

Beyond Shareholder Value

Can we put a monetary value on companies' economic, social and natural capital?

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What this presentation is about

- In this presentation we will show you
 - that the cost of natural and social capital can be determined similar to the cost of economic capital.
 - that we can make use of the tools used in the financial markets today.
 - that all the information we need is available today.
- Using the example of British Petroleum we will show
 - that BP is not earning its cost of capital.
 - that this loss can be approximated to be about 72 billion GBP in 2001 (about 8% of UK's GDP).

How is Shareholder Value created?

- Shareholder Value is created when a company earns more than its cost of capital.
- We know a company's earnings (e.g. Net Profit, Operating Profit, Value Added).
- What's more difficult is to determine a company's cost of capital.
- Academics as well as practitioners have been developing concepts to determine the cost of capital.

Shareholder Value takes a narrow view

- Management research and practice is very much focused on economic capital.
- Companies need more than just economic capital.
- We can distinguish between economic, social and natural capital.

Here is some of the capital BP uses

BP (2001)	Amount used	Sources
Non-financial assets [Mio £]	69,885	BP 2002, own calculations
CO ₂ [t]	73,420,000	BP 2004a
CH ₄ [t]	367,201	BP 2004b
SO ₂ [t]	224,541	BP 2004b
NO _x [t]	266,133	BP 2004b
CO [t]	124,584	BP 2004b
Work accidents [nb]	83	BP 2004c
PM ₁₀ [t]	16,666	BP 2004b

(Source: Figge & Hahn 2004)

Let's phrase the key question & challenge

- Key question:
 - Is BP earning its cost of capital?
 - This is the question a good traditional financial analyst will ask him/herself.
 - This is the question that sustainability analysts should start to address.
- Key challenge:
 - How can we determine the cost of all the different forms of capital BP uses?

The Burden-Oriented Approach

- What's BP's overall damage to society?
- Weigh up different „environmental bads“
 - How bad is more CO₂ in comparison to all the other impacts?
 - What's e.g. the trade-off between work accidents and CO₂?
- It's
 - Focused on how bad emissions are.
 - Ethically doubtful.
 - Impossible in practice for many impacts.
 - Unimportant.

Here's what David Green had to say... ...in 1894

But, when we once recognize the sacrifice of opportunity as an element in the cost of production, we find that the principle has a very wide application. Not only time and strength, but commodities, capital, and many of the free gifts of nature, such as mineral deposits and the use of fruitful land, must be economized if we are to act reasonably. Before devoting any one of these resources to a particular use, we must consider the other uses from which it will be withheld by our action; and the most advantageous opportunity which we deliberately forego constitutes a sacrifice for which we must expect at least an equivalent return. (Green 1894)

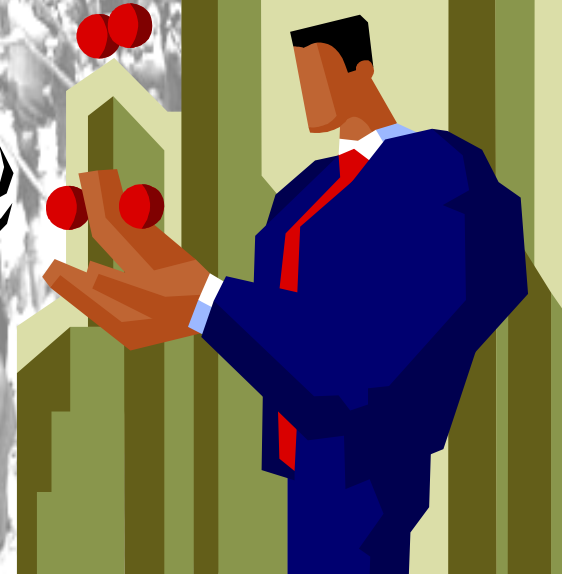
The Value-Oriented Approach

- How much value is created?
 - How much € value is created per ton of CO₂?
 - How much € value is created per ton of NO_x?
- Compare the value of alternative uses (opportunity costs)
 - When used in another place – how much more value is created?
- It's
 - Focused on how much value is created.
 - Easy to do.
 - Using the logic of the financial markets.
 - Compatible with managerial thinking.

How to price natural and social capital?

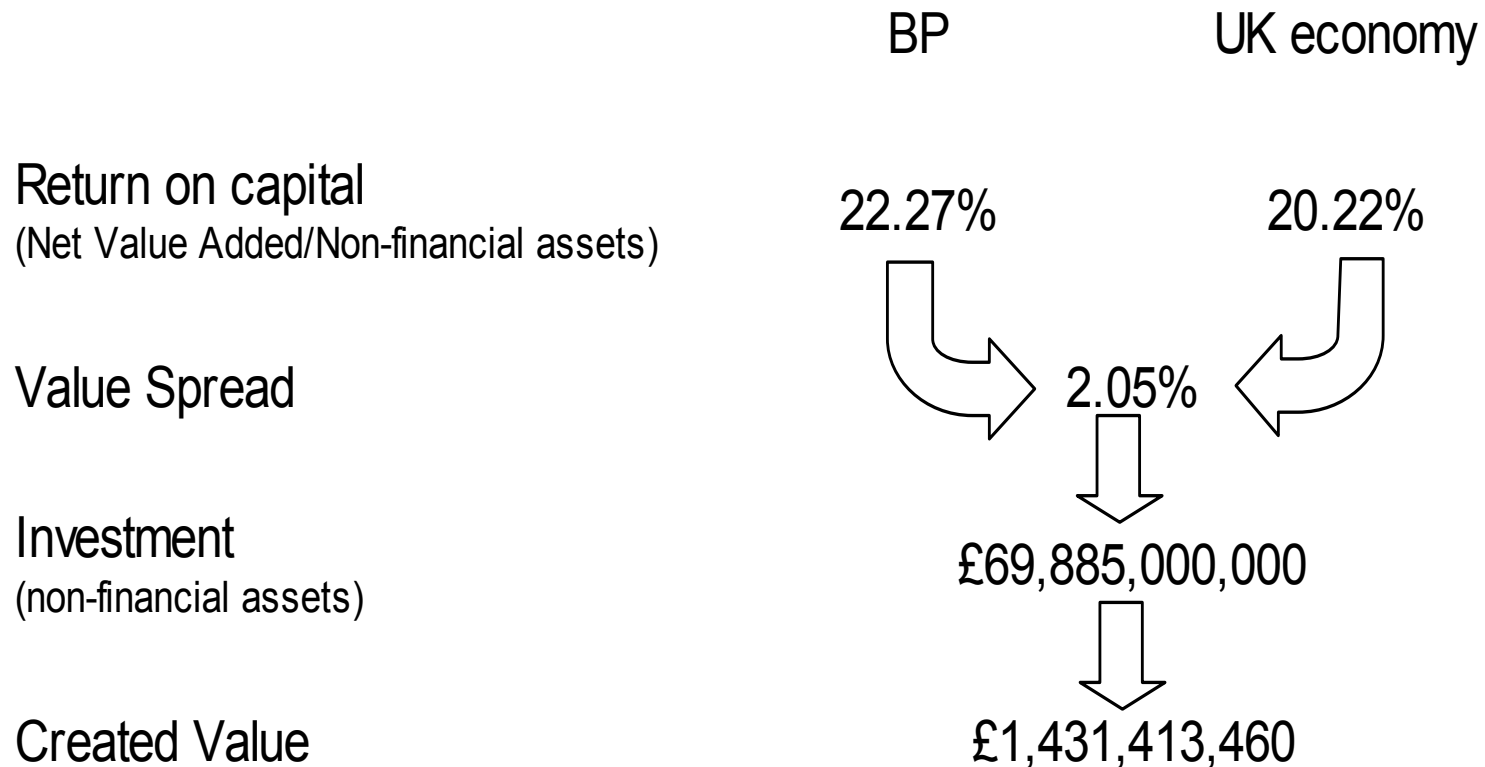
Traditional approach:
I want to pollute more!
How much is your pain
worth?

Sustainable Value approach:
I want to pollute more! How
much value would you
create, if you'd pollute
instead of me?



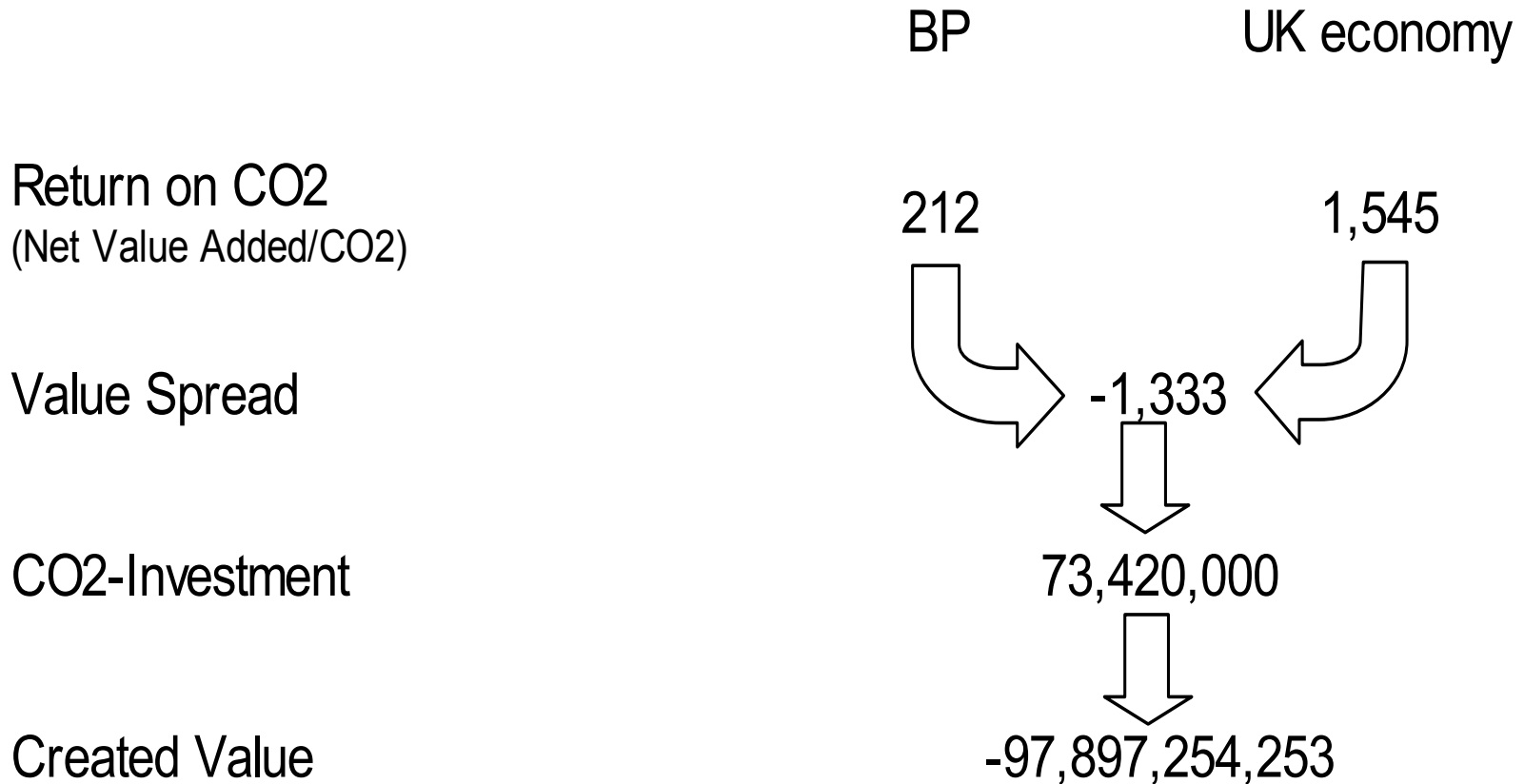
Enough theory – practical application

Creating economic value



Enough theory – practical application

Creating environmental value



BP's Sustainable Value

The big picture

	Return on capital [£/unit]	Opportunity cost of capital [£/unit]	Value spread [£/unit]	Amount of capital used	Value created [Mio £]
Economic capital (	0.2227 -	0.2022	) ⇨ 0.0205 *	69,885 Mio £=	1,431
CO ₂ (	0.0002 -	0.0015	) ⇨ -0.0013 *	73,420,000 t=	-97,897
CH ₄ (	0.0424 -	0.4030	) ⇨ -0.3606 *	367,201 t=	-132,425
SO ₂ (	0.0693 -	0.7864	) ⇨ -0.7171 *	224,541 t=	-161,020
NO _x (	0.0585 -	0.5266	) ⇨ -0.4681 *	266,133 t=	-124,587
CO (	0.1249 -	0.2230	) ⇨ -0.0981 *	124,584 t=	-12,225
Work accidents (	187.5060 -	6.6673	) ⇨ 180.8388 *	83 =	15,010
PM10 (	0.9338 -	4.9703	) ⇨ -4.0365 *	16,666 t=	-67,272
Sustainable Value					-72,373 Mio £

Conclusions

- Sustainable Value
 - allows to assess the sustainable performance of companies similar to financial performance.
 - is based on opportunity costs.
 - expresses corporate sustainable performance in monetary terms.
 - is based on data which is publicly available.
 - does not require external cost figures.
- BP
 - creates a negative sustainable value of about –72,000 Mio £ (about 8% of British GDP).
 - does not earn its cost of sustainable capital.

Suggested Readings

- Figge, F. (2001): "Environmental Value Added - Ein neues Maß zur Messung der Öko-Effizienz", Zeitschrift für Angewandte Umweltforschung, 14(1-4), 184-197.
- Figge, F. & Hahn, T. (2004): "Sustainable Value Added. Measuring Corporate Contributions to Sustainability Beyond Eco-Efficiency", Ecological Economics, 48(2), 173-187.
- Figge, F. & Hahn, T. (2004): "Sustainable Value Added - ein neues Maß des Nachhaltigkeitsbeitrags von Unternehmen am Beispiel der Henkel KGaA", Quarterly Journal of Economic Research, 73(1), 126-141.
- Figge, F. & Hahn, T. (2004): The Cost of Sustainable Capital. An Assessment of Sustainable Value Creation of Companies. Leeds and Berlin: University of Leeds and Institute for Futures Studies and Technology Assessment.
- Figge, F. & Hahn, T. (forthcoming): "Value-oriented impact assessment: the economics of a new approach to impact assessment", Journal of Environmental Planning and Management, 47(6).

More information

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