Environmental Risks and their increasing relevance to Credit Ratings

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Agenda

Climate Change Clouds Creditworthiness:

- Insurance
- Sovereign
- Corporate

Markets Go Green:

- Carbon Markets
- Green Bond Markets
- Green Bond Indices
In 2012, weather and climate affected $5.7 trillion of the U.S. economy (30% of GDP), and $5.9 trillion of EU economy (35.8% of GDP). In 2013, weather events accounted for 90% of natural catastrophe losses in 2013, causing over $120 billion of losses.

Source: Allianz, Munich Re
Climate Change: Are Insurers Well Prepared?

- **Impact on creditworthiness:**
  - Business Profile: Diversification & inherent risk of insurance market
  - Financial Profile: Capital adequacy

- **Limited effect on rating:**
  - Many insurers are already monitoring the risks
  - Negative rating changes could be triggered, especially if capital severely weakens
Impact on creditworthiness:
- Economic performance
- Fiscal performance
- External performance

Uneven effect on rating:
- Poorer and lower rated sovereigns hit hardest
- Could contribute to rising global rating inequality
Impact on creditworthiness:

Key factors for risk assessment:

• Corporates: Implement effective risk management
• Investors: Push for disclosure & understand financial impact
Climate Change: Carbon Price Risk Is Beyond Regulated Liability

Carbon Price Risk: Full Picture

Credit Risk Impact Chain

- More stringent emissions control
- Policy uncertainty
- Cuts in tradable carbon permits
- Emissions trading price volatility
- Change in supply cost and availability
- Change in consumer demand
- Profitability decline
- Free cash flow reduction
- Liability under-valuation

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Source: RepuTex Carbon Analytics
The Rise Of Carbon Markets

Carbon Market Prices Across Globe
($US per metric tonne)

European Union Allowance Full Price History

Price range forecasted from 2015 to 2020 based on spot price information and RepuTex Carbon Analytics forecasts. Marker represents trading price as of May 5, 2014.

EU CO2 allowances for delivery in December 2005 to 2014, under the EU ETS. Source: Platts

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The Greening Of Bond Markets
Green bond will emerge as a distinct asset class

Market growth:
- $11 bn in 2013, 50%+ CAGR
- $30 bn in 2014

Converging trends:
- Awareness of climate change and impact
- Recognition that a low-carbon pathway requires vast amounts of long-term cost-effective capital
- Development of criteria and standards

Supply
- $50 bn - $200 bn Potential issuance a year
- Developed world: Replacement and upgrade
- Developing world: New infrastructure

Demand
- Meet SRI and ESG mandates
- Investment: Liability matching, Inflation hedge & Diversification
- Incorporate climate change risk

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A Closer Look: Corporate Bond Markets

Market make-up:
- Industry: Led by utilities
- $ 36bn outstanding bonds by mid-2014
- Maturity: 4 - 8 years
- Ratings: Investment grade

Future prospects:
- Investment aggregation/pooling
- Structure to enhance credit support
- Move to green project finance

Distribution of Green Bonds by S&P Credit Rating

Green Indices Are The Next Phase

Green indices on demand to:
• Achieve transparency, simplicity and commoditization of asset class
• Attract debt capital committed to green assets, lowering cost of capital

Potential evolution of green indices:
• Mirror that of the green bond market
• Pattern themselves after their general fixed-income counterparts

S&P Dow Jones Indices:
• S&P Green Bond Index (GBI)
• S&P Green Project Bond Index (GPBI)

BOVESPA
• Corporate Sustainability Index (ISE)
• Carbon Efficient Index - ICO2

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In Closing

Climate change results in increasing frequency of extreme weather events, causing large and volatile losses

We expect climate change to have a varying impact on creditworthiness:

• Insurance: Limited effect due to high levels of capital
• Sovereigns: Contributes to ratings divergence
• Corporates: Probably negative, calls for comprehensive analysis

We expect climate change to impact markets:

• Carbon markets expansion across globe
• Green bond markets on the rise which is partly driven by the emerging corporate green bond market, leading to evolution of green indices
Thank You

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