

January 12, 2011

CDM Executive Board
P.O. Box 260124,
D-53153 Bonn, Germany

**Subject: Response to the EB call for public inputs at its 58th meeting regarding the draft revised
“Guidelines on the assessment of investment analysis”**

Dear Members of the CDM Executive Board,
The Carbon Finance Unit of the World Bank welcomes the opportunity to contribute to the discussion regarding investment analysis in the demonstration of additionality. This submission is organized as follows: First, we consider the concept of standardized market benchmarks and the suggested default values. Second, we provide technical comments on the guidelines on determining the underlying financial parameters.

1.) Market benchmarks and default values

The guidelines prescribe the use of a benchmark approach in investment analysis instead of an investment comparison analysis in cases “where the choice of the developer is to invest or not to invest.” This seems to be the case for most CDM project activities, in particular in the areas of renewable energy, energy efficiency and waste.

In the broader context, the EB 50 Guidelines for objective demonstration and assessment of barriers should also be considered. These state that: “Barriers that can be mitigated by additional financial means can be quantified and represented as costs and should not be identified as a barrier for implementation of projects while conducting the barrier analysis, but rather should be considered in the framework of investment analysis.” Taking both guidelines together, we note that benchmark analysis has increasingly become the EB’s preferred approach to assessment of additionality.

For those projects using the benchmark approach in investment analysis, the guidelines require the use of standard market benchmarks in cases where the projects could be developed by others than the project participants. Due to the nature of the sector, this guideline would apply in particular to renewable energy projects, which represent by far the biggest share in the overall CDM portfolio. First we note that the logic of requiring¹ “market” or “company-specific” benchmarks rather than project-specific benchmarks or investment comparison (as provided for in the Additionality Tool) is stringent in theory but less convincing in practice: The very fact that the project is not yet implemented, i.e. that the investment opportunity is still available, indicates that others are not in the position to undertake it.

¹ We note that the guidance allows company-specific benchmarks to be used for projects that can only be implemented by the project participant, and leaves the decision to DOE to conclude whether company-specific or market-specific benchmarks may be used for projects that could be implemented by others.

The use of benchmark rates of return is intended to improve objectivity and transparency in the assessment of additionality of individual projects. In practice, however, the application of benchmarks is

problematic. Markets for clean technology projects in smaller developing countries are typically in their infancy if they exist at all. In the most advanced developing countries as well as in industrialized countries, often these markets exist but they are fragmented and typically distorted due to public interventions. Establishing across-the-board benchmarks covering all investments in a group of sectors on these grounds is therefore inappropriate. Furthermore, the required financial data on the projects in the relevant market segment is normally not publicly available; it would therefore not be possible to factor them into broader benchmarks. Moreover, large inconsistencies may get introduced into the DOE interpretation of project investment decisions based on market data that may not accurately reflect the project investment decision. These provisions of the draft guidelines on investment analysis go beyond the guidelines on baseline approach and demonstration of additionality.

The suggested approach in the guidelines is to use a deductive approach to determine market benchmarks for the expected return on equity. Based on a global anchor value of 9.5% taken from long-term data for the USA economy, a table with country specific rates was generated by adding country risk premiums and distinguishing three categories of possible economic activity. The figures range from 9.6% for forestry in the United Arab Emirates to 15.5% expected in the industrial sector of Guinea.

We have three major concerns with the suggested approach. First, classifying all types of economic activities in only three categories does not adequately reflect the diversity of risk. Second, the proposed country risk premia are low relative to other independent measures. Third, the range of suggested sector risk spreads appears far too small.

- On the suggested categorization into three groups: This suggests that all projects in a group are equally risky, which is clearly not the case. For example, the proposed guidelines would group together a new gas-fired power plant, an industrial energy efficiency project, and a small renewable energy project, assigning them the same benchmark, although these investments—albeit in the same sector—have very different risk profiles. Considering the heterogeneity of projects types, even within sectors, it is not possible to accurately assign default values that can be considered common practice across broad groups of sector scopes as proposed in Appendix A.
- On the country risk premia: The proposed premia appear to substantially understate country risk. Other independent estimates of default spreads for sovereign debt² (typically, the lowest-risk investment in a particular country) are substantially higher than those used for these benchmarks. For example, the OECD provides rules for risk-based premiums for officially-supported export credits which may be considered as a minimum country risk spread.³ The World Bank and other MDBs have for decades used a standard real discount rate of 10-12% to evaluate projects in all sectors and all countries (Bellini et al., Handbook on economic analysis of investment operations, 1998, page 195; ADB Guidelines for the economic analysis of projects, 1997,

² See for example: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html

³ As noted by the OECD: "Minimum Premium Rates (MPRs) ... are meant to reflect country and sovereign buyer credit risk. In practice, the actual premium rates charged by the Participants for specific transactions may be above the minimum rates. http://www.oecd.org/document/34/0,3343,en_2649_34171_1830178_1_1_1_1,00.html"

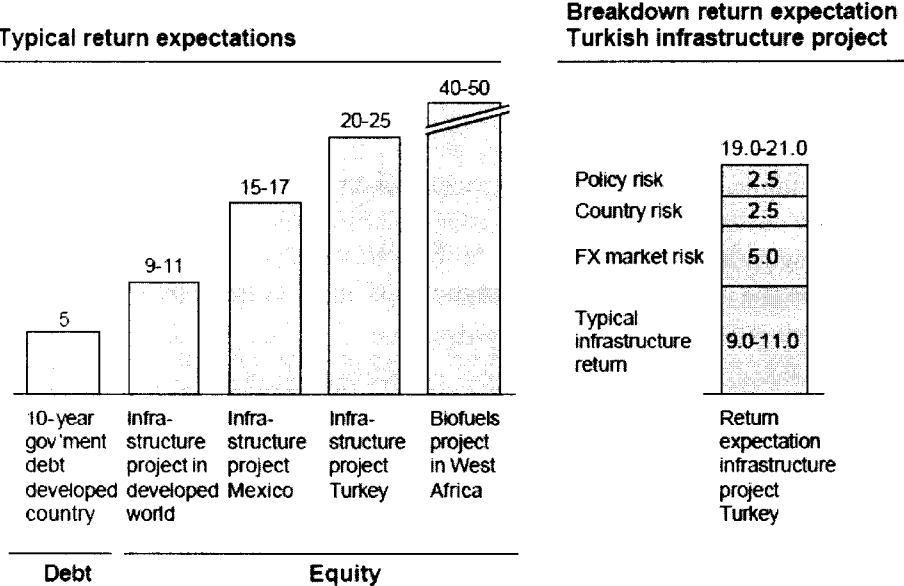
www.adb.org/documents/guidelines/eco_analysis/discount_rate.asp⁴). The MDB benchmarks could also be considered as a bare minimum as MDBs benefit from sovereign guarantees and preferred creditor status.

- On the range of suggested spreads: Similarly, the sectoral risk of the range of investments does not appear to be sufficiently taken into consideration. Higher country risk spreads for investments in emerging markets are indicated by a work stream paper prepared by a sub-group of the UN Secretary-General’s High-Level Advisory Group on Climate Finance (see also fig. below):
 “Equity returns for infrastructure projects in the developed world typically range from 9-11%. An investor in a specific infrastructure project in Mexico expected 15-17%, while an investor in an infrastructure project in Turkey demanded 20-25% and an investor in a biofuel project in West Africa expected 40-60% return.” (“Work stream 7 Paper: Public interventions to stimulate private investment in adaptation and mitigation,” 2010, page 5.
www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/Work_Stream_7%20Public_Private.pdf)

In other words, the combined spreads for the equity investments in the three countries noted above range from 6% to 49% over the 10-year risk-free rate, substantially higher than those suggested in the guidelines.

Figure 1

Examples of return expectations



SOURCE: Interviews

Source:
www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/Work_Stream_7%20Public_Private.pdf

⁴ “Bank practice is to use a rate of 10 or 12 percent to calculate the net present value of a project, or to compare with the internal rate of return, for economic analysis.” (Guidelines for the economic analysis of projects, 1997, www.adb.org/documents/guidelines/eco_analysis/discount_rate.asp)

Recommendation: Against this background we recommend to allow the use of **project-specific benchmark discount rates**. This reflects the fact that a categorization of very heterogeneous investment projects in terms of technology and country/region (despite its merits for the purposes of pure economic analysis) cannot capture the realities of private investment decisions, particularly in the imperfect, less developed and highly fragmented markets in which CDM projects are undertaken.

Furthermore, using project-specific benchmarks recognizes that the assessment of the riskiness of a project should not take financing into consideration. We therefore agree with the assertion in para. 9 that “the cost of financing...should not be included in the calculation of project IRR,” and disagree with the requirement in para. 16 that the cost of debt and equity should reflect that of “the legal entity owning the CDM project activity.” The approach recommended in para. 16 not only contradicts para. 9, but would yield illogical results: a higher discount rate would be applied to a project financing (where the “legal entity owning the CDM project activity” is a special-purpose vehicle) than to an identical project financed on an established company’s balance sheet. We therefore recommend that the standard benchmark rate used to evaluate projects should not be company- or market-specific, but rather based on the riskiness of the project itself. (See further comment on para. 16 in section (2) below.)

Benchmarks could be used as **default values** for the discount rate. Appropriate benchmarks would include national benchmarks (as already issued by certain countries), financial parameters used by already-registered CDM projects, or other benchmarks which reflect common practice in economic/financial analysis. Any of these benchmark default values would serve as **minimum** which project participants could use as an alternative to calculating project-specific discount rates.

1.) Technical comments

On paragraph 4: It is stated that “fair value calculations will include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets.” Book value is purely an accounting construct and reflects local provisions for depreciation and taxation. Fair value reflects what the asset is worth on the market, which in turn depends on what it can potentially earn. It is illogical to add book value to that amount.

On paragraph 5: It should become more explicit that taxation should typically be taken into account because private investment decisions are made on an after-tax basis (similar paragraph 11).

On paragraph 6: Early-stage investment in a project is typically accepted as part of the equity contribution of a project. It may be a sunk cost, but it should nonetheless be included in a project's cash flow calculation, and will be included in the investor's assessment of an appropriate return on equity.

On paragraph 8: The protection of confidential and competitive financial data against public disclosure does not go far enough and therefore creates disincentives for being transparent and explicit in the required financial analysis.

On paragraph 9: It is not correct to say that “the purpose of the project IRR is to determine the viability of the project to service debt.” This parameter shows the rate of return on the overall project. To assess a project’s ability to service debt, one would need to know the financing terms and the year-on-

year cash flows. In addition, lenders would require debt service coverage levels sufficient to compensate for the assessed riskiness of the project's cash flows.

On paragraph 10: It is not correct not to consider debt related cash flows when calculating the equity IRR. All financing inflows *and* outflows needs to be taken into account. This is not double-counting and it is required in order to consider costs created by time delays between these financial flows.

On paragraph 12: Local commercial lending rates are not appropriate benchmarks for a project IRR because they underestimate risk. Lenders will not cover 100% of project cost, and the cost that is not covered by lenders (i.e. the equity) commands a premium over lending rates.

On paragraph 15: see (1) above.

On paragraph 16: The proposal that "the cost of debt should be based on the weighted average cost of debt financing of the legal entity owning the CDM project activity" is inconsistent with the standard practice that discount rates should reflect the riskiness of the project (not the sponsor). In many cases, the project (say, an hydropower plant) is riskier than the sponsor (say, a multinational) and may be in completely different sectors. In any case, few project sponsors issue bonds, and if they do, they are almost certainly less risky than proposed CDM projects; also, only the higher-income host country governments issue bonds of maturities similar to those of most CDM project investments (typically 20 years or more for renewable energy projects, for example). So using the sponsor's or host country's bond yield as suggested, especially if its maturity--10 years is recommended in the guidance-- is shorter than the project investment, will certainly underestimate the appropriate discount rate.

On paragraph 17: The ratio of debt to equity should reflect that of the project entity/financing structure, not the parent. This is particularly obvious in the case of a foreign direct investment in a developing country. The default 50% debt - 50% equity structure is not realistic. A more typical constellation would be 70% debt – 30% equity. Note: Decreasing the debt share increases cp the equity rate of return. Therefore at that point the guidelines are rather not on the conservative side.

On paragraphs 19 and 20: Sensitivity analysis is used by investors to determine whether the project can sustain certain negative shocks/variatioins in assumptions and still remain viable, i.e. exceed the benchmark, and to put in place mitigation measures to protect against such downsides. They don't use them to look at the "upsides".

In summary our submission is intended to outline how difficult it is to define a fixed rule set for undertaking an appropriate investment analysis that is adequate to each individual case. We therefore recommend staying with a structure that allows for the use of different approaches – project-specific discount rates, internal benchmarks, and default/minimum benchmarks. As noted above, we also recommend revising upward the proposed default values for expected return on equity.


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