



The Simple Math of Development Finance

 Charles Kenny

Global gatherings from Addis Ababa to Glasgow are setting targets from climate through health and education to energy and transport that call for a lot of investment for sustainable development. But how much you can afford to invest depends on how much you're paying for it. And that's where the simple math of development finance comes in. The short answer: if poorer developing countries face a cost of capital that requires a 20 percent annual return or more, about the rate being demanded by international private investors at the project level, there isn't going to be much investment in clean energy, green transport, better healthcare, or more education. The situation is dramatically improved if projects only need to generate financial returns of 1 or 2 percent, closer to the interest rates currently demanded by multilateral development banks. In turn, that suggests any investment gap will only be substantially reduced with massive subsidies for private companies or considerably smaller financial infusions to bankroll international public investment.

Everyone agrees we need considerable investment...

We are seeing eye-watering numbers for the costs associated with meeting global development targets including climate mitigation and adaptation, involving trillions of dollars. According to [Kharas and McArthur](#), for many poorer countries, the amount they would have to spend annually in order to meet the Sustainable Development Goals is 10 percent of GDP or more *per year* (for two countries they actually suggest numbers as high as 100 percent or more). That may suggest some of the development targets were set at an [excessively ambitious level](#), and it is dangerous to assume that [investment is the only or most significant](#) challenge in meeting many development goals. Nonetheless, it also implies the need for a lot of money from outside sources to make such significant investments even somewhat plausible.

...But that depends on what's affordable...

How much investment developing countries can *afford* to carry out depends on how much they have to pay the institutions who provide the money to invest. The problem can be illustrated using a simple [mortgage calculator](#): borrow a billion dollars for 30 years at 2 percent interest and your monthly payment is \$3.7 million. Borrow that same money for 15 years at 20 percent and the payment is \$17.6 million a month. If you were borrowing the money for an investment, it would need to generate nearly five times the earnings to be sustainable if you borrowed at 20 percent for 15 years than if you borrowed at 1 percent for 30 years.

As it turns out, it appears *some* investments in developing countries *can* earn enough to support a 20 percent interest rate at least, because that's about what private investors seem to expect if they put up money for infrastructure projects in those countries. Data from EBRD private infrastructure projects suggest an average of a [23 percent](#) financial rate of return for the countries the Bank covers. More recently, estimates of the [cost of equity](#) for developing country public-private partnerships produce numbers of 14 to 20 percent for transport public-private partnerships (PPPs) and 16 to 22 percent for health services. IMF [staff analysis suggests](#) return on equity rates in infrastructure of between 8 and 37 percent in infrastructure and 8 and 29 percent in electricity (the numbers for sub-Saharan Africa were 37 and 27 percent).

...and scaleable

Sadly, however, there don't appear to be very many investment opportunities that pass the 20 percent threshold. That will be the fundamental reason why infrastructure PPPs in developing countries account for such a [small—and declining—](#)proportion of infrastructure investment. Indeed, it is probably fair to say that most investments in poorer countries don't make anywhere close to a 20 percent return. The overall relationship between higher investment rates and more rapid expansion of GDP is [far from significant, robust, and homogeneous](#), and there is some evidence to suggest the impact of investment on long-run GDP per capita growth in some developing countries all too [often approximates to zero](#). That is probably *too negative* as we've seen: some projects do generate those returns and there can be [hugely important impacts not captured in GDP statistics](#). But put it another way: if lower-income countries were chock-full of potential investments delivering 20 percent returns, they wouldn't be lower-income countries any more.

Rare is the country at any income level that offers ubiquitous 20 percent returns to large scale investments, but the scarcity of such returns in developing countries may also involve particularly acute shortages of local skills or complimentary infrastructure. In addition, perhaps [institutional differences](#) (and weaknesses) are at play. Perhaps most of all will be a simple lack of resources: poor people in poor countries just don't have very much money to spend. And PPPs remain expensive for governments, too: about [a third of total investment costs](#) on average are provided by governments

and the deals often involve contingent liabilities (“take or pay” obligations in power projects, price guarantees for inputs, revenue guarantees for transport projects, and so on): there simply isn’t the financial capacity in lower-income countries to do too many projects that are so expensive for both final consumers and government partners.

If we can’t easily solve the (long recognized) problem of high returns and limited international private investment in developing countries by significantly increasing the number of projects that earn at 20 percent or more, what about lowering the expectation of returns? On the side of private investors, current demand for those returns doesn’t appear primarily driven by risk: the chances of default on investments by development finance institutions like the EBRD in emerging markets [are low](#). Emerging markets as a whole [appear a safer investment](#) than high-yield domestic corporate bonds in rich countries, and infrastructure lending in emerging and developing markets over the past five years is consistent with an [AA/Aa rating](#). That suggests high pricing also reflects the fact that these investments are long-term, in small, unknown markets, and the deals are rare, bespoke, one-off projects. They’re immensely costly and time consuming in terms of due diligence per dollar invested, and that plus the combination of uncertainty and limited diversification potential unsurprisingly leads to demand for high returns.

Until these broader issues with investment are mitigated, the expected private return on capital will be relatively high in developing countries, individual private investors in individual projects in those countries will demand formidable interest rates, and there will be a severe limit on the number of investments likely to deliver such returns. In that sense, there is a conceit in the idea that all we need is project preparation facilities to create more projects and the “public-private infrastructure problem” will be solved—it has [far deeper origins](#) in education, institutional factors, the transactions costs of dealing with small, unknown markets and so on. More international private investment in infrastructure and firms in low- and lower-middle-income countries would be great, but it is simply implausible to imagine it could rapidly scale anywhere close to the volumes required at the prices being asked.

Making more investment cheap

Given that, the best way to quickly expand investment is not to try and produce sufficient returns to please (international) private investors in individual deals. Instead, it is to look for cheaper sources of investment finance. Luckily, there is one: even at a time of rising global interest rates, most developing country *governments* can borrow from international markets at considerably lower interest than 20 percent. The average government private bond in the [African Debt Database](#) has an interest rate of 6.1 percent, for example.

Especially regarding international capital, it makes sense that governments can borrow more cheaply than private project sponsors: they are considerably larger and can issue “standard” debt

products. Of course, even developing country governments are small compared to rich country firms, but at least they are in broadly the same league. In all of sub-Saharan Africa outside of South Africa, there are [fewer than 200 firms](#) with revenues greater than \$500 million, but even a comparatively small, poor developing country like Burkina Faso sees non-grant government revenues of \$2.7 billion.

Interest rates that multilaterals can offer are (even) more sustainable than private lending to governments. The average multilateral loan in the [African Debt Database](#) has an interest rate of 1.0 percent and maturity of 28 years. Many of those are subsidized: unsubsidized IBRD terms are closer to 2 percent than 1 percent (they vary depending on [country](#) and [international interest rates](#)) and terms tend to be 20 rather than 30 years. Still, even unsubsidized multilateral loans are considerably cheaper than those from the private sector: in 2021 the yield discount between sovereign five-year USD-denominated bonds and the eight-year IBRD Flexible Loan was [only](#) one or two percentage points for larger, richer developing countries, but that rose to a four to five percentage point discount for countries including Egypt, Pakistan, Nigeria, and Kenya—and would have been considerably larger still for many lower-income countries that didn't issue sovereign bonds at all.

An added advantage of multilateral lending over private sector lending to governments is that it should help improve the returns that those governments get from their investments: borrowing from multilateral institutions should ensure resources are used in comparatively high-return activities, using competitive and cost-minimizing approaches. And under those circumstances it appears that support can garner real economic returns: international public investment [in the right stuff even in the poorest countries](#) can deliver economic growth. In short, public sector lending through multilaterals should allow a considerable higher level of sustainable investment than direct private-finance approaches both by lowering financial costs and increasing economic benefits.

Making it cheap to finance more investment

If the simple math of development finance suggests public lending to government will allow for more financially and economically sustainable investments than using (international) private sector resources, there is still the question of plausible scalability on the behalf of rich country governments. But as it turns out, the international public finance approach is more affordable for donors, as well.

A recent proposal by BlackRock [suggested](#) (without much in the way of evidence) it would take approximately 10 percent of project costs in grants to bring private firms into developing markets to finance climate mitigation projects: \$100 billion of subsidy a year to attract \$1 trillion of annual private green investment. It isn't clear what the assumption was with regard to the rates of return

that investors would still want to see after this subsidy, but BlackRock's analysis of infrastructure asset returns over the past 10 years suggests they've [delivered 7.4 percent](#), so perhaps that's not an unreasonable benchmark.

Compare that approach (10 percent grant subsidy plus 7.4 percent returns) to the World Bank, where \$18 billion of paid-in official capital [supported](#) an outstanding loan portfolio of \$223 billion last year, and will allow for continued new lending into the future, all at a real interest rate closer to 2 percent. Scaling multilaterals is a more affordable approach for donors to take to support investment in developing countries than subsidizing individual projects, even while it is also a far more sustainable approach for developing countries.

There are risks to the multilateral route. Beyond the benefits of scale, diversification, standardization, a long borrowing history, high liquidity, and low cost of due diligence that World Bank borrowing has over individual developing country borrowing, the Bank benefits from guarantees from its rich country shareholders. That is an important reason why it can borrow at very low rates from international financial markets and pass those savings onto developing country governments. But it also means rich country governments may have to bear the burden of default on World Bank loans. Even though these are very rare, they happen, and often end in a donor bailout. The HIPC debt relief program covering unsustainable multilateral bank and IMF debt has [cost about \\$76 billion](#).

On the other hand, note that the returns demanded by foreign private investors create similar (and if linked to sovereign guarantee or contingent liability, pretty much identical) economic stresses to public debt, and the lower payment demands attached to public borrowing are themselves a protection. Lower interest rates and longer maturities reduce the risk of default precisely because they make repayment less burdensome. *Especially* at a time when many lower-income countries face [record debt burdens](#) primarily driven by variable interest borrowing from the private sector, more low-interest lending from rich country governments makes sense.

To considerably increase the funds available for investment in sustainable development, donors should support large capital increases at multilateral banks alongside large (if less leveraged) grants to their subsidized lending arms like IDA and the African Development Fund. The resulting loans and credits could be used to back new investments but also retire more expensive debt or buy out excessively costly public-private partnership deals (all preferably at a discount), creating space for more sustainable investment flows. It would be great if this finance were on top of existing commitments, but given [that only one-third of current ODA](#) is actually implemented by recipient institutions, there is also considerable space for redirecting existing resources from lower-impact donor-based spending to the kind of multilateral support that is more likely to spur growth and financial capacity.

The math of development finance is that simple: investments which are financially and economically sustainable at low interest rates aren't at high interest rates (and, as it turns out, that's particularly true for many green investment projects). So, if you want to get a lot of money to low- and middle-income countries to invest in sustainable development, the scalable and affordable model for both recipient and donor countries doesn't involve a bespoke approach based around large subsidies to individual private sector projects; it is a wholesale approach using multilateral development banks to deliver low-cost finance to governments.

CHARLES KENNY is a senior fellow at the Center for Global Development.



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