PROJECT DEVELOPER FORUM

# Workshop on Financial Analysis Closure and Conclusions

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| General: | Financial analysis only considers incremental cash flows at the time of investment decision.<br><br>Be consistent i.e. pre-tax benchmark requires a pre-tax cash flow analysis.<br><br>Gearing does not influence the benchmark choice i.e. one can apply a WACC to a project funded by equity only.<br><br>Post tax benchmarks are preferable because tax is a cash flow that matters e.g. tax is different for labor vs capital.<br><br>When there is a tax holiday, IRR cannot be used, a NPV needs to be used with differentiated discount rates when there is tax holiday vs when there is no tax holiday.<br><br>The IRR is the discount rate that makes the NPV equal 0.<br><br>The use of the guidelines for the objective demonstration of barriers is voluntary, a PP cannot be forced to use one or all of them. |
| Investment guidance 1: | Appendix 1 to new guidelines discloses the cost of equity in **real terms**. Assuming it uses a 50:50 debt : equity ratio, the WACC can be calculated as follows: Currently the cost of borrowing in the US is around 5.5% to 6.25% (money), deflating this at an anticipated inflation rate in the US economy of 2%[1] per annum gives a real pre-tax cost of borrowing to commercial companies of around 3.8%, if profits tax is say 25%, this gives a post tax cost of borrowing in real terms of around 2.9%, say 3%.<br><br>As an example, the WACC in real terms becomes for a Group 1 investment in Vietnam 12.75% * 50% + 3% * 50% = 7.88%.<br><br>To convert to a **nominal** benchmark the real benchmark rate of return needs to reflect the anticipated inflation rate of the currency in which the cash flows are being predicted. For instance using WEO data for Vietnam, the anticipated inflation rate over the next 10 years is 5.3% per annum. Using the formula money benchmark = (1 + real benchmark)*(1 + inflation rate) -1, the money benchmark |

[1] On inflation: Consistency i.e. 2% sounds too low for most non-Annex I countries but can one really assume that it is much higher for costs rather than revenues for many years down the analysis? If not, then 0-2% is an acceptable value to assume.

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| | rate of return for a Vietnamese project denominated in VND is 13.7%. |
| Investment guidance 2: | Calculate theoretical tax on project cash flows, excluding the interest shield provided interest is already considered in the WACC (1-T)[2]. |
| On beta: | Check the reliability of the underlying data for setting benchmarks: for example:<br><br>Simplest is to use the Damodaran website for country risk premiums, market risk premium and sector betas, see workshop notes.<br><br>Market return on equity: US data is preferable,<br><br>For beta: US data is preferable, sector beta is better than individual companies betas.<br><br>If local individual companies, use as many similar betas as you can possibly get, 3-5 companies are a minimum.<br><br>For market return on equity, use the whole 83 years.<br><br>For beta of individual companies, use shorter time intervals to get more observations in less time as companies often change their scopes of activities and gearing, e.g. weekly over two years. Include dividends.<br><br>Use market value of equity i.e. share price over last 3 months (number of shares, see balance sheet, times average share price over last 3 months) and book value of debt from long-term liability/debentures. |
| Biomass fuel switch case study: | Importance to prove that coal is a realistic alternative to switch to. If not, there is no project as biomass is the most attractive baseline alternative. If yes, the baseline emission factor should be coal whereas SSC CL 410 and AMS-I.C V.19 require using the lower of the two, which is a bias towards conservativeness.<br><br>Related questions the UN team raised:<br><br>- The project owner has used FO for 10 years, why has he/she not switched earlier?<br><br>- What is the impact of CER revenues because if it does not make biomass close to as viable as coal, then that questions whether coal really is a realistic scenario. |

[2] Not sure for China. Would be good if the NDRC could issue a short confirmation in this regard.

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| Thai case study on beta: | Question the robustness of a beta calculated based on Thai market as opposed to the US market.<br><br>Question on whether D/E ratio was considered as it can have a significant impact on the beta. |
| CCPP case study on costs for waste gas treatment: | More information on why the sector expert's numbers are relevant (similar scale, technology etc.).<br><br>EB60, para 93. The Board clarified that project activities using waste gas for energy generation and using methodology ACM0012 shall, when applying the investment analysis to demonstrate additionality, provide a detailed breakdown of project related cost. ~~and shall avoid an internal price for the waste gas coming from the project owner.~~: A price for waste gas is really always wrong because as soon as there is a price it means the baseline is not wasting anymore. |
| **Version history** | **1.0, dated 2011-06-20** |