

# Global Innovation Fund

## Social Rate of Return for 2023 Impact Report:

### Technical notes on methodology

*Revised April 9, 2024*

Note: GIF reports on achieved impact and prospective impact. This note relates to achieved impact.

#### I. Summary

GIF's purpose is to catalyse large scale impact. Because innovations take a decade or more to reach their full potential, that means that the bulk of GIF's impact is yet to come. But with a track record of eight years of investment, some of our early investments are already having transformative impact. Six of our investments, all initiated before 2022, have progressed to meaningful scale. Together they have brought significant benefits to millions. We reckon that these investments have already created **\$2.8 billion of net social benefits**, of which **\$945 million is directly attributable to GIF**. This is a 62% increase over last year's report.

**Each dollar invested in GIF is already returning \$6 in net benefits** – with higher returns to come. This lower bound estimate compares the benefits already generated by just those six pre-2022 innovations with *all* of GIF's pre-2022 operational costs and investment funding. (Using a 7% discount rate). This six to one return is a gross underestimate because the highlighted investments continue to generate benefits and other pre-2022 investments are now reaching maturity and creating significant benefits.

#### II. Procedure

##### Social benefit calculations

There are three components to the calculation of returns.

##### *Innovation benefit flows:*

We first estimate the annual net social benefits for the six innovations from the time of GIF investment through 2022. See Table 1 for the types of benefits considered, and how they are reckoned in dollar terms.

*Table 1 Types of benefits created*

Innovation	Benefit
DMI	Reduction in maternal mortality x Value of Statistical Life
Educational Initiatives	Imputed lifetime increase in income due to higher educational achievement
Lively Minds	Imputed lifetime increase in income due to higher educational achievement
One Acre Fund	Increased farm income
Paga	Reduced transactions costs associated with money transfers
Viamo	Improved agricultural productivity and health resulting from Viamo messaging

These calculations give us the gross benefits from the viewpoint of the beneficiaries. To get to net social benefits, we subtract the cost of providing these benefits. (Gross and net benefits are not discounted.)

For example, for our investment in Development Media International (DMI), which is a radio messaging intervention to increase family planning uptake, we estimate the number of maternal deaths averted as benefits. We calculate social benefits from country-specific value of statistical life (VSL) estimates. This gives us the gross benefit. We then subtract the cost of delivering modern contraception to additional users to yield net social benefits. One Acre Fund, another innovation, creates benefits to smallholder farmers through providing extension services, inputs, and credit. One Acre's internal monitoring system can track the impact of these services on farmer profits. We then deduct the implicit subsidy that One Acre provides to the farmers.

For this calculation, we include all benefits, including to people outside GIF's target population (those living on less than \$5PPP (2011) per day). That differs from our accounting of benefits in PYI (person-years of income-equivalent), which is restricted to poor people. On the other hand, the PYI reckoning includes benefits in women's agency and safety, for which monetization is difficult. For instance, the bulk of DMI's benefits in the PYI metric are not monetized and therefore not included here.

### *Innovation benefit attribution*

For GIF to assess its social return and impact, we calculate how much of the total net achieved benefits can be attributable to GIF. This is a difficult undertaking. There is no unique, correct way to allocate credit. An attribution method depends both on hard-to-verify additionality assumptions and value judgments on who deserves impact credit. Previously we have used the procedure of Kremer *et al* (2021), which seeks to identify the 'innovation costs' –i.e. the costs of the central research and development that underpin the innovation – and attribute all the benefits to the funders of those costs in proportion to their contribution over time. Here we use a simpler approach. We assume that GIF's financing took place at a critical moment: without that financing, the innovation might have faltered or stalled. GIF typically co-finances with others, so GIF's attributable share is its share of contemporaneous financing.

### *GIF costs*

For GIF costs, we include all GIF costs from 2015 through and including 2023 *pertaining* to the innovation portfolio costs for the period 2015 – 2021 (inclusive). This is because the six selected innovations are investments made in that period. Those costs include administrative costs and investment costs.

- **Investment costs:** We include the total value of disbursements to investments made from 2015 through and including 2023, for all the innovations funded between 2015 and 2021. We do not include disbursement value of innovations contracted after 2021.
- **Administrative Costs:** These are built up as follows:
  - o First, we disregard all the start-up costs in the period 2015-2016.
  - o Second, we include all administrative costs for the period 2015-2023.

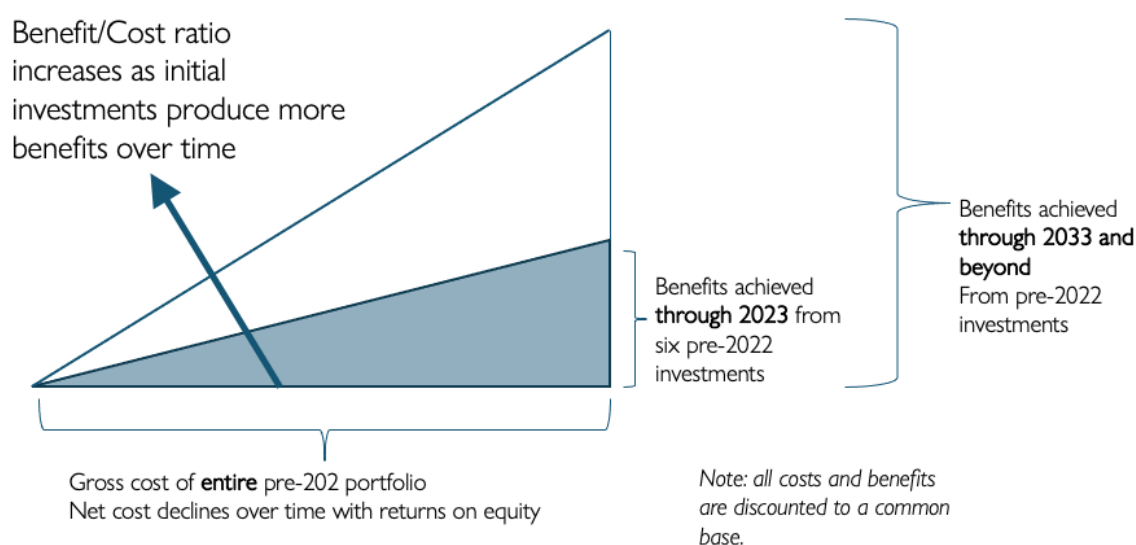
### *Lower bound Portfolio benefit/cost ratio*

The Benefit-Cost Ratio (BCR) is the ratio of net social benefits just for the six innovations to the investment and operational costs of the entire portfolio, as described above. We have used a 7%

discount rate. Discounting allows for all present and future costs and benefits to be expressed in a common metric.

### Why this is a lower bound estimate

The denominator includes *all* costs for the pre 2022 portfolio that includes not only these fast-maturing investments, but many others. As some of those investment reach fruition – and as these six continue to bear fruit – the total benefits from those already-incurred costs will increase. Therefore the benefit/cost ratio – the slope of the line in the diagram below – can only increase over time.



### Benefits by innovation

Innovation	Total Benefits (through 2023) \$ millions	GIF Attributed Benefits (through 2023) \$ millions
DMI	\$ 285	\$ 112
Educational Initiatives	\$ 430	\$ 209
Lively Minds	\$ 228	\$ 117
One Acre Fund	\$ 999	\$ 180
Paga	\$ 225	\$ 91
Viamo	\$ 720	\$ 236
<b>Total</b>	<b>\$ 2,886</b>	<b>\$ 945</b>

### *Why net benefits are underestimated*

Benefit calculations are conservative for the following reasons.

The benefits of DMI are based on value of statistical (VSL) for reduced maternal mortality. However, the program was shown to have significant widespread benefits in women's agency and self-reported well-being. Those benefits are included in PYI calculation of benefits but not in the monetized benefits in the table.

Educational Initiatives and Lively Minds create benefits for children that we believe will persist for decades. These are discounted at 7%. Many benefit-cost analysts prefer a lower discount rate, which would make a substantial difference in these cases.

Paga's benefits likely include facilitated urban to rural remittances, which are known to boost household resilience. We lack data to quantify this.

### *Changes from 2022 report*

Net benefits increased because of the inclusion of Viamo for the first time, together with augmented impact by Lively Minds and One Acre Fund. There were also upward revisions in the GIF share of attributable benefits for Educational Initiatives and One Acre Fund.

GIF costs (the denominator in the BCR) also increased with the expansion of the time period through 2021, versus 2019 last year.