Cameroon Cataract Bond:

A case study produced as part of the Cameroon Cataract Bond Evaluation

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Africa Eye Foundation Cameroon · Conrad N. Hilton Foundation · The Fred Hollows Foundation · Foundation Netri · DFC U.S. International Development Finance Corporation · Sightsavers · Volta Values & Investing

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1. Summary

This case study report covers the Cameroon Cataract Bond, a pay-for-performance loan - also known as a development impact bond (DIB) - designed to provide funding to prevent blindness through the provision of cataract surgeries. The bond aims to provide eye surgeries at a low cost for middle income patients and no cost for low income patients, while enabling the hospital to reach self-sufficiency in five years. The bond also aims to contribute to helping the hospital become a regional training institute for the Central African Economic and Monetary Community (CEMAC) region after the bond.

The DIB is led by the Cataract Bond Design Coalition, which is formed of The Fred Hollows Foundation, the Conrad N. Hilton Foundation, Sightsavers, the African Eye Foundation (AEF) and Volta Capital. The outcome funders were interested in getting involved in being early adopters of DIBs and wanted to pave a new market in innovative financing. The Cameroon Cataract Bond launched in March 2018 and will conclude in January 2023. $2 million of funding from US International Development Finance Corporation (DFC)[1], formerly OPIC, and the Netri Foundation to top-up $10 million already raised had been committed to fund the operations of the Magrabi ICO Cameroon Eye Institute (MICEI). MICEI is the AEF's flagship project and the first subspecialty eye care hospital and training institute in Central Africa to provide cataract surgery to treat avoidable blindness. As a part of the DIB model, the interest on loan repayments is linked to hospital performance, with the outcome payers paying a lower interest rate if performance is below expected. Cameroon was selected by AEF as the country for the intervention because the number of avoidable blindness cases in the country is set to double by 2020 if there is no systemic change in the service delivery strategy of eye care intervention.

Cameroon Cataract Bond summary

TIME PERIOD:
March 2018 – March 2023

THEMATIC AREA:
Sight restoring cataract surgery

COUNTRIES:
Cameroon

TARGET POPULATION:
Low-income patients and middle-income patients with cataracts in urban and rural areas in Cameroon

OUTCOME METRIC:

1. Number of cataract surgeries
2. Quality of surgeries with at least 50% of surgeries achieving a good outcome
3. Financial sustainability

Bonus payment: Equity target with at least 40% of surgeries provided to individuals belonging to the bottom two wealth quintiles of the population in Cameroon

LOAN VALUE:
$2 million

SERVICE PROVIDER:
Magrabi ICO Cameroon Eye Institute (MICEI)

OUTCOME FUNDERS:
The Fred Hollows Foundation

Conrad N. Hilton Foundation

Sightsavers

INVESTORS:
US International Development Finance Corporation (DFC) (formerly OPIC) Netri Foundation

BOND MANAGER:
Volta Capital

INDEPENDENT VERIFICATION:
AEDES

1 Overseas Private Investment Corporation (OPIC)

1.1 About this report

The case study report was commissioned by the Cataract Bond Design Coalition and was written by Ecorys. It covers the findings from our first and second research waves. The case study primarily focuses on the use of the impact bond mechanism and to examine the 'DIB effect', i.e. how the design, delivery, performance, implementation and impact of the intervention has been affected because it has been funded through a DIB.

DIBs are understood as one type of payments by results (PbR), or a type of funding whereby payments are made after the achievement of pre-agreed outcomes (FCDO, 2014). In a standard PbR contract, there are four actors: i) an outcome funder who funds the outcomes; ii) the service provider delivering the intervention; iii) the target population, benefiting from the services; and iv) a validating agency that validates the results on which the payments are based. DIBs involve two additional agents: i) the investor(s), which provide(s) the working capital to deliver the intervention and may be able to make a return on their investment, calibrated to the level of outcome achieved; and (sometimes) ii) the intermediary, which can assist with the development and commercialisation of the DIB, and/or with the monitoring and support of the delivery of the intervention. DIBs are typically implemented in developing countries, where the outcome funder is a donor agency or foundation often operating in a different country.

The report compiles the findings from the set-up phase of the DIB and has been updated to include findings from the implementation phase. The first wave of research was conducted between October and November 2018 and the second wave was conducted between April and June 2020 and involved consultations with the main stakeholders involved in the design and implementation of the DIB. A full list of consultations is set out at the end of this case study. The case study captures early successes, the DIB effect and lessons learnt during the design and implementation phases. The report will be updated in subsequent years to provide an account of the DIB's progress.

This in-depth review is a series being produced by Ecorys for this evaluation and the FCDO DIBs pilot programme evaluation, commissioned by the Foreign, Commonwealth and Development Office (FCDO) and undertaken by Ecorys. More information about the FCDO DIBs pilot programme evaluation, including other in-depth reviews, can be found at: https://golab.bsg.ox.ac.uk/knowledge-bank/resources/ecorys-evaluation-dfid-dibs/

1.2 Summary of learning from the set-up phase

The Cameroon Cataract Bond was the culmination of five years' work, instigated by The Fred Hollows Foundation but supported by others, to bring new finance into the eye care sector and shift the payment challenge away from outcomes funders. The outcome funders were interested in being involved as early adopters of DIBs and wanted to pave a new market in innovative financing. By sharing the financial risk between outcomes funders, service providers and an investor, it has enabled the mechanism to be tested to crowd in new finance to the sector and geography in the future. Although it attracted private foundation finance into the sector but not commercial finance, stakeholders are hopeful that the project, and the investment from a development finance intermediary, would 'prove the concept' and encourage future impact investing with commercial capital.

In achieving this aim, however, partners had to make compromises, and for many stakeholders the final design of the project was not how they envisaged it at the outset. In particular, some stakeholders were disappointed in the changes in the investment terms, from a 50% capital guarantee to a 100% guarantee, from an increase in interest rate from 5% to 8% and the service provider taking on a reasonable amount of financial risk. These compromises made some of the stakeholders hesitant of the value of the DIB.

In the set up phase, we found that the key factors that enabled the successful development of the DIB were the strong relationship between outcome funders and service provider and their shared commitment and understanding of the problem, combined with the clarity of the outcome measurement and its linkage to the objective of the intervention. However, the DIB faced several challenges during its set up phase. The difficulty in finding investors

and the complexity of the contracting made the set-up phase longer and more costly than anticipated. In addition to this, the bond coalition struggled to keep all stakeholders involved throughout the process and faced difficulties in ensuring the buy-in of certain stakeholders due to the complexity of the model.

We identified some key advantages of using a DIB. First, the risk sharing between outcome funders and service provider successfully brought impact investing into the eye care sector in Sub-Saharan Africa. Secondly, the DIB allowed the stakeholders involved to collaborate in a new capacity by creating common goals and designing targets together. Thirdly, the DIB improved the accountability and design of impact measurement and incorporated targets with payments attached to them such as sustainability and equity. Finally, the selection of outcome metrics brought innovation to the intervention by strengthening its design and focus of the outreach programme to achieve the equity target.

In terms of disadvantages of using the DIB, stakeholders cited that it was complex to design and expensive to set up. The key factors that contributed to increasing the cost of the set-up phase were the difficulty in finding suitable investors and the complexity of the contracting. However, some stakeholders did argue that the complexity and cost of the set up may be lower in future DIBs given that all outcome funders involved were developing a DIB for the first time.

1.3 Summary of learning from the implementation phase

1.3.1 Update on delivery

The Cameroon Cataract Bond reached the end of year 2, out of 5 years, in February 2020. Up to this point, the bond had performed well and was on track to achieve targets set for year 2 including volume and quality of surgeries, except for the equity target. The Bond had faced challenges in the design, measurement, monitoring and verification of the equity target and partners have been helping the hospital to address these challenges.

The Covid-19 pandemic posed challenges to the hospital, which had operated at reduced capacity in Spring 2020. At the time of research (April to June 2020 the Cameroon Cataract Bond was exploring the impact of Covid-19 on the likelihood of targets being achieved. When this research was conducted, the hospital was only open for emergency surgeries. While the hospital was expected to return to the provision of cataract surgeries, following the implementation of social distancing rules, the capacity of the hospital is expected to be reduced for a longer period of time which will affect the volume of surgeries the hospital can conduct.

1.3.2 DIB effects observed

In terms of what the DIB mechanism has achieved, by June 2020 we had observed a wide range of the claimed advantages of a DIB in the execution of the Cameroon Cataract Bond. However, most of the effects observed were not exclusively due to the DIB structure. A key contributing factor to this was the fact that the DIB was only a minority part of the funding of hospital and, as such, results achieved and changes in the delivery cannot solely be attributed to the DIB.

Overall, we observed an increased focus on outcomes and stronger performance management systems. In addition to this the service provider was flexible and adapted its delivery model when needed to achieve more outcomes. Finally, we also found that the focus on outcomes and the payment milestones attached to them contributed to more outcomes being achieved contributing to more effective and efficient services because the service provider has had more accurate performance data to adapt and deliver high quality cataract surgeries. Although these results could likely have been achieved without the DIB structure, stakeholders considered that the DIB had acted as a catalyst for change and contributed to some of these effects taking place faster by adding structure and discipline to delivery. In our research, we found that some of the claimed DIB effects were also observed in a comparator hospital funded

through a grant which receives technical support from Aravind, the same advisor as the DIB. This indicates that while these effects can also be achieved through a grant with the right technical support, the DIB structure can contribute to providing focus to catalyse change.

1.3.3 Lessons learnt

Overall, DIB stakeholders continued to see the DIB as a learning exercise and the opportunity to test something experimental. The governance structure of the DIB has been a part of this learning for all stakeholders as they continue to learn how to operate within a DIB.

In addition to this, two years into the execution of the DIB, stakeholders involved in the design were reflecting on the choices made in the design phase and were starting to draw additional lessons from the structuring of the DIB. In this sense, outcome funders reflected on the level of risk that a DIB requires and consider that they should have negotiated the terms further with investors to ensure there was a greater level of/more equal risk sharing.

Stakeholders also gathered significant learning around the design of outcome metrics. Specifically, outcome funders and the bond manager highlighted a need to ensure that outcome metrics and the data needed for verification is thought through during the design phase to avoid challenges during execution. This related to the challenges that the DIB has faced in relation to the measurement and monitoring of its equity target using the EquityTool. Furthermore, outcome funders also highlighted the importance to understand the trade-offs and incentives that result from the combination of outcome metrics such as financial sustainability and equity and the need to find the right balance to ensure the service provider is incentivised to deliver results against both targets.

Finally, all stakeholders agreed on the importance of sustained senior buy in, both during design and execution, to resolve bottlenecks, learn from the mechanism and to allow for the DIB to fail if targets are not achieved.

In terms of the lessons learnt relevant to the execution of the DIB, there are two key lessons learnt relevant to the value add of the impact bond mechanism. Firstly, stakeholders considered that the mix of expertise that the stakeholders involved in the DIB bring is a key value add of the DIB structure. Stakeholders acknowledged that the hospital could have been funded and achieved results without the DIB, but the involvement of different stakeholders such as the investors and bond manager brought different skills to the table that would not have been there if the hospital had received grant funding. These additional stakeholders brought rigour and commercial expertise that contributed to setting up the hospital for success.

Secondly, even if results could have been achieved without a DIB, the DIB mechanism is considered to have catalysed change in a way that would have taken longer or have been less effective with grant funding. The DIB fostered a mindset for experimentation and testing that helped drive changes and keep stakeholders aligned. Moreover, the support and supervision provided by the DIB Steering Committee, as well as the better performance management that the DIB has contributed to, have helped encourage the service provider to be proactive and adaptive.

Finally, DIB stakeholders reflected on what success meant for them in terms of their expectations of the DIB. Most stakeholders found that, although they expected the DIB to pave a new market in innovative financing to crowd in additional financing to the eye sector, the improvements the DIB has achieved on performance management and more efficient use of resources are the key success of the mechanism at this stage. Most stakeholders were aware that this is a claimed advantage of DIBs but did not expect the extent to which this would be a key advantage. All in all, the definition of success can change during the lifetime of a DIB and contributes to the learning of stakeholders involved.

2. Information on the intervention and DIB model

2.1 The Magrabi ICO Cameroon Eye Institute

> The Cameroon Cataract Bond funds cataract-related equipment, consumables, and activities within the intervention programme at the Magrabi ICO Cameroon Eye Institute (MICEI).

MICEI was created by the Africa Eye Foundation as a not-for profit organisation. The Africa Eye Foundation was set up by the Magrabi Foundation (a non-profit foundation organised in Egypt), the International Council of Ophthalmology (ICO), and the That Every Life May Count Foundation (a non-profit foundation organised in Switzerland). The aim was three-fold: to advocate for and promote better eyesight; to construct and operate a network of integrated self-sustainable eye hospitals across Sub-Saharan Africa; and to train and equip African eye care experts. MICEI is their flagship project and the first subspecialty eye care hospital and training institute in Central Africa.

The pay-for-performance loan contributes to the funding of the following activities:

- Comprehensive, high-quality and affordable eye care procedures, including outreach and awareness building, diagnosis, transport to hospital and follow-up care for surgery patients
- Certified training (through the University of Yaoundé) to grow the next generation of African eye care experts.

MICEI has adopted the Aravind model of cross-subsidisation pricing, high service volume, and revenue diversification strategies to provide quality cataract treatment services to the poor at low or no cost in Cameroon. The Aravind model is a social enterprise model of eye care first popularized in India by the Aravind Eye Care System that has had limited implementation in Sub-Saharan Africa due to lack of flexible capital in less-densely populated and lower income areas. The model has been adopted by the Magrabi Foundation, in Egypt, and has proven to be a successful model of financing low-cost cataract surgeries.

In order to operationalise the cross-subsidisation pricing model, MICEI has two target groups: low-income patients and middle-income patients. Between 30% and 40% of the patients are expected to be middle-income patients from urban areas, who will pay between $100 and $545 and contribute to the financial sustainability of the hospital. The funds generated will enable MICEI to provide cataract surgery for free or at a subsidised price for patients from urban and rural areas that are unable to pay for transport to the hospital and for the treatment itself1. These patients will be reached through the outreach programme including education campaigns, community visits, radio outtakes and awareness raising.

2.2 The DIB

The Africa Eye Foundation secured funding from Dr. Akef El-Maghraby (anchor donor and Chairman of the AEF) as well as leading, global health and disability NGOs, for the completion of the hospital (MICEI), which began in 2012. The hospital required an additional $2 million of funding to operationalise the hospital after construction was completed in 2016, which was financed through the DIB. The DIB is led by the Cataract Bond Design Coalition, which is formed of The Fred Hollows Foundation, the Conrad N. Hilton Foundation, Sightsavers, the African Eye Foundation and Volta Capital. The coalition is a partnership comprised of leading non-profit eye health funders, private sector advisors and the service provider.

The Cameroon Cataract Bond provides $2 million in financial support for MICEI's operational costs, including the funding of cataract-related equipment, consumables, and activities. The Conrad N. Hilton Foundation serves as the bond's primary outcome funder and covers approximately 80% of what is owed to the investors if the intervention succeeds. The Fred Hollows Foundation and Sightsavers—organisations focused on preventing and treating avoidable blindness—cover roughly 10% each.

There are four outcome metrics that payments are linked to:

PERFORMANCE TARGETS

1. **NUMBER OF CATARACT SURGERIES**: 18,000 over 5 years (7,000 by year 3) with a 20% buffer in Y3 and a 10% buffer in Y5 to provide flexibility in the event of unforeseen shocks.
2. **QUALITY OUTCOME:** At least 50% of cataract surgeries achieve a 'good' outcome according to WHO guidelines for visual acuity of cataracts patients post-surgery
3. **FINANCIAL SUSTAINABILITY:** Positive EBITDA (earnings before interest, tax, depreciation and amortisation) at the end of 5 years.

IMPACT TARGET

4. **EQUITY TARGET:** At least 40% of surgeries provided to individuals belonging to the bottom two wealth quintiles of the population in Cameroon by the end of year 5.

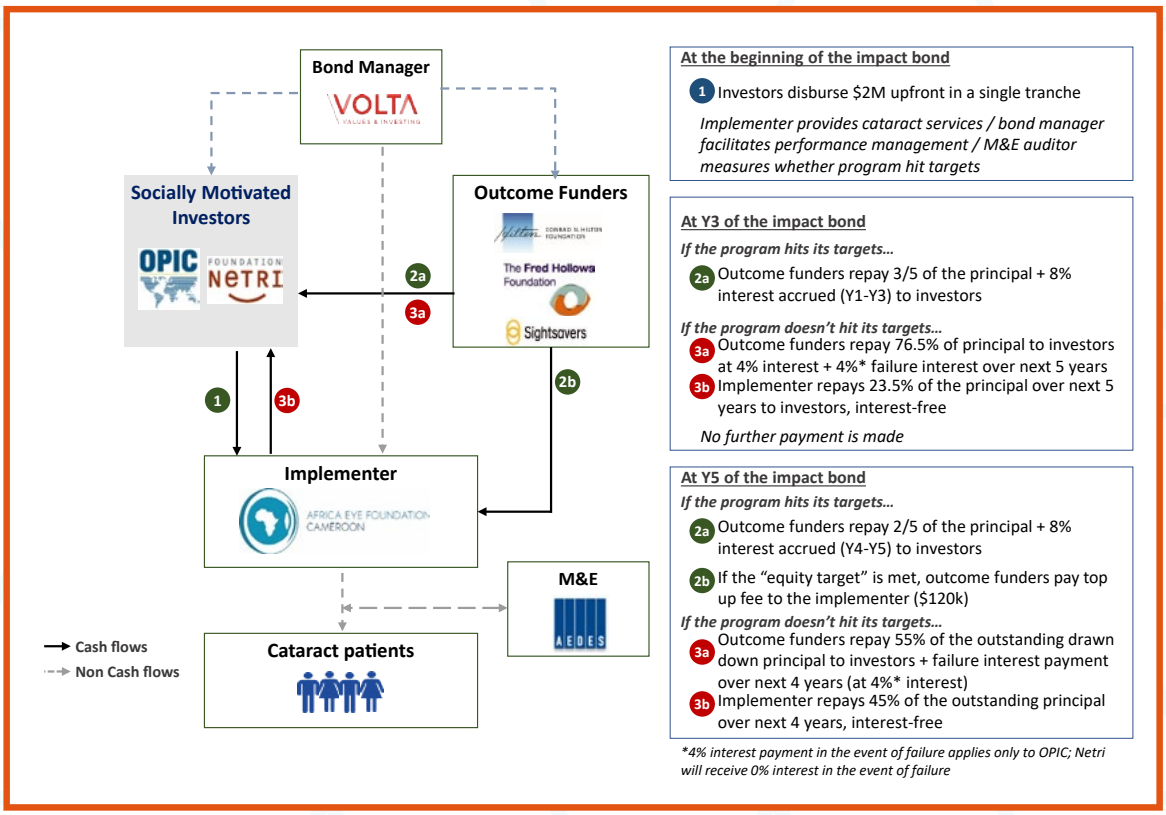
The Overseas Private Investment Corporation (OPIC), now Development Finance Corporation (DFC), and the Netri Foundation provided 87.5% and 12.5% respectively of the $2 million upfront capital in January 2018. The loan involves 100% capital protection (i.e. all of the $2m will have to be repaid), though the interest rate payable will depend on the performance against the outcome metrics, as detailed below.

Outcome payments will be made in year 3 and year 5 and the risk of non-performance is split between the outcome funders and the service provider, who is liable to repay in the case of non-performance according to the terms below:

- In year 3, 60% of the principal is repayable. If performance targets are met, outcome funders repay the principal at an 8% interest rate to investors. If performance targets are not met, 76.5% of the principal is repaid by outcome funders, and 4% interest to OPIC only, and the service provider repays the remaining 23.5%, interest-free.
- In year 5, the remaining 40% of the principal is repayable. If performance targets are met, outcome funders repay the principal at 8% interest rate accrued to investors and pay a bonus payment to the service provider of $120k if the equity target is met. If the performance targets are not met, outcome funders repay 55% of the outstanding principal to investors, and 4% interest to OPIC only and the service provider repays 45% of the outstanding principal, interest-free.

Figure 1 below sets out the structure of the Cameroon Cataract Bond.

Figure 1: Cameroon Cataract Bond Structure



3.1 Background and identification of outcome funders

The Fred Hollows Foundation started brainstorming ways to crowd in additional investments to reduce preventable blindness in 2013. This followed a report commissioned from PwC which found that there was insufficient financing going into eye care to eliminate avoidable blindness in middle and low-income countries. The Foundation also had a strong interest in being an early adopter of DIBs and creating public goods that could be shared with other parties interested in applying the DIB model. They therefore decided to develop a DIB to finance cataract surgeries in large-scale outreach eye camps in 2013. Selecting the specific eye care intervention that would best suit the DIB financing model took The Fred Hollows Foundation about 8 to 12 months. The Fred Hollows Foundation presented a proposal for outcome funding in South East Asia to the Australian Department of Foreign Affairs and Trade (DFAT) in 2014, but DFAT did not pursue the proposal as the agency was pivoting away from service delivery toward a health systems strengthening approach.

In January 2015, The Fred Hollows Foundation approached the Conrad N. Hilton Foundation to become an outcome funder. The Fred Hollows Foundation decided to shift the intervention to Cameroon because the Conrad N. Hilton Foundation had a portfolio focused on avoidable blindness in Sub-Saharan Africa and a previous relationship with the Africa Eye Foundation.

The Africa Eye Foundation was motivated to be involved with a DIB because of the international recognition that came from working together with the outcome funders and the potential to receive upfront financing with more favourable terms than a commercial loan, while sharing the risk of its operations with the outcome funders.

The Fred Hollows Foundation was appointed as lead outcome funder. The Fred Hollows Foundation engaged D. Capital (now Volta Capital), as the deal's technical advisor in April 2015. Volta Capital had previously acted as an intermediary for the Roll Back Malaria bond piloted in Mozambique. During the development process, Sightsavers joined the bond's design team as an outcome funder. Sightsavers also provided additional specialised knowledge of the eye care sector in Cameroon and substantial experience with monitoring and evaluation. All outcome funders shared a common objective of preventing avoidable blindness and supporting the expansion of innovative financing in the eye care sector.

Initial development costs incurred between May-Oct 2015 were split between the Fred Hollows Foundation and Sightsavers. The Conrad N. Hilton Foundation covered some of the "pre-launch" costs, which were taken out of the first payment made by the grant, which was approved in November 2015. At this point, the Conrad N. Hilton Foundation committed funds to the DIB and joined as the final outcome funder.

3.2 Design of intervention

The Fred Hollows Foundation and the Conrad N. Hilton Foundation agreed that the focus of the intervention should be the MICEI eye care hospital in Cameroon. The targets were put together in consultation with the MICEI management team and verified by experts such as the Aravind Foundation and the Africa Eye Foundation. The setting of these targets was based on the country demand for eye surgeries, benchmarks from other eye hospitals, the service provider's track record and WHO standards. Data from the Africa Eye Foundation was used to build the financial modelling behind the performance indicators. The quality indicator specifically aligns to the World Health Organization's benchmark for a good cataract surgery outcome.

Stakeholders considered the setting of the targets to be rigorously researched and well-informed by evidence, which was facilitated by the extensive knowledge of the outcome funder and the implementers in the eye care sector. However, some outcome funders and investors considered that the quantity and quality targets were less ambitious than the sustainability and equity targets, especially given the size of the eye health challenge in Cameroon.

In addition to this, including equity as an incentive was considered by all stakeholders to be ambitious and innovative, despite it not being attached to the payments beyond a bonus in year 5. The reason for this was due the challenge in measuring whether the hospital was reaching the poorest both in urban areas and rural areas.

MICEI uses the EquityTool3 to compare the wealth of its patients to the wealth of a national sample of population. The Equity Tool is a 12-question survey that determines household health through proxy measures such as home building materials, ownership of durable assets and type of energy used at home.

3.3 Identification of investors and negotiations

The identification of investors began in 2016. In January, a meeting was held with prospective investors, who were provided with background to the bond, the intervention and the proposed terms. Although a number of leads were identified, none committed to being the main investor. There were two main reasons. Firstly, certain prospective investors noted that the intervention did not align with their priorities in terms of country (Cameroon) or sector (eye care). Secondly, other investors were reluctant to join due to the risk attached to the investment, and the fact that there was not yet a significant and credible investor on board.

Some stakeholders highlighted that they may have misread the risk appetite in investing in a hospital that, at the time, was still under construction.

In March 2017, the US International Development Finance Corporation (DFC), formerly OPIC,— the United States development finance institution providing direct loans, guarantees, and risk mitigation products to help American businesses invest in emerging markets — agreed to being the main investor and to providing a loan of $1.75 million to the bond. OPIC's interest in and ability to finance the cataract bond with a loan was facilitated by the Conrad N. Hilton Foundation's presence in the outcome funder coalition, given that OPIC must support the interests of an American organisation. The Netri Foundation, who had already shown interest in 2016 but were waiting for another investor to join the DIB, committed the remaining $250,000.

However, when the DIB was set up, DFC's mission (formerly OPIC) only enabled the organisation to provide debt financing. This resulted in a change in the final terms of the DIB with 100% capital protection for investors, split between outcome funders and the service provider. The fact that the service provider had 'skin in the game' (i.e. they took on some of the risk of project failure) gave confidence to the investors and showed Africa Eye Foundation's commitment to reaching their targets.

The most substantive change to the terms was the move from a relatively small portion of the principle being covered to 100% coverage. The principle protection was increased to account for the commercial and political risks of the investment. The final terms involved a lift in the interest rate to investors from 5% to 8% if targets were met, and a 4% interest rate for OPIC if targets were not met. The Netri Foundation refused the term of a 4% interest rate if targets were not met. These changes were a result of an iterative negotiating process, first through negotiations with Deutsche Bank and other prospective investors and then, through negotiations with OPIC. The resulting terms of the DIB were agreed on with the service provider with reluctance, particularly after realising the extent of the due diligence costs, but accepted given that the terms of the loan were better than those provided by a commercial loan and because they were confident that they could achieve the targets that had been set.

3.4 Enablers and challenges to launching the DIB

Enablers

1 Collective Leadership:

- Strategic (between members of the leadership team);

Stakeholders generally agreed that the Cataract Bond Design Coalition built strong relationships with all actors, which facilitated the set-up of the impact bond. Furthermore, the alignment in the objectives that outcome funders have and their shared mission of preventing avoidable blindness ensured a shared sense of priorities during the set-up phase.

- Organisational (between these leaders and their internal stakeholders)

There was a strong commitment amongst outcome funders to develop a DIB and the fact that the DIB was launched and implemented despite the complexity and difficulty in finding suitable investors highlighted this commitment. In addition to this, the staff time devoted to the set-up phase and the pro bono work that some of the advisors provided strengthened the team as it ensured continued resources throughout the set-up phase.

2 Clear outcomes – measurable outcomes and linked to overall objective of the intervention.

Stakeholders consider that focusing on the delivery of cataract surgery services has a number of advantages from the results-based financing perspective given that it is a well-known intervention that is cost-effective and with clearly measurable outputs and outcomes, compared to other health interventions. For example, the link between outcomes and financing for interventions related to human resources development and health system strengthening were deemed to be too imprecise and difficult to attribute to the DIB.

3 Shared understanding of the policy 'problem' and sufficient evidence for the intervention so that it is credible or knowledge based.

The shared understanding amongst outcome funders of the importance of the intervention and how it contributes to addressing the health challenge in Cameroon was a key enabler to launching the Cameroon Cataract Bond. Given that outcome funders were engaged in the eye care sector, they shared their ambition in preventing avoidable blindness. The alignment between outcome funders and service provider in terms of their ambition also contributed to the setting of ambitious targets related to outreach.

4 Data to build up a business case, including data on the eligible cohort and outcomes likely to be achieved.

In terms of the measurement of outcomes, the setting of the targets was based on the country demand for eye surgeries, benchmarks from other eye hospitals, the service provider's track record and WHO standards. The cataract surgical volume targets set for MICEI were based on the unmet demand for cataract surgeries in the region, benchmarks from other existing eye hospitals, as well as Magrabi's track record in other countries. Data from the Africa Eye Foundation was used to build the financial modelling behind the performance indicators.

Nevertheless, some stakeholders highlighted that the lack of data to benchmark the risk appetite for similar interventions in similar country contexts made the pricing of the risk difficult, as discussed further in the challenges below.

5 Service provider track record and reputation:

Magrabi's track record in running for-profit hospitals in other countries and their experience in applying the Aravind model gave investors confidence. Additionally, investors highlighted that DIBs worked particularly well for service providers that already have an M&E system in place and are flexible enough to change their strategy based on the feedback they receive. One of the investors noted that having an independent evaluator and a monitoring and evaluation (M&E) system already in place provided them with more confidence in the project and incentivised them to participate. The M&E system is expected to support more rigorous reporting, which will enable stakeholders to track the progress made and impact of the investment.

Challenges

- Identifying investors who were willing to invest.
  Different stakeholders pointed to different reasons why this might have been the case. The misreading of the risk appetite was considered one of the key reasons, as the initial terms proposed by the bond coalition (5% interest rate and no capital guarantee) were often challenged and rejected by prospective investors. Other stakeholders commented that other reasons why prospective investors rejected the investment were the early presentation of the bond, which meant the strengths of the bond were not sufficiently capitalised on; the perceived risk of investing in Cameroon; the newness of the hospital; and the lack of alignment with investor priorities.

- Higher-than-anticipated costs
  The process of setting up the DIB took two years, which was longer and more costly than expected. This resulted in stakeholders involved in the set up incurring higher costs than anticipated in terms of staff time, consultant fees and legal advice. Some stakeholders considered that a significant proportion of these costs were 'first DIB costs' which could be considerably reduced in future DIBs. The development of the bond also required a steady stream of financial support that led the bond coalition to request multiple grants such as a grant proposal of USD 200,000 to Standard Chartered Bank's competitive "Seeing is Believing" Innovation Fund, which did not go through and forced partners to assume more costs than anticipated.

- Contracting
  Some of the stakeholders involved, such as OPIC and the Conrad N. Hilton Foundation, were restricted in the type of contracting tools they could or wanted to engage in to get involved in a DIB. As a consequence, these contracts had to be created from scratch. The bond manager and outcome funders had to work together to create a blueprint for OPIC to invest in Cameroon and allow the investment to be made as a loan. The Conrad N. Hilton Foundation, as a grant-making organisation, did not have a mechanism to make contingent grant payments at some time in the future, as per the pay-for-success nature of a DIB. As a result, the Conrad N. Hilton Foundation's initial outcome funding agreement was structured like a conventional grant, with a set schedule of payments and an accredited grant recipient (The Fred Hollows Foundation). In total 13 separate contracts had to be signed.

- The need to ensure the involvement of all stakeholders throughout the process to ensure a good flow of information.
  Stakeholders had not anticipated the need to keep everyone up to date with developments. This resulted in some stakeholders feeling like they were not fully aware of changes to the terms of the deal during negotiations with prospective investors.

- Limited buy-in from some stakeholders
  Some stakeholders were not fully bought into the process, due to the complexity of the model, and concerns about the alignment of risk and return across the different actors. For example, one organisation's board members asked why the money for the hospital could not be obtained via a large grant instead of via the DIB. The board members felt the additional costs of the bond seemed high, while the obvious benefit to parties involved seemed unbalanced, given that the investors had full capital protection.

3.5 Advantages of using the DIB mechanism during set-up phase

The following were cited by stakeholders as advantages to using the DIB during the set-up phase.

- The DIB brought impact investing and results-based finance into a space that did not exist before by sharing the risk of the investment between outcome funders, service provider and investors.
  Given that none of the outcome funders could assume the risk of investing in the eye care sector in Sub-Saharan Africa on their own, the risk sharing between them and the service provider opened up a new space for results based financing impact investing, despite the limited risk transfer to the investor.
- The DIB brought together different funders in the eye care sector working towards a common goal, collaborating in a new capacity.
  Although some of the stakeholders had worked together before, it was the first DIB all outcome funders got involved in and stakeholders considered it was beneficial for them to work together in a different capacity.
- The DIB contributed to a careful and rigorous design of the intervention and targets.
  Involved stakeholders considered the target setting to have been rigorously researched and well-informed by evidence. The Fred Hollows Foundation remarked that it can be difficult to insist on strong performance management frameworks; attaching payments to outcomes ensured this was a key focus in the project. According to Sightsavers, the DIB also helped the hospital gain ownership of their targets and improve management and efficiency, promoting more efficient management and use of data. Aravind contributed to this by ensuring the hospital staff appreciated and understood the targets and set the budget accordingly. In health care this rigour is important, as providers need to know the number of patients that they are able to reach.
- The DIB model enabled stakeholders to be ambitious in the setting of sustainability and equity targets that are unusual in the eye care sector.
  The innovative element of having a target that ensures the financial sustainability of the hospital is seen as key to ensure the impact of the intervention continues after the DIB ends. In addition to this, stakeholders felt it was innovative to have a clinical quality target, which is being considered as a tracer indicator for surgical quality more generally as part of the SDG indicator set because of its ease of measurement.
- The inclusion of an equity target that was facilitated by the DIB has brought innovation in the design of the intervention by leading to Magrabi adapting an outreach programme to ensure that they succeed in reaching the poorest.
  While outreach programmes are common, using tools to measure household wealth of those they are reaching and including a performance bonus to encourage outreach to lower-income communities is innovative. Stakeholders in the Fred Hollows Foundation also expect increased innovation in delivery to reach the sustainability target and equity target, which may be conflicting targets.
- The DIB provided upfront capital to MICEI, which enabled them to initiate the operations of the hospital.
  Stakeholders argued that although the intervention could have been financed through other payment by results financing models, it was unlikely that commercial banks would have been willing to finance the operations of a hospital that was under construction through a loan.

4.1 Update on delivery

This section provides an update on the delivery of the DIB and stakeholder experiences and perceptions from the DIB launch in October 2018 up to June 2020. The table below provides an overview of delivery, which is followed by further detail. The bond performed well over this time and was on track to achieve targets set for year 3, except for the equity target. However, it is worth noting that the equity target is not linked to any payment until year 5 (see other aspects of the DIB for more detail on the challenges and lessons learnt).

Period of delivery	Start date up to June 2020
Outputs/Outcomes achieved, versus expected (including number of beneficiaries supported, where relevant)	• The hospital had carried out 5407 surgeries by June 2020. MICEI was on track to reach and exceed the Y3 target of 7,000 surgeries. • Quality of surgeries remained very high and well above target. A cumulative 75% of surgeries achieved a 'good outcome' the day after surgery (against a target of 50%). • On outreach, the number of surgical camps delivered for outreach was on target until Covid-19. Due to the pandemic, all outreach activities have been suspended since Mid-March 2020, but there remains a large backlog of patients diagnosed but not yet operated on in outreach. Cumulatively, 22% of patients were in the bottom 2 quintiles based on the national measure (against a target of 40%)[2]. • MICEI had outperformed its projection for EBITDA, which was -$170,687 by June 2020.
Outcome payments to date (vs expected)	The first set of outcome payments are due at the end of year 3.

The Covid-19 pandemic has posed challenges to the hospital; when this research was conducted, the hospital was only open for emergency surgeries, and the hospital was operating at reduced capacity. The facility had capacity of 100 surgeries a day - before Covid-19, the hospital was doing 50 a day but during the pandemic was doing about 10 a day. The Cameroon Cataract Bond Coalition was exploring the impact of Covid-19 on the likelihood of targets being achieved.

The hospital was expected to return to the provision of cataract surgeries. However, with the implementation of social distancing rules the capacity of the hospital was expected to be reduced for a longer period of time, affecting the volume of surgeries.

For the service provider, the biggest perceived challenge was the potential loss in staff, with nurses and doctors potentially being required to work on the Covid-19 response, significantly affecting their capacity. There was uncertainty around when the hospital would be able to resume its outreach programme to reach lower income patients. As of August 2020, the hospital continued to operate at reduced capacity with new safety procedures in place. Outreach camps were not operational by August 2020 as gatherings of more than 50 people are banned by the Cameroonian government. MICEI is developing an alternative outreach plan to explore other ways of transporting backlogged outreach patients from outreach in for surgery, and to identify other ways of diagnosing and treating cataract patients from outreach without the use of camps. They have also developed a protocol for reduced size camps with the full suite of safety protocols but are approaching this with extreme caution as the average outreach patient is in their late 60's and therefore a higher risk population.

2 At the Feb 2020 Steering Committee meeting in Yaoundé, the Steering Committee agreed the key next step related to equity measurement is to get the most recent 2018 DHS data from the Cameroon Government statistics office. The Equity Tool currently relies on data from 2011, which is likely undercounting MICEI's reach to the bottom 2 quintiles. Sightsavers has engaged with the Government of Cameroon to get this updated data published. Equity Tool developers have indicated that as soon as they get this data, they will update their measurement system as a matter of priority. Once this is in place, the Steering Committee will recalculate the equity numbers to date to make a more accurate assessment of where MICEI is performing in its reach to the bottom 2 quintiles.

Furthermore, an economic recession could affect patients' ability to afford cataract surgeries.

As of August 2020, the Steering Committee agreed not to reduce targets or extend the DIB as volume and quality targets for year 3 will be reached. This may be reassessed for targets in year five depending on the severity and length of the pandemic's impact going forward.

4.2 DIB effects

This section describes the 'DIB effects' observed to date, i.e. how the design, delivery, performance, implementation and impact of the intervention has been affected because it has been funded through a DIB. To understand how the DIB model has affected the implementation of the intervention, we use a list of potential DIB effects identified from a review of the literature and our previous work evaluating impact bonds. These potential effects are listed in the table below. Our research assesses whether the DIB effect was observed in the project and whether this can be attributed to the impact bond mechanism. It is important to distinguish between the two – just because an anticipated effect of the DIB exists in the project, does not mean the DIB itself necessarily created this effect, as it could have been caused by other factors. We have assessed whether the effect can be attributed to the DIB by comparing the DIB to another eye hospital funded through a grant (Fitsum Birhan Specialized Eye Clinic). We explored whether the effect materialises more strongly in the impact bond-funded project compared to the similar grant-funded project, and whether stakeholders attribute this difference to the impact bond mechanism rather than to other factors.

For each category of DIB effect below, we have set out our findings for the effects as a RAG (Red-Amber-Green) rating, indicating the extent to which these effects were observed and the extent to which it is attributable to the DIB. The triangles indicate whether the characteristic was observed (green), observed to some degree (amber) or not observed (red). The circles indicate whether this is attributable to the DIB (green), attributable to some degree (amber) or not attributable (red).

DIB effect summary

DIB effect	Effect observed	Attributable to the DIB
Advantages		
1. Shift focus to outcomes, greater accountability	OBSERVED	SOMEWHAT ATTRIBUTABLE
2. Drives and improves performance management	OBSERVED	SOMEWHAT ATTRIBUTABLE
3. Providers manage adaptively through continuous learning to deliver what they feel will achieve outcomes	OBSERVED	SOMEWHAT ATTRIBUTABLE
4. Greater collaboration and/or coordination between stakeholders as there is an alignment of interest	OBSERVED TO SOME DEGREE	NOT ATTRIBUTABLE
5. All of the above factors leading to more beneficiaries supported, and more outcomes achieved	OBSERVED	SOMEWHAT ATTRIBUTABLE
Disadvantages		
1. Complex to design and expensive to set up	OBSERVED TO SOME DEGREE	ATTRIBUTABLE
2. Cherry picking of participants from target population	NOT OBSERVED	NOT ATTRIBUTABLE
3. Level, quality, range and duration of support are reduced due to the contracting model	NOT OBSERVED	NOT ATTRIBUTABLE
4. Performance management culture lowers staff morale and increases staff turnover	OBSERVED TO SOME DEGREE	SOMEWHAT ATTRIBUTABLE
5. 'Tunnel vision': Focus on primary outcomes comes at the expense of secondary outcomes; opportunities for project co-benefits are missed	NOT OBSERVED	NOT ATTRIBUTABLE

4.2.4 Observed DIB effects somewhat attributable to the DIB

> The DIB has shifted focus to outcomes and greater accountability, as the impact bond builds a culture of monitoring and evaluation

We found that in the Cameroon Cataract Bond, the DIB structure contributed to increasing the hospital's focus on outcomes, especially around quality and equity, and increased the standard against which these were measured and monitored. This effect was broadly expected by outcome funders and a motive to use a DIB. An increased focus on outcomes was also present in the comparator hospital, but stakeholders highlighted how the DIB structure incentivised the service provider to commit to the shift in mentality and make adjustments faster.

The reasons for this increased focus on outcomes are a mix of DIB and non-DIB related causes. The outcome metrics and payments attached to outcomes contribute to the service provider being more focused on achieving outcomes and has helped with the overall pace at which these are achieved and reported on. All stakeholders agreed that the metrics motivated the hospital staff to achieve targets (and demotivated when they did not reach them). Stakeholders also considered that the quality of the service provider contributes to this and having AEF and Magrabi as backers contributes to ensuring that results are met.

> The Provider has more flexibility and autonomy to deliver what they feel will achieve outcomes and are able to deliver process innovation

The DIB contributed to the autonomy and flexibility the hospital has to decide how to achieve results. Outcome funders did not anticipate the level of flexibility that the service provider would have but considered this to be a part of the learning from working within a DIB governance structure. We found that this level of flexibility is, partly, due to the increased focus on outcomes, as opposed to focusing on activities, that the DIB model provides. This is because focusing on outcomes allows service providers to decide what the best course of action is to achieve these outcomes as their financing is not dependent on what activities they decide to deliver.

However, the hospital felt it would, to a certain degree, have acted in an adaptable and flexible way anyway. The DIB funding is a limited proportion of the total funding of the hospital and, as a result, DIB stakeholders have limited space to influence how the hospital operates as a whole. As captured in the quote, MICEI had already developed a strategy that the DIB adhered to and helped support. Moreover, the staff's quality and motivation to achieve outcomes also contributes to their level of independence and willingness to adapt the way it operates.

'The coming of the DIB fitted into the vision of the hospital, but it needed adjustments to allow space to fulfil this vision.' **- SERVICE PROVIDER**

'Hard to carve out from the normal running from the hospital. They are doing what they are supposed to do taking into consideration the impact bond' **- SERVICE PROVIDER**

The DIB model drives performance management

We found that MICEI had developed strong performance management systems in its first years of delivery. The availability of reliable and verified data had helped the hospital adapt its approach to perform better and informed decision-making. Outcome Funders consider that even if grants do have monitoring and evaluation (M&E) systems, in a DIB, this data feeds into decision-making more strongly,

'[In a DIB, you are] much more determined to understand how to improve your performance, but also because there is an aim to understand what the issues with delivery might be. Even if they have M&E systems, the system is not as strong in grants.' **- OUTCOME FUNDER**

For example, the hospital had to adjust its sterilisation protocol and the problem was spotted early given its strong monitoring systems. Moreover, the availability of data on outcomes and capacity has helped the hospital adapt its response to Covid-19. The service provider has also highlighted how the DIB drove a higher standard in how outcome data was collected that they are now using in other non-DIB related activities such as their training wing.

'Measuring outcomes from a cataract surgery from the standard of the DIB, has made the hospital standardise the outcome metrics in the training [that the hospital provides to other doctors].' **- SERVICE PROVIDER**

Based on the extent to which MICEI has incorporated the use of data to improve performance management, it is clear that the DIB has contributed to provide focus to hospital staff to ensure the hospital achieves its targets. The service provider exemplified this by saying that having a Steering Committee with outcome funders ensures that they have to answer to difficult questions that outcome funders may pose, which has helped them focus on improving their performance in a more rapid way.

However, by observing a similar focus on performance management in a similar hospital funded through a grant, we found that strong performance management can be achieved through grant funding with the right level of technical support from the grant maker. That said, outcome funders and service provider considered that the DIB helped the service provider focus and added structure and governance to this focus. Overall, stakeholders considered that the DIB structure had the potential to catalyse stronger performance management, where grants may not have succeeded in doing so.

More beneficiaries are supported, and more outcomes achieved, ultimately leading to more effective and efficient services

The way the DIB has contributed to the service provider's focus on results and improved performance management has contributed to achieving more results than if the hospital had not received funding through a DIB. However, the evidence from the comparator hospital has shown us that many of these changes can be achieved through a well-designed grant with the necessary technical support from an advisor such as Aravind. We found that the DIB has achieved enhanced quality and equity, which can also be achieved through grant funding if equity and quality are built into the business model and are measured and monitored. Although the two hospitals are not completely comparable given differences in their operating models and size, we found that both are making progress in achieving their targets and that in the case of MICEI, the DIB has contributed to increase the focus on outcomes.

There are high levels of collaboration and/or coordination between stakeholders as there is an alignment of interests, though this is not due to the DIB

We found that given the shared mission and alignment of interests between outcome funders, these organisations have high levels of collaboration. Organisations acting as outcome funders have collaborated before and will likely collaborate in the future, which is not exclusively due to the DIB. However, the DIB has brought a new way of working together where outcome funders work more collaboratively with the service provider, investors and bond manager that would not have been achieved otherwise.

Stakeholders highlighted how the role of investors was essential in the structuring phase and adds value to the governance of the DIB, which would not have happened in a different funding mechanism. If the hospital had received grant funding, the only stakeholders involved would be those providing the grant. But in a DIB, the governance structure includes outcome funders, service providers and also investors and intermediary organisations that bring a different set of skills to the table.

Finally, we found evidence of outcome funders not working as closely with the service provider as they would have liked to because of the role of the bond manager as an intermediary leading on communications with the service provider. This was also partly due to the fact that the DIB is only one part of the funding of the hospital, which contributes to the service provider having to respond to the requests from different organisations that are providing the funding to the hospital, such as the Africa Eye Foundation.

On the other hand, service providers found the requests coming from outcome funders overwhelming when outside of reporting requirements and timelines and found the role of the intermediary to be helpful in managing these requests. Outcome funders recognised that this is a characteristic of how DIBs are designed, and as such, partly a DIB effect that they had to adapt to.

The Cameroon Cataract Bond design was expensive to set up and is more expensive to implement than a grant

As stated earlier, the DIB was more expensive to set up than a grant would have been. It also cost more than a grant to deliver the DIB. However, these additional costs were anticipated and built into the pricing of the DIB. Stakeholders deemed these additional costs to be good value for money considering the improved data and management that they provided.

Performance management culture has affected staff morale

Overall, we found that staff morale was high in MICEI, although hospital staff recognised that the challenges around reaching the equity target had an impact on staff morale who were demotivated where targets were not reached. Hospital staff at MICEI were motivated to achieve outcomes and as such were demotivated when they faced challenges, largely due to the reputational pressure to achieve targets. There was less evidence of lower staff morale in a similar hospital funded through a grant selected for comparison where respondents claimed staff were empowered by being given more responsibility and training.

4.2.5 DIB effects not observed or observed but not attributable to the DIB

The Cameroon Cataract Bond design has not incentivised cherry picking to date

A key consideration when commissioning impact bonds are the incentives in delivery structures. Cherry picking is defined as the provider organization only selecting the 'easiest' members of a population to work with as a means of maximising outcome payments at the expense of the harder-to-help groups. [3]

Given the cross-subsidisation model used in both MICEI and a similar hospital funded through a grant selected for comparison, we found no evidence of cherry picking. In MICEI, the DIB design and inclusion of the equity target aiming to reach patients from the two lowest income quintiles does not allow for cherry picking.

The Cameroon Cataract Bond design has not led to a decrease in quality, range or duration of support

The inclusion of the quality target in the Cameroon Cataract Bond has driven high levels of quality performance. Moreover, the outreach programme attached to the equity target has also driven the level of support provided to lower income households. The improved performance management systems also contributed to better quality in delivery. In a similar hospital funded through a grant selected for comparison, grant funding also supported an increase in quality in outreach surgeries and better quality due to stronger performance management. As such, we did not find any perverse incentives to provide lower quality services.

Focus on primary outcomes has not come at the expense of secondary outcomes or at opportunities for project co-benefits being missed

Given the fact that the service provided is a medical institution, primary outcomes and secondary outcomes are often inter-connected. For example, different dimensions of quality and having the right equipment contribute to a positive medical outcome which would count as a primary outcome. As such, it is challenging to separate primary outcomes from secondary outcomes. While we have seen an increased focus on primary outcomes, this has not been at the expense of secondary outcomes. However, we did not find significant evidence that the primary activity of the DIB, providing cataract surgeries, had resulted in a lower focus on other activities, such as training of doctors.

3 Social Finance, 2015. Technical Guide: Designing outcome metrics. Designing effective outcome metrics and measurement systems. Page 19. Available at: https://www.socialfinance.org.uk/sites/default/files/publications/tech_guide_2_designing_effective.pdf

4.3 Other interesting aspects of the DIB

Spillover effects and the wider impact of the DIB

There is emerging evidence of outcome funders learning from the DIB and applying what they have learnt into their wider programming and grant-making.

"The good stuff from this bond, when it infects other projects, that's when it has good success." **- OUTCOME FUNDER**

The Fred Hollows Foundation and Sightsavers have incorporated more learning into their programming. The Fred Hollows Foundation has started asking four grantees to collect data on quality of surgeries, which they had not done before. Moreover, through the bond, Fred Hollows Foundation stakeholders argued that they had developed an affordable methodology for validation of outcomes which they hope to apply to other programmes. Moreover, Fred Hollows also anticipates further changes to their programming stemming from learning from the Cameroon Cataract DIB in terms of systematising outcome targets and performance management:

'Fred Hollows have projects that have a logframe with many indicators, which can be time consuming and not always efficient in informing decision-making. With 4 key indicators, they can still say they are comfortable with the progress of the project.' **- OUTCOME FUNDER**

Sightsavers has started using the EquityTool to track the income levels of the groups they reach on other programmes, although payments are not attached to this. In addition to this, Sightsavers is using the learning from the outreach programme in Cameroon to inform the design of other outreach programmes. They already had programmes with outreach components, but the additional evidence on costs and reach is helping them adjust these.

Sightsavers note that the DIB is a catalyst of change for them. They could have done these changes otherwise because they can change the programme design every time, they develop a new programme, but these changes take time and there needs to be evidence that changes drive better results.

However, it is still early days, and some argue they need to wait until the third year of the DIB once repayments are made to take stock of what has been learnt.

Challenges and learning from designing outcome metrics

Two years into implementation, the stakeholders involved were reflecting on the decisions made in the design phase and the impact that these have had in the implementation stage. The choice of targets and the inclusion of a financial sustainability target and equity target has proven to be a challenging balance for the service provider.

In setting the target, stakeholders decided that the hospital should serve those most in need, at a minimum in line with the general distribution of the population. The target was set based on financial sustainability projections and data on income levels in Cameroon. The Cameroon Cataract Bond has faced challenges in measuring its equity target as a result of the tool used to estimate income levels.

During the delivery phase, the bond Steering Committee raised concerns that the EquityTool[4] did not reflect actual income levels in Cameroon due to data used for benchmarking household wealth levels being out of date (the data used is from 2011) and not accurately representing current wealth levels which is likely undercounting MICEI's reach to the bottom 2 quintiles. The EquityTool developers have recently received access to the Cameroon DHS data from 2018 and were in the process of updating the tool at the time of writing. Once this is in place, the Steering Committee will recalculate the equity numbers to date to make a more accurate assessment of where MICEI is performing in its efforts to reach the bottom 2 quintiles.

However, the current trajectory suggests that MICEI would be unlikely to reach its cumulative targets for equity. Moreover, the hospital has faced challenges in administering the EquityTool questionnaire to patients; there has been missing information and patients have not always been willing to fill in questionnaire and income level questions accurately, which has resulted in challenges for verification.

Stakeholders from the Steering Committee recognised that they have learnt a lot from using the Equity Tool and feel better placed to use it now than when the bond was designed. Sightsavers, the Fred Hollows Foundation and Volta Capital have started using the tool for other projects and consider that the learning from the bond has been useful to manage and monitor other projects more effectively.

4 Insert footnote with definition from RW1 case study

4.4 Lessons learnt

This section describes the lessons learned by stakeholders from their experiences of delivering the Cameroon Cataract Bond. These lessons are relevant both to the DIB design, as stakeholders reflect on design decisions made initially, and to the execution of the DIB.

DIB design

1 Although the service provider needs to carry some financial risk, the Cameroon Bond Coalition should have negotiated the terms further with investors to ensure there is more equal risk sharing.

Stakeholder feels that the DIB holds too little risk for the investor. The hospital itself carries more risks than the investors and could only do it because they had the Foundation as a backer.

2 When designing outcome metrics, it is the important to get the outcome metrics and the data for verification right.

More thinking could have gone into designing the equity target, but it was challenging given that none of the outcome funders had used the EquityTool before and it has never been used for a outcomes-based financing project before.

3 It is important to understand the trade-offs and incentives that result from the combination of outcome metrics.

In the Cameroon Cataract DIB, the equity target and the financial sustainability target present a trade-off inherent to eye care interventions - given that one incentivises maximising income and the other target does not- and finding the right balance is key to ensuring the service provider is incentivised to deliver results on both targets. There may be tensions between outcome metrics where the different metrics are incentivising the service provider differently. In eye care, the data generated through the DIB contributes to the evidence base to understand this trade-off and where the balance between both metrics lies.

4 Having senior buy in within organisations involved in the DIB is essential to resolve bottlenecks, learn from the mechanism and to allow for the DIB to fail if targets are not achieved.

In the Cameroon DIB, investors and outcome funders have senior buy in, but they acknowledge that this may change during the five years of implementation and pointed out the importance of renewed support for testing and innovation.

DIB execution

1 The proportion of funding that the DIB mechanism provides compared to other sources of funding can impact the extent to which the DIB affects delivery.

As seen when examining the effect of the DIB mechanism on the Cameroon Cataract Bond service provider MICEI, the DIB is rarely the sole reason driving change. In MICEI, the DIB provides a minority part of the funding, which has two implications. On the one hand, the non-achievement of targets is not the strongest incentive affecting behaviour by the service provider because the financial incentive is low. On the other hand, non-achievement of targets is unlikely with a strong financial backer such as the Africa Eye Foundation who can provide additional support to ensure the hospital delivers results.

'Magrabi is very experienced in doing this. The chairman has devoted his life to this. Very fortunate to have this project set so strongly in the individuals' passion. There is a long-term viability to the project.'
- AFRICA EYE FOUNDATION

2 The expertise of the DIB Coalition is a key value add of the DIB structure.

Stakeholders acknowledged that the involvement of different stakeholders such as the investors and bond manager has brought different skills to the table that would not have been there if the hospital had received grant funding. These additional stakeholders brought rigour and commercial expertise, given their experience in investing and designing performance management systems respectively, that contributed to setting up the hospital for success.

Most of these targets would have been achieved and there would have been funding to do this. But the DIB brought in a different mix of people and financing who wouldn't have been there otherwise'
- BOND MANAGER

3 Even if changes to performance management could have been achieved without a DIB, the DIB mechanism is considered to have catalysed change in a way that would have taken longer or have been less effective with grant funding.

The DIB fostered a mindset for experimentation and testing that helped drive changes and keep stakeholders aligned. Moreover, the support and supervision provided by the DIB Steering Committee, as well as the better performance management that the DIB has contributed to, have helped encourage the service provider to be proactive and adaptive.

4 Delivering an intervention through a DIB is a learning curve for all stakeholders involved.

The literature often focuses on the need for capacity amongst service providers to deliver a service through DIB financing given the additional requirements on reporting and performance management. However, outcome funders in the Cameroon Cataract DIB also reported learning in terms of the difference in management of a DIB compared to a grant. Outcome funders claimed to be used to a hands-on management approach from their grants and acknowledged that allowing the bond manager to take on the intermediary role between them and the service provider was a steep learning curve.

5 What success means might change during the lifetime of the programme as you learn about the mechanism.

DIB stakeholders argued that it is important to be aware of what the motivation to do the DIB is as it will affect whether the model delivers for the stakeholders involved. For example, if the aim was to crowd in funding, the DIB should be judged against that. However, they also found that as the DIB has evolved, the criteria against which the success of the DIB is judged might change as priorities change. Now, stakeholders consider that the improvements the DIB has achieved on performance management and more efficient use of resources are the key success of the mechanism.

5.1 Overall conclusions

After two years of delivery, the Cameroon Cataract Bond has performed well and was continuing to operate despite the challenges posed by Covid-19. Outcome funders, the bond manager and service provider continued to see the DIB as a learning exercise and the opportunity to test something experimental. The governance structure of the DIB has been a part of this learning for all stakeholders, as outcome funders have had to adapt to being more hands-off in the management of the contract, the service provider has had to adjust to the requests of the outcome funders and the bond manager has had to mediate. To date, the role of investors in delivery has been limited compared to their involvement during the structuring phase, which may be a result of the good performance of the DIB.

In terms of what the DIB mechanism has achieved, stakeholders agreed that the DIB has increased focus on outcomes and performance management for the service provider and acted as a catalyst for change in supporting and pressuring the service provider to be more effective, adaptable and better equipped to make adjustments. Stakeholders were of the view that the way the DIB has contributed to the service provider's focus on results and improved performance management has contributed to achieving more results than if the hospital had not received funding through a DIB. However, the evidence from the comparator hospital has shown us that many of these changes can be achieved through a well-designed grant with the necessary technical support from an advisor such as Aravind. As such, it may be said that a DIB does not necessarily out-perform a well-designed grant (setting of good targets and providing technical support to support provider in achieving them) but that DIBs can contribute to catalyse change when you are working on increasing the focus on outcomes.

Moreover, we are already starting to see some wider effects of the DIB spilling over to the outcome funder organisations who are using the learning from the DIB for their wider programming. The learning from designing outcome metrics, using the EquityTool and working in collaboration with different stakeholders are invaluable to the outcome funders and we expect to see more of this learning in the remaining three years. Outcome funders argue that as they continue to learn from the mechanism, the improved performance management comes out strongly as the value added by the DIB mechanism, despite their initial motivation being to crowd in private investment into the eye sector.

Overall, stakeholders still consider that eye care and cataract interventions are a good fit with a DIB structure. However, some stakeholders consider that DIBs could add more value when used to test innovative solutions and use the mechanism as an opportunity to gather data and evidence on the effectiveness of untested interventions. Cataract surgeries are considered to be well researched and with a wide evidence base of what works and what metrics are relevant to measure it. The Cameroon Cataract DIB focused on bringing this knowledge to test in a new geography. However, we found that some of the results achieved can be achieved through a well-designed grant too and, as such, the value added by the DIB is to help catalyse change when you want to increase focus on outcomes.

'There are two types of DIBs: innovative and proven intervention where there is agreement in the intervention. This is the second sort of DIB where there is no need to change the intervention. There was a lot of evidence of what best practice is and what works in implementation.'
- OUTCOME FUNDER

Going forward and thinking about how sustainable the results and changes achieved by the DIB mechanism will be, outcome funders consider that while the financial sustainability outcome target contributes to their exit strategy, the value added of the DIB will be the capacity built through the DIB. As such, the mix of expertise within the DIB coalition is considered a key value add by the DIB which contributes to building the capacity of the service providers. As eye care experts, outcome funders have contributed to the service provider's understanding of equity and the design of its outreach programme, while also learning themselves in using the tool. In turn, the investors and bond manager have brought rigour and commercial expertise that have contributed to setting up the hospital for success.

6. Annex

Stakeholders consulted in RW1 and RW2 unless stated otherwise:

- Volta Capital
- The Fred Hollows Foundation
- Conrad N. Hilton Foundation
- Sightsavers
- US International Development Finance Corporation (DFC), Formerly Opic
- Netri Foundation
- Africa Eye Foundation
- Aravind Eye Care System
- Magrabi Ico Cameroon Eye Institute (MICEI) (only consulted in RW2)
- Fitsum Birhan Specialized Eye Clinic (only consulted in RW2)