Economics & Finance

Zero Carbon Analytics

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Reforming climate finance: Addressing bias in sovereign credit ratings

Key points:

- Changes in sovereign credit ratings influence a country's borrowing costs from international capital markets. Downgrades in particular can have severe repercussions for a country, making it difficult to source financing for climate mitigation and adaptation.
- Researchers have raised concerns around countries in the Global South being subject to different standards in rating decisions, and around credit rating agencies (CRAs) potentially exacerbating economic crises. 95% of credit rating downgrades were applied to Global South countries during the Covid-19 pandemic, despite these countries experiencing milder economic contractions than countries in the Global North.
- Critics of the current rating system have also raised concerns about a lack of transparency in rating methodologies and the potential for conflicts of interest.
- Climate change could increase annual interest payments on sovereign debt by USD 22 billion–33 billion by 2100, even if global temperature rise is limited to below 2°C. CRAs have started to incorporate climate-related risks in sovereign ratings. However, this has largely had a negative impact on emerging markets, many of which are vulnerable to climate change.
- The United Nations (UN) has called for the development of ratings that account for long-term factors on a country's debt sustainability such as climate change and demographic trends, and that positively reflect developing countries' investments in climate mitigation.
- Global regulation of CRAs could ensure rating comparability, enforce transparency and evaluate analysts' expertise.

Finance will be key at COP29 and biodiversity COP16

Climate finance is set to be a central topic at the United Nations Biodiversity Conference (COP16) and the UN Climate Change Conference (COP29) this year, with Global South countries seeking accountability in financial pledges and access to finance on equitable terms.

This series of reports, titled 'Reforming climate finance', illustrates the influence of global financial institutions on high debt burdens and limited access to climate finance in the Global South. The reports examine the financial tools and institutional changes being discussed in international forums to address these challenges.

The series includes briefings on debt-for-nature swaps in Latin America and the Caribbean, the impact of sovereign credit ratings on highly indebted countries, the inconsistencies between the International Monetary Fund's (IMF's) climate policies and conditionalities imposed on debtor countries, and transition finance in Asia.

Sovereign credit ratings influence countries' borrowing costs

Credit rating agencies (CRAs) play a key role in determining a country's cost of debt through the issuance of **sovereign credit ratings** - which measure a government's ability to repay its debt. Sovereign ratings are used as a benchmark for investors to assess the risks of investing in government bonds. Changes in ratings, such as upgrades and downgrades, affect a country's borrowing costs from international capital markets and generate market reactions such as price and interest rate adjustments.

Just like corporate and municipal bonds, sovereign credit ratings fall into two main categories: investment and speculative grade. An investment grade rating means a low risk of default (not being paid back), while a speculative grade indicates a higher risk of default.

- **Investment grade**: Ratings in this category signal stable economic conditions and sound financial practices. Countries with investment-grade ratings from leading CRAs generally borrow at lower costs, as investors accept lower returns due to the lower risk involved.
- **Speculative or 'junk' grade**: These ratings indicate a higher risk of default. Countries with speculative-grade ratings face higher borrowing costs because investors demand higher yields to compensate for the increased risk. This can result in higher interest payments on government bonds and potentially affect the country's economic stability.

Sovereign assessments by the top three CRAs – Fitch, Moody's and S&P – typically focus on eight key variables: per capita income, GDP growth, inflation, fiscal balance, external balance, external debt, economic development and default history. However, while the CRAs disclose their approach to sovereign credit ratings and these key determinants, these ratings are also based on qualitative factors such as political risk. The qualitative judgments made by the rating committee is a subjective interpretation of softer, less tangible information, and the public has a limited understanding of how this process unfolds. CRAs may also use additional factors that are not explicitly accounted for in the public scorecard. And while the three agencies use similar methods, they operate independently, which can result in differences in approach and rating outcomes for particular sectors or products, even when evaluating the same information.

Sovereign ratings also frequently act as a country-level baseline for corporate ratings. That means that firms cannot receive a higher rating than governments in the country they are based. One study found that this ceiling creates a barrier for private firms and can limit economic growth in regions, as downgrades in sovereign ratings lead to an increase in borrowing costs for companies, even if their financials are strong.

Impact of sovereign downgrades

Several studies have examined the impact of downgrades, many of them focused on emerging markets. The main findings are that downgrades increase borrowing costs, limit a country's access to international finance markets, have spillover impacts across global markets, and generate financial instability.

Climate finance

Sovereign credit rating downgrades raise borrowing costs through higher interest rates on government debt, adding to fiscal pressure and potentially limiting a country's ability to access credit. In emerging markets with "relatively weaker economic fundamentals", financial stability could become strained following a downgrade, as high debt burdens make them more vulnerable to capital outflows, currency depreciation and inflation. In order to avoid this, governments may adopt policies to address the immediate concerns of private investors, even when these policies conflict with their long-term sustainable development objectives.

Downgrades may also discourage public investments in renewables and climate mitigation and adaptation due to high interest rates and limited access to credit. Without climate spending, climate impacts such as nature loss worsen. A University of Cambridge study shows that nature loss can trigger further rating downgrades, creating a self-perpetuating cycle. Attracting private finance for climate is also made more difficult due to "the lack of investment grade sovereign credit ratings for many EMDEs [emerging and developing economies]", according to the IMF.

Sovereign spreads

One study found a negative relationship between sovereign spreads and credit ratings in emerging markets, with higher ratings being associated with lower spreads, a relationship that has strengthened over the years.[1] When a country's credit rating increases (indicating lower risk), its bond spreads decrease, indicating that investors demand less of a risk premium. Conversely, a lower credit rating results in higher spreads, meaning investors demand a higher risk premium.

Spillover effects

Several studies have found that sovereign downgrades have spillover effects across countries and financial markets. Even if an emerging economy is stable, negative sentiment following a downgrade elsewhere might lead to higher perceived risks for all emerging markets, causing rating agencies to take a more cautious approach with others. This leads to a vicious cycle of market stress, downgrades, and reduced investor confidence in emerging markets.

If there is a price response to the credit rating change - for example from bonds - further outflows of capital may occur. One study found that sovereign ratings in emerging economies impact not only rated instruments - like bonds - but also stocks, and rating changes have spillover impacts to other countries, with neighbouring countries most affected. One study focused on the US and euro area countries found that while asset prices react strongest to other domestic asset price shocks, substantial international spillovers occurred, both within and across asset classes.

These knock-on and spillover effects - the magnitude of which depends on the type of announcement, the country experiencing the downgrade, and the CRA issuing the announcement - can destabilise financial markets by affecting institutional demand and market liquidity and acting as triggers for buying or selling.

[1] The sovereign spread is the difference between the interest rate on a US treasury bond and a similar bond of another country. This measure is related to country risk: A higher spread implies higher perceived risk.

Disproportionate impacts

Research shows that downgrades have a disproportionate impact compared to upgrades. One study found that government downgrades and imminent negative sovereign credit rating actions have a stronger effect than positive adjustments on the size and volatility of lending in emerging markets. Downgrades often trigger stronger market reactions because they are perceived as a signal of higher risk, especially in emerging markets where economic stability is more fragile.

Analysis also shows that the top three CRAs tend to be slow to upgrade sovereign credit ratings compared to downgrading, which are usually faster and deeper. CRAs tend to overreact by downgrading sovereign ratings during periods of economic crisis and instability, while underreacting when upgrading during more stable times. One study found that previous downgrades negatively impacted future ratings, and domestic economic variables have limited influence on the ratings path once a country has been downgraded. This means that once a country is downgraded, it is extremely difficult for them to turn things around.

Critiques of CRAs

Bias against poor and emerging economies

Emerging markets were largely excluded from credit rating processes until the 1990s, with only 12 emerging market nations rated by Moody's in 1993. In 2003, only 10 African countries were rated by the three top CRAs, but by 2021 that number increased to 31. The UN initially pushed for Sub-Saharan African countries to be included in the credit rating process in order to allow poor regions to access investment from the global bond market – crucial for funding development, infrastructure and economic growth. Many international investors tend to favour rated securities over unrated ones, even when both carry similar levels of credit risk.

However, while the same criteria should be applied consistently for sovereign credit ratings across regions, several studies have found that countries in the Global South have been subjected to different standards by CRAs. One study by researchers in Turkey found that CRAs consistently give higher ratings to developed countries regardless of their macroeconomic fundamentals such as government debt, GDP or inflation rates. They found that ratings often don't consider the improved resilience of emerging markets to external shocks, and place undue weight on external financial pressures from developed economies. Sovereign risk ratings for emerging markets indicate more risk and volatility than what is seen in their actual market performance, which worsens the perception of instability.

A later study also found that CRA's assessments of poorer countries often deviate from the ratings suggested by improvements in their economic fundamentals, creating a self-fulfilling prophecy. Due to lower ratings, countries have to borrow at higher costs, which worsens their financial position and, in turn, could increase the risk of a potential default. This bias has significant implications for the Global South – a 'junk' rating limits a country's ability to borrow and access international financial markets, as investors use sovereign ratings as a key benchmark when looking to invest in emerging economies.

Poor countries held to different standards

Zero Carbon Analytics analysed sovereign ratings for the World Bank Heavily Indebted Poor Countries (HIPC), all in the Global South, and the IMF 'advanced economies', all in the Global North, with the highest debt-to-GDP ratios. The analysis showed that the HIPC all had junk ratings despite having lower debt-to-GDP ratios than the top 10 indebted Global

North countries, indicating that the HIPC countries are more likely to be able to repay their debts. A junk grade for these countries will increase their cost of borrowing and prevent them from accessing global financial markets and investing in climate mitigation. All the Global North countries, apart from Greece, met investment grade, despite having higher debt ratios.[2] While CRAs consider a multitude of other factors when making sovereign rating assessments, the data shows that countries in the Global South are potentially being held to a different standard than countries in the Global North.

[2] Greece was only rated below investment grade by Moody's.

Fig. 1: Sovereign ratings for Global North and HIPC countries with highest debt-to-GDP ratios

Blue = Below investment grade
White = Investment grade

IMF Global North countries	Moody's	Standard and Poor's	Fitch	Debt to GDP Ratio
Japan	A1	A+u	Au	2.64
Greece	Ba1	BBB-	BBB-	1.73
Singapore	Aaa	AAAu	AAAu	1.68
Italy	Baa3u	BBBu	BBBu	1.42
United States	Aaa	AA+u	AA+u	1.29
France	Aa2u	AA-u	AA-u	1.12
Portugal	A3	A-u	A-u	1.12
Spain	Baa1	Au	A-u	1.12
Canada	Aaa	AAA	AA+u	1.07
Belgium	Aa3	Aau	AA-u	1.04

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World Bank Heavily Indebted Poor Countries	Moody's	S&P	Fitch	Debt to GDP ratio
Mozambique	Caa2u	NR	WD	1.01
Republic of the Congo	Caa2	B-	CCC+	0.9957
Ghana	Ca	SD	RD	0.924
Bolivia	Caa3	CCC+	CCC	0.826
Senegal	Ba3	B+	NR	0.75
Rwanda	B2	B+	B+	0.644
Nicaragua	B2	B	B	0.604
Zambia	Caa2	SD	RD	0.562
Togo	B3	B	NR	0.559
Burkina Faso	NR	CCC+	NR	0.543

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Source: Bloomberg Terminal, World Population Review, World Bank Heavily Indebted Poor Countries (HIPC) • Data downloaded in September 2024. Only countries with data available on the Bloomberg terminal were included. Long term foreign currency sovereign credit ratings were used.

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Lack of transparency and unsolicited ratings

Researchers have also raised concerns over the lack of transparency in the CRA's method of assigning ratings. One study by Belgian researchers highlighted that CRAs are not fully transparent in how they assign ratings, and their models often rely on incomplete data for emerging markets, leading to biased results. This creates uncertainty and forces countries into lower-rated categories than they may deserve.

Countries in Africa have also faced downgrades in assessments they did not request or pay for, with unsolicited downgrades adding to their financial burdens. Ghana's government has raised concerns around unsolicited downgrades by Moody's and Fitch. The country's finance ministry said it was "gravely concerned about what appears to be an institutionalized bias against African economies."

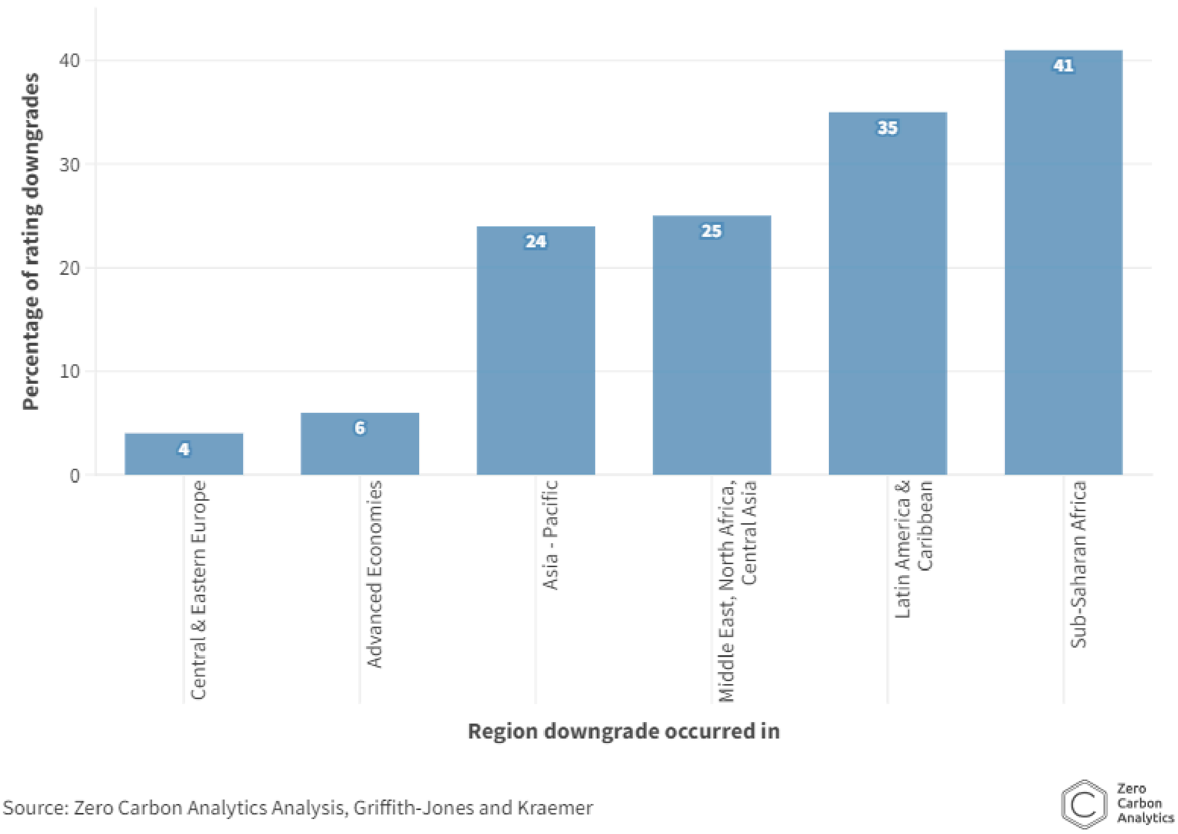
Exacerbate fiscal vulnerabilities during crises

The inability of CRAs to foresee the crises of the 1990s and their downgrades of sovereign credit ratings afterwards led some researchers to argue that they may have exacerbated those crises. The Mexican economic crisis in 1994-1995 "produced the sentiment that rating agencies react to events rather than anticipating them and raised questions about how seriously investors should take sovereign ratings on developing countries," according to the OECD. A group of researchers found that credit rating agencies may have contributed to worsening the East Asian crisis in 1997–1998 by issuing excessive downgrades, which increased borrowing costs for the affected countries and helped to create a self-fulfilling prophecy.

Covid-19 Pandemic

During the COVID-19 pandemic, developing countries experienced over 95% of credit rating downgrades. This is despite Global North countries taking on significantly larger increases in debt and their economic output contracting at more than twice the rate of output contraction in emerging markets and developing economies. Fear of potential downgrades may have deterred some developing countries from participating in official debt relief programs during the pandemic, impacting their long-term debt sustainability, according to the UN.

Fig. 2: Share of the three CRA's portfolio of rated sovereigns downgraded by at least one notch (Jan 31, 2020 - Feb 28, 2021)



In Latin America, 12 of 18 countries that are rated were downgraded during the pandemic, while four were given negative outlooks.[3] 11 out of the 16 climate-vulnerable Small Island Developing States that are rated also experienced a downgrade or a negative credit outlook from at least one of the major CRAs during the pandemic.

In Africa, downgrades continued to play a role in post-pandemic economic recovery. In the first half of 2023, 13 negative rating actions — seven downgrades and six negative outlook revisions — were applied to 11 African countries. The CRAs attributed their downgrades, among other things, to a shrinking amount of foreign currency or reserves, increasing debt service costs, and rising interest rates on Eurobonds - making it too expensive for African governments to borrow money internationally. The actions reversed optimism among international investors that African economies were recovering from the pandemic.

Lack of competition and conflicts of interest

S&P, Moody's and Fitch hold more than 95% of the global credit rating market, leaving little room for competition. This near-monopoly makes it difficult for alternative, regional CRAs to gain traction or offer differing perspectives, particularly in the Global South. Moody's takeover of Global Credit Rating Company, which has operations across Africa, in July further reduced the diversity of rating perspectives in African markets.

[3] The 18 countries rated sovereigns by Fitch in the region include Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname and Uruguay.

According to a study by researchers in Belgium, there are several potential biases stemming from the business models of the top three CRAs:

- CRAs used to make money by selling assessments to investors or anyone who paid. But as demand grew for them to cover more regions and do assessments more often, this business model became less profitable. The shift from an "investor-pays" to an "issuer-pays" model, which took place in the 1970s, introduced several risks. In the "issuer-pays" model, bond issuers, who are the clients of CRAs, cover the costs of credit ratings. This can create a conflict of interest, as CRAs might feel pressured to issue more favourable ratings to retain these paying clients. Issuers could threaten to switch agencies or demand better terms if they receive negative ratings, incentivising CRAs to provide ratings that are more positive than they should be.
- The ownership structure of CRAs adds another layer of potential bias, as the parent companies of CRAs are sensitive to the investment incentives of their major shareholders and bondholders. CRAs and their parent companies might be motivated to issue upward-biased ratings to benefit their key investors, compromising the objectivity of their assessments.

How to make ratings more holistic and equitable

World leaders are rallying behind international financial system reform to make the system fairer for developing countries ahead of the G20 summit in November in Brazil. The current credit rating system puts Global South countries at a disadvantage, and reforms could provide a more level playing field, according to the UN. Looking forward, climate change could increase annual interest payments on sovereign debt by USD 22 billion–33 billion by 2100, even if global temperature rise is limited to below 2°C.

Incorporating climate risks in a just way

Climate change is already impacting sovereign ratings, with CRAs starting to incorporate climate-related risks and environmental, social, and governance (ESG) factors into their rating assessments. For the Global South, climate and environmental considerations are largely having a negative impact on their ratings, since CRAs do not positively account for investments in climate mitigation. In 2020, Moody's reported that ESG considerations negatively impacted 60% of its sovereign credit ratings for Global South countries. S&P said that future modifications in ratings due to climate change factors would be negative in most cases. These downgrades or negative outlooks could make it difficult for countries to invest in climate mitigation, particularly as CRAs tend to exclude the positive impacts of climate resilience investments in their rating assessments.

In response to these growing risks, the UN has called for the development of ratings that account for long-term factors on a country's debt sustainability such as climate change and demographic trends. The ratings should positively reflect developing countries' investments in sustainability or a robust climate mitigation, according to the UN, since investing early in climate mitigation and adaptation can strengthen long-term fiscal stability and reduce borrowing costs for corporations. "Failing to invest in making economies and societies more climate-resilient undermines future growth, wellbeing, and sovereign creditworthiness," the UN said.

Global and regional regulation of CRAs

There is currently no global body that regulates CRAs, and the UN has called for the establishment of a global regulator to ensure rating comparability, enforce transparency and evaluate analysts' expertise. The global watchdog, which would have adequate representation for emerging and developing economies, should complement national regulators, according to the UN.

The IMF has also said that "well-crafted" regulation of CRAs could increase investor confidence and boost capital flows and economic growth, adding that a regulatory framework across jurisdictions could promote transparency around rating decisions. Regulation that requires CRAs to publicly disclose their criteria and methodologies for assigning and updating ratings could improve investor decision-making and allow them to assess the reliability of an agency's analysis. Some progress has been made on the national and regional levels, such as the EU's rules on CRAs adopted in 2009 in the wake of the financial crisis.

Spotlight on Africa

The United Nations Economic Commission for Africa (ECA) said there is a pressing need for African regulators to develop mechanisms to oversee the work of the CRAs within their jurisdictions. This is especially important, as a United Nations Development Programme study suggests that fairer ratings could save African countries up to USD 74.5 billion, aiding in managing debt and allocating resources for development.

The ECA highlighted a concerning trend: despite positive economic projections, sovereign credit ratings for African countries are deteriorating. "Moody's, Fitch and S&P continue to make significant errors in their ratings, yet they continue to influence global financing decisions and flow of capital," the ECA said. The commission suggested increasing the presence of analysts based in Africa who understand the domestic environment - which could help tackle the challenges around foreign-based assessments. S&P has two offices in Africa - in Cape town and Johannesburg, Moodys' has one - in Johannesburg, while Fitch has none, according to the CRA's websites. Johannesburg and Cape Town are among the top three African cities with the most wealthy residents. However, having analysts based in these cities does not necessarily provide the on-the-ground approach necessary to fully understand the socio-economic and risk factors across African countries, which often have vastly different characteristics. Research shows that issuers with analysts located in more distant offices tend to receive more conservative ratings than those with analysts located closer.

The African Union is in the process of establishing a regional credit agency which will aim to provide more relevant and detailed ratings tailored to the continent's unique economic contexts and support the development of domestic financial markets. It is unclear how effective establishing an African credit rating agency would be in attracting capital, as "target investors tend to assign more weight to reports from the established Big Three agencies" despite claims of bias. However, it offers an alternative for the 22 African countries without international ratings that can't afford the cost of maintaining ratings from one of the international rating companies.

Lending during crises

To address concerns around CRA's exacerbating crises by issuing "excessive" downgrades, the UN suggested mechanisms to support countercyclical lending. For example, international financial institutions could provide more favorable lending terms during crises, even if CRAs downgrade a country. It also suggested a more nuanced rating grade, that would soften the sharp divide between investment and speculative to reduce the risks of massive outflows of capital when a country is downgraded.