

## Training Programme CBA

CBA: discount rate

Geert Smit, April 17, 2007

Translating facts into vision

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## Content

- What is the discount rate?
- How to determine the level of the discount rate?
- Discount rates elsewhere and suggested discount rate

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## What is the discount rate?

- The discount rate used in the financial analysis should reflect the *opportunity cost of capital* to the investor. This can be thought of as the return on the best alternative project
- It is used for future values, i.e. costs and benefits, which are discounted to the present
- Example: discount rate of 5%. 1 EURO in year 1 is worth  $1/(1,05) = 0.907$  EURO in year 0

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## Time factor and discount rate

- The marginal utility of 1 EURO today is bigger than the marginal utility of 1 EURO tomorrow
- Example: discount rate of 5%. 1 EURO in year 1 is worth  $1/(1,05) = 0.907$  EURO in year 0

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## How to determine the level of the discount rate?

1. Minimum opportunity costs of capital: benchmark for a public project=return on G'ment bonds
2. Maximum limit value: return lost from the best investment alternative, i.e. through a portfolio of securities in the international financing market
3. Cut-off rate: use simple rule-of-thumb approach, i.e. interest rate on EIB bonds

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## Factors affecting the discount rate

- The Member State's specific macroeconomic conditions
- The nature of the investor: for instance, the discount rate can be higher for PPP projects, where the inclusion of private funds may increase the opportunity cost of capital
- The sector concerned (e.g., transport, environment, energy, etc.)

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## Discount rates elsewhere

Sector	Country	Discount rate
Transport	Espana	6
Transport	Espana	6
Transport	Espana	6
Transport	Espana	6
Transport	France	8
Environment	Lituania	3
Environment	Poland	6
Environment	Poland	6
Industry	Portugal	10
Energy	Portugal	11

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## Suggested discount rates

- The Commission recommends that a 5% financial discount rate is used as an indicative benchmark for public investment projects co-financed by the Funds
- The downwards revision compared with the 2000-2006 programming period reflects changing macroeconomic conditions in the EU

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## Consistent discount rates

- It is of utmost importance that consistency is ensured amongst the discount rates used for similar projects in the same region/country
- The Commission encourages the Member States to provide their own benchmark for the discount rate in their guidance documents. This reference must then be applied consistently

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