

Note: This is a rougher stage internal document that has not undergone our formal vetting process.

GiveWell discount rate 2020

A discount rate is a percentage rate by which you discount future costs or benefits: a discount rate of 5% means that for each passing year a cost or benefit is modeled as less valuable by a factor of $1/(1+5\%)$.

We use the discount rate to represent the difference between how much we value increases in economic consumption now and projected economic benefits in the future. We use economic consumption as a proxy for the welfare that people get from consuming goods and services.

The discount rate's primary effect in the cost-effectiveness analyses of our top charities is to represent how much we discount increases in consumption resulting from the long run effects of improved child health for our malaria, deworming and vitamin A charities (which we call "developmental effects"). It also affects the longer run benefits from cash transfers. We don't discount mortality benefits in our cost-effectiveness analyses.

James Snowden was the primary researcher who worked on this value. Caitlin McGugan provided an independent view. **James recommends a discount rate of 4%.**

We have partially reviewed elements of the academic literature on discount rates at a shallow level. Our broad takeaway was that decisionmakers should choose a discount rate consistent with their context, and there are a number of judgement calls involved in setting a discount rate.

We considered five reasons to assign a discount rate.

1. **Increases in consumption over time meaning marginal increases in consumption in the future are less valuable.** *We chose a rate of 1.7% based on an expectation that economic consumption would grow at 3% each year, and the function through which consumption translates to welfare is [isoelastic](#) with $\eta=1.59$. (Note that this discount rate should be applied to increases in $\ln(\text{consumption})$, rather than increases in absolute consumption; see calculations [here](#))*
2. **Temporal uncertainty.** *Uncertainty increases with projections into the future, meaning the projected benefits may fail to materialize. James recommended a rate of 1.4% based on judgement on the annual likelihood of an unforeseen event or longer term change causing the expected benefits to not be realized. Examples of such events are major changes in economic structure, catastrophe, or political instability. This does not include the probability that a person will die before realizing the full benefits of the intervention, which is captured elsewhere in our cost-effectiveness analysis.*
3. **Pure time preference (beneficiaries).** *People act in such a way that implies they would prefer spending now to later. We did not apply an additional adjustment for this factor. We believe the*

common use of self-commitment mechanisms such as savings accounts indicate that a preference for short term benefits is often an involuntary action (independently of reasons 1 and 2).

4. **Pure time preference (donors).** Donors may prefer to achieve benefits now rather than later independently of the relative benefit to the beneficiaries. *We do not have this preference.*
5. **Compounding non-monetary benefits.** There are non-monetary returns not captured in our cost-effectiveness analysis which likely compound over time and are causally intertwined with consumption. These include reduced stress and improved nutrition. *We chose a rate of 0.9% to account for this based on discussion.*

We summed the components of the discount rate to get a recommendation of 4%. This is broadly consistent with recommendations we have seen in the academic literature.

We consider the discount rate an uncertain parameter but one which is difficult to make additional progress on. James and Caitlin do not fully agree on the discount rate we should use. Caitlin believes the discount rate should be 6% but that a 4% discount rate is reasonable.