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Special Report:

Climate Change: Preparing For The Long-Term

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Special Report:

Climate Change: Preparing For The Long-Term

From flooding in Europe, wildfires and drought in the U.S. and Australia, to devastating typhoons in Asia, it's hard to escape the recent stories about extreme weather. Each new event adds to a growing perception that the effects of a changing climate are already being felt--concerns that are shared in many recent reports from the scientific community. The Intergovernmental Panel on Climate Change recently released its fifth assessment, finding that: "Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia." Similarly, this month's U.S. National Climate Assessment states: "Impacts related to climate change are already evident in many sectors and are expected to become increasingly disruptive across the nation throughout this century and beyond."

These warnings highlight the risks to societies and their economies. Without action to combat the causes of climate change, particularly the greenhouse gases that are held as a common culprit, scientists predict that average global temperatures will continue to increase, sea levels will rise, and extreme weather will become more frequent and severe. These trends will in turn affect resource and energy use, the regulatory environments governing business and finance practices, and how governments and companies measure and mitigate risk--including credit risk.

Overview

- Increasingly, governments and corporations have left behind the question of whether climate change will affect them, and instead are focusing on when, and how.
- The corporate bond market's appetite for bonds that promote environmental sustainability is growing.
- We think investors will focus more on climate and carbon risks as an indicator of company value.

The issue of climate change is clouded by the politics of the debate. Despite emphatic warnings of the consequences of global warming, a clear consensus has yet to emerge on its source, speed, and the scope of the transformations that could affect our natural world. This creates uncertainty among voters and dilemmas for governments in developing coordinated action plans. The result can be fragmented policies globally that may miss opportunities to generate the best benefits in terms of emissions reductions, or to develop cost effective clean energy. For both government and industry, the lack of clear signals means that risk mitigation strategies may be delayed or lose out to more immediate problems, leaving businesses and investors vulnerable to rapid policy shifts and the weather itself.

What this all may mean for debt issuers, and perhaps even for the global financial system, is the subject of this special report by analysts and experts from across McGraw Hill Financial. Research teams around the world from Standard & Poor's Ratings Services, Platts, and S&P Dow Jones Indices, have pinpointed the key themes that businesses, industries, and governments are grappling with as they try to predict the physical and financial impact of climate change.

Our special report also coincides with Standard & Poor's participation in the United Nations Environment

Programme's (UNEP) inquiry into a sustainable financial system. A U.N. goal is to support the transition to a green economy by identifying best practices and exploring financial market policy and regulatory innovations. As part of the inquiry, Standard & Poor's President Neeraj Sahai will join a roundtable discussion co-hosted by UNEP on May 29. Standard & Poor's is also a member of the UNEP Finance Initiative "E-RISC" project working group, which is assessing the role of environmental factors in sovereign credit risk, and is participating in the U.N.'s "Ascent" program, which aims to prepare proposals ahead of climate summits in New York this September and in Paris in November 2015.

One of the initiatives the Ascent working group is considering is a new extreme weather risk and resilience disclosure requirement for public companies, as has been the norm in the insurance industry. For many years, insurance groups have disclosed the likely impact of natural catastrophic losses on their balance sheets, such as by using models to predict the impact of an event with a once-in-200 year likelihood of occurrence. We understand that leading companies now take weather-related risk into consideration as part of their risk management disciplines, which in turn influences their purchases of insurance protection. Typically they draw on the modelling expertise of insurers or insurance brokers. Under the Ascent proposal, corporations might be asked to disclose the potential impact on their balance sheets, with the expectation that this might create an incentive to plan for the effects of climate change, and ultimately reduce losses and save lives. In our view, these disclosures could benefit investors, since they would provide new insights into the resilience of companies to climate change.

A connected thread in all of our reports, outlined below, is the need for deeper, more quantifiable information on both climate scenarios and the actions that businesses, industries, markets, and governments are taking to prepare for them. As the threat of climate change begins to look more acute, this need will likely become more urgent.

CLIMATE CHANGE IS A GLOBAL MEGA-TREND FOR SOVEREIGN RISK

For governments, climate change--and specifically global warming--will be the second most important mega-trend to affect sovereign credit risk through this century, after the effects of aging populations. Key points from our report are that the impact on creditworthiness will mostly be negative and probably be felt via drags on economic growth and public finances. The impact will not be distributed evenly: poorer and lower rated sovereigns will typically be hit hardest, we think, which could contribute to rising global rating inequality.

S&P'S FIRST TAKE ON THE EPA'S PROPOSED CO2 RULES FOR POWER GENERATORS

On Monday, June 2, 2014, The U.S. Environmental Protection Agency (EPA) released its much anticipated draft regulation, calling for a 30% cut in carbon dioxide (CO_2) emissions from the nation's power plants by 2030, with interim milestones that cover the 2020-2029 timeframe. Though the lead time should prove valuable, we consider the mandates somewhat ambitious, particularly since states must file their initial implementation plans by June 2016. Because it is still early in the game, we don't yet know how individual states or utilities will go about complying with the new regulations. Significantly, each state has its own reduction target, which reflects the profile of its existing generating fleet.

ARE INSURERS PREPARED FOR THE EXTREME WEATHER CLIMATE CHANGE MAY BRING?

The frequency of extreme weather events has increased in recent years, but insurance and reinsurance companies have coped well so far. We think the industry has been well prepared to deal with natural catastrophes of the magnitude the world has been experiencing recently, and thus the ratings impact has been limited. Many of the insurers and reinsurers we rate have processes in place to monitor the potential impact of climate change. That said, while understanding of climate change is still evolving, we believe a sudden spike in the number and severity of extreme events could test the industry.

THE GREENING OF THE CORPORATE BOND MARKET

The corporate green bond market, currently at $10.4 billion, is gaining momentum, and we estimate that, based on year-on-year growth trends, it will grow to around $20 billion globally in 2014. In our view, corporate green bond issuance is accelerating not only because it diversifies investor pools for issuers, but also because of investors' growing interest in promoting environmental, social, and governance goals. So far, corporate green bonds have mostly been issued in Europe, generally with investment-grade ratings of 'A+' or 'A', with many issues to date being oversubscribed. We believe this trend is likely to continue, as green issuance shifts from multilateral development banks toward mainstream corporations. In the future, the green project bond market could support the aggregation of environmental projects to form debt obligation instruments and also refinance existing environmental projects.

GUEST OPINION: GREEN FIXED-INCOME INDICES: A NATURAL OUTGROWTH OF THE GREEN BOND MARKET

According to S&P Dow Jones Indices, the nascent green bond market has reached an inflection point and is poised for take-off. This reflects a number of converging trends:

- Growing investor and public awareness of climate change, and of its potential impact on businesses, human life, and asset values;
- The recognition that a low-carbon pathway for the global economy to keep global temperatures within acceptable limits likely will require vast amounts of long-term cost-effective capital, which only institutional investors can provide via fixed-income instruments that are rated at least investment grade; and
- The development of voluntary criteria and standards for green bonds.

CORPORATE CARBON RISKS GO WELL BEYOND REGULATED LIABILITIES

Over the next five years, carbon emission regulation likely will extend to cover 40% of global greenhouse gas emissions from 21% currently. In our view, focusing solely on a company's direct liability to regulation may not accurately reflect its full carbon price risk. We believe that a comprehensive analysis of carbon price risk should incorporate both direct and indirect exposure due to the cost of a carbon liability being passed down the supply chain or changing demand for products and services. We have analyzed the impact of carbon pricing on corporate credit from four risk aspects:

- Environmental regulations,
- Emissions market pricing,
- Business risk across the value chain, and
- Financial risk to profitability, cash flow, and asset and liability valuation.

Carbon price risk management strategies that companies have adopted are also helpful in evaluating the net impact of carbon price risk on corporate creditworthiness.

DEALING WITH DISASTER: HOW COMPANIES ARE STARTING TO ASSESS THEIR CLIMATE EVENT RISKS

Climate events can hurt profits, impair asset value, and constrain cash flow. This can weaken a company's liquidity and compromise its ability to raise money and service debt over both the short and long term. In Standard & Poor's opinion, corporate credit quality may suffer if companies fail to implement adequate risk management regarding climate events. We think regulators and investors will start to focus more on climate and carbon risks as an indicator of company performance and value.

GUEST OPINION: CLIMATE POLICY AND THE RISE OF CARBON MARKETS

According to Platts, the world's policy response to climate change has so far been fragmented, resulting in a mix of taxes, cap-and-trade programs, environmental legislation, incentives for renewable energy, and a host of other policies and measures at the local and national level. The policy frameworks--market-based or otherwise--that may work best over the next few years are likely to provide the blueprint for managing emissions for decades to come. This could have implications for long-term investments in energy and manufacturing. In Europe, the world's largest cap-and-trade market appears to be achieving its aim of limiting CO2 emissions at a comparatively low cost. However, the true cost to Europe's economy is unclear, given state subsidies for renewables and other incentives.

LIMITED VISIBILITY FOR CLIMATE CHANGE'S EFFECTS ON U.S. STATE AND LOCAL GOVERNMENT CREDIT QUALITY

In the U.S., municipal and state governments have historically been able to manage the risk of natural disasters without diminishing credit quality. With the exception of catastrophic events, such as Hurricane Katrina, the credit impact of most natural disasters has been limited. Nevertheless, increasing uncertainty caused by changing climate patterns represents a growing risk for local governments that can be difficult to quantify. This risk could result in more credit pressure for local governments if Washington were to not provide timely and sufficient financial relief. The same could be true if a local government's ability to prepare for disasters--for example, through strategies that protect infrastructure and transportation, and control flooding--comes at the cost of financial flexibility and increased leverage.

CALIFORNIA'S WATER SYSTEM ILLUSTRATES THE NEAR-TERM IMPACTS OF LONG-TERM CLIMATE CHANGE

Given the length and severity of California's three-year drought, plus the potential long-term effects of climate change, the state's water agencies are trying to prepare for persistent water shortages. To meet current and future needs, they are developing capital plans whose costs they're assuming now. We expect that funding for these projects will largely come from higher water rates and, to a lesser extent, proceeds from new bonds.

ASSESSING THE CREDIT-SUPPORTIVENESS OF EUROPE'S RENEWABLE ENERGY FRAMEWORKS

In this Credit FAQ, we address investors' questions regarding how policy frameworks for renewable energy sources have developed across the EU and rank them according to our view of their sustainability and economics. Recent announcements by the U.K. and Germany indicating lower support for some types of renewable energy have fuelled investor uncertainty, which we think could impede renewable energy investment in the EU.

At the moment, there are more uncertainties than answers about the financial and credit impact of global warming. Yet increasingly, governments and corporations have left behind the question of whether climate change will affect them, and instead are focusing on when--and how.

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