

ADVANCE

Application and Dissemination of Value-Based Eco-Ratings in Financial Markets

LAYMAN'S REPORT

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What is ADVANCE about?

ADVANCE has been a 27 months project, co-funded by the LIFE Environment Programme. The overall project budget of the ADVANCE project was about €688,000. ADVANCE has applied the Sustainable Value approach to measure the environmental performance of 65 European companies in monetary terms. ADVANCE has linked up academic researchers with eco-rating practitioners to test the Sustainable Value approach. The single most important output of the ADVANCE project has been the ADVANCE survey which was published in April 2006. In addition the ADVANCE project has published a handbook that explains how to conduct Sustainable Value assessments and has furthermore trained practitioners in a series of workshops. Dedicated training materials were developed for these workshops. The results of the project have also been disseminated through conference presentations and presentations to companies.

What is the problem ADVANCE addressed?

Companies affect the sustainable development of our society in two ways. On the one hand, they create a return. It is usually assumed that society prefers more return to less return. On the other hand, companies need resources to create this return. It is usually assumed, that society prefers companies that use less resources to companies that use more resources. The ADVANCE project focuses on the use of environmental resources.

To assess if and to which degree a company has contributed to sustainable development, we must therefore determine if the return that a company has created, outweighs its use of environmental resources. Unfortunately we face a problem in this context. Return and environmental resources are measured in different units and can therefore not be subtracted easily. To compare return and environmental resource use we must therefore express return and environmental resources in the same unit. Ideally, the use of environmental resources is monetarised, i.e. they are expressed in the same unit as the economic return. However, putting a monetary value on environmental resources is difficult in practice. Environmental resources are resources without a price tag.

All existing assessment methods have approached this problem in a similar way. To be able to compare different environmental resources they concentrate on the cost, burden or harmfulness that the use of these environmental resources entails. If the use of one unit of a resource creates twice as much burden as the use of another resource, then the relative weight of the former resource compared to the latter resource is two to one. Once the relative burden is known, different environmental resources can be aggregated. However, to be able to relate the use of environmental resources to value creation this overall burden must also be monetarised. While there is a range of different theoretical approaches that attempt to solve this problem, most of them fail in practice. What all of these approaches have in common, is that they concentrate on the burden, cost or harmfulness to monetarise the use of environmental resources.

What is the Sustainable Value solution?

The Sustainable Value approach was developed by two researchers who are today with the University of St Andrews (Scotland) and the Institute for Futures Studies and Technology Assessment (Germany). Sustainable Value takes a fresh look at how to aggregate and monetarise environmental, social and economic resources. Rather than looking at the burden

that is associated with resource use it concentrates on value creation. Sustainable Value is the first value oriented approach for sustainability assessments.

Sustainable Value follows the example of the financial markets. In the financial markets investors face a similar problem. Capital is a resource without a price tag. To assess the cost of capital, investors therefore make use of the opportunity cost principle. The cost of a resource corresponds to the value that could have been created if the resource was used in another place. For example, if the reader of this layman's report could have made €10 in the time it takes to read it, then the (opportunity) cost of reading this layman's report corresponds to €10. This allows to price the reader's time - despite the fact that it does not have an obvious price tag.

Sustainable Value uses the same logic to price environmental, social and economic resources. The ADVANCE project focused on environmental resources. To price the environmental resource use of 65 European companies, ADVANCE compared the return that the companies generated with their environmental resources to the return the economies of the EU 15 countries would have generated with exactly this set of environmental resources on average. In a second scenario the companies' return was compared to the return the EU 15 countries envisage to achieve in the year 2010. This more ambitious return in 2010 is the result of (a) tougher environmental goals that foresee the reduction of environmental impacts and (b) envisaged economic growth.

To give just an example, the Italian autoparts company Pirelli created a Sustainable Value of about €480 million in 2003. This can be interpreted as follows. According to the ADVANCE survey the EU 15 economy would have created about €480 million less gross domestic product (GDP) if the environmental resources used by Pirelli had been used by the average EU 15 company. In the second, future oriented scenario Pirelli's Sustainable Value shrinks to -€589 million. This can be interpreted as follows. If the European performance targets for 2010 are to be met, we can expect the average EU 15 company to create an additional €589 million GDP compared to Pirelli's current performance in 2010. Overall, Pirelli used its environmental resources in 2003 about 1.3 times more efficiently than the EU 15 on average. Pirelli therefore has what is called a return to cost ratio of 1.3:1. The detailed assessment results of all companies were reproduced in company profiles. Figure 1 gives an example of a company profile. Profiles for all 65 ADVANCE companies can be found both in the ADVANCE survey as well as on the ADVANCE website (www.advance-project.org).

Pirelli & C. SpA			ADVANCE-Rating	
Country	Italy		Sustainable Value ^{Env}	Performance in 2003 484,840,349 €
Industry	Autoparts		Return to Cost Ratio	1.3 : 1
			Rank	28
Performance				
	2001	2002	2003	
Gross Value Added	2,335,000,000 €	1,990,000,000 €	2,026,000,000 €	
Sales	7,762,000,000 €	6,718,000,000 €	6,671,000,000 €	
CO ₂ -emissions [t]	1,435,632	1,330,342	1,370,613	
NO _x -emissions [t]	845	737	772	
SO _x -emissions [t]	0	0	0	
Waste generated [t]	145,096	153,943	171,867	
Water used [m ³]	29,632,531	29,898,051	29,960,663	
VOC-emissions [t]	6,201	3,693	4,111	
CH ₄ -emissions [t]	0	0	0	
Opportunity Costs of Resource Use by the Company				
	2001	2002	2003	2003 → 2010
CO ₂ -emissions	3,751,413,903 €	3,605,120,031 €	3,702,623,890 €	5,116,989,610 €
NO _x -emissions	773,641,469 €	718,112,336 €	774,896,587 €	1,492,038,346 €
SO _x -emissions	0 €	0 €	0 €	0 €
Waste generated	889,427,539 €	963,143,899 €	1,077,583,797 €	1,684,671,208 €
Water used	1,161,020,444 €	1,217,523,725 €	1,242,562,830 €	1,573,580,193 €
VOC-emissions	5,368,909,873 €	3,465,998,048 €	3,990,450,456 €	8,436,781,514 €
CH ₄ -emissions	0 €	0 €	0 €	0 €
Value Contributions				
	2001	2002	2003	2003 → 2010
CO ₂ -emissions	-1,416,413,903 €	-1,615,120,031 €	-1,676,623,890 €	-3,090,989,610 €
NO _x -emissions	1,561,358,531 €	1,271,887,664 €	1,251,103,413 €	533,961,654 €
SO _x -emissions	2,335,000,000 €	1,990,000,000 €	2,026,000,000 €	2,026,000,000 €
Waste generated	1,445,572,461 €	1,026,856,101 €	948,416,203 €	341,328,792 €
Water used	1,173,979,556 €	772,476,275 €	783,437,170 €	452,419,807 €
VOC-emissions	-3,033,909,873 €	-1,475,998,048 €	-1,964,450,456 €	-6,410,781,514 €
CH ₄ -emissions	2,335,000,000 €	1,990,000,000 €	2,026,000,000 €	2,026,000,000 €
Sustainable Value ^{Env}	628,655,253 €	565,728,852 €	484,840,349 €	-588,865,839 €
Return to Cost Ratio	1.4 : 1	1.4 : 1	1.3 : 1	1 : 1.3
Rank	26	28	28	29
SV Margin	8.1%	8.4%	7.3%	-8.8%

Figure 1: Company profile of Pirelli & C Spa.

What are the key results of the ADVANCE project?

Overall, the ADVANCE project has demonstrated that the Sustainable Value approach can be successfully applied in practice and produces meaningful and inspiring results. As the ADVANCE survey has shown, the environmental performance of European companies varies widely both within as well as between sectors. The automobile sector is a good example in this context. The ADVANCE survey has covered the majority of the large European automobile manufacturers. Within this sector, the sector leader uses its environmental resources seven times more efficiently than the sector laggard. However, as the ADVANCE survey has also shown, the environmental performance of companies is also largely determined by their sector affiliation. Especially sectors that rely heavily on research and development tend to create Sustainable Value. The best companies are operating on a factor 4 level today, i.e. they are using their environmental resources four times more efficiently than the market average. The automobile sector, pharmaceuticals and engineering & machinery are good examples in this context. In contrast, resource-based industries, the oil and gas sector, the chemical industry and utilities are typically five times or more less efficient than the market average. This shows the tremendous potential of structural change for sustainable development.

What are the other outputs of the project?

The ADVANCE survey has been the single most important output of the ADVANCE project. The ADVANCE survey has proven that the environmental performance of companies can be assessed in monetary terms using the Sustainable Value approach based on information that is publicly available today.



Figure 2: ADVANCE survey publications

The remaining deliverables of the project focused on disseminating (a) the results of the ADVANCE survey and (b) the Sustainable Value technique. The results of the ADVANCE survey were presented at a number of conferences inside and outside the EU.

To help practitioners apply the Sustainable Value approach in their daily operations, a Handbook explaining the application of Sustainable Value was developed. This Handbook explains the underlying rationale of Sustainable Value and introduces a simple step by step process for the calculation of Sustainable Value. This Handbook is available both as a hard copy as well as a PDF download on the project website (www.advance-project.org).

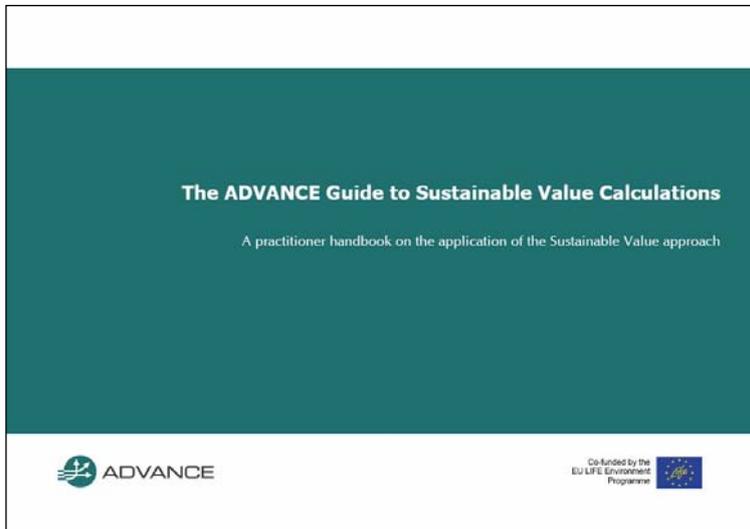


Figure 3: The ADVANCE Guide to Sustainable Value Calculations

The project website has evolved into a rich information portal for anyone interested in the ADVANCE survey results and the Sustainable Value approach. The website enables interested parties to either briefly browse through the results of the ADVANCE survey, or to access a multitude of in-depth information on the survey and the Sustainable Value approach.

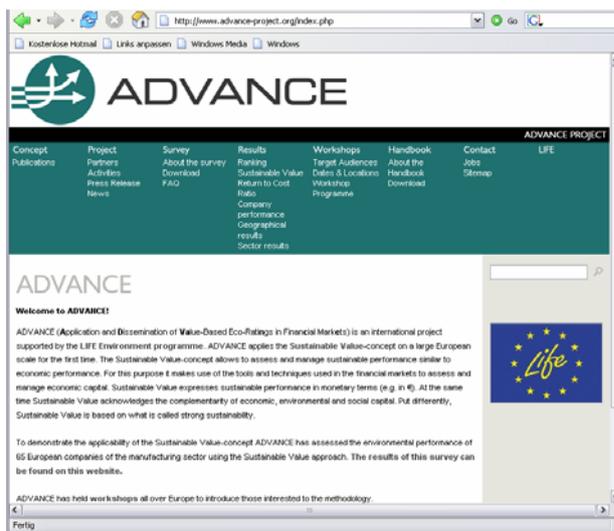


Figure 4: The project website

In addition, workshops were held in Milan, Frankfurt, Stockholm and London. Using specially designed training materials, participants were introduced to the underlying rationale of Sustainable Value and were presented the results of the ADVANCE survey in a first step. In

a second step, participants calculated the Sustainable Value of one of the ADVANCE companies. This was facilitated by a specially designed Sustainable Value spreadsheet. Workshops were well attended and participants showed great interest and insight in the Sustainable Value approach. Training materials were put on a specially designed CD-ROM. In addition to the training materials, this CD-ROM also contains background reading materials.



Figure 5: The CD-ROM with workshop materials

What is the legacy of the ADVANCE project?

Interest in the ADVANCE project has outstripped expectations during its 27 months duration. The results of the ADVANCE survey have proven relevant for a range of different stakeholders, including e.g. corporate managers, socially responsible investors, and policy makers. The project has also sparked considerable interest in the underlying Sustainable Value approach both in the academic and practitioners' field. The project team is aware of several companies that are currently experimenting with or using the Sustainable Value approach. Among others, there are two new research projects that apply the Sustainable Value approach and develop it further. Practitioners have confirmed that the underlying logic of Sustainable Value is easy to understand and highly relevant in practice. Interestingly, the most important obstacle in the application of Sustainable Value on an even larger scale appears to be the poor quality of corporate environmental and social reporting.

More information about ADVANCE and the Sustainable Value Approach

More information about the ADVANCE-Project can be found on the project website:

www.advance-project.org.

More information about the Sustainable Value Approach and further applications of Sustainable Value can be found on the thematic website www.sustainablevalue.com.

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