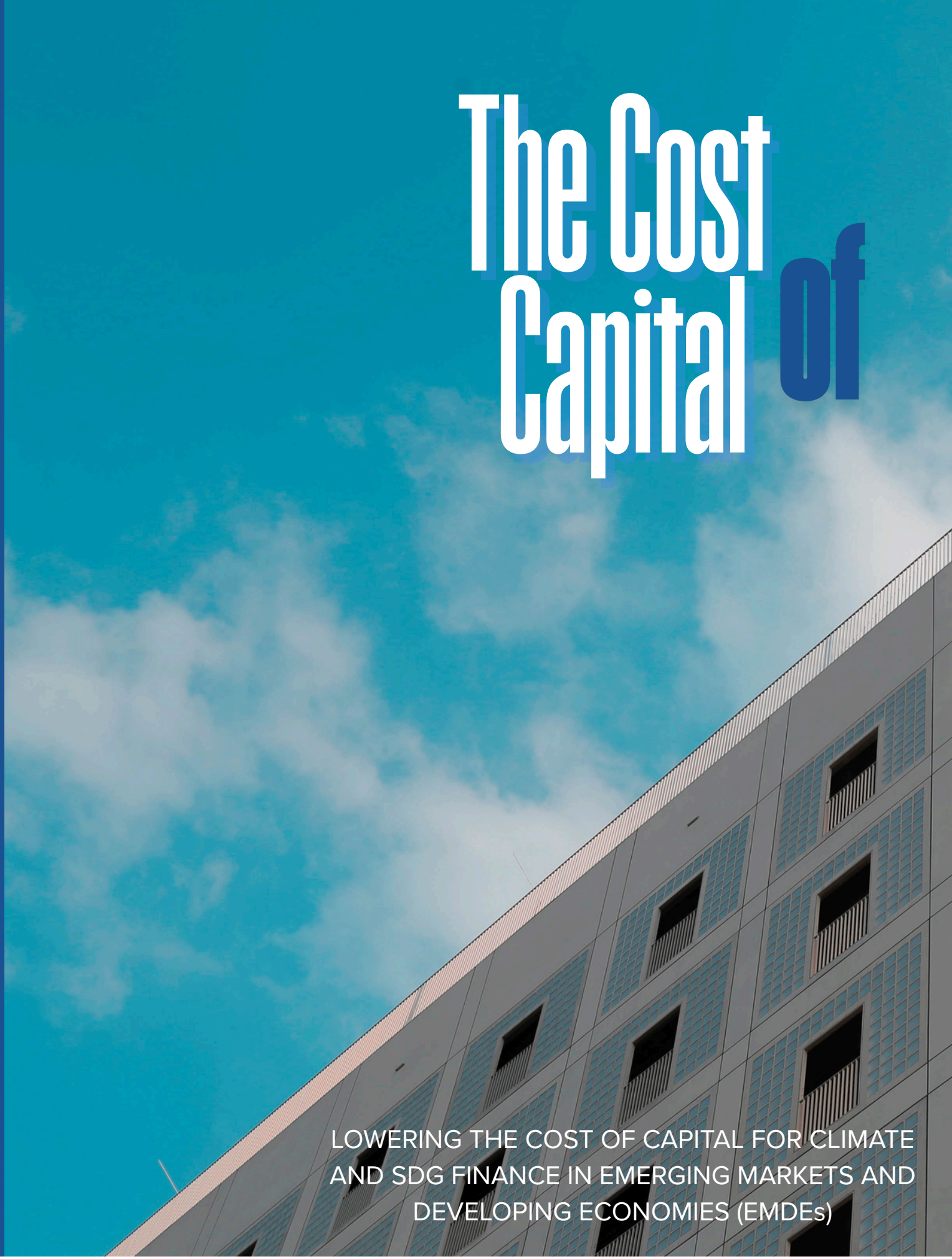
The Cost of Capital



LOWERING THE COST OF CAPITAL FOR CLIMATE AND SDG FINANCE IN EMERGING MARKETS AND DEVELOPING ECONOMIES (EMDEs)

Columbia Center on Sustainable Investment
A JOINT CENTER OF COLUMBIA LAW SCHOOL AND COLUMBIA CLIMATE SCHOOL

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FOREWORD

Today, the world's fastest-growing economies face the steepest borrowing costs — even for clean energy projects with solid fundamentals. This is not a function of global capital scarcity. Trillions are available. **The problem lies in systemic barriers that prevent capital from flowing to where it's most urgently needed.** The high cost of capital in EMDEs not only undermines critical financing for the energy transition and sustainable development; it also limits the ability for US- and EU-based financial institutions to invest in and finance projects in EMDEs, despite institutional and stakeholder appetite and interest for transition finance.

This paper provides a holistic diagnosis of the structural forces inflating the cost of capital in EMDEs – including sovereign credit ratings, investor risk perceptions, development finance mandates, and regulatory norms – and it outlines **ten actionable solutions to unlock long-term, affordable finance for climate and sustainable development** – at the speed and scale required by both global goals and national ambitions.

Each of the proposed approaches deserves careful discussion, consideration, and exploration; they are presented in this paper as a roadmap for discussion, including in the context of relevant global discussions on financing climate action and sustainable development, including the UN Financing for Development Agenda, the UNFCCC COP process, and the G20 Sustainable Finance Working Group.

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ABOUT THE COLUMBIA CENTER ON SUSTAINABLE INVESTMENT

The Columbia Center on Sustainable Investment, a joint Center of Columbia Law School and Columbia Climate School, is an applied research center that works to develop critical understanding, practical approaches, and governance tools for governments, investors, communities, and other stakeholders to maximize the benefits and minimize the potential harms of international investment for sustainable development.

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* The topics listed in each section of the Table of Contents are indicative of the content covered, but do not represent the exact structure of the paper.

1) INTRODUCTION

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The core challenge in climate and SDG finance in Emerging Markets and Developing Economies (EMDEs) is not the magnitude of financing that is needed – a few trillion dollars per year – since the global saving per year of around $30 trillion is readily adequate to the task. The core challenge is the accessibility of those funds.

Currently, EMDEs face a cost of capital (in both debt and equity financing) that is far higher than the cost of capital paid by high-income countries (HICs), even though both are part of the same global capital market. In short, the $30 trillion per year of global saving flows overwhelmingly to the economies already rich in physical and human capital, leaving a chronic shortfall of financing for countries that are desperately in need of building their infrastructure and human capital. The high cost of capital in EMDEs also limits the ability for US- and EU-based financial institutions to invest in and finance projects in emerging markets, despite institutional and stakeholder appetite and interest for transition finance.

Importantly, the high cost of capital belies the tremendous growth potential of emerging economies. With appropriate financing mechanisms and enabling policies, plausible modeling suggests that infrastructure projects in these markets have high growth potential. They are also more creditworthy than typically reflected in credit ratings or institutional capital demands – resulting in untapped investment opportunities well-suited for large banks and institutional investors. The cost of this mismeasurement is high – especially when considering both the loss of potential investment(s) and the net increase in borrowing costs.

Based on an assessment of the ratings and borrowing costs of 16 African countries in 2022, UNDP estimated that the cost to those countries of even a one-level misalignment of credit ratings cost those countries a combined $74 billion in lost investment opportunities and increased interest payments.[1]

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[1] United Nations Development Programme (UNDP). (2023). Lowering the Cost of Borrowing in Africa: The Role of Sovereign Credit Ratings. UNDP, New York.

2) THE COST OF CAPITAL IN EMDEs

Consider Table 1. Yields on 10-year International Bonds:

Country	Gross Debt to GDP 2023	GDP Growth in 2023	Yield 10-Year Bond
India	82%	6.3%	7.1%
France	110%	.9%	2.8%
Italy	143%	.7%	3.8%
Japan	255%	2.0%	.7%
United Kingdom	104%	.5%	4.0%
United States	123%	2.1%	4.2%

Sources: International Monetary Fund (IMF), World Economic Outlook (April 2024) for gross debt and GDP per capita (PPP); Trading Economics for bond yields.

India has the lowest Debt/GDP (Gross Domestic Product) ratio and the fastest GDP growth rate, and yet pays the highest costs on borrowing, roughly 300 basis points (bp) above Italy, the US, and UK, 430 bp above France, and 640 bp above Japan. The proximate cause is that poorer countries like India are assigned lower credit ratings than high-income countries, as described below.

Yet India is far from the most egregious case of excessive costs of borrowing. Countries with larger populations are often assigned higher credit ratings than countries with smaller populations, so India's credit rating is higher than many countries at a similar GDP per capita and with similar economic fundamentals. This is evident in Table 2:

Table 2. Debt, GDP per Capita, and Bond Yields, Selected EMDEs[2]

Country	Debt to GDP 2023	GDP per Capita, PPP, 2023	Yield 10-Year Bond
India	81.9%	9,183	7.1%
Egypt	92.9%	18,525	21.16%
Colombia	60.8%	19,482	11.55%
Pakistan	76.6%	6,774	14.3%

Sources: International Monetary Fund (IMF), World Economic Outlook (April 2024) for gross debt and GDP per capita (PPP); Trading Economics for bond yields.

The impact of these high borrowing costs is especially acute in sectors like renewable energy, where the upfront capital investment dominates the total cost of service. Even technologies like solar, which now have some of the lowest levelized costs of energy (LCOE) globally — estimated at just $0.035/kWh — remain out of reach for many EMDEs because the cost of capital can be two to three times higher than in advanced economies.[3] [4]

Estimates of Africa's weighted average cost of capital in the power sector are more than 18% in 2023, compared to below 5% in Europe and the US.[5] In short, while the technology is cheap, the financing is not, which makes clean energy deployment prohibitively expensive and undermines the global energy transition where it is most urgently needed.

[2] Note: The bond yield data on Trading Economics does not indicate the denomination of the bonds; the data therefore reflects a mix of hard- and local-currency issuances, which can include significant foreign exchange (FX) risk premia in the case of local-currency bonds.
[3] International Energy Agency (IEA). (2024). Reducing the Cost of Capital: Strategies to Unlock Clean Energy Investment in Emerging and Developing Economies. IEA, Paris; IEA (2023), Scaling Up Private Finance for Clean Energy in Emerging and Developing Economies, IEA, Paris.
[4] BloombergNEF. (2025). Levelized Cost of Electricity Update: 2025. Bloomberg Finance LP.
[5] Clean Air Task Force (CATF). (2024). Evaluating the Weighted Average Cost of Capital (WACC) in the Power Sector for African Countries. CATF, Boston; IEA (2023), Cost of Capital Observatory, IEA, Paris.

3) THE LOW CREDIT RATINGS OF EMDEs

Overall, the high cost of capital in EMDEs is driven by the perception that default risk is very high for these countries, as reflected in their poor credit ratings.

The credit rating agencies (Moody's, Fitch, S&P Global) systematically give low credit ratings to the low-income countries (LICs) and lower-middle income countries (LMICs), as classified by the World Bank. As of December 9, 2024, the breakdown of sovereign ratings by income category is shown in Table 3. Of the 193 UN member states, 125 have a sovereign credit rating by Moody's. Of these, 59 are at investment grade, while 66 are below investment grade, that is, speculative grade. Note that while 47 of 63 (74.6%) of high-income countries (HICs) have an investment-grade credit rating, only 10 of 54 (18.5%) of upper-middle income countries (UMICs), 2 of 50 (4%) of lower-middle income countries (LMICs), and 0 of 26 (0%) of low-income countries (LICs), are at investment grade.

Table 3. Sovereign Credit Ratings by Country Income Group

Country Income Group	Countries	Rating	Inv Grade	% Inv Grade	No Rating
High Income	63	54	47	74.6%	9
Upper Middle Income	54	42	10	18.5%	12
Lower Middle Income	50	21	2	4.0%	29
Low Income	26	8	0	0.0%	18
Total	193	125	59	30.6%	68

Sources: Author's Analysis

These are indeed alarming data. They show in total that only 12 of 130 (9.2%) developing countries have an investment grade credit rating.[6]

According to the scoring methodologies of the credit-rating agencies, per capita GDP is a direct determinant of the credit score for sovereign borrowers, with higher GDP per capita translating directly into a higher credit rating. It also has a strong indirect role in many of the qualitative judgments that enter the credit scores. A large population, as mentioned earlier, is also given a positive weight in the methodology, so that two populous LMICs (India and the Philippines) are accorded an investment-grade rating, while the rest of the LMICs are rated as below investment grade.

A cross-country regression of the Moody's credit rating for April 2024 shows the decisive effect of the GDP per capita on Moody's credit ratings. Simply put: high-income countries have good credit ratings; lower-income countries have lower credit ratings.

In the regression, the Moody's ratings are converted to a 0-100 scale, with each notch (e.g., from Aa1 to Aaa) accorded an increment of 5 points. The right-hand-side determinants of the credit ratings are: GDP per capita, population, inflation (indicating financial stress), access to a Federal Reserve swap line (indicating liquidity), the Debt/GDP ratio, and dummy variables for Russia, Belarus, and Ukraine (geopolitical risk).[7]

[6] Note: The bond yield data on Trading Economics does not indicate the denomination of the bonds; the data therefore reflects a mix of hard- and local-currency issuances, which can include significant foreign exchange (FX) risk premia in the case of local-currency bonds.

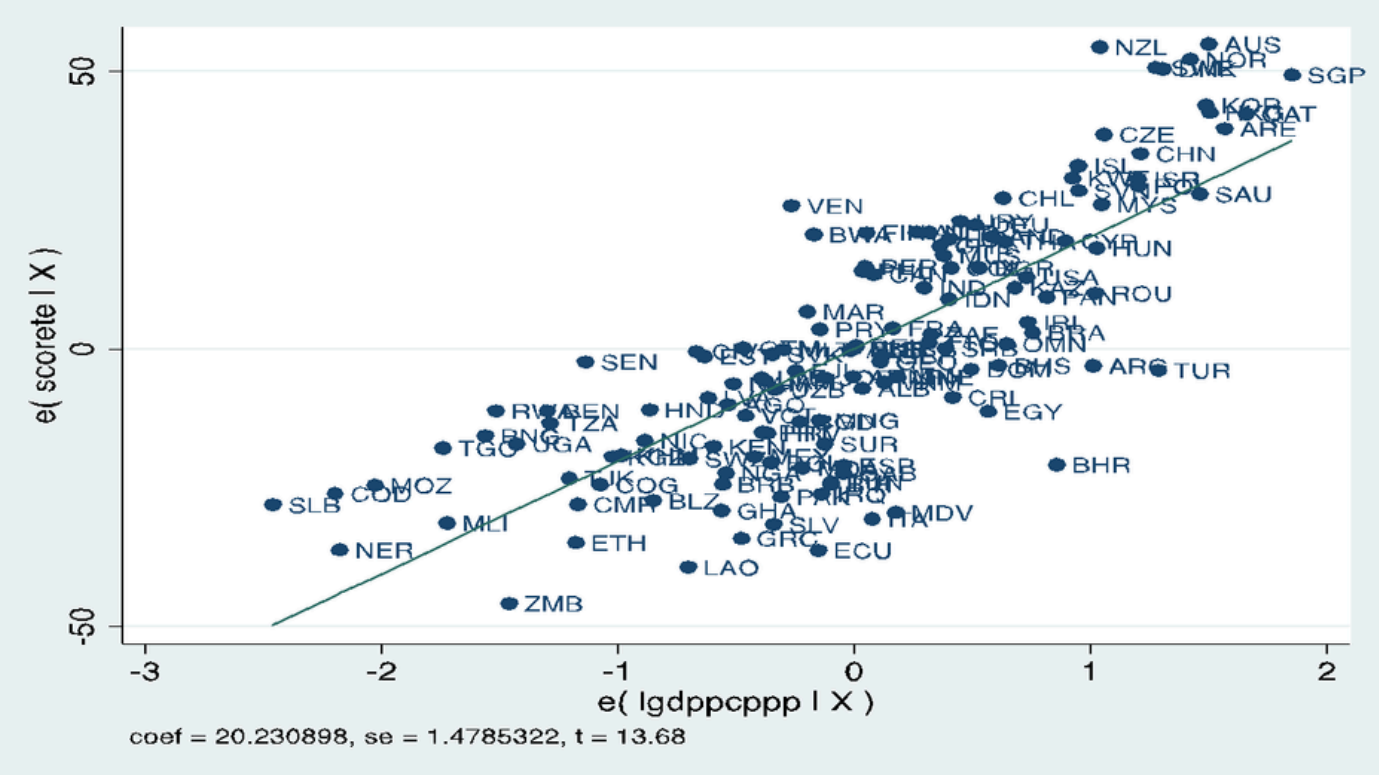
[7] Note that there are existing efforts underway – such as the UNECA and Afreximbank-backed Liquidity and Sustainability Facility (LSF) – to increase liquidity for African sovereigns by creating a repo market anchored in a diversified pool of African Eurobonds.

THE LOW CREDIT RATINGS OF EMDEs (cont.)

Interestingly, the Debt/GDP ratio is not even statistically significant, probably reflecting the fact that many high-income countries are accorded Aaa ratings despite Debt/GDP ratios well above 100%. Countries linked to the Fed through swap lines have better credit scores (worth almost two notches). Countries with high inflation have lower ratings. What is most decisive is GDP per capita. Poorer countries are rated lower irrespective of any country-specific credit risks.

The partial regression plot of the Moody's score (vertical access) on the natural log of GDP per capita (horizontal access) is shown in Figure 1:

Figure 1. Partial Regression Line of Credit Rating (y-axis) vs. GDP per Capita (x-axis)



Sources: Author's Analysis

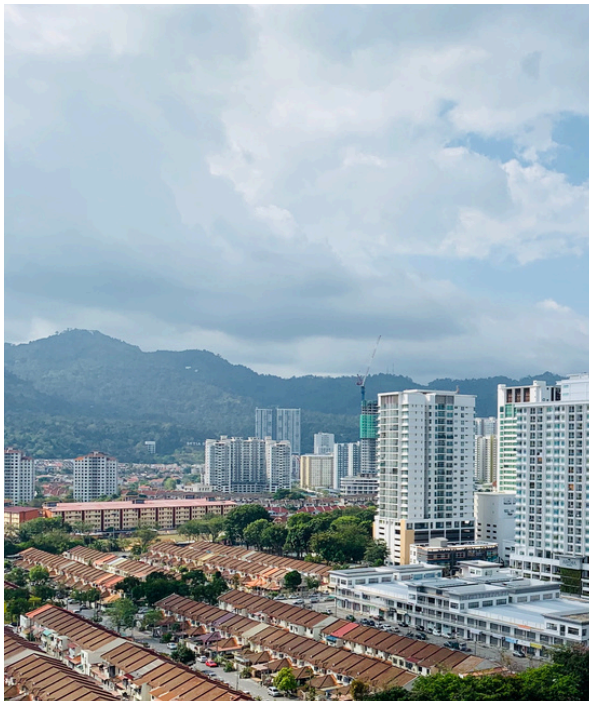
We see clearly that richer countries are systematically assigned a higher credit rating. The coefficient 20.2 means that an LMIC at one-eighth of the GDP per capita of the US (around $10,000 per annum, PPP) loses 38 (=20.2*ln8) points, or almost 8 notches! A small country with $10,000 per capita does not have any practical chance of receiving an investment-grade credit rating, irrespective of its economic growth potential, quality of governance, or expected returns on public investments.

HICs, of course, have an intrinsic advantage because they typically borrow in their own currency, insulating them from the types of crises facing countries that borrow in foreign currencies. Ratings also include subjective indicators of government institutions and public sector capacity, all of which favor HICs. Accordingly, of the risks assessed by credit rating agencies, most are biased in favor of high income countries and are solvable for lower income countries, with appropriate mechanisms, as described below.

4) THE HIGH GROWTH POTENTIAL OF THE EMDEs

The EMDEs in fact have a very high growth potential, far higher than in the HICs, based on high rates of investment in human capital, infrastructure, and business capital. Thus, the credit rating system is doubly toxic. It actually gives the lowest ratings to the countries with the highest growth potential, and it generally ignores the long-term structural determinants of debt sustainability, putting the focus on short-term liquidity considerations (more on this below).

Prof. Robert Barro has extensively measured the rate of conditional convergence in a series of important studies dating back to the early 1990s and has estimated what he terms the "iron law" of 2% conditional convergence. This means that a country at half of the GDP per capita of the US tends to grow 1.4% per annum faster than the US, since 1.4% = 2% * ln(2).[8] A country at one-fourth the per capita income of the US tends to grow 2.8% per annum faster, and so forth.



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The US GDP per capita is around $84,000 in 2024, with a growth rate of 1.5% per annum. Thus, a country at $42,000 would be expected to grow at 2.9% (=1.5% + 1.4%) per annum. A lower-middle income country at one-eighth the per capita income of the US would be expected to grow at 5.6% per annum. A low-income country at one-sixteenth the per capita income level, $5,250, would tend to grow at 7% per annum. As these are per capita growth rates, the aggregate GDP growth rates would be 1-2% per annum higher because of population growth.

The high growth potential of the EMDEs results mainly from the very high returns to public education and infrastructure in these countries. Schooling raises the productivity of the educated workers as well as the economy-wide total factor productivity. The internal rate of return to investments in schooling in low-income countries is likely to exceed 20%. With strong investments in schooling and physical infrastructure (energy, transport, digital, water, and sanitation), low-income countries can achieve sustained GDP growth of 7 percent per annum or higher during the next 40 years. Such high growth potential, based on the high returns to investments in human capital and infrastructure, justify far higher levels of financing for the EMDEs, and for the LICs and LMICs in particular.

[8] The 2% rule holds that ln(GDPt+1/GDPt) = -0.02*ln(GDPt/GDP-USt) + other variables, where GDP denotes the per capita GDP. Therefore, the log-growth of GDP is equal to 0.02 * log (GDP/GDP-US). A country at half of the US GDP per capita therefore has a growth rate 0.02*log(2), or 1.4% higher than that of a country at the same income level as the United States.

THE HIGH GROWTH POTENTIAL OF THE EMDEs (c.)

Of course, the high growth rates of the EMDEs are potential, not guaranteed. They also depend on decent economic management, openness to trade, sustainable fiscal policies, and reasonable geopolitical stability. Nonetheless, even with all of these qualifications, the fact of conditional convergence belies the common belief that EMDEs have poor investment prospects. The EMDEs, on balance, represent the fast-growing regions of the world, and the countries with the highest marginal productivity of capital.

Conditional convergence not only casts doubt on the credit rating methodologies of the main rating agencies, but also on the IMF-World Bank Debt Sustainability Framework (DSF), which calls on low-income countries to avoid a level of public debt above 30-50% of current GDP. Such advice is patently short-sighted. With rapid growth, even a Debt/GDP ratio as high as 100-200% in the short-term can decline to below 50% in 30-40 years as the result of rapid growth. Large-scale public borrowing makes ample sense under three conditions: (1) the public investment has a high rate of return; (2) economic growth is likely to be rapid; and (3) the debt has long maturity, so that it will be amortized only after the economic growth is attained.

Indeed, it certainly pays for EMDEs to borrow externally for public investment spending that is part of a high-growth development strategy. Domestic revenues and domestic saving will generally be far too low to support the full public investment needs of a high-growth trajectory. As a rough estimate, a low-income country should make public investments of about 15% of GDP on education at all levels, 10% of GDP on health, 5% on transport, 5% on electrification, and 5% of GDP on other urban infrastructure (water, sanitation, digital, social housing). In addition, other budgetary outlays include public administration, national defense and internal security, environment sustainability and adaptation, and social protection.

Thus, a low-income country might be well advised to spend at least 40% of GDP on budget outlays and another 10-20% of GDP via the public investment outlays of parastatals, such as power and water utilities. Budget revenues will typically start at around 20% of GDP, but should be increased gradually to at least 30% of GDP. Such large financing needs evidently require very large external financing as well, both equity and debt. Yet the large-scale, long-maturity external financing will be sustainable and justified by the high rates of return and economic growth that accrue to the public investments.

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5) THE HIGH CoC IMPEDES EMDE ENERGY TRANSFORMATION

Energy infrastructure in general requires long-term financing.[9] A power plant lasts 25-40 years, or even longer, but requires significant upfront investments for construction and start-up. The problem is especially severe with regard to decarbonization, since zero-carbon energy systems are in general far more capital intensive than fossil-fuel based energy systems. As a result, when the cost of capital is high, fossil-fuel-based power generation has a lower levelized cost of energy (LCOE) than zero-carbon alternatives. But when the cost of capital is low, zero-carbon energy has a lower LCOE. This makes reducing the cost of capital essential to the energy transition in EMDEs.[10]

The low credit ratings of the EMDEs are therefore decisive in frustrating their shift to low-carbon energy systems. The world will not succeed in the global energy transformation so long as the EMDEs pay exorbitant yields on their international long-term loans.

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[9] Sachs, J. D., & Sachs, L. E. (2022). Financing Decarbonization. Revue européenne du droit, (4).
[10] Ibid.

6) TEN PATHWAYS TO LOWER THE CoC

There are at least **ten important ways to reduce the cost of capital in the EMDEs**. All of them should be implemented. These are: (1) improve the credit risk management of the EMDEs; (2) improve the credit risk rating methodologies of the rating agencies; (3) improve the methodology of the IMF/World Bank Debt Sustainability Framework (DSF); (4) shift EMDE financing to long-term maturities; (5) ensure a lender of last resort to reduce credit risk; (6) build capital markets in EMDEs; (7) enhance guarantees and special treatment for climate and SDG financing; (8) increase financing by development banks and specialized funds; (9) use blended finance and other innovative legal and financial innovations to de-risk EMDE finance and scale private finance; and (10) change the risk behaviors of major investor pools to take on a larger proportion of assets at sub-investment grade.

Each of these approaches deserves careful discussion, consideration, and exploration; they are included here as a roadmap for the discussion, including in the context of relevant global discussions on financing climate action and sustainable development, including the Financing for Development Agenda and the G20 Finance Track.

1 Improve the Credit Risk Management of the EMDEs

Improved credit risk management in the EMDEs would entail a well-articulated long-term growth and investment strategy that ensures debt sustainability and public-sector liquidity along the path of debt servicing. Key policy actions include developing long-term frameworks for rapid economic growth based on quantitative macroeconomic modeling and detailed investment scenarios, strengthening macroeconomic fundamentals, ensuring policy predictability, ensuring public-sector access to short-term international financing if needed (to prevent temporary debt-service interruptions), and promoting high-quality, high-return investments within a long-term public investment and fiscal framework. On this basis, backed up by long-term investment and fiscal frameworks, the EMDEs would make the case for improved credit ratings and lower costs of capital.

2 Improve the Methodologies of the Credit Rating Agencies

The commercial credit ratings (Moody's, Fitch, S&P Global, and others) need to be re-designed to distinguish liquidity risk and long-term risk, to reduce subjective biases, and to account for the growth prospects in EMDEs. Improved credit ratings by the rating agencies would include, inter alia: (1) basing credit ratings on the long-term (30-40 year) growth trajectory, not the 5-10 year trajectory used by the IMF and certainly not only on past performance, as in current rating methodologies; (2) not punishing countries credit ratings simply because of low GDP per capita, as lower GDP per capita signifies higher growth potential (i.e., conditional convergence); (3) assessing Debt/GDP ratios according to the 30-40 year scenario, rather than the 5-10 year scenario as is currently done; (4) taking into account the uses of sovereign debt (i.e., the capital assets that are being built by sovereign borrowing, including human capital and infrastructure); (5) taking into account the maturity structure of the debt, as long-term debt is inherently less risky than short-term debt as it avoids rollover risk; (6) taking into account the adequacy of the credit risk management systems in place in each country; (7) taking into account regional monetary arrangements to ensure liquidity of member governments (as described below); and (8) minimize subjective assessments of, e.g., political stability which reflect inherent biases toward developed countries and do not reflect economic fundamentals.

TEN PATHWAYS TO LOWER THE CoC (cont.)

3 Improve the Methodology of the IMF-WB Debt Sustainability Framework

The IMF-World Bank Debt Sustainability Framework should be reformed with the same considerations in mind as for the credit-rating agencies. It is currently anti-growth, as it discourages long-term borrowing for high-return investments in human capital and infrastructure. The DSF should be forward-looking, investment-based, growth-oriented, and sustainable development-oriented. Developing countries can sustainably take on much higher ratios of debt to GDP, provided: (1) they use the funds for highly productive SDG-related long-term productive investments (e.g., electrification, digital connectivity, schooling, healthcare, protection of natural capital, etc.); (2) the loans are with long maturities at fixed rates (within 200 bp of AAA-borrowers); and (3) the borrowing countries have long-term fiscal frameworks that aim to raise future tax revenues to service the higher level of debt, and long-term trade policies to promote net exports needed for future debt servicing.

The main problem with the DSA ceilings is that they are based on a conflation of solvency and liquidity considerations.[11] We certainly agree that debt servicing can lead to a liquidity crisis if the borrowing is short term. We therefore believe that incremental SDG borrowing should be long term (>30 years), precisely to reduce the risk of short-term liquidity. Once the risk of liquidity crises is diminished, the case for higher Debt/GDP ratios becomes clear.

The focus of the IMF should be on developing a framework to fund the SDG agenda (health, education, infrastructure, energy, land use, climate, etc.). The financing gap of each member state should be systematically calculated in Article IVs and country programs and the financing needs should be incorporated into every major interaction with their member states. Current Article IVs and current IMF programs generally do not even mention the SDGs, much less identify the financing gaps and the ways to close the financing gaps.

4 Shift EMDE Financing to Long-term Maturities

Many EMDEs are caught in a low-level growth-debt trap involving Eurobond debts and even official credits with maturities 10 years or shorter. The borrowing governments frequently succumb to enormously costly liquidity crises because their debts fall due far sooner than the long-term growth is achieved as needed to amortize the debts. Development loans to the LICs and LMICs should generally be for at least 30 years and typically longer given the long period required for successful long-term economic development. While longer maturities can reduce rollover risk and support growth-aligned repayment, they are not sufficient on their own. Argentina's 100-year bond issued in 2017 (which defaulted in 2020) illustrates this point. The bond was issued at a high interest rate (7.9%) and denominated in foreign currency, without the backing of sustained macroeconomic stability or productive investment.[12] Its failure underscores not a problem with long maturities per se, but with mismatched financing terms and weak fiscal fundamentals. In this sense, it is an outlier – and a cautionary tale – not an argument against long-term development finance.

The EMDEs currently face the possibility of a “rollover” crisis when their bonds fall due. The main reason, aside from the inappropriately short maturities, is that they borrow in foreign currencies, so their own central banks cannot act as a lender of last resort to refinance the external debts falling due. The result is vulnerability to a self-fulfilling rollover crisis. In a self-fulfilling rollover crisis, the sovereign debtor is, for whatever reason, declared to be at risk of default (perhaps by a credit downgrade or credit alert). As a result, the borrower finds itself unable to refinance the bonds falling due, and thereafter falls in default as a self-fulfilling prophecy. The main solution to the current debt crises should be the refinancing of existing loans to long maturities. This is emphatically the case on all bilateral loans, which should be restructured by the Paris Club into 30-year (or more) maturities at interest rates comparable to the rates faced by the creditor nations.

[11] As the IMF notes: The IMF's definition of debt sustainability “includes both solvency and liquidity requirements.” See IMF Policy Paper: Review of the Debt Sustainability Framework for Market Access Countries (2021).

TEN PATHWAYS TO LOWER THE CoC (cont.)

5 Ensure a Lender of Last Resort to Reduce EMDE Credit Risk

With a global lender of last resort, such a self-fulfilling panic could be obviated. The IMF could and should play this role but does not because of the objections of the US. The US aims to be the sole global lender of last resort, but only to countries that are allies of the US (the Eurozone, Canada, UK, Japan, Korea, etc.). These countries indeed face lower borrowing costs than non-US allies. The IMF should provide a similar service for the EMDEs, with the backing of the five major central banks (US Federal Reserve, European Central Bank, Bank of England, Bank of Japan, and People's Bank of China). While the IMF's current balance sheet is theoretically adequate for systemic support, the real issue is conditionality. As a lender of last resort to prevent liquidity crises, conditionality should be subordinate to stabilization. For instance, predefined triggers – such as reserve depletion, credit downgrades across regional peers, or severe currency mismatches – should allow for liquidity provision without protracted negotiations or specific sovereign veto power.

Since the IMF is unlikely to play this role because of the US veto, the EMDEs should create their own regional monetary funds, or monetary "clubs" in the cases of non-regional groupings, for example the BRICS. Regional funds would cooperate mainly by providing swap lines across the participating central banks, as in the Chiang Mai Initiative for ASEAN, China, Japan, Korea, and Hong Kong. In addition, smaller nations or regional groupings should consider creating their own currency unions, so as to be able to engage in global financing in their own currency. The African Union, for example, should begin the process of establishing a monetary union, and in the meantime, can create an African Lender of Last Resort (ALLR). However, for CMIM-type initiatives to be truly effective in circumstances where the IMF can't or won't intervene, they must demonstrate independent conditionality in accordance with their regional ownership model.

6 Build Capital Markets in EMDEs

Even in cases where EMDEs are successful in establishing regional monetary arrangements, they must still address foreign exchange (FX) constraints, especially where access to globally accepted reserve currencies remains essential for external debt servicing and trade. In the near term, regional monetary funds and ALLR-type institutions should explore mechanisms to alleviate these FX constraints. These could include pooling and strategically managing FX reserves, leveraging Special Drawing Rights (SDRs), engaging in cross-regional currency swap arrangements with reserve-issuing central banks, or piloting commodity-linked or regional digital currencies for intraregional trade settlement.

Over the longer term, however, a more resilient solution lies in the development of deep, liquid local currency bond markets. Building such markets can help reduce risk premiums, improve price discovery, and enable more affordable long-term financing without excessive dependence on foreign currency borrowing. Achieving this will require sustained collaboration among governments (to improve fiscal credibility and market infrastructure), multilateral development banks (to provide technical and financial support), and institutional investors (to help shape demand and provide market depth). While not a panacea, local currency bond markets are a cornerstone of financial sovereignty and long-term stability—and must be treated as a strategic priority alongside near-term FX solutions.

[12] Argentina Ministry of Finance. (2017). The Government issues a 100-year bond in USD at 7.125%. Ministerio de Economía, Buenos Aires.

TEN PATHWAYS TO LOWER THE CoC (cont.)

7 Enhance Guarantees and Special Treatment for Climate and SDG Financing

Guarantees and preferential treatment can significantly improve the risk-return profile of EMDE finance, attracting a more diverse pool of investors. These enhancements can take various forms, including insurance instruments, official guarantees, subordination clauses, and preferred creditor status for specified products, among others.

A specific function of the multilateral or regional development banks and the specialized funds (such as the Green Climate Fund, the Adaptation Fund, the Global Environment Facility, and others) should be to provide official guarantees on climate and SDG financing. An additional guarantee fund could also be established under the auspices of the World Bank or regional banks. A standalone guarantee facility offers greater flexibility in structuring and targeting (e.g., by region, sector, or instrument type), and could unlock higher leverage by operating under a tailored risk appetite. However, reforming and expanding the existing guarantee mandates of multilateral institutions should occur in parallel to avoid fragmentation.

"Themed bonds" such as SDG Sovereign Bonds or Climate Bonds, linked to achievement of the SDGs or particular climate objectives, should also be afforded preferred creditor status when these bonds meet particular qualifying conditions. For example, to qualify as a preferred bond, the bond would have (1) maturity of at least 30 years, with a 20-year grace period; (2) a coupon rate no more than 200 bp above the prevailing Aaa rates; and (3) a well-defined development objective and support structure (SDGs, energy, ecosystems, infrastructure, others).

The world's major financial centers (New York, London, Hong Kong, etc.) should become the market-makers for long-term SDG or Climate Sovereign Bonds with preferred creditor status. Some traditional financial centers may be relatively uninterested or detached from development lending, while others will see new commercial opportunities in new specialization in such financing. Hong Kong, for example, would seem to be a very promising center for the flotation of long-term development bonds, given the potential co-financing by the Hong Kong bond market with China's Belt and Road Initiative.

8 Enlarge the Financing by the MDBs and the Specialized Funds

The expansion of MDB financing has been advocated on many fronts, including the UN Secretary-General's SDG Stimulus and the High-Level Expert Group on the G20. The MDBs currently operate at a deficient flow of financing. Combined MDB disbursements are roughly $120 billion per year compared with more than $1 trillion that is needed. (The $120 billion are gross flows; flows net of repayments are far lower). The MDBs should increase annual gross disbursements to at least $500 billion per year by 2027, with further increases thereafter. This increase in lending should be accomplished by annual rounds of paid-in capital of $100 billion per year, thereafter leveraged 5X. Currently, many MDBs keep a relatively low ratio of development loans to total capital, suggesting that even with their current capital, the MDBs could significantly expand their development lending.

The specialized funds (such as the Green Climate Fund, the Adaptation Fund, the Losses and Damages Fund, the Global Environment Facility, and others) also play a crucial role in addressing specific challenges and priorities within the realm of global development and climate action. These funds are designed to target particular sectors, issues, or regions, and to offer tailored financial support to address unique needs. Funds that contribute to the capital expenditures of clean energy projects, for example, can help bridge the cost gap between green technologies and fossil fuel-based systems. To date, the specialized funds are both profoundly under-capitalized and difficult to access.

TEN PATHWAYS TO LOWER THE CoC (cont.)

Governance and operational procedures, though well-intentioned, are frequently onerous, counterintuitive, and poorly suited to the realities faced by developing countries. The result is a congested funding pipeline where – in the case of GCF – only 44% of committed funds have been disbursed as of late 2023.[13] The process of accreditation for implementing entities can take 1 to 3 years and is reminiscent of the same reforms now being proposed to alleviate issues of interconnection queues in regional transmission systems.

Efforts are underway to address these issues. The Green Climate Fund (GCF) has recently introduced reforms including: a single project lead throughout the appraisal process; rolling reviews of priority-aligned proposals; simplified templates; and strict page limits on concept notes and funding proposals. Still, broader change is required across the climate finance architecture. Brazil's G20 Presidency – along with an Independent High-Level Expert Group – pushed for harmonized templates, streamlined accreditation, and time-bound approval processes across the four largest multilateral climate funds. Their recommendations to the Sustainable Finance Working Group emphasized standardization of blended finance structures to lower transaction costs while maintaining flexibility to national and subnational priorities.[14]

Finally, new, sub-regional MDBs could be established to facilitate low-cost borrowing for their sub-regional members. A clear case of success is the CAF, the Development Bank of Latin America and the Caribbean. The CAF began as the Corporación Andino de Fomento, the Andean Development Corporation. The bank borrowed at excellent rates on behalf of regional members with sub-investment-grade ratings. In other words, the CAF provided a means to lower the cost of capital to its members, mainly by maintaining an excellent loan portfolio, paid-in capital of the member countries, and implicit preferred creditor status. Sub-regions around the world – such as ASEAN, Central Asia, the East Africa Economic Community, Mercosur, and others – could emulate the CAF and thereby leverage capital provided by sub-regional members and achieve a preferred creditor status.

9 Scale Blended Finance

Historically, every dollar of concessional public finance has attracted several dollars of commercial capital, with more than half of this coming directly from private sources. In markets favorable to green technologies, this private capital leverage ratio can be even higher.[15] Blended finance is gaining prominence as an essential mechanism to mitigate perceived risks for private investors.[16] By using public or philanthropic funds to mitigate risk, blended finance structures can unlock significant amounts of private capital for projects that might otherwise be too risky. These structures are particularly effective in sectors like renewable energy and infrastructure, where upfront costs are high and returns may be slow to materialize. For private investors, the presence of public finance can provide a buffer against potential losses, making these investments more attractive.

Yet blended finance in EMDEs continues to face significant hurdles, including misperceptions about risk and illiquidity.[17] Insufficient and fragmented data on pricing, concessionality, risks, and impacts creates uncertainty, and makes it difficult to standardize processes and structure deals effectively, deterring private sector participation.[18] Similarly, a lack of robust data hinders credit rating agencies and prudential regulators' ability to accurately assess the true risks associated with investing in developing markets through blended finance.[19]

[13] Green Climate Fund (GCF). (2024). Annual Results Report 2023. Green Climate Fund, Incheon.
[14] G20 Sustainable Finance Working Group. (2024). 2024 G20 Sustainable Finance Report. https://g20sfwg.org/wp-content/uploads/2024/10/2024-G20-Sustainable-Finance-Report.pdf.
[15] Deloitte. (n.d.). Financing the green energy transition: How to overcome challenges. The Wall Street Journal. Retrieved January 19, 2025.
[16] Briera, T., & Lefèvre, J. (2024). Reducing the cost of capital through international climate finance to accelerate the renewable energy transition in developing countries. Energy Policy, 188.
[17] The Columbia Center on Sustainable Investment is conducting research on the misperceptions of risk in blended finance and on structures that would enable greater liquidity. See https://ccsi.columbia.edu/content/blended-finance.
[18] Transparency International (2022). Blended Finance: Integrity and Anti-Corruption Standards. Transparency International Helpdesk Answer.
[19] Convergence Report.Convergence Blended Finance (2024). The State of Blended Finance 2024. Convergence Report.

TEN PATHWAYS TO LOWER THE CoC (cont.)

A critical misalignment in the current financial architecture is that prudential regulations often fail to recognize the de-risking effects of blended finance or of other credit enhancements, including guarantees, in determining capital requirements, undermining the very ability of credit enhancements to improve the risk-return profile of investments.[20] Capital adequacy frameworks tend to treat all exposures of a given credit rating similarly, regardless of whether the underlying risks have been mitigated through structured support mechanisms. Even when public or philanthropic capital effectively cushions first-loss risk or provides a guarantee of repayment, banks are still required to hold capital as if those protections did not exist. Moreover, current regulations do not distinguish climate-aligned investments despite their long-term strategic value and potential for lower transition risk under supportive policy scenarios. To enable credit enhancements to effectively scale private capital, prudential frameworks must evolve to better reflect the actual risk profile of de-risked assets and to support financial institutions' ability to engage in climate and SDG finance without compromising their soundness.

10 Change the Risk Assessments of Major Investor Pools

Major investor pools (e.g., sovereign wealth funds) seeking higher returns are likely to find that many EMDE investments offer competitive or superior actual net-of-risk returns compared to higher-rated investments in developed markets. Based on the explanations above, major investor pools should understand the great growth potential of EMDEs and that the credit rating investment-grade cutoff is arbitrary in terms of the eventual net-of-default returns on loans. The risk assessment models used by export credit agencies (ECAs) could be instructive for major investor pools, as they often provide a more nuanced and context-specific evaluation of risks associated with investments in EMDEs.

Traditional credit ratings often fail to account for risk mitigants like guarantees, co-financing from development banks, or public-private partnerships, resulting in higher perceived risks than justified, as described above. Finally, ECAs often incorporate the broader economic, social, and environmental impacts of projects into their assessments. Highlighting these non-financial benefits can help investor pools understand the additional value that EMDE projects create, beyond immediate financial returns.

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[20] Noss, J., Songwe, V., & Yong, J. (2024). The rising tide of climate finance – scope to adjust prudential treatment (FSI Occasional Paper No. 23). Bank for International Settlements.

7) OUTSTANDING ISSUES

Ensuring that Climate Finance and SDG Finance are Regarded as a Package

One of the risks today is that international finance becomes a battleground between climate action and SDG action. The choice is not climate action versus sustainable development. It is climate action within sustainable development, as is clearly spelled out in the Paris Agreement and the SDGs. We must therefore assess financing needs holistically, to cover not only climate mitigation and adaptation, but to cover other SDG priorities, including education, health, land use, urban and inter-urban infrastructure, digital transformation, and social protection. Appendix 2 lists a number of priority issues for SDG financing.

Particular Financing Considerations of Regional Interconnection Projects

Projects spanning multiple countries facilitate the development of cross-border infrastructure (i.e., transportation networks, energy grids, and communication systems that span multiple countries improve connectivity, trade facilitation, and overall regional development).[21] This scheme can also mitigate risks by diversifying them across multiple nations. Shared investments in diverse sectors and geographies reduce the impact of economic shocks or challenges faced by individual countries. This risk diversification enhances the stability of projects and promotes resilience against unforeseen circumstances, contributing to sustained economic development.

However, financing regional interconnection projects, which involve the infrastructure necessary for the transfer of energy across borders, requires careful consideration of both political and economic factors. These projects are typically capital-intensive and have long gestation periods, making them risky investments that often require guarantees or support from multiple governments. Financing such projects involves navigating diverse regulatory environments and securing commitments from stakeholders in multiple countries. The success of these projects often hinges on aligning interests and ensuring mutual benefits, which may require innovative financing structures and risk-sharing mechanisms to attract both public and private investors.

Long-term Low-Emission Pathways

Long-term low-emission pathways to achieve decarbonization by 2050 are critical for guiding countries and industries in their shift towards low-carbon and sustainable practices. These plans provide a roadmap for achieving emissions reductions, adopting renewable energy sources, and minimizing environmental impact while ensuring economic stability. A robust long-term pathway includes clear targets, timelines, and funding strategies, and is crucial for maintaining competitiveness in a global economy increasingly geared towards sustainability. Such plans also help mitigate the risks associated with the transition by providing predictability and supporting sectors and communities that may be adversely affected.

Global Taxation

SDG and climate financing, including incremental capital for the MDBs, the specialized funds, and possibly a new guarantee fund, needs dedicated global revenues that do not depend on the haphazard contributions by donor countries. Global levies should be assessed on the historical and continued CO2 emissions of high-income countries, and on other sectors, including international shipping, international aviation, and international financial transactions, as well as an extreme wealth tax. The assessment on HIC emissions of CO2 would accord well with three principles: polluter-pay principle (e.g., HICs are assessed $4 per ton on CO2 emissions of the preceding year); historical responsibility (e.g., HICs are assessed $0.12 per ton of CO2 emissions during the preceding thirty years); and common but differentiated responsibility (the assessment is on HICs).[22] These assessments would total roughly $100 billion, which could be leveraged into $1 trillion of long-term loans. This could be done in a variety of ways.

[21] Camelo Vega, A. M., Financing Pathways for the Energy Transition: A Regional Approach (New York: Columbia Center on Sustainable Investment (CCSI), September 2024).
[22] In the current World Bank classification, China and Russia are upper-middle-income countries, not high-income countries, but both will soon be HICs, and therefore rather soon would become subject to the proposed levy.

OUTSTANDING ISSUES (Cont.)

For example, a portion of the funds could be provided to the MDBs, which would then leverage the funds into loans on their own balance sheets, aiming for a 10X leverage. Alternatively, the funds could capitalize a new global guarantee fund that would provide guarantees on qualifying climate-linked and SDG-linked sovereign bonds. The climate-linked sovereign bonds could then be securitized (i.e., bundled into marketable securities) so that investors would buy a portfolio of climate-related loans backed by guarantees. The global guarantee fund would function in a manner similar to Fannie Mae in the market for homeowner mortgages. Depending on the leverage that is achievable, levies could be adjusted to assure $1 trillion of LIC/LMIC loans per year.

Brief Reflection on Finance Justice

The discussion above focuses on the credit conditions facing the EMDEs. It does not focus on the question of who owes what to whom for climate justice and for achieving the SDGs. The rich countries count their payments to the poorer countries as "development assistance," essentially as acts of generosity. The poorer countries, on the contrary, regard the transfers by the rich countries as partial compensation for harms committed by the rich countries dating back to African slavery and European imperialism, and continuing till today in the form of climate damages caused overwhelmingly by the greenhouse gas emissions of the rich world, political destabilization by the US and others (including at least 90 US regime-change operations abroad since 1947), wars of choice by the rich countries, and various forms of economic exploitation (e.g., underpayment of taxes by multinational companies).

As the world moves from the "unipolar" moment after 1991 once claimed by the US, and now fading into history, and moves to a multipolar world in which the EMDEs will surely play a vastly larger geopolitical role, the demands for finance justice are bound to increase. At a minimum, the HICs should be taking pro-active financial steps to ensure that all countries are able to achieve the SDGs, finance the energy transition, and make the urgently needed investments in climate resiliency. Without such minimum needs of the EMDEs being met, the demands for economic justice will understandably and rightly multiply. The longer the HICs delay the urgent steps needed for just climate and SDG financing, the far larger will be the bill of justice awaiting them in the future.

AUTHORS' NOTE

Some of the proposals in this report are ambitious relative to prevailing practices, reflecting the scale of transformation needed to align global capital markets with climate and sustainable development goals. Lowering the cost of capital in emerging and developing economies is both a financial and moral imperative – one that will require coordinated reforms across credit rating methodologies, multilateral finance, risk management frameworks, and investor behavior.

These pathways will evolve in tandem with global policy frameworks, and financial institutions should actively engage in shaping and supporting them. The Columbia Center on Sustainable Investment is committed to advancing these vital conversations and exploring innovative, pragmatic reforms. We invite feedback, collaboration, and continued dialogue at ccsi@columbia.edu.

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