

Emerging markets



ASSESSING CLIMATE RISKS FOR EMERGING MARKETS

In light of the recent COP26, **Patrick Russel** examines the sensitivities of climate change, in terms of risks and opportunities for the emerging market equity asset class.

TO START, ONE needs to understand the current situation in terms of how the world is tracking towards meeting the target of net zero emissions by 2050 (as measured by greenhouse gas (GHG) intensity, in carbon dioxide (CO₂) equivalents). This sets the context for policy action over the next 10 years – defined as the ‘critical decade’.

Whilst global GHGs dropped in 2020 (with COVID-19 lockdowns), volumes have bounced back strongly in 2021 and are approaching their peak levels of 2019. Global energy-related CO₂

emissions are on course to surge by 1.5 billion tonnes in 2021 (+4%) – the second-largest increase in history according to the International Energy Agency (IEA). And with mobility restrictions relaxing on global travel, emissions appear set to rise again in 2022. A recent UN report (released 17 September, 2021) shows global GHGs will rise 16% by 2030 on 2010 levels based on current National Determined Contributions (NDCs).

This is a massive miss on the -45% decline on 2010 levels cited by the UN as the level required to achieve net zero emissions by

2050 (and limit a global temperature rise on pre-industrial levels to 1.5°C).

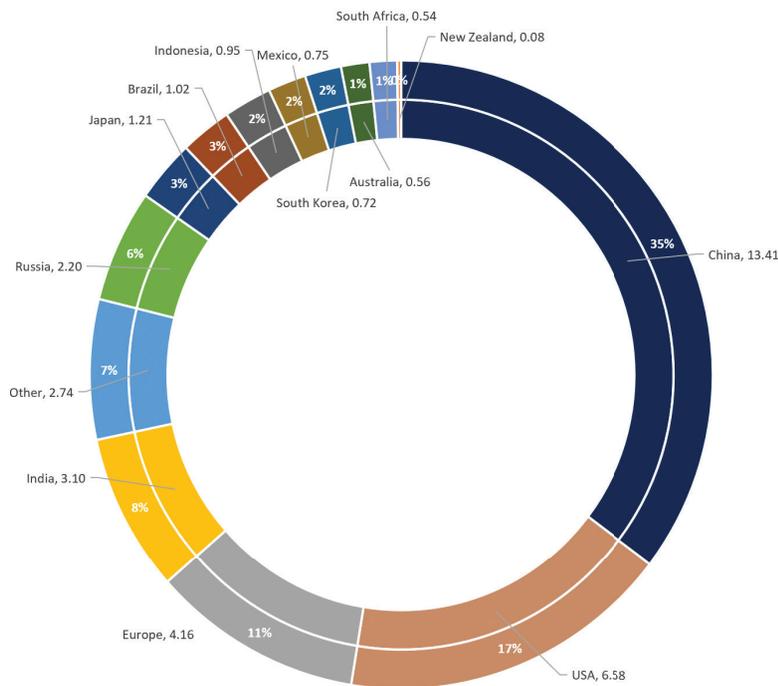
The Intergovernmental Panel on Climate Change (IPCC) issues a report every few years updating the scientific evidence on global warming and climate change. This has a critical impact on the thinking and policy action emanating from COP events and their latest report (July 2021) highlights that the pace of global warming has accelerated over the past two decades, and the risks of overshooting the cap of 1.5°C to 2.0°C by 2050 are now very significant and increasing.

Under current business as usual, total net GHGs will only drop to 30 billion tonnes per annum by 2050 versus a target of zero to 10 billion tonnes under scenarios to limit temperature rise to 1.5°C. In short, under current policies, the world is on track to produce about 55 billion tonnes of GHGs annually by 2030 (before offsets from forestry, etc.), which is getting close to double the original target of 35 billion tonnes in 2030 – as per the 2015 Paris Agreement.

If unchecked, this will have substantial negative consequences to the global economy as the

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Chart 1: Global GHGs billion tons by country 2019



Source: International Energy Agency

temperature could potentially lift by 4°C by 2050 on pre-industrial levels [source: IPCC, September 2021 report]. According to climate scientists, this will lead to extreme rise in sea levels, droughts, storms, large food shortages – creating considerable social dislocation, mass migration and potentially regional/global conflict.

ASSESSING AT THE COUNTRY LEVEL

First, we have to consider which countries are the large emitters on an absolute basis and where they are placed on a per capita basis (i.e., relative). Countries that have both high emissions on an absolute and relative basis will be under the greatest pressure to cut by 2030. Those that are high in absolute terms, but are lower than the global average on a per capita level GHGs will be given more time to reduce.

Chart 1 summarises the largest emitters globally China is the standout at 35% of global emissions (the largest by a quite a margin), followed by the US (17%), Europe and India (11% each).

It is worth putting the scale of China’s GHG emissions into perspective, according to Bloomberg data, China Baowu, the world’s largest steelmaker put more CO2 into the

atmosphere in 2020 than Pakistan; and China Petroleum and Chemical pumped more CO2 into the air in 2020 than Canada. On a relative basis when observing per capita GHGs, it is a slightly different picture and we find India drops in risk profile, as does Indonesia and Brazil.

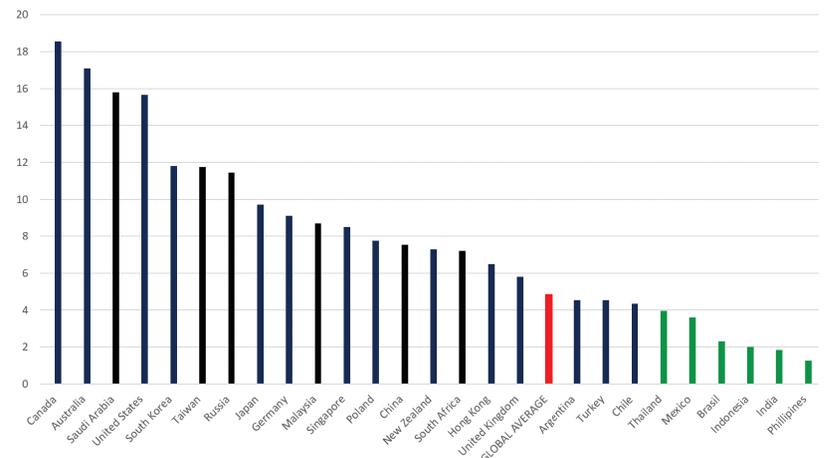
In assessing emerging market (EM) climate change risks, we must consider the future plans of each country as well – as defined by their own nationally determined contributions (NDC) targets through to 2030 and 2050. In this regard we use data compiled by Climate Action Tracker (CAT). This assesses the GHGs of individual countries, and how existing NDCs relate to achieving net zero by 2050 (i.e., limiting a temperature rise to 1.5°C).

CAT then classifies the country from the top category: ‘Role Model’ – policies consistent with global warming well below 1.5°C (Paris Agreement) to the bottom category: ‘Critically Insufficient’ – policies consistent with global warming of in excess of 4°C.

Sadly, there are no countries in the ‘Role Model’ category, as of September 2021, with only the UK and the Philippines with policies consistent with limiting global warming under 2°C.

The CAT summary is:

Chart 2: GHGs tonnes per capita by country 2019



Critically Insufficient – policies consistent with global warming >4°C (10% global CO2e emissions):

- Argentina;
- Russia;
- Turkey;
- Saudi Arabia; and
- Thailand.

Highly Insufficient – policies consistent with global warming 3°C to 4°C (60% global CO2e emissions):

- Australia (downgraded from Insufficient);
- Brazil (downgraded from Insufficient);
- Mexico (downgraded from Insufficient);
- New Zealand (downgraded from Insufficient);
- India (downgraded from Compatible);
- Indonesia;
- South Korea;
- South Africa;
- China; and
- Vietnam (upgraded from ‘Critically Insufficient’).

Insufficient – policies consistent with global warming 2°C 3°C (30% global CO2e emissions):

- Chile;
- European Union;
- Germany (Upgraded from Highly Insufficient);
- Japan (Upgraded from Highly

Insufficient); and

- United States (Upgraded from Critically Insufficient).

Compatible – policies consistent with global warming <2°C (1% global CO2e emissions):

- Philippines; and
- United Kingdom.

Compatible – policies consistent with global warming <1.5°C (Paris Agreement):

- None.

Role Model – policies consistent with global warming <1.5°C (Paris Agreement plus):

- None.

One of the key drivers of reducing GHGs is ‘paying for the cost of carbon’ a business produces. Accordingly, countries that have carbon trading schemes are creating the ‘carrot and stick’ approach for companies to change their behaviour. This is the driving force in the EU’s success in reducing GHG over the past decade. Countries with no carbon trading schemes, or weak schemes are therefore at a clear strategic disadvantage in terms of creating pricing signals to convert to a low carbon economy. It is

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clear from the COP26, that countries that fail to pivot to low-carbon economies will be penalised, especially by carbon border taxes over the long-term by the countries that comply, and this is a facet that is into our assessment for EM climate change risks.

Our final overlay looks at both the willingness and ability of country to reduce GHG emissions. Countries with high levels of gross domestic product (GDP) linked to producing and exporting vast quantities of fossil fuels, such as Russia, Saudi Arabia, Colombia and Indonesia have some of the weakest commitments to reducing GHGs given the potential income loss from decarbonising.

Some countries that have limited natural renewable resources (such as hydro, wind, solar, and geothermal) are forced to have a high proportion of energy created by domestic and/or imported fossil fuels (coal, oil and gas) have made limited progress in cutting GHGs and/or have posted relatively weaker NDCs with regard to cutting future GHGs – South Korea, Taiwan, Thailand, Malaysia, South Africa, Turkey and Poland are guilty here.

The EMs that have the more proactive plans for reducing their GHGs tend to have a much lower exposure to fossil fuels and/or are more richly endowed in natural renewable resources, and as such, the pivot to cleaner energy is much less costly. Major EMs in this category are India and Brazil.

If we assess the climate change risks being material and growing, we can build this

additional risk premium into our country cost of capital. In short, if required we can add an extra percentage point(s) on to our country discount rate to compensate for weak NDCs and an inherent unwillingness of the country to pivot to clean energy in order to meet the net zero target.

ASSESSING AT THE COMPANY LEVEL

Even though individual countries may have weak NDCs with respect to reducing GHGs, there are many examples where companies are taking the matter into their own hands and targeting net zero by 2050 for their own carbon footprint. These companies know that while there may not be a cost of carbon today in their country (due to absence of an effective carbon cap and trading scheme), it is almost inevitable that one will be in place, and if not, then the business will ultimately be penalised by investors and/or carbon border taxes.

To that end, some companies have openly committed to net zero themselves. Some have signed up to RE100 – which is an initiative

that requires a company to have all their energy created by renewable sources by 2050. A growing list of companies in EM are also joining the Task Force on Climate-Related Financial Disclosures (TCFD), putting themselves in a better position to manage climate change risks.

CONSIDERATIONS FOR PORTFOLIO STRATEGY

From a bottom up perspective, we take the analysis a step further and track the annual GHG emissions of every company on our EM approval list from year to year. We can then see if the GHGs are rising or falling in every company on our list.

Furthermore, we can undertake sensitivity analysis on the costs of carbon. For example, we have analysed our portfolio and found that if every company had to pay €60 (\$93)/tonne CO₂ (current spot price in EU – considered the global proxy price for carbon emissions) it would reduce average company profits by 2% (weighted). And if the carbon price rose to €160/tonne CO₂ the profit reduction would be 5% (weighted).

Company engagement is also critical – as an example, we have exposure to an Indonesian cement company which has high GHG emission levels relative to its portfolio size. Rather than sell the stock, we are actively engaging with the company to encourage strategies to abate their carbon by adopting new technologies.

We highlight China as the country most at risk, given its high absolute and relative levels of GHGs emissions, reflecting its dependence on fossil fuels for its energy supply. This is a factor, among others, that supports a deep underweight position to China. We also have zero exposure to Russia and Saudi Arabia – EMs whose economies have substantial downside risks from fossil fuels being replaced by renewables.

We note South Korea and Taiwan have high per capita levels of emissions, and as such expect these countries will be under increased pressure to reduce their GHGs by 2030. [MM](#)

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