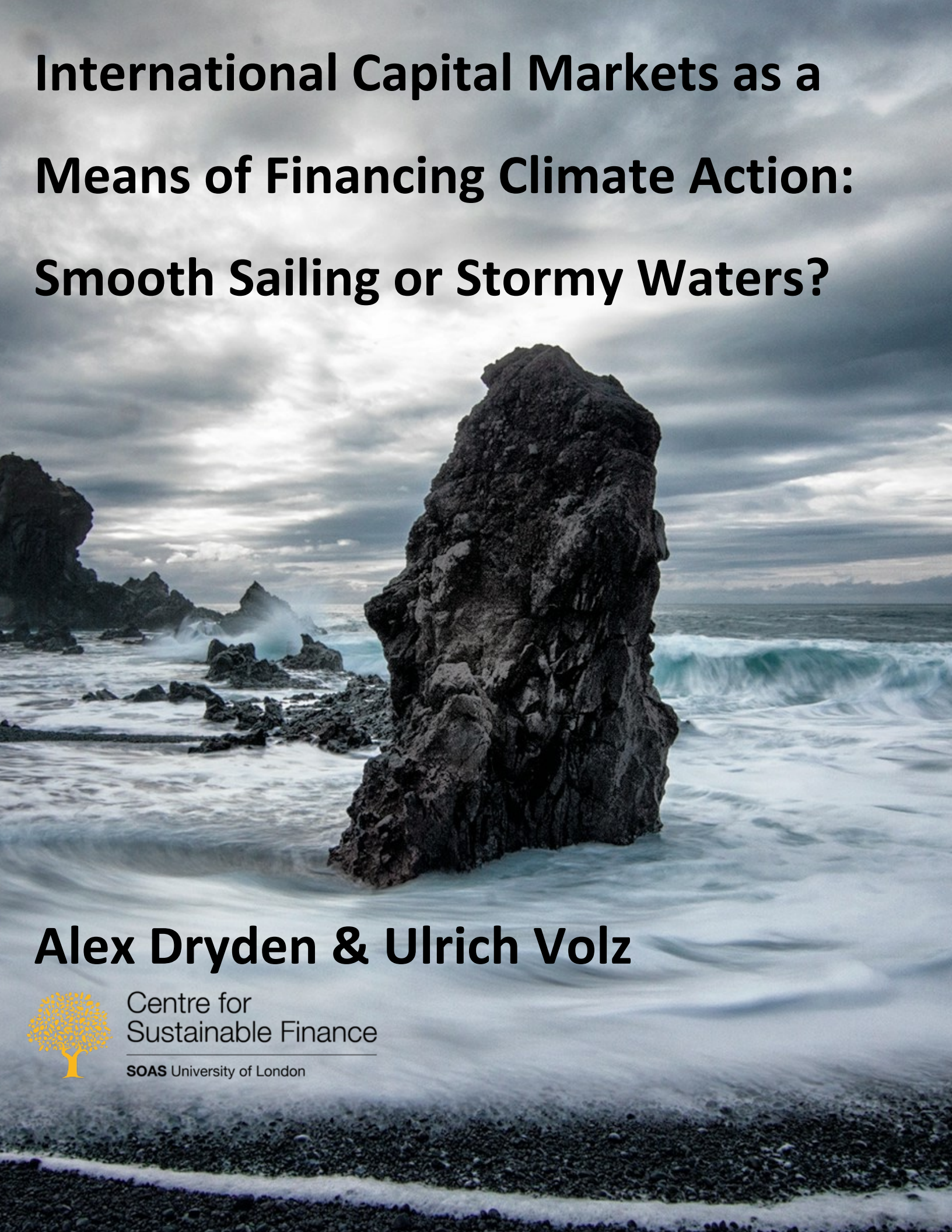
International Capital Markets as a Means of Financing Climate Action: Smooth Sailing or Stormy Waters?



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For more information, visit https://www.soas.ac.uk/centre-forsustainable-finance/

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Alex previously worked for over a decade as a Global Investment Strategist for J.P Morgan Asset Management covering macroeconomic development, central banks and fixed income markets. After initially starting in London Alex relocated to New York in 2017 and covered U.S. bond markets for three years before returning to the UK.

During his tenure Alex regularly appeared on financial news outlets including Bloomberg and CNBC sharing insights into the latest financial trends and market movements. Alex's research has been frequently quoted in prestigious financial publications, such as the Financial Times and the Wall Steet Journal.

Alex holds and MSc in Finance (Economic Policy) from SOAS, where his dissertation focus on the factors influencing a country's ability to return to international capital markets following a sovereign default. Alex also holds a BSc in International Business, Finance and Economics from the University of Manchester and is also a CFA charterholder.

Ulrich Volz is Professor of Economics and Director of the Centre for Sustainable Finance at SOAS, University of London. He is also a Senior Research Fellow at the German Institute of Development and Sustainability, Visiting Professor at the London School of Economics and Political Science, and Research Fellow at the Centre for Economic Policy Research. He is a co-chair of the Global Research Alliance for Sustainable Finance and Investment and of the Debt Relief for a Green and Inclusive Recovery initiative.

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He spent stints working at the European Central Bank (ECB) and European Bank for Reconstruction and Development and held visiting positions at the University of Oxford, University of Birmingham, Aoyama Gakuin University, ECB, Bank Indonesia, Bank Negara Malaysia and the Asian Development Bank Institute, where he previously served on the Advisory Council. Ulrich was part of the UN Inquiry into the Design of a Sustainable Financial System, a member of the NGFS-INSPIRE Study Group on Biodiversity and Financial Stability. In 2024, Ulrich was appointed by the Brazilian G20 Presidency to the Group of Experts of the G20 Taskforce on a Global Mobilization against Climate Change (TF-CLIMA). He has acted as an advisor to numerous governments, central banks, international organisations and development agencies on matters of macroeconomic policy, climate risk and sustainable finance, and financial sector development. Ulrich obtained a doctorate in economics from Freie Universität Berlin and was a Fox International Fellow and Max Kade Scholar at Yale University.

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Abbreviations

CAT bonds – Catastrophe bonds

CIF – Climate Investment Funds

CPI – Climate Policy Initiative

CRA – Credit rating agency

CRED – Centre for Research on the Epidemiology of Disasters

DFI – Development finance institution

EM-DAT – Emergency Disasters Database

EMDEs – Emerging and developing economies

F2C2 – Finance Facility against Climate Change

G20 – Group of 20

GFC – Global financial crisis

GDP – Gross domestic product

HIPC – Heavily Indebted Poor Country Initiative

IDA – International Development Association

IMF – International Monetary Fund

MDB – Multilateral development bank

NDB – National development bank

ND-GAIN – Notre Dame Global Adaptation Initiative

OECD – Organisation for Economic Co-operation and Development

RSF – Resilience and Sustainability Facility

UNDP – United Nations Development Program

Executive Summary

Emerging and developing economies (EMDEs) are under heavy pressure to mobilise finance for climate action. There is a particular urgency to do so for investment in adaptation and resilience, given that this is vital for preparing their economies and societies for the worsening climate crisis and the havoc it is going to inflict on them. They also need to invest in low-carbon growth, given this is becoming ever more an issue of economic competitiveness.

From a climate justice perspective, vulnerable developing countries should receive sufficient amounts of climate finance in the form of grants or on very concessional terms to invest in both adaptation and mitigation. However, despite strong economic, political and moral arguments for financing more climate action in poor countries, many donor countries are constrained by severe pressures on their public finances, making it very unlikely that rich countries will make more finance available.

Given that international public climate finance has been in short supply, EMDEs have been seeking alternative, private financing sources. Over the last two decades, a growing number of EMDEs, sometimes referred to as “frontier markets”, were able to access international bond markets to finance their development aspirations, including climate action.

While this has been, in principle, a welcome new source of finance, many EMDEs, especially poorer ones, have been struggling in maintaining access to international capital markets at sustainable cost. For many low-income and lower-middle income countries, accessing international capital markets comes with elevated risks – risks that they often cannot manage.

Patchy access to international capital markets and unsustainable borrowing costs are not a new phenomenon but have been a constant feature of the post-global financial crisis era. Since 2012, on average, more than a fifth of EMDEs with exposure to international capital markets experienced borrowing costs that significantly exceeded sustainable levels.

The tightening of global financial conditions since March 2022 has compelled a growing number of countries to issue foreign-denominated debt at unsustainably high yields to be able to repay old debt. Historically, such expensive bond issues have merely postponed subsequent debt restructurings rather than avoided them. Kenya’s experience is illustrative: environmental challenges, coupled with high borrowing costs, have severely limited its ability to sustain market access, impacting its fiscal and developmental goals.

Climate change increases the likelihood that vulnerable countries will experience problems in continuing to access international capital markets and roll over debt at affordable rates. Arguably, the poorest and most vulnerable countries would be better off avoiding direct access to global debt markets altogether.

Instead of forcing poor countries into accessing international capital markets at high cost and high risk, the potential of multilateral development banks (MDBs) to borrow cheaply from international capital markets and on-lend to low-income and lower-middle income countries at much lower cost than they would have to pay themselves needs to be fully harnessed. Moreover, international facilities including the multilateral climate funds should also be empowered to tap international capital markets and leverage the resources they have at their disposal, following the recent example of the Climate Investment Funds.

There is also a strong case for creating new facilities to mobilise large amounts of private capital to frontload climate finance in poor developing countries. This can be done without straining current donor budgets by effectively securitising future aid commitments by donor countries, building on the successful example of International Finance Facility for Immunisation.

The establishment of a new Finance Facility against Climate Change that would raise capital from international capital markets on behalf of low-income and lower-middle-income countries and pass it on as grants or at highly concessional loans for financing their Nationally Determined Contributions would be a pragmatic and highly effective way of overcoming the current impasse in international climate finance in an increasingly difficult geopolitical environment.

Strengthening the ability of multilateral facilities to borrow from international capital markets and on-lend to vulnerable developing countries is the most cost-effective way of mobilising international private capital and putting a risk buffer between vulnerable developing countries and fickle international markets.

EMDEs themselves can and need to do a lot to bring down the cost of capital. By strengthening fiscal frameworks and building better debt management capabilities, by publishing transparent records of public and publicly guaranteed debt, and by developing credible disaster risk financing strategies, governments can make an important difference in reassuring both credit rating agencies and international investors of their ability and intent to repay their debt.

Governments can also issue risk-linked sovereign instruments and include disaster risk clauses in debt contracts to mitigate climate risks and scale up investment in resilience, helping to reduce the climate risk premium facing vulnerable countries.

Moreover, rewards-for-results-instruments such as sustainability-linked bonds that incentivise sustainability-oriented policies and investments through a reduction in the cost of funding when predefined key performance indicators have been met could help to bring about better sustainability outcomes and contribute to greater debt sustainability.

Key international financial institutions like the International Monetary Fund and the major MDBs should make a concerted effort to promote the widespread adoption of sovereign state contingent debt instruments to support better public debt management, the climate-proofing of public finances, and the achievement of more ambitious sustainability outcomes.

Additionally, strengthening domestic financial resource mobilisation via local currency bond markets and public development banks and reducing the outflow of EMDE savings could reduce dependency on foreign currency financing and address the structural problems behind the high cost of capital facing EMDEs.

Countries that borrow from international capital markets need to be able to rely on a fair and transparent sovereign debt restructuring mechanism to ensure a swift resolution of sovereign debt problems when they arise. Especially in times of climate crisis, countries cannot afford to be stuck in a sovereign debt crisis that prevents them from investing in social development and protecting their economies.

In the absence of a sovereign debt restructuring mechanism and in the face of severe debt distress in many developing countries, a comprehensive and ambitious debt relief initiative is needed to address the current public debt problems and help countries get back on their feet. Without debt relief, which allows countries to clean up their balance sheets, they will be unable to mobilise new investments, whether public or private, domestic or international.

International capital markets offer a deep pool of capital that could be tapped to finance the growing climate investment needs in EMDEs. A combination of measures is needed to ensure that private capital is mobilised in a way that is sustainable and does not expose vulnerable countries to risks they find hard to manage. With concerted efforts, international capital markets can be put to good use and support vulnerable developing countries in investing in resilience and sustainable growth and realising their development ambitions.

1. Introduction

In an era marked by rapid environmental change and escalating economic challenges, the role of capital markets in supporting sustainable development has never been more critical. To meet climate and development goals by 2030, the Independent Expert Group to the G20 estimates that $3 trillion must be mobilised annually by emerging and developing economies (EMDEs) excluding China, of which $1.8 trillion is expected to be sourced domestically and a further $1.2 trillion from external sources (Bhattacharya *et al.*, 2024). Capital markets are frequently touted as an essential mechanism in marshalling the necessary resources required to meet these climate objectives (e.g., Cha, 2021; OECD, 2019). Theoretically, given the large and prolonged investment required for climate change initiatives, capital markets offer a deep pool of potential capital (PCAF, 2021). Borrowing from international markets can have an intertemporal smoothing function by placing some of the burden of climate-change adjustment onto future generations, helping managing the impact of fiscal finances over time (Songwe *et al.,* 2022). However, these advantages are predicated on the assumption that countries have unfettered and continuous access to international capital markets and that the cost of financing are sustainable. In reality, international capital market access, once established, can be hard to maintain. Countries must contend with fluctuating currencies, roll-over risk and international borrowing costs that together result in intermittent access to foreign capital (Amstad *et al.,* 2018). Aggressive tightening of monetary policy by central banks in advanced economies placed considerable strain on borrowing costs among developing economies. In 2022, 19 countries saw the yield of their long-dated debt trade over 1,000 basis points over U.S. Treasuries in secondary markets, levels that are typically regarded as unsustainable (Jensen, 2022).

Our analysis seeks to add to the literature by demonstrating that unsustainable capital market access is not a novel issue associated with the recent rise in international borrow costs. Instead, developing economies have been struggling with maintaining access to capital markets for much of the post-Global Financial Crisis (GFC) era even when global monetary policy was comparatively easy. Since 2012, on average 22% of EMDEs have seen their long-dated debt trade at spreads exceeding 1,000 basis point over U.S. Treasuries. Furthermore, our analysis shows that countries with the highest vulnerability to climate change are most vulnerable to seeing their debt trade at elevated spreads and being suspended from capital markets.

Despite these financial constraints, 16 countries have still managed to issue debt with coupons above 9.5% – a threshold commonly used in financial markets to mark exceptionally high yield issuances in Eurobond markets (e.g. Morgan Stanley, 2024) – on 28 separate occasions since the GFC. However, such elevated interest rates often impose severe fiscal pressures. Notably, six of these issuers have subsequently defaulted on their obligations and two additional economies are experiencing debt distress and are at risk of default. The high incidence of debt restructurings and the fickle nature of capital markets draws into question whether they present a viable means to address the prolonged and mounting costs associated with climate change. Moreover, it raises important questions about climate justice. Vulnerable developing countries, already suffering severely from the impacts of global climate change to which they contributed nothing, do not receive sufficient international grants and low-cost financing for their adaptation efforts and are effectively forced to seek other sources of financing to keep their economies afloat.

The study is organised as follows. Section 2 outlines the empirical literature surrounding capital market access, highlighting the difficulties associated with defining the concept as well as the potential factors influencing a country's ability to access capital markets. Section 3 presents a systematic study of capital market access, demonstrating the significant growth in the number of EMDEs accessing international capital markets between 2008 and 2020 as well the prolonged challenges countries can face in accessing capital markets at sustainable levels. Building on this, Section 4 investigates how climate vulnerability affects a country's ability to access international capital markets. Section 5 introduces a complementary case study focusing on the challenges Kenya has had in maintaining capital market access while simultaneously managing the disruption of drought, flooding and the COVID-19 pandemic. Section 6 discusses the usefulness of international markets in funding climate finance initiatives, emphasising the importance of fairness in ensuring equitable access to capital and puts forward practical policy suggestions to enhance capital market access and make financing costs more viable for EMDEs. Concretely, it proposes an action plan consisting of four complementary policy areas to improve and secure EMDEs' sustainable access to international capital markets at sustainable interest rates. These are: (i) adopting measures to lower the cost of capital and mitigate risk for issuers and creditors; (ii) using multilateral facilities as intermediaries to raise cheap(er) capital for EMDEs; (iii) establishing an international sovereign debt restructuring mechanism to quickly resolve debt sustainability problems; and (iv) strengthening domestic financial resource mobilisation to reduce dependency on foreign capital. Section 7 summarises and concludes.

2. Literature Review

An initial challenge in investigating market access involves identifying an accurate definition of the term. Previous studies, such as those by Gelos *et al.* (2011), Guscina *et al.* (2017), and the International Monetary Fund (IMF, 2020), provide varying definitions of international capital market access. Gelos (2011) believe a sovereign achieves capital access following a successful syndicated loan or bond issuance. In contrast, the IMF (2020) focuses on the sustainability of access, defining it as being achieved once a government has successfully issued international bonds three times in the prior five years, with a cumulative total of at least 50% of its IMF quota. Guscina *et al*. (2017) propose that market access is only achieved when a country is able to raise long-term capital on international markets. Moreover, recent research has sought to distinguish countries by their level of capital market access, noting that some countries can have 'full', unfettered access to overseas creditors while others may only have a 'partial' ability to borrow internationally (Dias *et al.,* 2024; Cruces and Trebesch, 2013).

The challenge with monitoring the flow of capital as a signal for capital access is that it is predicated on the basis that countries tap international capital markets on a frequent basis. In reality, countries may opt not to participate in international bond markets for a period of time if liquidity is sufficient. It would therefore be a misnomer to consider these inactive countries to be 'barred' from capital market whilst they are consciously opting to not issue debt. To overcome this challenge, Jensen (2022) utilises secondary market data, establishing a threshold of 1,000 basis points over U.S. Treasury bonds as a signal that investors are effectively unwilling to lend to a country on sustainable borrowing terms. Using this measure, one third of developing economies were effectively barred from accessing capital markets as of 2022.

Initial research on what enables capital market access focused primarily on the endogenous factors related to the country itself. Lensink and Bergeijk (1991) demonstrate that a combination of domestic GDP per capita, investment share, and net-debt-to-GDP ratio correctly predicts whether a country will have access to international capital markets in 75% of cases. Expanding upon this, Presbitero *et al.* (2015) and Min *et al.* (2003) demonstrate that internal factors such as strong fiscal and external balances, limited solvency issues, and strong domestic institutions are all likely to increase the likelihood of international capital market access. Haque *et al.* (2017) demonstrate that a strong growth performance and reasonable sovereign ratings will likely increase a developing economy's ability to tap international markets. Once capital market access is established, governments are encouraged to adopt prudent fiscal frameworks whilst simultaneously using debt management operations that seek to lock in low interest rates while smoothing the maturity profile of the overall debt profile (Mecagni *et al.,* 2014).

Such a shrewd approach to debt levels allows countries to continue to retain goodwill amongst international investors. Conversely, rising debt-to-GDP levels are often a cause for concern. Hadzi-Vaskov and Ricci (2016) show that a 10% increase in net debt-to-GDP levels implies an increase of 100-120 basis points in a sovereign's borrowing costs in overseas capital markets.

Alternatively, the literature also demonstrates that exogenous factors within global financial markets play an important role in determining whether a developing country can borrow overseas (Comelli *et al.,* 2012; Fratzscher, 2012; Silva *et al.,* 2021). Due to the investment diversification opportunities presented by developing economies, investors actively seek to include them within portfolio allocations (Mecagni *et al.,* 2014). However, investors' risk appetite is often fickle, with changes in the cost of borrowing and overall market volatility frequently determining whether a country can successfully borrow from international creditors. Much of the growth in lending to developing economies occurred after the GFC. This period was characterised by low international borrowing costs, which facilitated numerous countries in gaining capital market access for the first time (Prates *et al.,* 2023). However, the rise in international borrowing costs since 2021 presents a dramatic change in the global investment landscape, necessitating a reassessment of these exogenous factors and whether countries have now lost access to sustainable overseas borrowing.

Outside of this endogenous vs. exogenous framework, several papers have explored whether the presence of international financial institutions such as the World Bank or the IMF facilitates lending from private creditors. Part of the literature posits that an IMF programme should act as a 'seal of approval' for sovereigns, signalling economic reforms and encouraging capital inflows (Rodrik, 1995; Fischer, 1999). However, the academic community remains divided on the IMF's actual catalytic benefits. Some evidence suggests IMF programmes can cushion against declining creditworthiness and are viewed positively by credit rating agencies (Gehring and Lang, 2018). Conversely, scholars like Rowlands (2001), Jensen (2004), and Krahnke (2023) question this hypothesis, highlighting scepticism about the IMF's impact on capital market access. Additionally, Chapman *et al.* (2015) argue that IMF announcements may reveal negative private information, deterring investors. The stigma may arise because the IMF intervenes in severe economic situations, potentially biasing its effect on market access (Dias *et al.,* 2024). Overall, empirical support for the benefits of IMF intervention is limited, indicating a disconnect between theory and practice.

Most studies have not explicitly considered the influence of disasters on a country's access to international markets. However, extreme environmental events can impinge on a country's ability to raise capital. As Volz *et al.* (2020) demonstrate, climate change can amplify sovereign risk via multiple macroeconomic, trade, fiscal, financial stability and political channels. Given that international investors place significant weight on domestic variables when considering whether to lend to a country, disasters can undermine these key variables, hampering access to capital markets.

Indeed, following a disaster, lower-income and emerging economies often experience a decline in credit ratings by one notch (S&P Global, 2015; Dryden, 2025).

Countries that have proactively managed disaster risks through robust insurance and infrastructure investment typically benefit from better capital market access post-disaster (Sheehan *et al.,* 2023). However, the costs associated with such provisions are often a luxury few vulnerable economies can afford. Regions such as Latin America, Africa, and Asia-Pacific, which are most vulnerable to severe disasters, typically see more pronounced impacts on their credit ratings compared to more resilient regions like Europe and North America (S&P Global, 2015).

Finally, much of the discussion on capital market access is predicated on the basis that being able to borrow from overseas investors is inherently a positive option. However, Aguiar (2024) argues that access to international bond markets is not necessarily associated with improved economic performance. Indeed, the macroeconomic volatility associated with maintaining a functioning relationship with overseas creditors leads Bulow and Rogoff (1990, 2005) and von Luckner *et al.* (2023) to suggest that perhaps the poorest countries would be better off avoiding accessing global debt markets.

Small economies in particular might not have the necessary resiliency to withstand the often-volatile nature of global financial markets. Furthermore, the expensive borrowing costs charged by foreign investors potentially inhibit a country's fiscal stability (Von Luckner *et al.,* 2023). Given the sudden shock that disasters often inflict on small and low-income countries, there is a need to re-visit Bulow and Rogoff's warning and to assess whether capital markets are an effective tool in helping developing economies overcome the mounting challenges associated with climate change.

Image credit John Hutchinson via Unsplash

3. Assessing International Capital Market Access

International capital market access is often seen as an essential component for helping encourage investment and growth within the domestic economy (OECD, 2019). Capital markets can be important conduits for helping overcome the exogenous shocks associated with disasters as well as to finance infrastructure projects to improve climate resiliency (OECD, 2021). However, for capital markets to be an effective tool in addressing climate change, it requires sovereigns to be able to access markets on a consistent and sustainable basis, i.e. at debt service cost that are manageable.

To demonstrate the often-fractious relationship EMDEs have with international capital markets within the context of mounting climate change issues, our analysis is divided into four components. Firstly, we explore the challenges many EMDEs have in establishing and maintaining access to capital markets at sustainable interest rates. Secondly, we consider the role of ratings agencies in the wake of disasters, demonstrating that climate vulnerable countries experience a ratings downgrade, hampering their ability to smooth the costs of the disaster over a prolonged period. Thirdly, we highlight the unsustainable borrowing practices struggling countries are forced to adopt in order to maintain access to international lending, often culminating in a default and debt restructure. Finally, we briefly review how long sovereigns that default on their debt get excluded from international capital markets and the factors that are conducive to re-accessing international capital markets after a default.

Ensuring long-term access to international capital markets

Our analysis focuses on long-dated issuances between 2003 and 2024 of 10-year Eurobonds for 37 different EMDEs (see Appendix Table A1 for details). We adopt the definitions utilised by Jensen (2022) and Zucker-Marques *et al.* (2024), whereby sustainable capital market access is a function of the yield spread to a 10-year U.S. Treasury bond. If spreads exceed 1,000 basis points the issuer is considered to be 'distressed'. Meanwhile, we consider those issuers who are experiencing challenging market valuations as 'stressed' if spreads are between 700-1,000 basis points.[1] Figure 1 displays the number of countries with 'distressed' or 'stressed' access to international capital markets. Figure 2 shows the share of countries (out those with 10-year issuances) with 'distressed' or 'stressed' access to international capital markets.

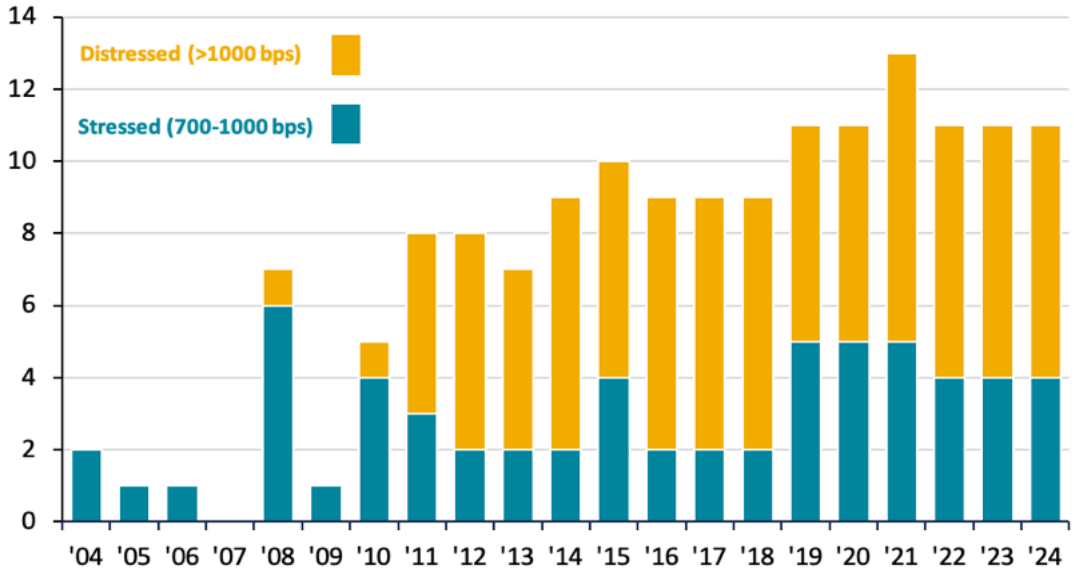
Global financial conditions do seem to have some bearing on the proportion of long-dated EMDE issuance trading at either 'stressed' or 'distressed' levels. In 2008, as the GFC unfurled, and during the 2011-12 Eurozone debt crisis, the proportion of countries effectively suspended from international markets did increase substantially as skittish international investors pushed up borrowing costs. More recently, during the onset of the COVID-19 pandemic in March 2020, 34% of the issuers saw their secondary market 10-year debt trading at spreads in excess of 700 basis points. Indeed, capital market suspension seems to have been a consistent feature of the pandemic period. Between March 2020 and the official end of the pandemic in May 2023, on average 29% of EMDE's were experiencing challenges in access capital markets on a sustainable basis. Indeed, no country that is eligible for support from the International Development Association (IDA) was able to issue bonds in 2023 and private capital outflows totalled $203 billion from IDA-eligible countries (Properzi, 2023; Mazzucato *et al.*, 2024).

However, external financial conditions and the risk-tolerance of overseas creditors does not entirely explain the capital market access challenges many developing economies are facing. Indeed, intermittent capital market access is often perceived as a fleeting issue facing EMDEs, with yields only being elevated versus developed market peers during period of higher global borrowing costs or crisis. Yet, as shown in Figures 1 and 2, governments regularly struggle to maintain access to international capital markets. Indeed, as of 31 December 2024, seven countries (or 20%) out of the 35 EMDEs that have issued 10-year debt, have seen their debt trading at 'distressed' levels, with a further four countries (11%) struggling with yields in excess of 700 basis points over U.S. Treasuries.

[1] Under the Debt Sustainability Framework, the IMF considers a country to be in debt distress when its bonds trade at a spread of 600 basis points or more over the corresponding U.S. Treasury index (IMF, 2013).

Figure 1

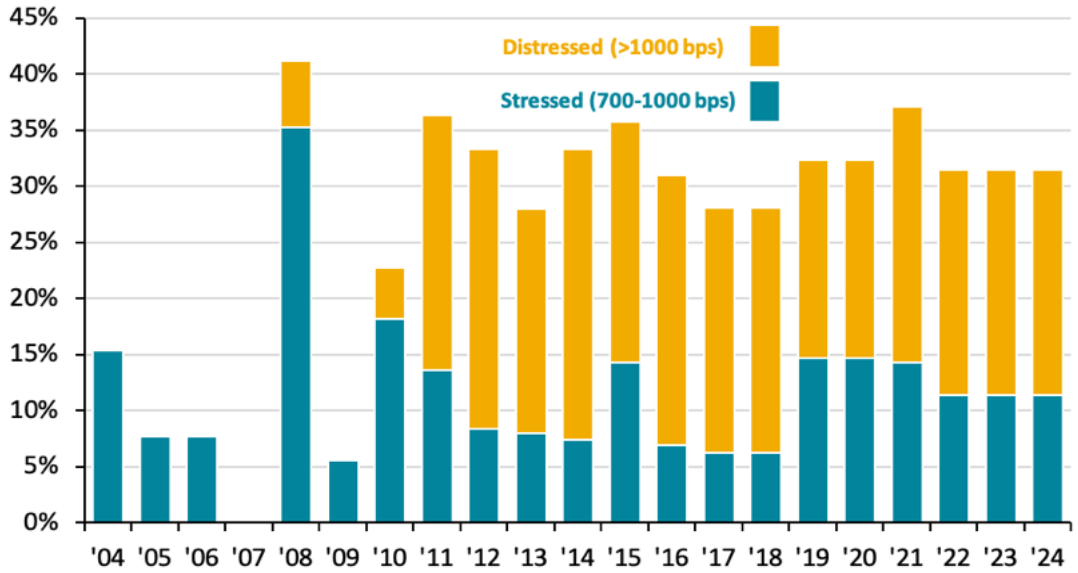
Sovereign credit rating downgrades following a disaster by notches



Source: Authors' calculations with data from EM-DAT and Standard & Poor's.

Figure 2

Share of EMDEs with 'distressed' or 'stressed' access to international capital markets (in percent)



Source: Compiled by authors using data from Refinitiv Eikon.

Disasters & downgrade risk

A commonly purported benefit of international capital markets is that they offer governments the opportunity to swiftly raise capital to cover costs arising from exogenous shocks, such as disasters, thereby mitigating the damage by smoothing the recovery costs over a prolonged period (Aguiar, 2024). Credit rating agencies (CRAs) play an important role as institutional 'gatekeepers' for sovereigns to be able to access international capital markets (Fuchita and Litan, 2006; Kruck, 2017). Positive ratings upgrades can act as a catalyst for mobilising resources in capital markets, lowering the cost of borrowing for governments (Chen *et al*., 2016). Conversely, downgrades can cause countries to lose access to capital markets at sustainable borrowing costs, severing their ties to overseas creditors.

CRAs utilise a broad array of economic and fiscal variables when considering the appropriate rating to award a sovereign. The ratings methodologies of the major three CRAs (Fitch, S&P and Moody's) make passing references to the impact of disasters, allowing analysts to use their discretion when judging the impact of disasters, particularly where they might lead to a prolonged deterioration in their fiscal profile or heightened borrowing needs. However, the sensitivity of ratings downgrades to disasters remains.

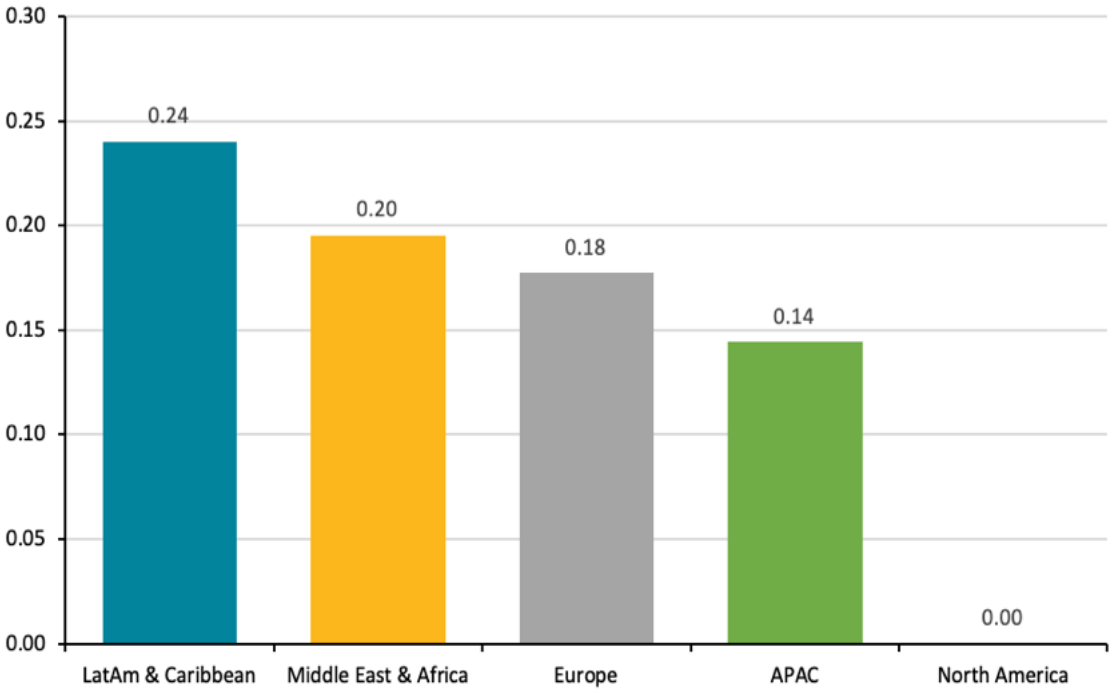
For disaster data we utilise the Emergency Disasters Database (EM-DAT) compiled by the Centre for Research on the Epidemiology of Disasters (CRED). This provides a database of over 18,000 natural and meteorological disasters dating back to 1900. Within this database, disasters are defined as events that have led to 10 or more fatalities, affected 100 or more people or resulted in a call for international assistance, or led to the declaration of a state of emergency. Due to the extensive coverage, there are a large number of smaller disasters included that do not have a wider impact on the economy and the overall fiscal balance. For the purposes of this study and consistent with literature on the impact of disasters (see IMF, 2003; Rasmussen, 2006; Raddatz, 2007; Cavallo *et al.,* 2013; Dryden, 2025; Lo and Volz, 2025), we focus on 'large' disasters as meeting at least one of the following conditions:

i. The domestic government calls for international assistance or declares a state of emergency following the event;
ii. the total damages incurred by the disaster are in excess of 1% of GDP; or
iii. the impacted population is in excess of 2% of the total population.

Based on this definition, there have been 1,087 'large' disasters between 1980 and 2021. Typically, ratings do not decline following the onset of a disaster, however, in 118 instances a sovereign experienced at least a one notch rating downgrade in the one year following the disaster. Figure 3 shows that the credit ratings of Latin American and Caribbean economies are amongst those most susceptible to downgrades, on average witnessing a 0.24 notch downgrade following a large environmental event. In contrast, the ratings of North American economies show no susceptibility to downgrades following a disaster.

Figure 3

Sovereign credit rating downgrades following a disaster by notches



Source: Authors' calculations with data from EM-DAT and Standard & Poor's.

Our findings are broadly consistent with those of S&P Global (2015), in that Latin America and the Caribbean nations are the most susceptible to ratings downgrades following a disaster. However, the extent of the downgrade following a disaster is not as large as suggested by S&P Global (2015), indicating that a broad array of variables matter when considering an appropriate rating. Given that rising global temperatures are likely to increase both the frequency and intensity of disasters, it is envisaged that countries will become increasingly vulnerable to the adverse market effects of downgrades following an environmental event (Klusak *et al.,* 2023).

Maintaining capital market access: Unsustainable borrowing practices

Utilising capital markets to address the challenges of climate change relies on countries being able to raise debt on a continuous basis on sustainable borrowing terms. As this study has already identified, climate vulnerable nations suffer a fractious relationship with international creditors often finding their ability to raise and roll-over capital disrupted due to exogenous factors outside of their direct control. However, it is rare for a country to find itself entirely suspended from international markets. Indeed, only during extreme global risk-off events such as the GFC or in the event of unresolved debt restructuring do countries find themselves completely unable to raise capital from international markets at any terms. Outside of these extreme scenarios, desperate debtors can resort to issue bonds at elevated coupon rates in order to incentivise creditors to extend further capital and stave off a debt restructuring.

In the post-GFC era, it is rare to witness issuance at coupon rates in excess of 9.5%.[2] Since 2008, 16 sovereigns have issued debt at such high rates across 28 separate bond issuances.[3] However, accessing international markets at such elevated borrowing costs often merely delays rather than resolves a country's debt issues: out of the 16 countries with coupon rates in excess of 9.5% at issuance, six economies – Venezuela, Ghana, Mozambique, Ukraine, Suriname and Lebanon – all subsequently defaulted on these high-yielding debts. In addition, Ecuador maintains a cantankerous relationship with international creditors having defaulted 10 times in modern history.

[2] In primary bond issuances, the yield typically matches the coupon rate, as bonds are usually issued at or near par value to align with prevailing market conditions and investor expectations. However, for low grade issuers bonds may be issued at a price discount resulting in yields being in excess of the stated coupon.

[3] Since 2008, there have been over 1300 USD issuances by 90 different EMDE sovereigns.

Table 1

Post-GFC USD Eurobond issuance above 9.5% coupon

Country	Issue Date	Tenor (years)	Amount (USD bn)	Coupon	Yield at issuance	Yield 3-months after issuance	Bond Status
Indonesia	Mar-09	10	2.00	11.625%	11.78%	7.24%	Matured
Indonesia	Mar-09	5	1.00	10.375%	10.38%	6.73%	Matured
Venezuela	Aug-10	10	3.00	12.750%	12.75%	15.87%	Defaulted
Venezuela	Aug-11	20	4.20	11.950%	11.95%	16.30%	Defaulted
Venezuela	Nov-11	15	3.00	11.750%	12.37%	14.18%	Defaulted
Ecuador	Mar-15	5	2.20	10.500%	10.50%	10.37%	Matured
Ghana	Oct-15	15	1.00	10.750%	10.75%	12.29%	Defaulted
Angola	Nov-15	10	1.50	9.500%	9.50%	12.85%	Outstanding
Cameroon	Nov-15	10	0.75	9.500%	9.75%	11.95%	Outstanding
Mongolia	Apr-16	5	0.50	10.875%	10.88%	9.92%	Matured
Mozambique	Apr-16	7	0.72	10.500%	10.50%	18.55%	Defaulted
Ukraine	Nov-18	12	1.60	9.750%	9.75%	10.29%	Defaulted
Costa Rica	Dec-18	3	0.50	10.133%	10.13%	10.12%	Matured
Costa Rica	Dec-18	8	0.55	10.000%	10.00%	10.31%	Outstanding
Costa Rica	Dec-18	3	0.37	10.000%	10.00%	10.55%	Outstanding
Costa Rica	Feb-19	5	0.45	10.000%	10.00%	8.74%	Matured
Costa Rica	Mar-19	10	0.60	10.000%	10.00%	9.26%	Outstanding
Lebanon	Nov-19	10	1.50	11.500%	11.50%	54.31%	Defaulted
Lebanon	Nov-19	15	1.50	12.000%	12.00%	57.52%	Defaulted
Suriname	Dec-19	4	0.13	12.875%	12.88%	28.10%	Defaulted
El Salvador	Jul-20	32	1.00	9.500%	9.50%	10.03%	Outstanding
Turkey	Nov-22	5	3.50	9.875%	10.00%	9.41%	Outstanding
Kenya	Feb-24	7	1.50	9.750%	10.38%	9.85%	Outstanding
Cameroon	Jul-24	7	0.55	9.500%	10.75%	10.34%	Outstanding
El Salvador	Nov-24	30	1.00	9.650%	9.65%	-	Outstanding
Nigeria	Dec-24	7	0.70	9.625%	9.63%	-	Outstanding
Nigeria	Dec-24	10	1.50	10.375%	10.38%	-	Outstanding
Angola	Dec-24	6	1.93	10.950%	10.95%	-	Outstanding

Note: 9.5% is a threshold commonly used in financial markets to mark exceptionally high coupons or yield issuances in Eurobond markets (e.g. Morgan Stanley, 2024). The yield after 3-months reflects the yield of the bond in secondary markets three months after initial issuance.
Source: Compiled by authors with data from Thomson Reuters Eikon and individual bond prospectuses. Note: Bonds are typically issued at a yield matching the coupon rate, but sometimes they are sold at a slight discount, which raises the initial yield.

In the post-GFC era, it is rare to witness issuance at coupon rates in excess of 9.5%. Since 2016, only **16 sovereigns** have issued debt at such rates across **28 separate bond issuances.** However, this usually does not end well.

Of the 16 countries with coupon rates in excess of 9.5% issuance, **six economies defaulted** on their debts (Venezuela, Ghana, Mozambique, Ukraine, Suriname and Lebanon). Only **four countries have managed to repay the principal** on this expensive borrowing.

In 2024, five nations issued debt with coupons above 9.5%, a record high.

Given the high initial borrowing costs, these debt restructurings likely came as no surprise to international investors. With the exception of Ukraine, every country in this sample that eventually defaulted had issued costly debt, which immediately began trading at distressed valuations in secondary markets – an indication that investors were sceptical from the start about these countries' ability to repay. Four countries have been able to successfully service and repay the principal on these expensive bonds; however, this is often on relatively small principle amounts below $1 billion in size.

Since 2020, the increase in global borrowing costs has forced six countries to issue bonds with a coupon greater than 9.5%, all of which are currently struggling with debt-distress. Furthermore, low-income countries still need to refinance about $60 billion of public and private external debt in both 2025 and 2026, approximately triple the average in the decade prior to 2020 (IMF, 2024). The pressure on countries is illustrated by the fact that three different nations were forced to issue at coupon rates in excess of 9.5% in late 2024.

Regaining access to international capital markets after default

A sovereign's inability to regain access to international capital markets can culminate in a default on foreign-denominated debt. Since March 2020, the combined effects of the COVID-19 pandemic and subsequent tightening of global financial conditions have pushed 11 countries into default (see Table 2). Notably, countries with high climate vulnerability have been disproportionately affected during this latest wave of sovereign debt crises. Excluding defaults linked to the war in Ukraine, such as those in Eastern Europe, most defaults have occurred in nations acutely susceptible to the impacts of climate change.

This pattern is highlighted by the global climate vulnerability score, which averages 0.43 according to the ND-GAIN Climate Vulnerability Index. Over half of the defaults since 2020 have taken place in countries with higher-than-average scores, underscoring the intersection of climate risks and sovereign financial instability.

Table 2

Foreign debt default announcements (since March 2020)

Country	Default Announcements	Amount (USD bn)	Climate Vulnerability
Ethiopia	Dec-23	1.03	0.522
Ghana	Dec-22	13.74	0.444
Ukraine	Aug-22	19.59	0.359
Belarus	Jul-22	3.25	0.325
Sri Lanka	Apr-22	8.65	0.466
Russian Federation	Mar-22	27.29	0.323
Belize	Sep-21	0.556	0.461
Zambia	Nov-20	3.000	0.488
Suriname	Jun-20	0.675	0.424
Ecuador	Apr-20	17.28	0.465
Lebanon	Mar-20	31.31	0.402

Source: Compiled by authors with data from ND-GAIN Climate Vulnerability Index.

For governments to regain access to international capital markets, they must navigate the demands of global creditors. Imposing significant losses ("haircuts") on creditors risks prolonged exclusion from capital markets.[4] However, Dias et al. (2024) highlight that the duration of market exclusion following sovereign defaults has significantly decreased since 2000. Exclusion periods have fallen by four to six years on average, with partial access often restored within a year of resolving default terms.[5] This trend suggests that investors, once restructuring agreements are finalised, are increasingly willing to "forgive and forget", reinvesting in defaulting nations. According to Dias *et al*. (2024), the chances of market re-access following a default can be improved further with support from the IMF as well as via stronger domestic institutions.

Despite shorter exclusion periods, delays in negotiating debt restructuring terms remain a critical challenge. For example, it has taken Ghana and Zambia over two years to finalise restructuring terms with their creditors. Meanwhile, Lebanon, which defaulted in March 2020, has yet to agree terms with creditors.

[4] Analysis of sovereign default episodes by Cruces and Trebesch (2013) suggests that a deeper haircut leads to a longer loss of market access. Following restructurings with haircuts below 30%, there was a 50% probability of overcoming market exclusion within one to two years, while countries where the haircut was over 60% took longer than a decade to re-access markets.

[5] For sovereign restructuring between 2000 and 2005, market access was partly regained after an average of only 1.8 years. The equivalent loss of access was 4.4 years for sovereigns restructuring during the 1990s. See Volz *et al*. (2020) and Cruces and Trebesch (2013).

These prolonged negotiations leave countries in economic limbo, unable to chart a path toward recovery. The lack of timely solutions highlights the pressing need for reforms to the sovereign debt restructuring process, particularly for countries at heightened risk from climate change. Without streamlined processes, many nations remain caught in cycles of economic stagnation, unable to address urgent climate-related challenges.

Notwithstanding the delays, for heavily indebted governments in climate-vulnerable countries perhaps a sovereign default is not something to be feared. Instead, when managed effectively through meaningful debt restructuring, default can serve as a critical step toward recovery and renewal. Far from being solely a symbol of financial distress, default can offer a unique opportunity to reset a country's fiscal trajectory and address the mounting challenges posed by climate change (Volz *et al*., 2021). An equitable, sustainable debt solution would allow countries to return to international capital markets in a more robust shape than prior to the default and on a fiscal and economic footing that allows them to be able to face the challenges of climate change.

Market access is likely to be restored more swiftly if a restructuring comes quickly and orderly (Volz *et al*., 2021). The longer governments hesitate, the deeper the haircuts will have to be and the longer the exclusion from the debt market will last. Empirical evidence highlights that a pre-emptive and comprehensive restructuring of sovereign debt can ease the recession in the debtor country (Forni *et al*., 2016). Early restructuring can also help avoid an even deeper recession, which is also positive for creditors, as delays and repeated restructuring have led to larger haircuts in the past (Forni *et al*., 2016).

In summary, our analysis suggests that access to international capital markets at sustainable rates is less assured than often assumed, and that suspension from these markets tends to be a more persistent feature of sovereign borrowing than historically recognised. Climate vulnerable countries in particular struggle to maintain consistent and sustainable borrowing terms with international creditors and often find themselves punished with ratings downgrades following a disaster. At its extreme, countries will seek to avoid defaults by rolling over debt at exorbitantly high borrowing costs which often delay rather than resolve a debt crisis.

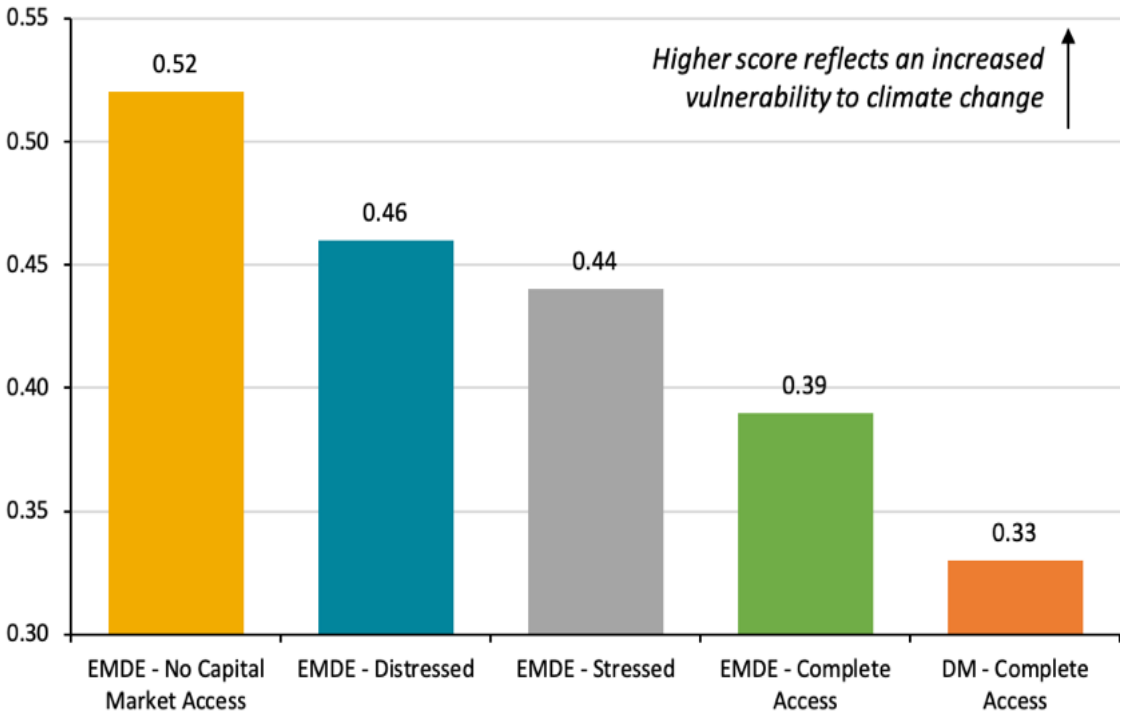
4. How Does Climate Vulnerability Affect a Country's Ability to Access International Capital Markets?

Accessing international capital markets poses severe challenges for countries highly vulnerable to climate change. The Notre Dame Global Adaptation Initiative (ND-GAIN) Index measures a country's susceptibility to climate-related disruptions on a scale from 0 (least vulnerable) to 1 (most vulnerable). Figure 4 shows that EMDEs with no 'stressed' or 'distressed' conditions in secondary market trading have an average climate vulnerability score of 0.39. In contrast, for those countries who have experienced at least one month of spreads between 700 and 1,000 basis points between 2003 and 2022, have had an average score of 0.44, indicating greater vulnerability. In addition, countries that have experienced periods of significant distress for longer timeframes are amongst the most vulnerable to climate change with an average ND-GAIN score of 0.46. For additional context, when looking at the countries that have not established access to international capital markets via a bond issue, their ND-GAIN score is significantly higher at 0.52. Meanwhile, developed market (DM) economies which typically benefit from unfettered access to international markets have an ND-GAIN score of 0.33. These findings emphasise that the countries most vulnerable to climate change not only require significant fiscal support to overcome these challenges, but their challenges are compounded by the fact that international markets seem to be wary of providing sustainable access to nations that are particularly vulnerable to climate change.

Indeed, as shown by Buhr *et al*. (2018) and Kling *et al*. (2018), climate vulnerable developing countries have to pay a climate risk premium which makes investment in resilience and adaptation more expensive and difficult, creating the risk of a vicious circle in which developing countries face higher sovereign risk, rising capital costs, and decreasing fiscal space for investment. The EMDEs with the highest climate vulnerability scores are effectively excluded from international markets.

Figure 4

ND-GAIN climate vulnerability score by market access level

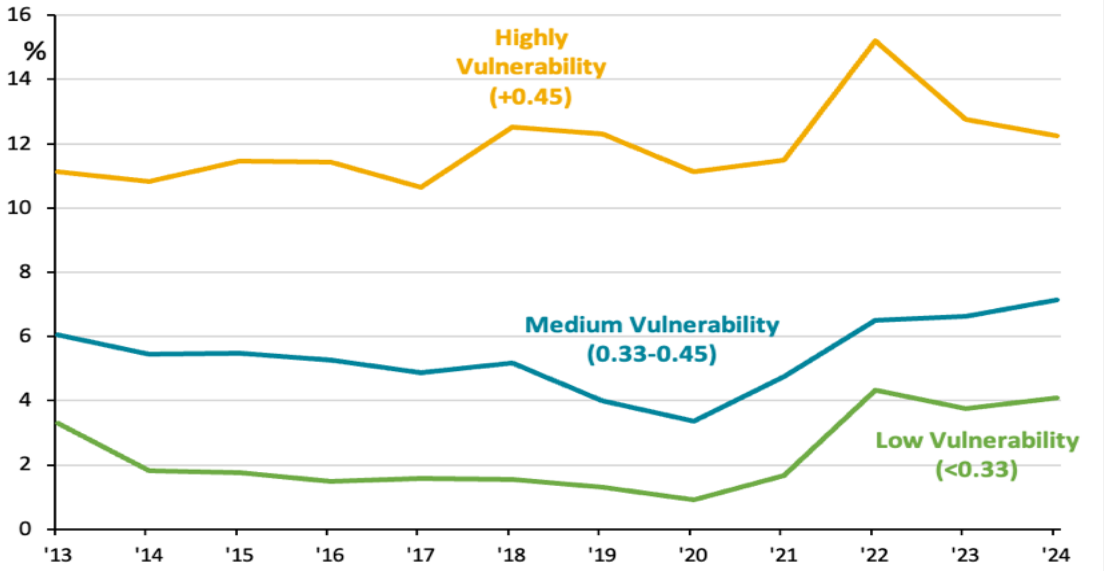


Source: Authors' calculations with data from Refinitiv Eikon, Notre Dame Global. Average annual vulnerability score from 2003 to 2022.

Indeed, Figure 5 shows the average bond yields of different country groups based on their ND-GAIN climate vulnerability score. It clearly shows that countries with a high climate vulnerability score pay on average much higher interest rates than countries with a low vulnerability score. Similarly, Figure 6 shows the bond yields of different countries as of the end of 2024 compared to their average climate vulnerability score. Countries with higher borrowing costs are often the ones facing the most challenging outlook from a climate change perspective. It should be noted that the five countries with yields above 20 percent (Egypt, Ghana, Nigeria, Turkey, Zambia) have been suffering with extreme debt distress or even defaulted on their external sovereign debt.

Figure 5

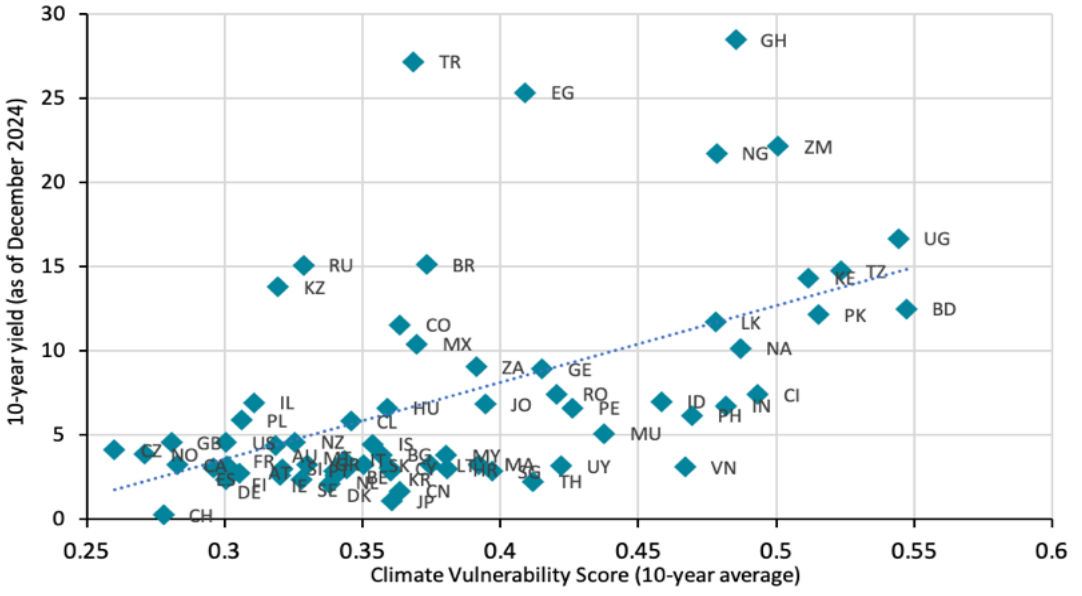
Average 10-year yield of different groups by climate vulnerability score



Source: Eikon, ND-GAIN.

Figure 6

10-year yield as of December 2024 compared to climate change vulnerability score



Source: Eikon, ND-GAIN.

Econometric analysis

To examine econometrically how climate vulnerability affects a country's ability to access international capital markets, we develop a simple probit model.[1] For this analysis, we define capital market access as a binary factor, with market access classified as either 'maintained' or 'suspended'. Suspension occurs when a country's long-term borrowing costs become excessively high, crossing a threshold of 700 basis points above U.S. Treasury rates for at least one month in a year.

The analysis considers factors that contribute to losing market access. These include both global influences – such as shifts in investor sentiment and changes in global liquidity – and domestic factors like high debt levels and limited foreign currency reserves. Studies have highlighted that global liquidity and investor sentiment are significant drivers of market access (see de Almeida and Singh, 2021; da Silva *et al*., 2021). Additionally, high gross and external debt burdens, combined with lower foreign currency reserves, have been shown to reduce a country's ability to secure international financing (Bassanetti *et al*., 2016; Romer and Romer, 2019).

In this context, the study incorporates climate vulnerability as an additional factor influencing market access. Using the ND-GAIN vulnerability index, which measures a country's exposure and sensitivity to climate change, the analysis evaluates whether greater vulnerability increases the likelihood of market exclusion. A higher ND-GAIN score indicates greater susceptibility to climate risks, which may compound existing financial challenges and further limit access to international funding.

The results shown in Table 3 highlight key factors influencing a country's likelihood of losing access to capital markets. Notably, global liquidity has a consistently positive and significant effect across all models, indicating that tighter global liquidity environment increases the probability of losing capital market access as funding for EMDEs becomes increasingly expensive. Additionally, greater external debt is positively associated with losing access to markets, suggesting that countries with higher external debt burdens are more likely to face financial constraints and barriers to borrowing. Conversely, total reserves have a protective effect, as higher reserves significantly reduce the likelihood of losing capital market access, providing a financial buffer that reassures investors.

Table 3

Determinants of a country's likelihood of losing access to capital markets

		Baseline	Internal Economic Variables			Climate Variable	Internal Economic & Climate
		(1)	(2)	(3)	(4)	(5)	(6)
Global Liquidity	*iw*	0.934 (0.348)***	0.679 (0.372)*	1.153 (0.354)***	0.915 (0.349)***	0.846 (0.355)**	0.751 (0.387)*
Investor Sentiment	*USHY*	-0.183 (0.069)***	-0.097 (0.074)	-0.231 (0.071)***	-0.176 (0.070)**	-0.165 (0.070)**	-0.120 (0.078)
Size	*GDP*	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***
External Debt	*Ex_Debt*		0.011 (0.003)***				0.010 (0.003)***
Total Reserves	*Reserve*			-0.103 (0.236)***			-0.050 (0.027)*
Gross Debt Level	*Debt*				0.002 (0.003)		
Climate Vulnerability	*ND-GAIN*					6.278 (1.763)***	5.946 (1.945)***
	Cons	2.234 (0.631)***	1.090 (0.696)	3.200 (0.675)***	2.069 (0.682)***	-1.066 (1.117)	-1.376 (1.337)
Observations		541	438	537	541	541	434
Liklihood Chi-Sq		161.14	105.7	185.46	161.54	173.89	126.07
Psuedo R2		0.2366	0.1818	0.2736	0.237	0.2553	0.2183

*Robust standard errors in parentheses *significance at 10%; ** significant at 5%; *** significant at 1%.*
1/ Variable definitions: iw: Chicago Fed National Financial Conditions; GDP: GDP per capita; USHY: Yield on U.S High Yield Index; Reserve: Total Reserves (measured import coverage by months); Climate Vulnerability: ND-GAIN Index: Notre Dame Global Adaptation Initiative - Vulnerability Index

Source: Authors' calculations.

The analysis underscores the importance of climate vulnerability as a key risk factor. Countries with higher climate vulnerability, as measured by the ND-GAIN vulnerability index, face a significantly greater probability of losing market access. This result highlights the growing role of environmental risks in shaping global financial flows, as more vulnerable countries may be perceived as riskier by investors (Volz *et al.* 2020; Agarwala *et al.*, 2022; Kraemer and Volz, 2022). Other variables, such as economic size (GDP per capita), show a negative relationship with losing market access, suggesting that larger economies are less likely to face restrictions in borrowing. Meanwhile, we use the yield of U.S. high-yield markets as a proxy for international investor sentiment. This measure has a negative but less consistent impact, suggesting that worse sentiment might paradoxically extend access to higher-risk markets. These findings suggest that a combination of external debt, liquidity conditions, and climate risks play a crucial role in shaping countries' access to international capital markets, with reserves and economic size acting as important mitigating factors.

5. Kenya Case Study (2020-2024)

In early 2023, concerns grew over Kenya's ability to repay a $2 billion bond maturing in June 2024. The combined impact of COVID-19, the worst drought in 40 years, and extensive flooding destabilised Kenya's economy. High debt levels and soaring borrowing costs effectively closed access to international capital markets. Although Kenya narrowly avoided default, the economic toll highlighted the challenges environmental disasters and constrained capital market access pose for heavily indebted economies.[7]

Background on borrowing

Kenya's debut in international bond markets in 2014 raised $2 billion, the largest entry by an African nation (Financial Times, 2014). The success prompted further issuances, with Kenya borrowing $6.85 billion by 2019 at interest rates often exceeding 8%. Initially, Kenya managed its obligations well, repaying a 2019 bond on time and issuing a $1 billion 13-year bond in 2021 at 6.3%.

Table 4

Kenya's sovereign Eurobond issuances (in USD)

ISIN Code	Issue Date	Tenor	Amount (USD bn)	Coupon
XS1028952403	Jun-14	10-years	2.00	6.875%
XS1028951850	Dec-14	5-years	0.75	5.875%
XS1781710543	Feb-18	20-years	1.00	7.250%
XS1781710626	Feb-18	30-years	1.00	8.250%
XS1843435766	Nov-19	13-years	1.20	8.000%
XS1843435840	Nov-19	8-years	0.90	7.000%
XS2354781614	Jun-21	13-years	1.00	6.300%
XS2764839945	Mar-24	7-years	1.50	9.750%

Source: Compiled by authors with data from Refinitiv Eikon and individual bond prospectuses.

[7] A more detailed version of this case study can be found in Dryden and Volz (2025b).

COVID, drought and flooding

COVID-19 delivered a heavy blow to Kenya's economy. Lockdowns in 2020 caused a 0.3% contraction in the economy, with tourism, which makes up 11.5% of GDP and total employment, losing 80% of revenue (Ondicho and Irandu, 2021). Tax relief measures and increased spending strained fiscal stability, prompting Kenya to join the G20's Debt Service Suspension Initiative (DSSI) in 2021 (UNDP, 2020).

Between 2020 and 2023, the country experienced five consecutive below-average rainy seasons, marking the longest and most severe drought in four decades (World Bank, 2023). By early 2023, approximately 5.4 million people (32% of the total population) faced acute food insecurity, with 1.2 million living in emergency conditions (ReliefWeb, 2023).

In early 2024, the rains returned; however, heavy rainfall led to extensive flooding throughout Kenya with over 200,000 people affected. Flooding destroyed around 40,000 acres of cropland and destroyed major highways and railway lines, hampering relief efforts (Njagi Njeru, 2024).

Economic and fiscal challenges

Despite rebounding to 7.6% in 2021, Kenya's growth slowed to 4.8% by 2022 due to drought, rising global prices, and tighter financial conditions. Public debt rose to over 70% of GDP by 2023, with interest payments consuming 30% of revenues and external debt servicing accounting for 20% of export earnings (African Development Bank, 2024). Inflation spiked, driven by food and energy costs, despite government subsidies.

By November 2023, the yield on Kenya's 10-year bond reached nearly 17%, far above the 1,000 basis point threshold for distressed debt. A significant portion of Kenya's debt was denominated in foreign currency, and sharp depreciation of the Kenyan shilling against the U.S. dollar in 2023 compounded fiscal pressures. The servicing cost of the 2014 dollar-denominated bond increased by 50% in local currency terms due to the weaker shilling. Adjusted for exchange rate impacts, the bond's effective local currency interest rate averaged 12.8% annually over its lifetime (Dryden and Volz, 2025b).

Prudent fiscal policy would advise that interest rates on debt should not exceed the projected growth rate of an economy (Blanchard, 2019). Positive 'interest rate-growth differentials' (r-g) can create a debt overhang as domestic tax revenues are insufficient to cover rising debt levels, locking governments in a cycle of indebtedness and low growth (Aguiar *et al.,* 2009; Zucker-Marques *et al*., 2024).[8]

[8] Bonds issued at rates higher than g will not automatically cause debt sustainability problems, given that overall debt dynamics depend on the weighted average cost of capital. However, a larger share of high-interest bond debt in total debt will drive up the weighted average cost of capital and increase risks for fiscal sustainability.

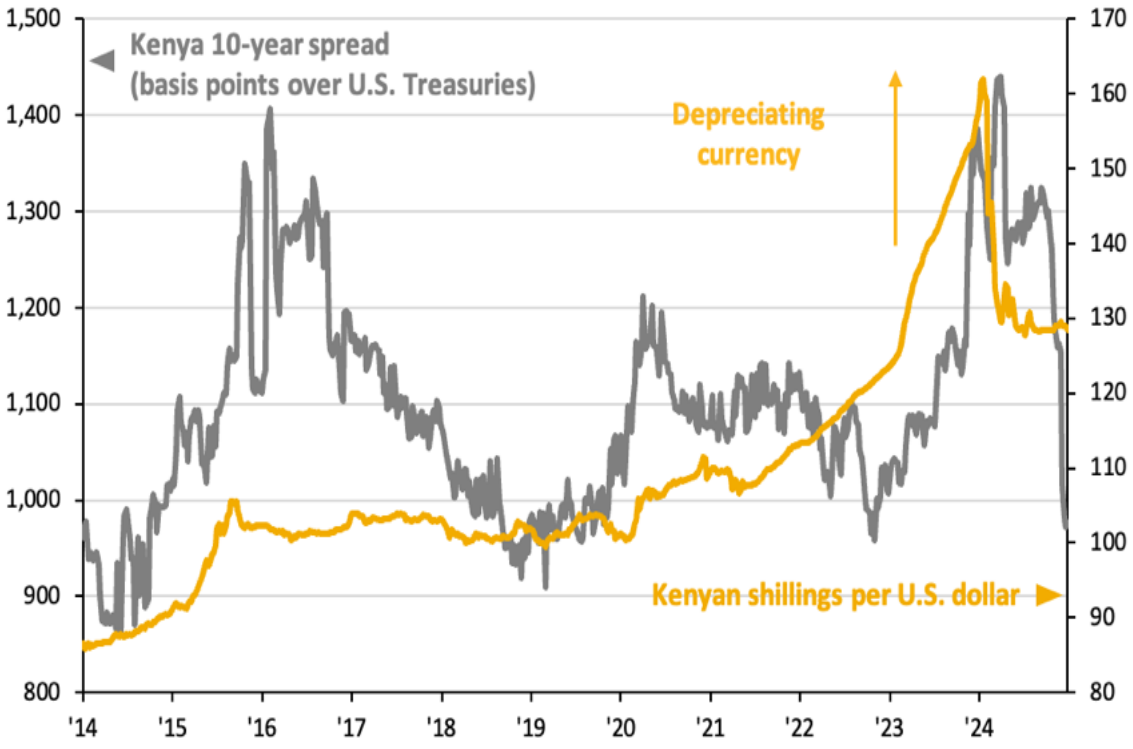
Kenya's r-g differential remained positive, raising questions about the 2014 bond's issuance. Economic growth had averaged 5.1% over the prior decade, while the bond's 6.875% coupon rate suggested an immediate strain. Even the IMF's pre-issuance growth projection of 6.4% highlighted the mismatch. Despite these fundamentals, the bond was over four times oversubscribed, reflecting high investor interest (IMF, 2014).

Capital market access

Kenya's 2014 Eurobond traded at distressed levels (≥700 basis points) since issuance, with yields nearing 17% by late 2023. The global tightening of financial conditions left many sub-investment grade borrowers without market access. However, in early 2024, easing rates allowed Côte d'Ivoire to issue bonds, encouraging Kenya to follow suit. Kenya raised $1.5 billion at a steep 10.375% yield, offering short-term relief but raising long-term concerns (Financial Times, 2024).

Figure 7

Kenya 10-year spreads and currency performance (2014-2024)



Source: Compiled by authors with data from Refinitiv Eikon.

Climate change reforms and debt relief

Alongside its latest bond issuance Kenya secured an additional SDR407.1 million (approximately $551.4 million) in July 2023 from the IMF's Resilience and Sustainability Facility at a discounted 4.9% interest rate (IMF, 2023). This 20-month arrangement was earmarked to support Kenya's ambitious plans to build resilience to climate change and catalyse further private climate financing. Given the constrained liquidity environment, it has been an open secret that a large part of this IMF credit was diverted away from climate adaptation investment to instead meet Kenya's pressing Eurobond repayments.

Amid these efforts, President William Ruto advocated for systemic global financial reforms at the Summit for a New Global Financing Pact in Paris. He proposed a global green bank, independent of the World Bank and IMF, to support developing nations' climate adaptation efforts. Warning of a "crisis situation," Ruto criticised existing financial institutions for prioritising donor countries' interests over addressing climate crises (Financial Times, 2023b). He also urged international institutions to allocate $500 billion annually to help refinance high-cost debt held by developing economies (Financial Times, 2023b).

Kenya's struggles – from drought to closed capital markets – emphasise the need for global financial reforms to ensure nations are not forced to choose between debt repayment and combating climate change (Dryden and Volz, 2025b).

Image credit: Md. Hasanuzzaman Himel via Unsplash

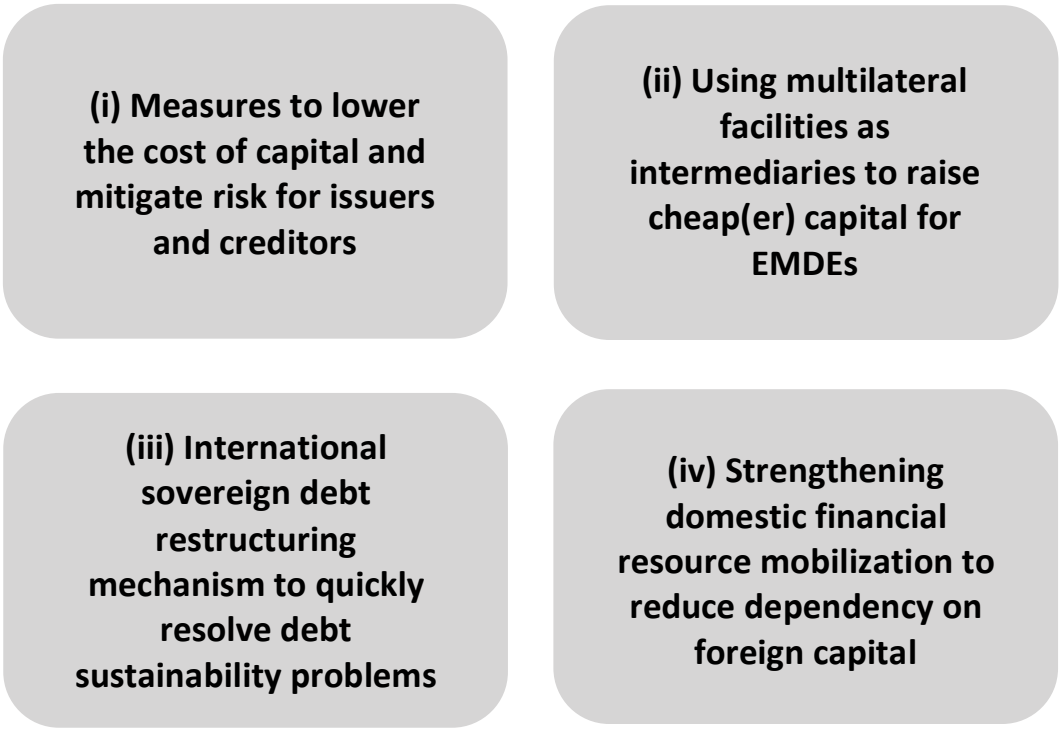
6. Discussion and Policy Suggestions

The analysis so far has shown that international capital market access is not a given for EMDEs and that countries accessing markets are often doing so at borrowing rates that are not sustainable. Indeed, the fickle nature of international creditors has seen countries face intermittent access even during periods shaped by easing monetary policy dynamics. As shown in the case of Kenya, attempts to roll-over maturing debt whilst lacking sustainable access to international capital markets can result in governments adopting untenable fiscal remedies that likely delay, rather than avoid, a debt restructuring event. Moreover, the analysis has shown that vulnerability to climate change is further impeding access to international capital markets by elevating the cost of capital and raising the risk of sovereign credit rating downgrades after disasters.

Below, we propose an action plan consisting of four complementary policy areas to improve and secure EMDEs' sustainable access to international capital markets at sustainable interest rates (Figure 8). These are: (i) adopting measures to lower the cost of capital and mitigate (albeit not wholly eliminate) risk for issuers and creditors; (ii) using multilateral facilities as intermediaries to raise cheap(er) capital for EMDEs; (iii) establishing an international sovereign debt restructuring mechanism to quickly resolve debt sustainability problems; and (iv) strengthening domestic financial resource mobilisation to reduce dependency on foreign capital.

Figure 8

An action agenda for safeguarding sustainable access to international capital markets



Source: Compiled by authors.

6.1 Measures to lower the cost of capital and mitigate risk for issuers and creditors

The central problem facing most EMDEs is the high cost of capital. These are driven by underlying macroeconomic and fiscal vulnerabilities (Buhr *et al.*, 2018). The cost of capital problem is even more severe for developing countries that are particularly climate vulnerable (Buhr *et al.,* 2018; Kling *et al.*, 2018, 2021; Beirne *et al.,* 2022a, 2022b). For international capital markets to be a viable source of finance for climate action – and indeed for any other kinds of investment – of developing countries, the cost of capital needs to be brought down.

In recent years, much attention has been devoted to the role of sovereign credit ratings, with concerns that the major sovereign credit rating agencies have exerted a bias against EMDEs, and particularly against African EMDEs (e.g., Griffith-Jones and Kraemer, 2021; Cash and Khan, 2024).

Often, the notion is that the cost of capital would be significantly lower if only the rating agencies provided more objective assessments. Indeed, the African Union expects that the establishment of a new Africa Credit Rating Agency, which is set to be launched in June 2025, "will reduce the cost of credit ratings for African countries and businesses, increase their access to capital markets, and ensure a fairer representation of their creditworthiness" (AU, 2025). However, reviewing the evidence for a potential rating bias against EMDE sovereigns, a recent study by UNCTAD (2025, iii) finds that:

> *"subjective indicators, judgements, and sentiment play an important role in determining the rating opinions of rating agencies, and […] this creates significant scope for bias. Several studies have identified various types of ratings bias that have historically tended to work against the interests of developing countries. However, systemic and consistent ratings bias can be hard to prove and may be overshadowed by other forms of bias that are innate to the current global financial architecture. Variances in the yield spreads between developed and developing countries with the same credit ratings indicate that participants in global capital markets take account of much more than ratings."*

Importantly, UNCTAD (2025, iii) concludes that ratings "assume less importance when countries adopt high quality, and transparent data and debt management systems and establish accountable and effective institutions" and asserts that "focusing policy efforts on addressing perceived ratings biases may not be the most constructive way forward". Recent cases of sovereign default illustrate serious deficiencies in public debt management and underscore the need for strengthening capabilities in debt management offices and enhancing transparency of public debt. While sovereign debt should be the most transparent form of debt, it is often amongst the opaquest, raising the perception of risk. Enhancing debt transparency, including the public disclosure of relevant terms and conditions of financing agreements by the sovereign borrower, will enable a better assessment of risk not only by credit rating agencies but also by markets.[9] Moreover, strengthening public debt management capacity, which needs to include better capabilities to manage risk (including exchange rate risk) and analyse trade-offs between different sources of financing as well as contingency planning and development of disaster risk financing strategies to cushion against external shocks and ensure steady and stable access to public financing, is critical. Better debt management and enhanced debt transparency provide the basis for improving sovereign ratings and lowering the cost of capital. This may also require changes to the institutional, legal and regulatory arrangements for external debt management.

[9] The 'Principles on Promoting Responsible Sovereign Lending and Borrowing' put forward by UNCTAD (2012, 9) state: "The process for obtaining financing and assuming sovereign debt obligations and liabilities should be transparent. Governments have a responsibility to put in place and implement a comprehensive legal framework

To address climate risks for public finances and debt sustainability, and hence reduce the climate risk premia that vulnerable countries must pay in markets, governments need to conduct a comprehensive vulnerability assessment to identify the major risk drivers and develop a strategy to mitigate climate-related fiscal risks – and communicate this strategy to markets to also reap the benefits (Volz *et al.,* 2020). This involves the mainstreaming of climate risk analysis in public financial management, implementing financial sector policies to mitigate risks, scaling up investment in climate adaptation and resilience, and developing disaster risk financing strategies and insurance solutions, including disaster risk pools.[10] Based on an understanding of where major climate-related risks for public revenues and spending lie, governments need to undertake targeted investments to strengthen resilience of the economy and public finances. Building capacity in governments, and especially at finance ministries, to better understand and mitigate climate-related risks is critical.

In their financing strategies, governments can make use of debt instruments that smoothen repayments and mitigate climate-related risks and other economic shocks. Sovereign state-contingent instruments (SCDIs) can support better public debt management, the climate-proofing of public finances, and the achievement of more ambitious sustainability outcomes (Volz, 2022; Table 5). Volz (2022) argues that the escalating climate and ecological crises provide a strong rationale for a wider adoption of sovereign SCDIs as the physical and transition impacts of climate change and environmental degradation are increasingly altering the risk profile of sovereigns.

Different types of SCDIs can be used, including debt instruments linked to macroeconomic and price variables, to the occurrence of specified events, and to the achievement of sustainability outcomes (Table 5). Instruments such as commodity-indexed bonds, GDP-linked bonds, and revenue-indexed bonds can provide governments with greater fiscal space when the economy is weak, while allowing investors to benefit from strong economic/fiscal performance, while inflation-linked bonds provide insurance to investors against high inflation.

that clearly defines procedures, responsibilities and accountabilities. They should particularly put in place arrangements to ensure the proper approval and oversight of official borrowings and other forms of financing, including guarantees made by State-related entities." The Principles also emphasise the importance of disclosures (UNCTAD, 2012, 10): "Relevant terms and conditions of a financing agreement should be disclosed by the sovereign borrower, be universally available, and be freely accessible in a timely manner through online means to all stakeholders, including citizens. Sovereign debtors have a responsibility to disclose complete and accurate information on their economic and financial situation that conforms to standardized reporting requirements and is relevant to their debt situation. Governments should respond openly to requests for related information from relevant parties. Legal restrictions to disclosing information should be based on evident public interest and to be used reasonably."

[10] On disaster risk pools see Martinez-Diaz *et al.* (2019).

Table 5

A taxonomy of state-contingent debt instruments

	Instruments featuring continuous adjustment of debt service payments	Instruments involving discrete adjustment of debt service payments
Debt instruments linked to macroeconomic and price variables	Inflation-linked bonds Commodity-indexed bonds GDP-linked bonds Wage-indexed bonds Revenue-indexed bonds	
Debt instruments linked to the occurrence of specified events		Risk-linked securities Sovereign debt with disaster clauses
Debt instruments linked to the achievement of sustainability outcomes		Sustainability-linked bonds Nature performance bonds

Source: Volz (2022).

The use of risk-linked sovereign instruments such as cat bonds and embedding disaster risk clauses in sovereign debt contracts is an opportunity for governments, especially in highly climate-vulnerable countries, to mitigate climate risks and scale up investment in resilience. Catastrophe (CAT) bonds are specialised debt instruments designed to raise funds for insurers, reinsurers, and governments in the event of major disasters, such as earthquakes or severe weather conditions (Cummins, 2008; Jensen, 2024). By transferring the financial risk of such events to the capital markets, these bonds provide issuers with disaster insurance while offering investors higher potential returns and portfolio diversification, due to their low correlation with traditional equity and bond markets. In the event a specified disaster occurs, investors may lose all or part of their principal, but if no disaster occurs, the principal is returned in full (Garcia *et al*., 2011; Volz, 2022). Fitch Ratings (2021) highlighted that Jamaica's World Bank-sponsored CAT bond significantly strengthens its disaster risk-mitigation strategy without adding to national debt, illustrating how such instruments can enhance fiscal resilience and potentially improve sovereign credit ratings. However, issuance of CAT bonds has been predominately focused on hurricane risk with over 82% of issuance exposed to hurricane risk in the Atlantic Basin (Artemis, 2024). Its success demonstrates that investors are able to adapt to new bond structures within bond markets; however, the preoccupation with insuring against hurricane risk remains a quandary. Given that sub-Saharan African economies are struggling primarily with droughts, agricultural decline, flooding and other extreme weather events, the insertion of these clauses into their debt structures may provide them additional fiscal flexibility in navigating these challenges whilst simultaneously offering investors purchasing CAT bonds some diversification within their portfolios.

Adaptation and resilience bonds are a subcategory of green bonds whose proceeds are used specifically for climate-resilient investments. As use of proceed bonds, resilience bonds are not SCDIs, but it would be possible to develop adaptation and resilience-themed sustainability-linked debt (see below). Resilience-focused investments enhance the ability of the economy to adapt and/or transform in a manner that lowers climate risk, avoids maladaptation, and unlocks broader development benefits. Of course, governments could also issue plain vanilla bonds and use their proceeds for the same resilience-enhancing investment. However, as part of a broader adaptation and resilience strategy, governments can use resilience bond issuances to signal their commitment to enhancing resilience. This could, in turn, translate into lower risk premia (and hence lower cost of debt).

An additional and broadly underutilised feature in bond issuance is the use of catastrophe or disaster risk clauses to help mitigate against the impact of exogenous shocks. These contractual provisions allow for adjustments to the payment terms in the event of a specified event occurring. As the frequency and devastation of disasters increases, multilateral development banks (MDBs) are beginning to include disaster clauses as part of their conditions of lending, with the Climate Policy Initiative calling for this to be standard feature in all future debt instruments by 2030 (Bridgetown Initiative, 2024; CPI, 2024; IDB, 2024). Wider adoption across debt instrument could provide additional protection to EMDE borrowers who are often most vulnerable to disasters (IMF, 2023). However, it must be emphasised that catastrophe clauses as such can make debt more expensive than plain vanilla debt.

Finally, rewards-for-results-instruments such as sustainability-linked bonds that incentivise sustainability-oriented policies and investments through a reduction in the cost of funding when predefined key performance indicators (KPIs) have been met could help to bring about better sustainability outcomes and contribute to greater debt sustainability.[1] A good example is the Interamerican Development Bank's Biodiversity and Climate-Linked Mechanism for Ambition (IDB CLIMA), a results-based programme that rewards countries that invest in nature and climate commitments (IDB, 2025). IDB CLIMA provides a 5% rebate on the financing cost upon full achievement and independent verification of three predefined nature and climate KPI targets. IDB CLIMA does not penalise the borrower if the targets are not met. To the extent that the KPIs of sustainability-linked bonds relate to broader government efforts to enhance resilience to ecological change, they could also help to reduce the cost of capital through a signalling effect to investors that the government is serious about resilience. Governments could also structure resilience-themed bonds as rewards-for-results-instruments, with the government benefitting from better repayment terms if resilience themed KPIs are met. Such sovereign bonds don't exist yet but would be worth developing.

In the past, developing economies, particularly first-time issuers, were often encouraged to adopt simple (plain-vanilla) instruments (Grigorian, 2003; OECD, 2019). Theoretically, fixed-coupon bonds with bullet repayments are seen to be easier to price and hedge and are more useful for the construction of yield curves. Furthermore, there have been worries that creditors may shun 'enhanced' bonds that differ from the de facto structure, leading to lower investor participation and higher overall borrowing costs. However, bullet bond structures leave developing economies vulnerable to roll-over risk when the entire principal repayment comes due (Nicholls and Peter, 2014). Going forward, key international financial institutions like the IMF and the major MDBs should make a concerted effort to promote the widespread adoption of sovereign SCDIs to support better public debt management, the climate-proofing of public finances, and the achievement of more ambitious sustainability outcomes.

6.2 Using multilateral facilities as intermediaries to raise cheap(er) capital for EMDEs

A further, more holistic point of discussion is whether international capital markets are even an appropriate mechanism for addressing EMDEs' climate financing gap. The fiscal problems associated with climate change represent a large and persistent cost to developing economies, which also raises important questions around climate justice. Addressing such a challenge requires long-term and reliable finance at reasonable cost. However, the fickle nature of international capital markets and the often-high rates demanded from vulnerable countries make them an inadequate source of finance. Importantly, climate related investments will typically not generate foreign exchange earnings, exposing countries to exchange rate risk if these investments are financed in foreign currency.[12] Disasters can worsen exchange rate risk: Recent work by Lo and Volz (2025) shows that poor countries tend to face capital outflows and currency depreciation in the aftermath of large disasters, making repayment of foreign currency debt more expensive in terms of local currency.

In line with the insights of Bulow and (1990, 2005) and Von Luckner *et al.* (2023), perhaps the poorest nations would be better off avoiding global debt markets altogether. As demonstrated with the case of Kenya, inconsistent market access leaves vulnerable sovereigns scrambling to avoid default, often resorting to unsustainable fiscal options in order to do so. At the same, it is clear that domestic financial resource mobilisation alone (c.f. Section 6.4) will not suffice to fill the climate finance gap, especially in the short run. Given the large costs associated with climate change in EMDEs, ways need to be found to tap to tap international capital markets for long term finance of climate action without exposing poor countries to risks they cannot manage.

[12] Whilst mitigation investments are often commercially viable and generate positive cash flows, returns will typically accrue in local currency. Moreover, adaptation investment will usually generate high social returns, but they often don't generate cash flows, or if so, only in local currency.

Instead of borrowing directly, multilateral facilities backed by rich countries can borrow cheaply from international capital markets and on-lend to EMDEs – leveraging the capital provided by shareholders/donors. MDBs have been doing this for decades (e.g. Humphrey, 2022). Against the backdrop of their excellent credit ratings, MDBs issue bonds at low cost to raise long term financing for development. Recent progress in reforming the capital adequacy frameworks of MDBs can increase lending capacity, but this will not suffice.

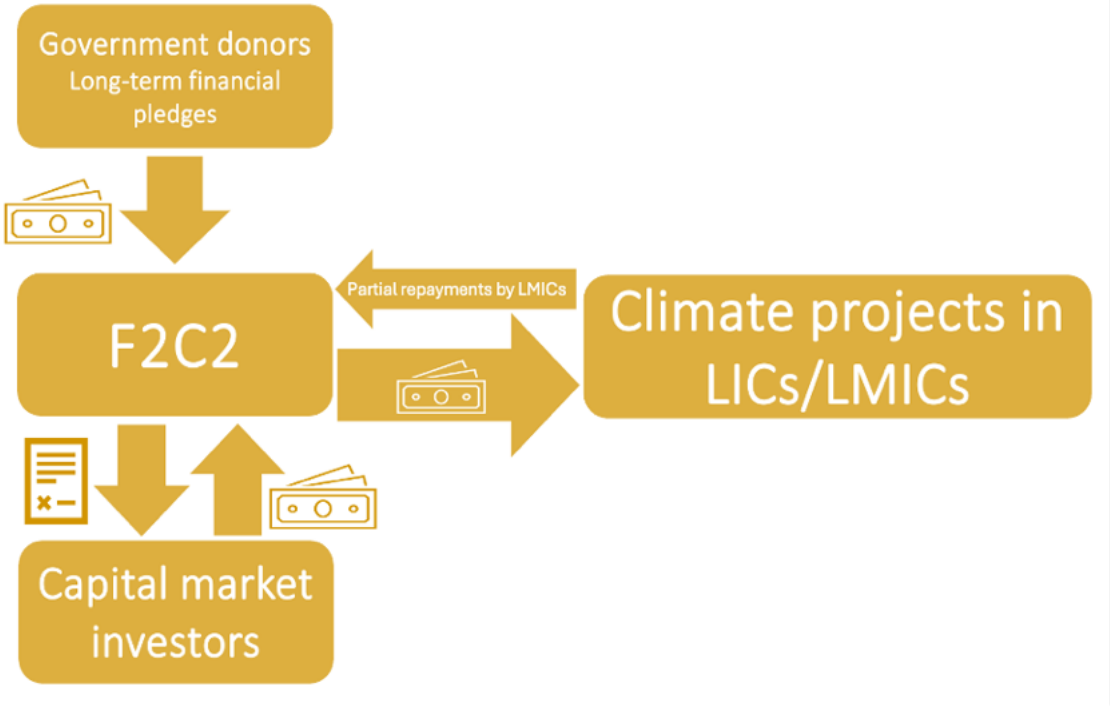
Other multinational facilities should adopt the same model and raise private capital in international capital markets to lend it on to EMDEs. The Climate Investment Funds (CIF) – one of the world's largest multilateral climate funds – has demonstrated that this can work very well. In January 2025, it issued its first bond through a newly established Capital Markets Mechanism, which received a strong rating by both Fitch (AA+) and Moody's (Aa1), enabling it to raise capital at relatively low cost. CIF's inaugural 3-year bond raised $500 million at a price of 36.6 basis points over 3-year U.S. Treasuries, resulting in a re-offer semi-annual yield of 4.838% and re-offer price of 99.757% for the bonds (CIF, 2025). Other multilateral climate funds should replicate CIF's Capital Markets Mechanism to tap capital markets and increase their firepower.

A further step would be the establishment of a new Finance Facility against Climate Change (F2C2) that would raise capital from financial markets on behalf of low-income and lower-middle-income countries as proposed by Kraemer and Volz (2024). In their proposal, F2C2 would raise $1 trillion – around a fifth of the total estimated cost of financing the Nationally Determined Contributions for the 80 countries classified by the World Bank as low-income or lower-middle-income that would be eligible to receive funding from F2C2. The facility would mobilise funding with a substantial grant element through the issuance of green bonds earmarked for climate action (Figure 9). The F2C2 bonds would be backed by rich nations' future commitments of official development assistance, which cover the green bonds' debt service obligations. This would allow the necessary frontloading of climate spending in poor countries, while minimising the short-term impact on donor countries' stressed budgets. Such multilateral cooperation would provide poor nations with better borrowing terms, greater voice in debt discussions, and a means for transferring expert knowledge between nations.

The establishment of a new F2C2 that would raise capital from international capital markets on behalf of low-income and lower-middle-income countries and pass it on as grants or at highly concessional loans for financing their Nationally Determined Contributions would be a pragmatic and highly effective way of overcoming the current impasse in international climate finance in an increasingly difficult geopolitical environment. Strengthening the ability of multilateral facilities to borrow from international capital markets and on-lend to vulnerable developing countries is the most cost-effective way of mobilising international private capital and putting a risk buffer between vulnerable developing countries and fickle international markets.

Figure 9

Finance Facility against Climate Change (F2C2)



Source: Kraemer and Volz (2024).

6.3 International sovereign debt restructuring mechanism to quickly resolve debt sustainability problems

Countries that borrow from international capital markets need to be able to rely on a fair and transparent sovereign debt mechanism they can resort to in case their debt burden becomes unsustainable. Given the extensive financing needs that developing economies face to tackle climate change, a mechanism is needed that will allow debt distressed countries to restructure their debt in a timely manner when needed and possibly benefit from debt relief. Several proposals for a sovereign debt restructuring mechanisms have been floated, including by the IMF (Krueger, 2002), but they have failed to win sufficient political support from major advanced countries which have preferred ad hoc debt restructurings via the Paris Club. The climate emergency combined with the growing number of countries being forced to issue debt at unsustainably high borrowing rates reinforces the case for an institutionalised sovereign debt restructuring mechanisms. While delays in resolving sovereign debt crisis have always been costly in terms of foregone development, such a delay is even worse when countries are unable to defend themselves against the worsening impact of climate change.

A system that does not allow countries to enter a swift, fair, and transparent debt restructuring process is effectively forcing countries with debt sustainability problems to default on development and climate (Zucker-Marques *et al*., 2024).

In the absence of such a mechanism and given the large number of developing countries facing severe debt distress, a debt relief initiative will be necessary to tackle current sovereign debt problems and help countries to get back on their feet (Volz *et al.,* 2020, 2021; Zucker-Marques *et al.;* 2024). Without debt relief, which allows countries to clean up their balance sheet, it will be impossible for countries to mobilise any new investment, be it public or private, domestic or international. Debt forgiveness under the Heavily Indebted Poor Country (HIPC) initiative that was initiated by the IMF and the World Bank in 1996 and its successor, the Multilateral Debt Relief Initiative from 2005, enabled several countries to enter capital markets in the following decades. Of the 36 countries that completed a full HIPC arrangement, one-third successfully leveraged the resulting fiscal capacity to enter international bond markets.[13] Since international investors are highly sensitive to debt-to-GDP ratios, meaningful debt forgiveness can play a critical role in helping these countries rebuild their balance sheets and regain access to international capital markets. Importantly, a coordinated debt relief initiative would provide governments with the fiscal space needed to invest in climate action and enhance resilience against the impacts of a warming global climate.

Greater participation in debt restructurings by private creditors is also a necessary feature to allow for effective restructurings. Investors have historically been reluctant to deliver sizable principal reductions ('debt haircuts') to struggling governments (Cruces and Trebesch, 2013), even those struggling in the wake of disasters such as storms or earthquakes (Dryden, 2025). As discussed before, countries that have borrowed at elevated yields often see their debt almost immediately trading at distressed valuations in secondary markets, suggesting that from the onset investors are sceptical of a governments' ability to repay. Given that financial markets operate on the core principle of higher risk, higher return, investors lending to nations at elevated borrowing costs should not be surprised when the government later defaults. However, as Zucker-Marques (2023) points out, private bondholders often charge high interest rates prior to default and yet do not bear substantial losses during the debt restructurings.

[13] The following countries have gained capital market access following their HIPC agreement: Benin (2024); Cameroon (2015); Cote d'Ivoire (2014); Ethiopia (2014); Ghana (2007); Honduras (2013); Mozambique (2013); Nicaragua (2012); Rwanda (2013); Senegal (2009); Togo (2016); Zambia (2012). Two countries already had a track prior to undergoing HIPC: Bolivia and Haiti.

6.4 Strengthening domestic financial resource mobilisation to reduce dependency on foreign capital

The best way to reduce external debt vulnerabilities and the reliance on fickle international capital markets is the development of deep and liquid local currency bond markets that allow both the sovereign and corporates to raise capital in local currency. This is nothing that can be achieved overnight, but the experiences of East Asian countries, which undertook concerted efforts to develop local currency bond markets after the Asian Financial Crisis of 1997-98 to overcome their dependencies on foreign currency borrowing, is encouraging.

Channelling more domestic savings into domestic investment – including climate investment – holds substantial potential. As shown by Volz *et al.* (2024), large amounts of developing country savings are currently invested – often at low or negative returns – in financial centres in advanced countries. These capital exports are often channelled back to developing countries in the form of high-yielding, short-term debt or portfolio investment, which increase financial vulnerabilities. Between 2004 and 2023, the foreign asset and reserve acquisitions of EMDEs other than China were $15.5 trillion: Net foreign assets acquired by residents increased by $11.8 trillion while reserve asset holdings increased by $3.7 trillion. These are domestic savings invested abroad – largely in hard-currency assets – instead of the local economy. In other words, while capital should be flowing from advanced countries, where it is abundant, to EMDEs, where investment needs are much larger, a lot of capital is flowing in the other direction – it is flowing 'uphill'. Even in countries that are net capital importers (including most countries in sub-Sahara Africa), significant amounts of domestic savings are invested abroad in safe, hard-currency assets, instead of the local economy.

Volz *et al.* (2024) argue that efforts need to be reinforced in EMDEs to channel more domestic savings into domestic investment. They highlight a shortage of relatively safe, investable assets in EMDEs as a major reason for sizable capital flight. The inability to issue safe assets imposes a major constraint on the resilience of local capital markets to external shocks. Building on the experience of countries that have been successful in mobilising domestic savings for development, they argue that national development banks (NDBs) in EMDEs can assume a key role in mobilising domestic savings and channelling them into domestic investment and propose that the role of NDBs can be enhanced with support from MDBs and development finance institutions (DFIs) of advanced countries.

Beyond technical assistance and capacity building, MDBs and international DFIs can support NDBs to improve their ability to raise funding in local capital markets. For NDBs to assume a catalytic role in financing the green transition and effectively leverage the capital provided by their shareholders, they need to be able to obtain refinancing at competitive rates. MDBs and international DFIs can significantly strengthen NDBs in this respect by providing equity, callable capital, or subordinate debt. MDBs/DFIs can also provide guarantees that support NDBs in issuing local currency debt. Volz *et al.* (2024) also highlight the potential of leveraging digital solutions to mobilise domestic savings.

Image credit: Samule Sun via Upsplash

7. Conclusion

EMDEs are under heavy pressure to mobilise finance for climate action. There is a particular urgency to do so for investment in adaptation and resilience, given that this is vital for preparing their economies and societies for the worsening climate crisis and the havoc it is going to inflict on them. They also need to invest in low-carbon growth, given this is becoming ever more an issue of economic competitiveness.

Given that international public climate finance has been in short supply, and especially for adaptation, EMDEs have been seeking alternative, private financing sources. Over the last two decades, a growing number of EMDEs were able to access international bond markets to finance their development aspirations, including climate action. While this has been, in principle, a welcome new source of finance, this report has documented that many EMDEs, especially poorer ones, have been struggling in maintaining access to international capital markets at sustainable cost. For many low-income and lower-middle income countries, accessing international capital markets comes with elevated risks – risks that they often cannot manage. As shown in this study, climate change increases the likelihood that countries will experience problems in continuing to access international capital markets and roll over debt at affordable rates. We hence conclude that the poorest and most vulnerable countries would be perhaps better off avoiding direct access to global debt markets altogether.

Instead of forcing poor countries into accessing international capital markets at high cost and high risk, we should develop and scale up existing or build new multilateral facilities that can borrow more cheaply from international capital markets and on-lend to EMDEs at much lower cost than they would have to pay themselves when accessing capital markets directly. To this end, we need to harness the potential of MDBs to tap international capital markets and on-lend to low-income and lower-middle income countries at much lower cost. Moreover, international facilities including the multilateral climate funds should also be empowered to borrow from international capital markets and leverage the resources they have at their disposal, following the recent example of the Climate Investment Funds.

There is also a strong case for creating new facilities to mobilise large amounts of private capital to frontload climate finance in poor developing countries. This can be done without straining current donor budgets by effectively securitising future aid commitments by donor countries, building on the successful example of International Finance Facility for Immunisation.

The establishment of a new Finance Facility against Climate Change that would raise capital from international capital markets on behalf of low-income and lower-middle-income countries and pass it on as grants or at highly concessional loans for financing their Nationally Determined Contributions would be a pragmatic and highly effective way of overcoming the current impasse in international climate finance in an increasingly difficult geopolitical environment.

Yet, there is also a lot that countries themselves can do. By strengthening fiscal frameworks and building better debt management capabilities, by publishing transparent records of public and publicly guaranteed debt, and by developing credible disaster risk financing strategies, governments can make an important difference in reassuring both credit rating agencies and international investors of their ability and intent to repay their debt.

Governments can also issue risk-linked sovereign instruments and include disaster risk clauses in debt contracts to mitigate climate risks and scale up investment in resilience, helping to reduce the climate risk premium facing vulnerable countries. Moreover, rewards-for-results-instruments such as sustainability-linked bonds that incentivise sustainability-oriented policies and investments through a reduction in the cost of funding when predefined KPIs have been met could help to bring about better sustainability outcomes and contribute to greater debt sustainability. The development of donor-supported resilience-themed bonds as rewards-for-results-instruments - where governments could benefit from better repayment terms if resilience-related KPIs are met - hold great potential. This would not only contribute to much-needed investment in resilience but would also signal to markets that governments are working towards climate-proofing their economy and reducing the climate-related risks facing public finances.

Our analysis raises important questions about climate justice. Vulnerable developing countries, already suffering severely from the impacts of global climate change to which they contributed nothing, do not receive sufficient international grants and low-cost financing for their adaptation efforts and are effectively forced to seek other sources of financing to keep their economies afloat.

From a climate justice perspective, clearly, vulnerable developing countries should be receiving large amounts of climate finance as grants or at highly concessionary rates. However, notwithstanding strong economic, political and moral arguments for financing more climate action, many donor governments are constrained by severe pressures on public finances, making it very unlikely that rich countries will make more climate finance available (Butler, 2024).

Besides much-needed efforts to strengthen domestic financial resource mobilisation and reduce the outflow of EMDE savings (Volz *et al.,* 2024), it will be hence important to strengthen the ability of multilateral facilities to borrow from international capital markets and on-lend to vulnerable developing countries. This is the most cost-effective way of mobilising international private capital and putting a risk buffer between vulnerable developing countries and fickle international markets. Or, to refer to the question posed in the title of this publication: it would provide a way of accessing international capital markets for long-term financing, allowing for smooth sailing, while shielding poor countries from the at times very stormy conditions of international finance.

Appendix

Table A1

First issuance of 10-year bonds in international capital markets

Country	Date at which access first achieved
Bangladesh	March 2015
Bulgaria	March 2017
Chile	March 2007
China	December 2003
Colombia	January 2004
Cote d'Ivoire	March 2021
Egypt	August 2010
Georgia	January 2013
Ghana	April 2017
Hungary	December 2003
India	December 2003
Indonesia	August 2004
Jordan	December 2016
Kazakhstan	April 2019
Kenya	May 2004
Malaysia	December 2003
Mauritius	July 2017
Mexico	December 2003
Morocco	June 2012
Namibia	July 2017
Nigeria	December 2007
Pakistan	October 2009
Peru	September 2010
Philippines	December 2003
Poland	December 2003
Romania	August 2007
Russia	December 2003
South Africa	December 2003
Sri Lanka	September 2014
Tanzania	June 2010
Thailand	December 2003
Uganda	January 2010
Uruguay	August 2019
Viet Nam	July 2007
Zambia	January 2012

Source: Compiled by authors with data from Refinitiv Eikon as of 31 December 2024.

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