
Recidivism was reduced by 9 percent of the 2,000 program participants as compared to a control group. The investors were repaid their initial investment by the Ministry of Justice, in addition to a return equivalent to an estimated 3 percent per year for the period of the investment (Ainsworth, 2017).

Crucially, plans for the third tranche of offenders were abandoned when the U.K.'s Ministry of Justice rolled out a new program called Transforming Rehabilitation, which reformed probation practices for all people serving short-term prison sentences, and thereby made it impossible to create a control group (Social Finance, 2017). Impact bonds with longer time horizons, such as this Peterborough bond that was intended to last for seven years, may encounter similar challenges—whether by a change in government approach or by private group or activist action—as other solutions are introduced.

# Investors and the potential return on investment

Investors in impact bonds include firms, funds, and individuals affiliated with the private and philanthropic sectors. Most impact bonds have more than one investor. Eighty-two impact bonds have at least one philanthropy or foundation as an investor; other common investor types include investment funds (52 impact bonds), nonprofits/NGOs (28), financial services firms (25), impact investing firms (24), and high net worth individuals (21).

**Figure 4: Types of investors**



**Source:** Brookings Global Impact Bond Database, July 2020

With an average upfront capital investment of USD3.16 million, the returns depend not only on the achievement of outcomes, but also how much each investor invests and the structure of the investment vis-à-vis other investors. Across all contracted impact bonds, the possible returns to an investor range from 1.3 percent to 20 percent of the original investment with a USD25 million average return.<sup>2</sup> Losses are also a possibility.

<sup>2</sup> Financial information based on available data. Note: variation in how impact bonds report returns makes comparison difficult.

If outcomes are not achieved, the investor generally stands to lose not only the potential returns, but also the principal capital, though some impact bonds offer full or partial principal guarantees for their investors to blunt the potential loss. Possible losses are dependent on the initial investment and range from USD100,000 to more than USD9 million.

## Box 3: Case studies in outcomes and repayments

### NYC ABLE

One impact bond that famously did not lead to an investor repayment was the Adolescent Behavioral Learning Experience (ABLE) program for youth who are incarcerated. The impact bond aimed to reduce recidivism among adolescents at Rikers Island prison in New York City through a cognitive behavioral therapy program that had shown promising results in other settings.

Launched in 2012, the impact bond targeted adolescent men detained at Rikers and defined the outcome metric in straightforward terms: a decrease in the readmission rate of participants—based on the number of days incarcerated—following their initial release from Rikers. A reduction of 11 percent would have meant that the investor, Goldman Sachs' Urban Investment Group, received a repayment plus a return from the city of New York.

However, in addition to this central outcome metric, the program also collected interim

proxy measures, including participants' engagement with the cognitive behavioral therapy intervention. The program evaluation by the Vera Institute of Justice found that while 44 percent of the adolescents who participated in the program reached key, predetermined psycho-social milestones, the rate of recidivism was the same as in the historical comparison cohort (Parsons et al., 2016 and Rudd et al., 2013). The impact bond was discontinued in 2015 after the three guaranteed years of implementation, but two years before its expected conclusion.

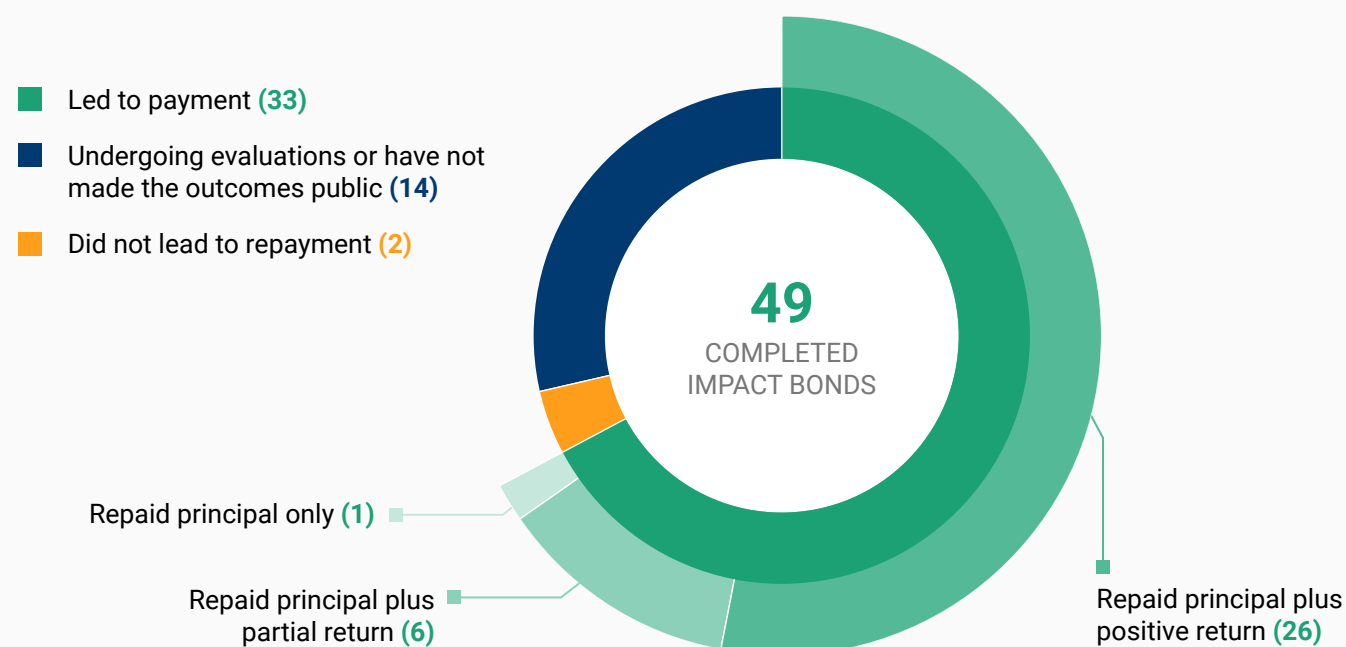
Because the outcome was not achieved, Goldman Sachs did not have its \$7.2 million principal investment repaid by the city of New York. However, Bloomberg Philanthropies had guaranteed \$6 million of the loan, meaning that Goldman Sachs lost just \$1.2 million. On the whole, loan guarantees are not very common across the impact bonds market.



## Impact bonds that have reported outcomes and repaid investors<sup>3</sup>

Forty-nine impact bonds worldwide have reached the end of the contract period. Of those, 33 achieved outcomes that led to repayment, including 26 that repaid the principal plus a positive return, six that repaid principal plus a partial return, and one that repaid principal only. The two remaining impact bonds did not achieve outcomes or repay their investors—the NYC ABLE Project for Incarcerated Youth, detailed as a case study in this brief, and Austria’s impact bond for economic and social empowerment for women affected by violence. Another 14 of the 49 completed impact bonds are still undergoing outcome evaluations or have not yet made their outcomes public.

**Figure 5: Impact bond repayment**



**Source:** Brookings Global Impact Bond Database, July 2020

<sup>3</sup> This section is based on available, verified data.

In addition, there are another 23 impact bonds currently in progress which have released some data on interim outcomes. Table 2 summarizes the outcome payments made to date for both completed and in-progress impact bonds, again sorted by sector, with the USD161 million in repayments for employment impact bonds nearly double the repayments for social welfare impact bonds. The repayments also show the relative value placed on different outcomes: Though there are only three impact bonds in health, their total repayments are nearly equal to the total paid across all 24 social welfare impact bonds. To date, approximately USD463 million has been repaid to investors based on interim and final outcomes achieved. As with the outcomes achieved to date, impact bonds within the same sector will have different levels of initial investment and repayments not necessarily tied to the same interim or final outcomes, making comparisons difficult.

**Table 2: Payments made to date across sectors for completed and in-progress impact bonds**

Sector	# in-progress	# complete	Payments made to date
Employment	9	9	\$161 million
Social welfare	8	16	\$88.8 million
Health	2	1	\$84.5 million
Education	3	8	\$64.3 million
Criminal justice	2	2	\$64.1 million
Environment & agriculture	0	1	\$110,000

**Source:** Brookings Global Impact Bond Database, July 2020

Tables 3 and 4 capture the outcome achievement in impact bonds to date. Completed impact bonds, categorized by their outcome achievement across sectors, are presented in Table 3, showing that the majority of completed impact bonds are in the social welfare and employment sectors, with outcomes tied to family preservation, housing stability, employment, and enrollment in school or job training.

**Table 3: Outcome achievement across sectors for completed impact bonds**

Sector	# of completed impact bonds	Examples of Outcomes achieved
Employment	9	2,586 people employed
Social welfare	16	1,159 people employed or in school/training, 641 families preserved or reunited, and 1,737 people stably housed
Health	1	3,216 people screened for cancer
Education	8	955 people employed or in school/training, 790 students qualified for entry-level employment, 5,037 girls enrolled in school, and 1,605 reading at or above the national average
Criminal justice	2	252 people avoided a return to jail
Environment & agriculture	1	Met 100% of goal for established coffee plots with leaf rust-resistant varieties

**Source:** Brookings Global Impact Bond Database, July 2020

Table 4 presents the same data for impact bonds currently in progress. As with completed impact bonds, the majority are again in employment and social welfare sectors, and the achieved outcomes include leaving government-supported care programs and reducing uptake of public benefits, as well as increases in employment and stable housing.

**Table 4:** Outcome achievement to date across sector for impact bonds in-progress

Sector	# of impact bonds in-progress	Examples of Outcomes achieved
Employment	9	1,050 youth employed
Social welfare	8	300 students left government care, 898 people were stably housed, and 130 people reduced public benefits
Health	2	1,610 people improved their vision
Education	3	11 more on-time graduates
Criminal justice	2	405 people avoided a return to jail

**Source:** Brookings Global Impact Bond Database, July 2020

For both of the above tables, a non-exhaustive sample of the outcomes achieved to date are included to illustrate some of the “real world” impacts of the impact bonds. It is important to note that even within the same sector, impact bonds do not necessarily define, track, or report their outcomes in the same way. The impact bonds in the education sector have outcomes ranging from enrollment to classroom performance to successful transitions to employment.

## Attribution and sustainability

A few critical issues remain unanswered with respect to outcome achievement. First, it is important to note that, given the evidence available at present, it is not possible to attribute the achievement of outcomes in the completed impact bonds thus far to the impact bond mechanism itself. In other words, it can be said that outcomes were achieved (or not) in these impact bonds, but not that this was the result of the impact bond per se. It is not even possible to attribute the majority of the outcomes achieved to the social intervention, as very few projects have conducted rigorous impact evaluations of the interventions. Also, little is known about the extent to which metric thresholds or outcome prices established in impact bonds were the appropriate ones. It is possible that the thresholds set were too low in some cases and perhaps even too high in others. Low thresholds might result in the easy achievement of outcomes and substantially lower risk for investors but perhaps suboptimal social outcomes. Thresholds that are set too high could lead to perverse incentives such as cherry picking unless mitigating design aspects are in place. This and the failure to achieve outcomes could also lead to substantial reputational risk for service providers and outcome funders as well as perhaps put at risk the potential value-add of the impact bond mechanism to the social sector.

A further unanswered question is whether outcomes have been sustained beyond the length of the impact bond, since few evaluations follow up with beneficiaries after impact bond completion. There has also been no measurement to date on the effect of impact bonds on outcome achievement for future beneficiary cohorts. A final consideration of sustainability is the effect of impact bonds on the broader ecosystem of social services delivery and financing which could potentially lead to greater outcome achievement for individuals in the future. The next brief in the series explores these ecosystem effects including whether impact bonds build a culture of monitoring and evaluation, drive performance management, foster innovation in delivery, crowd-in private capital, reduce government risk, and incentivize collaboration.

**Box 4:**

## Implications of COVID-19 on impact bond outcomes and investor payment

In early 2020, the virus causing COVID-19 began to spread across the globe, leading governments to put in place measures to ensure the health and well-being of the populations they serve. While, at the time of this publication, the long-term impacts of the pandemic on the economy are only being modeled, the short-term effects are already devastating. Mandated stay-at-home orders and business closures have led to unprecedented disruptions in economic activity and dramatic shifts in the delivery of critical social services around the world.

Brookings has conducted some initial analysis<sup>4</sup> on the effects of the pandemic on the services delivered through impact bonds, as well as impacts of the crisis on various components of the impact bond model itself. Capturing learnings for the management of ongoing impact bonds (144 projects serving 1.2 million individuals in the first quarter of 2020), as well as for the design of future impact bonds, will be critical to ensure effective and efficient service delivery in the future.

Evidence shows that impact bonds are potentially more flexible than input-based contracts in terms of adapting service delivery but at the same time, could be more rigid given the contractual structure and established outcome metrics. An important early learning from the COVID-19 crisis is to build in contingencies for shocks in impact bond contracts from the start. While allowing for some adaptation in programming, remaining tied to outcome thresholds and metrics presents challenges when social sectors are upended, and challenges magnified. The Inclusive Youth Employment Pay for Performance Platform SIB, for example, decided to close as it was not possible to continue with the existing structure given the dramatic changes in the world. There are also challenges in a time of shock for measurement and evaluation; the Village Enterprise DIB, for example, was collecting data for their ECT evaluation when the pandemic struck, upending their intended processes. The coming months will test the flexibility and adaptation of the impact bond model.

<sup>4</sup> <https://www.brookings.edu/research/what-happens-in-an-outcome-based-financing-model-when-a-major-crisis-hits/>

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