

Why disclosing climate risk is already an improvement?

Climate risk is now recognised as a significant risk to businesses and society as a whole, pressuring companies to report on how climate change affects their operations and financial performance. These more transparent disclosures benefit an investment community that is increasingly seeking transit to a low-carbon economy and expecting companies to report on climate-related risks with as much as rigorous methodologies and clarity as any other financial risk.

WE FIND THAT CLIMATE RISK AND FIRM PROFITABILITY are negatively correlated. The result is robust across the spectrum, in the US as well in Asia, for MSCI EM ETF Top 50 or Bottom 50 companies. Companies that rank high on climate risk also have the lowest profitability ratios such as P/E and P/B.

Introduction

In the latest CDP 2019 reports as reported from Bloomberg, water risk was cited to be very significant as it might disrupt production (ie. Coca Cola) of supply of material (semi-conductor industry).

Closer to home, take the Greater Bay Area (GBA) in Southern China, covering 11 cities, containing a population of 67millions, that is only 5% of total population, but producing 20% of China's GDP. In other words, it is an extremely densely populated region and the backbone of the Chinese economy. A double whammy given that the area is faces high Climate Risk mainly due to water scarcity, sea level rising and flooding's events. Put it differently, the climate risk related potential economic and social costs are extremely high!

According to the Geneva Association, the economic losses from flood disasters in Guangzhou, could reach USD 760 billion per year by 2050 if no additional investments in adaptation are made. June 2008 floods in Guangdong damaged more than 10,000 factories at an estimated cost of over RMB3.8 billion. In Shenzhen, it caused around RMB1.2 billion in economic losses. The costs are much higher if one accounts for supply disruption related risks in other industries and beyond China.



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Meanwhile, company executives have barely paid even a minimum level of attention to the climate issues. According to a recent global survey, *The Road Ahead: The KPMG Survey of Corporate Responsibility Reporting 2017*, 72% of large and mid-cap companies do not acknowledge the financial risk of climate change in their annual financial reports. And of the minority that acknowledges such risk, only 4% provide some data on the business value-at-risk. The ones that report the data are typically companies from countries where such disclosure is either mandatory or encouraged by government, regulators or stock exchanges.

Academic research on the impact of climate risk is minimal, mainly due to a lack of market focus associated with misperception of climate risk as a long-term risk. This is because, climate risks while well understood by environmental engineers, are an uncharted,

and unknown field for industry practitioners and business leaders. The two camps do not speak the same language. Hence a cross collaborations and data analysis, will bring focus, transparency and clear understanding of climate related risk. In reality, these risks span from short- to mid- to the long-term horizon. Hence, there is an urgency to educate the market, companies and investors, that these risks will hit them faster than expected. As such, the need for proper analysis and business adaptation to climate change is pressing. Studies published in 2016 and 2014 strongly emphasise that both physical risk and transition risk have a transparent material impact at the company level. A 2018 study by Schroders Investment Management estimates that companies would have to spend at least 4% of their market value to ensure their asset against physical climate risks. In 2017, the Task Force on Climate-Related Financial Disclosure

released reports and called for better climate risk reporting, climate risk management and stress-test scenarios.

Defining Climate Risk

Climate risk has, in general, four components. The first is the physical risk of being exposed to extreme weather events as well as climate change. The second is the transition risk related to regulatory changes to mitigate climate change. The third is the technological advancement of renewables and energy efficiency increasing the risk to existing industries relying on fossil fuels. The final risk is the social risk due to changes in consumer trends and behavior.

The level of transitional risk is based on a score developed by the nonprofit CDP - formerly known as the Carbon Disclosure Project - that is an indicator of a company's performance addressing climate, and more specifically environmental issues.

The score highlights a company’s progress towards leadership using a four-step approach:

1. Disclosure (D-level): The completeness of the company’s response to the CDP questionnaire;
2. Awareness (C-level): The extent to which the company has assessed climate issues, risks and impacts about its business;
3. Management (B-level): To what level has the company implemented actions, policies and strategies to address climate issues; and
4. Leadership (A-level): The steps a company has taken which represent best practice in the field of climate management.

Larger transition risk could incur if the disclosure and regulation framework is not strong enough, meaning a higher CDP score indicates a lower transition risk.

Climate Risk Disclosure in Emerging Markets

Given that climate risk is a new topic in the market and the difficulty associated with it, it is normal to expect a low level of awareness and therefore low disclosure not

just in Asia, but developed as well developing countries. We analysed:

1. Companies that sit on the Top 50 and Bottom 50 MSCI Emerging Market ETF Index as of June 2018.
2. 136 US public companies that are among the top global 500 companies which have responded to the CDP questionnaire in 2013. While the US data of 2013 are not directly compatible with the 2017 MSCI data, the year mismatch helps in analysing the level and the speed of climate awareness, climate adaptation and climate-related disclosure of emerging countries and Asia in particular versus the US.

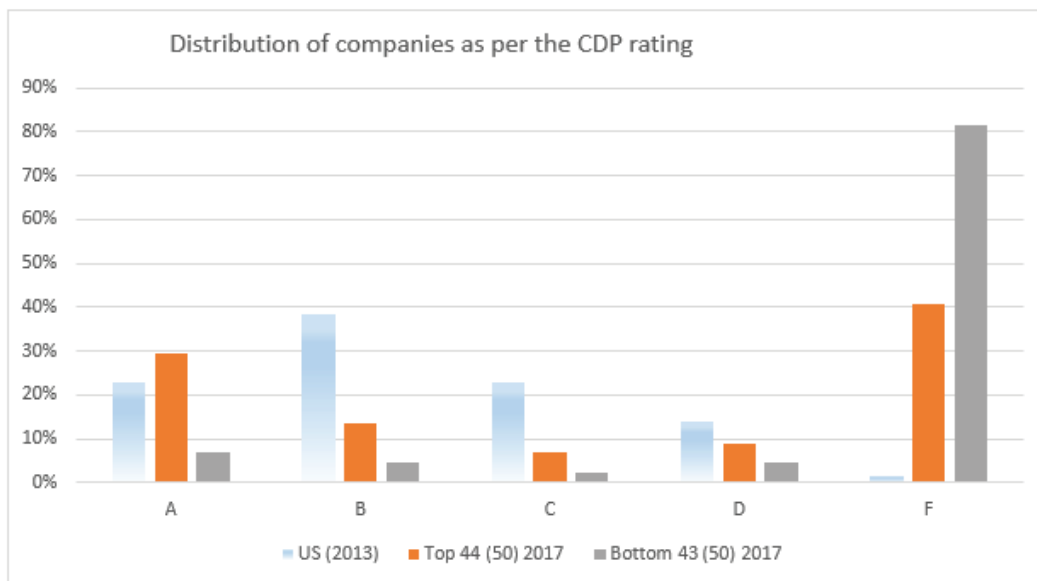
Among the Top 50 companies in the MSCI EM ETF Index, only 44 companies responded to the CDP questionnaire. Among the Bottom 50 MSCI EM ETF companies, only 43 companies responded.

Our next point of interest is to investigate the extent to which the emerging market companies are addressing climate risks. The CDP coding stands for A-Leadership, B- Management, C-Awareness, D- Disclosure and F-failure on climate-related risks. The desired result would be to have more

companies rated at A-level and only a few at D or F-level.

The results are striking. Most of the emerging market companies are at the F-level, meaning failure to disclose enough information on climate risk. That is due to either lack of understanding or lack of awareness of climate risk, or a combination of the two. Second, companies seating at the MSCI EM ETF Bottom 50, have a deficient climate disclosure relative to the MSCI EM ETF Top 50 companies. In 2018, 81% of the Bottom 50 fail to disclose sufficient information relative to only 40% for the Top 50 companies and 2% for US companies. Even after a gap of 5 years, Asian companies (part of the MSCI EM ETF Index) and respective leaders in their countries are far behind in acknowledging and measuring climate risk.

With the growing importance of the topic, we expect more companies to populate the A, B and C -level areas. As climate risk becomes more evident, immediate and more accessible to translate into numbers, governments



will introduce more stringent regulations to cope with the transition from high to low carbon economies, business-as-usual is no longer viable for companies. As we have shown in our analysis, only a handful of companies among the already top performing ones, measure, disclose or are aware of climate risks.

Climate risk and company performance

We find that climate risk and firm profitability are negatively correlated. The result is robust across the spectrum, in the US as well in Asia, for MSCI EM ETF Top 50 or Bottom 50 companies. Companies that rank high on climate risk also have the lowest profitability ratios such as P/E and P/B.

Without getting lost into the causality, it is essential for investors to recognise that low P/E companies face higher climate risk, a significant risk largely ignored and unpriced. These risks are not short-term. Hence low P/E does not imply an underpriced company, but a persistent abnormality that it most likely becoming even more pronounced.

To test the hypothesis of how climate risk relates to company financial performance we use climate disclosure data to model

climate risk. We refer again to the Top 50/Bottom 50 MSCI EM ETF companies and US companies. However, our sample size shrinks further from 87 (43+44 companies) to 67 companies, as these are the only ones that have responded to CDP and have the needed climate disclosure data on Bloomberg.

Our analysis indicates that climate risk and firm profitability measure via price-to-earnings or price-to-book ratio are negatively correlated. The results are robust across the spectrum, in the United States, Emerging Markets and slightly weaker in Asia. Companies that rank high on climate risk have also the lowest profitability ratios. We believe that the weak relationship for Asian companies indicates that climate risk is not acknowledged yet, or at least not to the extent that it is in other regions.

The results are even more concerning when comparing top versus bottom companies. The correlation between climate risk and financial ratios, is three times stronger for Bottom 50 companies (ranging from -0.1 to -0.35 for P/E ratio and climate risk relationship). This highlights the climate risk for companies with low profitability who also fail to disclose any climate risk data due to either lack of

awareness of climate risk, or dismissal as not relevant.

It is therefore essential for investors to recognise that Asian companies P/E face strong downward pressure as investors start pricing climate risk, a significant risk largely ignored and unpriced, especially in Asia where the correlation are the weakest. These risks are neither short-term, nor a one-off as extreme events are becoming the new normal due to increasing frequencies. For example, a company with relatively lower than normal profitability P/E ratio and low climate disclosure (hence high climate risk), it is no longer be a candidate for value investing, but rather a sell subject as investors start pricing in climate risks.

It is therefore in the company's unique advantage, and not just the regulators, to increase the data transparency on climate data, as well as to report on operational and business strategies on how to mitigate these risks and capture opportunities. From the investors prospective, they need to equip themselves with knowledge on climate risks, their impact, and their relevance per sector and region. In doing so, the market will enjoy a more efficient investment allocation while speeding up the transition toward a low-carbon economy. ■

