



# **Climate Change Related Risks and Company Ratings**

Germanwatch Discussion Paper

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## 1 The need to include climate change related risks into company ratings

Climate change related risks, direct or indirect, are becoming increasingly material for business performance. In recent years, it has become apparent that climate change is already a reality. Warnings from scientists about the consequences of global warming as well as recommendations from various scientific institutions for reductions of greenhouse gas (GHG) emissions has sharpened. A recent study from West LB Panmure estimates the potential market value at risk to be between US\$ 210 – 915 billion globally (West LB, 2003 a).

To date, the inclusion of climate-related risks into company ratings has not been conducted on a broad level. However, several stakeholders show an increasing interest to do so: insurance/reinsurance companies, pension fund managers and other critical shareholders. This is not only a rational interest, but increasingly also an economical essential. While many climate-related risks might be considered long term risks, some may also have significant *short term implications* on company performance. Examples are evolving national/regional climate policies such as the EU emissions trading scheme (EU-ETS).

When talking about risk exposure, one needs to differentiate between *direct* and *indirect* risks affiliated with climate change. Companies will often be affected by both direct and indirect risks, while the relevance of single aspects might differ between sectors and companies. Direct risks include:

- physical impacts, e.g. damages by flooding, loss of harvest due to heat periods, water shortage, irregularities in weather patterns (farming sector);
- interruptions in production;
- changes in market demand;
- changes in market supply and/or production costs (farming, natural resources).

This paper focuses on indirect risks including:

- the risk of GHG regulation;
- negative impacts on company reputation, and;
- the risk of litigation.

With the introduction of the GHG emissions trading scheme in the European Union, regulatory risks have materialised<sup>1</sup>. The economic impact on companies can be quantified as soon as national allocation plans have been defined and market prices for CO<sub>2</sub> allowances established.

### Emissions trading scheme and financial accounting

While discussions on the details of accounting are still ongoing, it is highly probable that participants of the EU trading scheme will have to include GHG certificates in their balance sheets. This links directly to financial accounting. Most experts in Germany agree that allowances constitute “immaterial economic goods/commodities” which need to be included into balance sheets even if they are allocated free of charge<sup>2</sup>. Allowances sold and purchased need to be accounted for regardless of the allocation method. An open question is what price allowances need to be valued with (market price, price of allocation, etc). The value of allowances will be incorporated into financial accounting

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<sup>1</sup> Concerning credit ratings, the Basel II agreement already pushes for an increased consideration of “soft factors” to obtain a more comprehensive picture of the credit worthiness of companies (Wambach et. al, 2002). So even if climate risks are seen as soft factors in countries that implemented and/or develop effective climate policies, those risks should be considered.

<sup>2</sup> Although there are some discrepancies on the issue, German Trade Law (Handelsgesetzbuch, HGB) prohibits the accounting of freely allocated allowances in balance sheets, if allowances are seen as fixed assets. The majority of experts currently view allowances as current assets which means they must be included in balance sheets.

systems and thus directly influences a company's market value. - The International Financial Reporting Interpretations Committee (IFRIC) currently supports allowances being considered in balance sheets by defining a value position for the allocated allowances, by defining a donation from public hands and by defining liability. In contrast to the German Trading Law, all allowances<sup>3</sup> would be assessed according to the fair value principle under the IFRIC/IAS (Lovells 2004). The developments in the EU might also influence accounting systems in other nations. Attempts to harmonise reporting standards between the EU and the USA are ongoing.

Given the magnitude of the EU scheme and the potential pace of introduction – one might note an implementation time of less than 5 years in the EU - in combination with a lifetime of over 40 years of technical equipment in several sectors, GHG emissions should be assessed as risks in other nations as well. The announcement of the *Global Security Risk Monitor* in the US just six months after the attacks on the World Trade Centre underlines how quickly “non-financial” risks can materialise.

Finally, there is a chance that policy reactions will become more acute as the number of natural disasters increase. This is especially true for countries that currently do not have an adequate climate policy strategy,<sup>4</sup> but which will be affected either directly or indirectly by climate change. A recently published study *An Abrupt Climate Change Scenario and Its Implications for United States National Security* might be an early indicator for increasing awareness in the USA, as it comes to the conclusion that “*There is substantial evidence to indicate that significant global warming will occur during the 21<sup>st</sup> century*” (Schwartz, Randall 2004).

## **2 Financial risks associated with GHG emissions and governmental regulation**

The allocation of allowances to installations covered by the emissions trading scheme equals the setting of emissions targets and is thus one of the most crucial aspects of the design of the EU-ETS. Installations emitting more than they can “pay” with allowances face substantial financial penalties: 40 €/per excess ton of CO<sub>2</sub> from 2005 to 2007 and 100 €/per excess ton of CO<sub>2</sub> equivalent in the period 2008 to 2012. Although the majority of allowances will be allocated free of charge until 2013, the EU-ETS will have significant distributional effects – especially in the long term when emissions targets are tightened. Most allocation methods imply a competitive disadvantage for emissions-intensive industries. Calculations for German utilities show that even with allocation rules honouring early actions in the short term, less CO<sub>2</sub> intensive utilities are likely to be advantaged in the long term<sup>5</sup>. Further important parameters are company-specific mitigation costs and investment cycles.

Monetary impacts on companies may occur in the short-term due to price fluctuations for CO<sub>2</sub> allowances and/or mitigation credits.

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<sup>3</sup> including those allocated free of charge

<sup>4</sup> or stringent allocation plans in the case of EU-ETS.

<sup>5</sup> Please note that fuel specific benchmarks might minimise this effect. The consequences of the governmental agreement of March 30<sup>th</sup>, which entails a fuel-specific benchmark for electricity generation for the first years of the EU-ETS, still need to be evaluated.

### 3 Overview of recent initiatives in GHG risk evaluation

Several activities within the financial market in the past few years demonstrate an increasing awareness of climate-related risks:

- The financial world is eager for information on climate-related risks at a company level. The Carbon Disclosure Project and the Global Greenhouse Gas Register launched by the World Economic Forum, illustrate this clearly;
- Financial analysts have started to analyse the risks;
- Shareholders increasingly insist that "their" companies develop an adequate risk management strategy covering climate-related risks;
- The start of the European Emission Trading Scheme might introduce a comprehensive consideration of regulative climate risks by the mainstream financial rating agencies.

The most important examples include the Carbon Disclosure Project (CDP) – an initiative of 87 institutional investors, representing assets worth US\$ 9 trillion<sup>6</sup>, to ask all FT500 companies on climate risk relevant information, as well as the GHG register of the World Economic Forum. When the latter was launched in December 2003, eight companies representing nearly 5% of global GHG emissions already had committed themselves to participate. Other initiatives include:

- projects of the US-based institutions CERES and IRRC;
- periodical analysis by Standard & Poors;
- calls of several pension funds managers to account for GHG related risk;
- the recent analysis of West LB Panmure, Dresdner Kleinwort Wasserstein, USS, Henderson Global Investors and UBS.

All this shows the increasing awareness and demand for climate risk consideration both in the EU and the US.

A common result of these studies is that industrial sectors and also companies within a sector face different degrees of risk exposure. In addition, the management response of companies differs strongly. Some initiatives, for example those of West LB, CERES and the CDP, also entail promising approaches to quantifying "soft" factors e.g. management responses.

### 4 Options to include GHG risks into company ratings

The challenge will be to define a comprehensive approach covering all relevant aspects of GHG related risks. It is important to gain a common understanding of which parameters need to be incorporated in rating processes, while the weighting of single factors might be left to the different actors. One might discuss whether different indicators are appropriate for debt rating and equity rating.

A recent analysis by Standard & Poors *Emissions Trading: Carbon Will Become a Taxing Issue for European Utilities* (Standard & Poors, 2003) focuses on absolute emissions as the main risk indicator. One might doubt, however, if this approach generates a complete picture of a company's risk profile. Even the inclusion of relative GHG emissions as the only additional indicator would exclude long term risks and opportunities.

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<sup>6</sup> the number of participating investors has been strongly increasing during last year. At the beginning of 2003, the CDP initiative counted 35 investors, assets worth US\$ 4.5 trillion.

The following parameters influence a company's risk exposure and should therefore be considered in a comprehensive risk evaluation scheme:

- absolute and relative GHG emissions<sup>7</sup>;
- mitigation costs [€/t CO<sub>2</sub>] and potentials (e.g. options to improve efficiency of operations);
- investment cycles /lifetime of technical equipment;
- indirect GHG emissions (e.g. electricity consumption);
  
- the degree of management awareness, including ability and incentive systems;
- the existence of a risk management system which accounts for climate change related risks;
- the company's strategy on climate change (including GHG reduction targets);
- projections of future GHG emissions in line with long term planning of business activities;
- existing experience with upcoming climate policy measures (e.g. pilot trades / pilot trading schemes in the case of emissions trading);
  
- type and stringency of national climate policies, and;
- the ability to make use of the flexible mechanisms under the Kyoto Protocol.

Figure A sketches a proposal for categorisation of climate-related risks and those parameters that influence the risk exposure of companies.

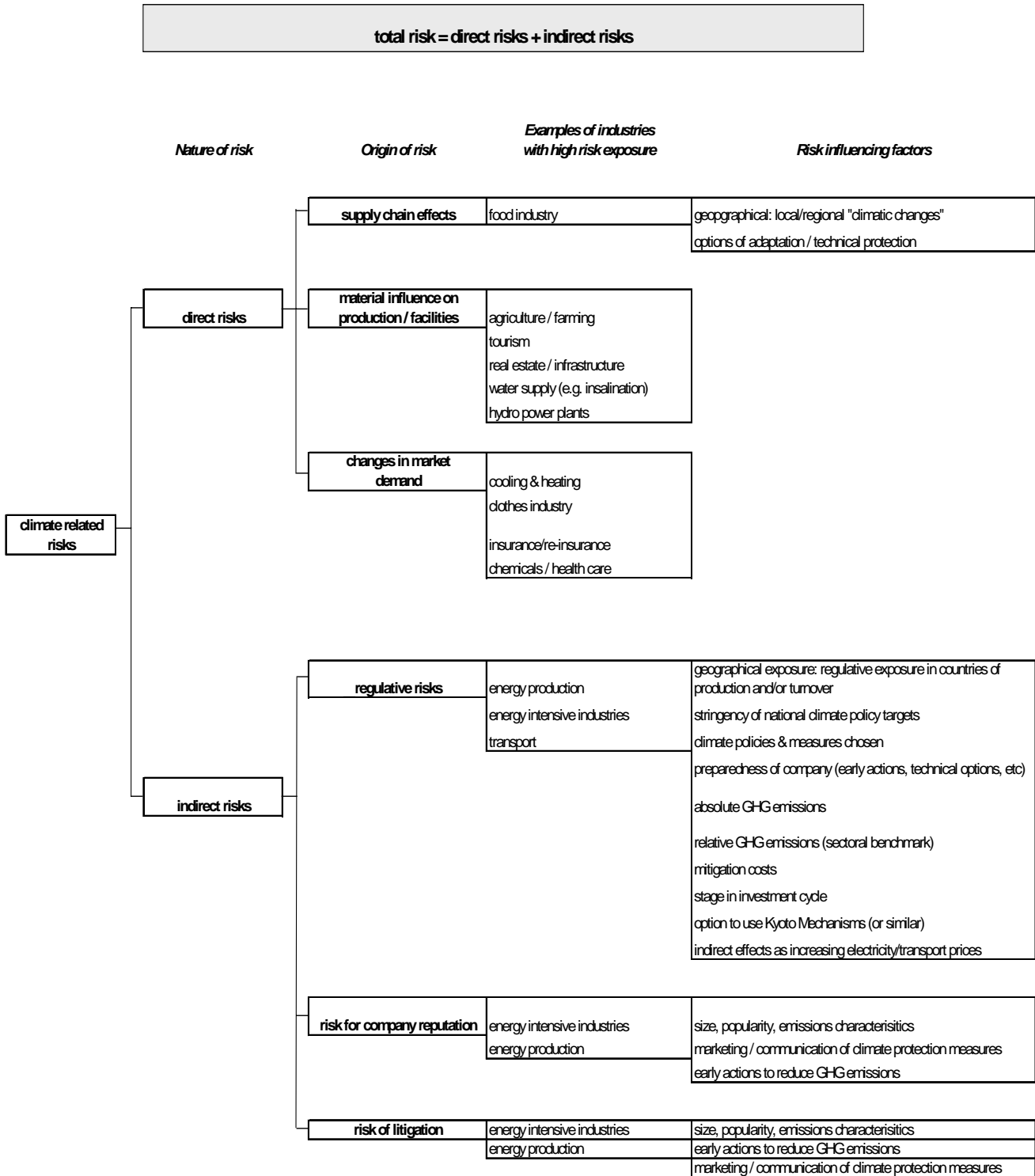
To avoid distortions, standardised monitoring and reporting approaches are needed. Also relevant is the issue of data availability. In order to overcome current deficiencies, a common response of the financial services sector – potentially in co-operation with national bourses – can play a very important role. The Carbon Disclosure Project might be the driver for further improvements with a view to company reporting.

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<sup>7</sup> Eventually the share of process emissions

**Figure A.**

Proposal for categorisation of climate-related risks and parameters influencing risk exposure



## 5 Theses, questions & points for discussions

- > Climate change related risks – both direct and indirect – are becoming more and more relevant. Emissions-related risks materialise with evolving national/regional climate policies, especially cap-and-trade schemes. Therefore, they should be incorporated comprehensively in both equity and credits rating.
- > Should climate change risks be integrated in credit/equity ratings (and if so, to what extent) - or should they remain a separate, non-financial information source?
- > How should the relationship between climate change related risks and the risk of junk bond status be evaluated?
- > Which indicators need to be included in the assessment of climate change related risks (see list of indicators above)?
- > Which of those indicators are of outstanding relevance? Should there be an assessment of individual parameters, e.g. risk exposure and management response? If so, is a homogeneous ranking of parameters between rating agencies advisable?
- > What role should rating agencies play in moving the climate change risk agenda into the board rooms?
- > What can be done to improve data availability on a company level?

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