



THEIR VIEW

MINT CURATOR

Green bonds and guarantees: Key tools to contain global warming

Huge sums of capital are needed for a transition and India has done well to create an enabling framework for green finance



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The science required for a fundamental transition from fossil fuel-based to non-fossil fuel-based production is now known. Some are still at the experimental frontier or too costly to implement, but other technologies such as green hydrogen and especially renewable energy are now commercially viable and being rolled out at scale. But these are not being rolled out at anywhere near the scale required to avoid the catastrophe which awaits if average temperatures rise 1.5° Celsius above pre-industrial levels. As explained in my last column (*Mint*, 28 April 2023), the binding constraint in containing global warming is finance, not technology. Can enough resources be mobilized to finance the huge investments required to bring about this fundamental technological transformation? This question was addressed in a panel discussion at the National Council of Applied Economic Research (NCAER) on 15 May 2023, led by Gautam Jain of the Columbia University Centre for Global Energy Policy, which I had the privilege of chairing. Other panellists included Gagan Sidhu of the Council for Energy, Environment and Water, Neha Sharma of Climate Bond Initiative, and Praveen Kumar of NCAER. I have drawn on Gautam Jain's presentation, among other inputs, for this column.

Let me first address the issue of legacy and responsibility. Global warming is not a consequence of emissions today. It is the consequence of cumulative emissions of CO2 over centuries which remain suspended in the atmosphere. As the accompanying table shows, just six countries account for 64% of the cumulative CO2 emissions since the industrial revolution (1751 onwards) that have driven global warming: the US (26%), China (12%), Russia (11%), Germany (6%), UK (5%) and Japan (4%). The moral responsibility of countries which account for so much of this global warming is very clear. Unfortunately, this does not count for much in global geopolitics.

For more than 30 years since the Rio de Janeiro Earth Summit of 1992, emerging market and developing economies (EMDEs) have been demanding that the 'polluter pays' principle should apply globally, as it does within countries, especially developed countries. However, that demand has had no traction. Meanwhile, time is running out. Unless massive investments are made during the next 5-7 years, the window for containing global warming below 1.5° Centigrade may close. It is best to look for more effective, timely alternatives while sustaining a discussion on the fulfilment of legacy responsibilities for compensation in the future.

One fairly robust estimate is that the required investment in clean energy projects for effective mitigation is about \$5 trillion a year. Of this, about

Polluter must pay

The current state of our environment is the result of cumulative emissions over more than a century, with just six countries estimated to account for 64% of all CO2 emissions since the industrial revolution.

Country	Cumulative 1751-2014 (Gigatons CO ₂)	% Global	Emissions 2014 (Gigatons CO ₂)	% Global	Emissions per capita 2014 (tonnes CO ₂)
China	174.7	12	10.3	30	7.5
US	375.9	26	5.3	16	16.2
India	41.7	3	2.2	6	1.7
Russia	151.3	11	1.7	5	11.9
Japan	53.5	4	1.2	4	9.6
Germany	86.5	6	0.7	2	8.9
Iran	14.8	1	0.6	2	8.3
Saudi Arabia	12	1	0.6	2	19.5
South Korea	14	1	0.6	2	11.7
Canada	29.5	2	0.5	1	15.1
Brazil	12.9	1	0.5	1	2.6
South Africa	18.4	1	0.5	1	9.1
Mexico	17.5	1	0.5	1	3.8
Indonesia	11	1	0.5	1	1.8
UK	75.2	5	0.4	1	6.5
World	1434	-	34.1	-	4.7

Source: Vinod Thomas's *Risk and Resilience in the Era of Climate Change*



20% (i.e., \$1 trillion) is the requirement for EMDEs excluding China. As against that the annual funding available this year is only \$1.4 trillion or 30%. For EMDEs (excluding China) the amount available is only \$150 billion, which is around 15% of the requirement. Can this huge gap be filled? Multilateral development banks (MDBs) cannot meet this massive financing gap. Some estimates suggest that the maximum additional annual financing that MDBs can collectively mobilize for all purposes, including climate finance, is only \$1 trillion. There is much scepticism even about this estimate (see Mundle, *Mint*, 28 April 2023, cited

above). That leaves the private sector. But private investors invest for profit, so the question arises whether climate financing can generate enough returns, adjusted for risk, to pull in private funds of around \$5 trillion a year. Important innovations here include the green bonds and allied instruments like transition bonds, sustainability bonds and sustainability linked bonds. This asset class of thematic bonds, including social bonds, originated in 2007, but it took a while for the market to accept them. During the past five years, the flow of these assets has grown annually at a phenomenal rate of 55% to a total issuance of \$3.5 trillion. There is much room for further growth, since the global bond market is estimated at \$130 trillion and green bonds, which have led the growth of this asset class with a 60% share, trade at a significant premium. Some estimates suggest that the volume of green bonds could indeed grow to the asking amount of \$5 trillion by 2025.

The catch is that global warming will have a disproportionately high impact on EMDEs compared to developed economies, but only 10% of green bonds and other thematic bonds have flowed to EMDEs (excluding China). Here, MDBs can play a key leveraging role. Foreign investors are reluctant to invest in EMDE bonds because of political and other perceived risks as well as currency risk in case of local currency bonds. MDBs can use their limited funds to provide insurance and risk guarantees which can leverage climate finance many times larger than their own funds. EMDE governments need to develop a green bond frameworks and taxonomy and also strengthen ESG mandates. This will enhance the demand for thematic bonds. India has done well by issuing a green bond framework last November. The country also undertook other measures that enabled the successful issue of two local currency bonds that have been trading at a premium. *These are the author's personal views.*

THEIR VIEW

El Niño has cast a long shadow on the Indian economy

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The probability of El Niño developing has risen sharply. This has led to fears of its impact on India's agriculture sector, rural demand and inflation. Unfortunately, this risk has emerged at a time when there are already other risks lurking for the Indian economy like weak external demand, skewed domestic demand and tight monetary conditions. In the midst of all this, a weather-led disruption could have adverse repercussions on the economy.

The probability of El Niño developing this year is about 90%, as per a US-based agency, National Oceanic and Atmospheric Administration. But does this necessarily imply that India's monsoon will be adversely impacted? While the Indian Meteorological Department has forecast normal rains, private forecaster Skymet has projected a below-normal monsoon this year. Going by our experience, of the 21 El Niño years we've had since 1950, there was below normal or deficient monsoon rains in 11. In the past, there has been normal rainfall even in El Niño years if the

event's intensity was weak or if its arrival did not clash with our monsoon. In some years, the impact of El Niño has been countered by a positive IOD (Indian Ocean Dipole) - another weather-related development that results in high rainfall. For instance, despite 1994, 1997 and 2006 being El Niño years, India received normal/excess rainfall as IOD was significantly positive. For 2023, there are forecasts of IOD moving into the positive territory, which may counter El Niño's impact. Analysis of past data shows that the likelihood of poor rainfall is nearly 70% in case of a strong or moderate El Niño event.

As these are all weather-related predictions, it is difficult to get a very clear picture. But the important point to analyse is what happens in case there is a poor monsoon in India this year. Approximately half of the country's net sown area relies on the monsoon rains, which also replenish water reservoirs. While the overall impact on the agriculture sector will depend on the spatial distribution and timing of rainfall, there is still a risk of farm production being adversely impacted in case of below-normal monsoon. Foodgrain production for agriculture year 2022-23 (July-June) is estimated at a record high of 323.6 million tonnes, 2.5% higher compared to previous year. However, rice

production this year has already got adversely impacted (2.6% lower compared to previous year) due to a rainfall deficit in key producing states and unseasonal rainfall. Even though the production of wheat is estimated to be 4% higher as per the second advance estimate, the final output could be negatively impacted by heatwaves during March-May. Wheat production had fallen by around 2% in agriculture year 2021-22 due to heat waves.

Note that agriculture contributes around 18% to India's GVA (gross value added). Moreover, there is an indirect impact on the economy in the form of consumption demand, as agriculture employs around 47% of India's workforce. Hence, weak rural demand can adversely impact other sectors like FMCGs, automobiles, cement, paint, etc. Unfortunately, rural demand has anyway been relatively weak over the past year. High retail inflation coupled with high input prices for the agriculture sector and weak rural wage growth have kept rural

demand subdued. In the last two quarters, as some of these parameters improved, rural demand began showing signs of an upturn, as indicated by FMCG companies' sales. However, weather related disruption and below-normal rains could derail the recovery in rural sector demand. While the reliance of our rural economy on the agriculture sector has been reducing (agriculture's share in rural income fell to 40% in 2011-12 from 51% in 1999-00), it is still high. Also, any adverse impact on the farm sector would further exacerbate India's skewed economic recovery.

The other big factor is the impact of poor monsoon on inflation. Consumer price index (CPI) inflation in the last two months has moderated below 6% (RBI's upper limit). However, inflation for some essential food items such as cereals and milk remains high (13.7% and 8.8%, respectively in April). Household inflationary expectations that are strongly influenced by food inflation, remain at a high of 10.5% (one-year

ahead expectations). In the recent past, the government has intervened to control food inflation through measures like open-market sales of wheat, reducing import duty on edible oil, curbing rice exports and banning wheat exports. Hence, the government may continue to intervene to control food prices in case of a poor monsoon. As per an International Monetary Fund study, El Niño can significantly impact global commodity prices, which in turn will have implications for our inflation and monetary policy response. While the Reserve Bank of India has paused its rate hikes, it has indicated a need to be watchful on inflation front. With wholesale inflation having fallen sharply in the last two months, there are expectations of a CPI reprieve too. However, weather-related disruption continues to pose price risks.

It is difficult to make predictions on the economy based on the likelihood of a global phenomenon like El Niño. However, the government needs to be cautious and ready with a plan in case this event materializes. India is already struggling with slowing external demand and waning pent-up domestic demand. Any weather-related disruption to the agriculture sector and rural demand would skew the recovery further and pose economic difficulties.

India's bankruptcy code might well be in need of a rescue too

Go's insolvency is a test case while the IBC itself may need revision



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Whether Go First can resume flying isn't an easy question to answer

In the seven years that it has been around, Indian Prime Minister Narendra Modi's signature bankruptcy reform has failed to live up to its billing. The 2016 insolvency law was crafted when India was starting to tackle a huge pile of bad loans: a \$200 billion-plus menace. With banks garnering bumper profits in a post-pandemic high interest-rate environment, that baggage is lighter with a lower urgency to deal with it.

It shouldn't be. Creditors' recovery rates on soured advances have been low for the past couple of years—and they're falling. Liquidations are the most common result of bankruptcy proceedings, which take more than twice the 270 days envisaged. In a country where savings are in short supply, the priority was always to prevent productive capital from going to waste in unviable projects. Some big resolutions of steel plants raised creditor hopes, but rampant gaming of the legal process by vested interests is dashing them.

Which is why the bankruptcy protection sought by Go Airlines is so crucial. It has temporarily shut down. If the court can't quickly revive Go First, as the brand is now known, the risk is that it will be grounded forever, like Kingfisher in 2012 and Jet in 2019. The domestic aviation market will become even more of a duopoly.

But rescuing Go First could be seen as bailing out the billionaire Nushi Wadia by inflicting losses on SMBC Aviation Capital, ACG Aircraft Leasing Ireland and other aircraft lessors. SMBC, which claims to have ended its lease before Go's filing, wants to take its jets away. The bankruptcy protection, lessors allege, is a "fraudulent exercise." On Monday, the appellate authority rejected their plea: They need to approach the tribunal to repossess planes with expired leases, or go to the apex court.

It's a complicated bankruptcy. About half of Go's Airbus fleet has been incapacitated by failures of Raytheon's Pratt & Whitney engines. The airline has claimed \$894 million in compensation. A Singapore-based arbitration panel asked P&W to "immediately begin making reasonable efforts" to locate suitable spares. The engine-maker said that it will honour the award. But since it hasn't supplied the first batch of 10 engines that the tribunal asked it to try to deliver by 27 April, Go filed for bankruptcy. Or that's what its filing said.

But those nuances are irrelevant for Go First creditors: Regardless of whether the airline was incompetent, undercapitalized or unlucky, its shareholders must pay a price before lenders and lessors are asked to make sacrifices.

It's unclear how much of this risk will materialize but its intensity will shape how farming and inflation fare