

A person wearing a straw hat and light-colored clothing is working in a field of banana plants. The person is standing in the middle ground, facing right, and appears to be tending to or harvesting a banana plant. The field is filled with banana plants, some with large, green leaves and others with dried, brown leaves. The ground is covered with dry leaves and twigs. The background shows more banana plants and a clear sky.

CHAPTER 6:

FINANCIAL RISK ASSESSMENT AND MITIGATION



In negotiating more than fifty transactions in the period 2001-2003 alone, the Carbon Finance Business unit of the World Bank on behalf of the carbon funds it manages, has developed techniques for systematically evaluating risk and structuring transactions to mitigate and assign risk. These policies, drawn from best practice in the risk management industry, entail the following:

Risk Assessment and Allocation

The CFB uses a range of risk assessment tools including: (a) financial, technical, social and environmental appraisal of candidate projects in accordance with World Bank Group operational policies, (b) monitoring the Kyoto Protocol process, as well as trends in the emission reductions market, and (c) applying a rigorous process of validating emission reductions. Recently, the CFB refined its appraisal process to improve its ability to screen projects, reducing the cost of dropped projects.

Under most Emission Reductions Purchase Agreements, the World Bank commits to pay an agreed price *upon delivery of emission reductions* (signified by receipt of a verification report from an independent third party), net of verification costs.

Mitigating Risk at the Portfolio Level

In addition to managing risk at the project level the World Bank has developed several tools to manage risk at the *portfolio* level. First, by purchasing from a range of projects, it *diversifies* away much of the unique risk of each project.

Second, the World Bank can exercise *remedies* under the Emission Reductions Purchase Agreement if a project does not deliver the committed volume of emission reductions, including in some cases recovering liquidated damages—potentially making financial resources available to purchase the shortfall from excess emission reductions produced by other projects within the portfolio (please see call options below).

Third, each Emission Reductions Purchase Agreement includes a set of milestones, including at least one that occurs before the end of a fund's allocation phase. This enables the CFB to quickly identify which projects are not delivering in accordance with the milestones, and to give notice to the project entity and (if the default is not remedied) reallocate CFB funds elsewhere.

Fourth, to hedge against the risk of projects defaulting after the end of the allocation phase, and to ensure that the participants receive adequate emission reductions given a limited capital base, the CFB may purchase call options. Experience with the PCF has shown that these are particularly useful in the event of under-production or a delay in one or more projects.

Fifth, the CFB has developed a portfolio management model, through which it regularly monitors overall portfolio performance and estimates potential defaults in order to develop a hedging strategy.