

### 3.1: Capital Investments

Prior to the acceptance of sustainable projects, socially responsible organizations have to evaluate the feasibility and sustainability of capital investments. Common financial methods historically employed in capital budgeting decisions include return on investment, payback period, unit cost of service, cost–benefit ratio, internal rate of return, and net present value. However, these methods are not always the best choices in sustainable finance since these methods do not explicitly account for cash flows associated with social, environmental, and economic impacts. These methods tend to externalize rather than internalize sustainable costs imposed on the society.

#### Sustainability Valuation

Valuation determines a company's worth. **Sustainability valuation** shows how sustainability adds value to the business. Currently, no existing methodology is considered adequate for sustainability valuation. This has led to much debate surrounding the best way to measure sustainability valuation within the firm. A recent McKinsey & Company survey shows that executives believe that improvements in social, environmental, and governance performance create value; however, they do not agree on how much or how to measure it. McKinsey & Company (2009). Naturally, respondents agree that it would be helpful if companies reporting on sustainability performance would quantify financial impact, measure business opportunities as well as risks, and be transparent about methodology. McKinsey & Company (2009).

Research has shown that nonfinancial measures are the leading indicators of a firm's future financial performance. Frigo (2002). Additionally, research shows that firms listed on the Dow Jones Sustainability Index consistently outperform firms not listed on the Index. Thus, determining appropriate sustainability valuation metrics is particularly critical in this time of increasing emphasis on sustainability.

Given the importance of sustainability valuation but the lack of standardized approaches, several efforts have been made to identify or develop appropriate valuation metrics. In a recent effort to value sustainability performance, qualitative reports of progress were analyzed and converted to five common financial metrics: ratio analysis, discounted cash flow analysis, rules of thumb valuation, economic value-added analysis, and option pricing. Yachnin & Associates and Sustainable Investment Group Ltd. (2006). Other traditional financial approaches used include cost–benefit ratios and net present value.

Yet it is commonly agreed that existing financial metrics are insufficient to capture the real value of sustainability. As a result, a number of new approaches and methods have been proposed: deliberative monetary valuation, social multicriteria evaluation, three-stage multicriteria analysis, multicriteria mapping, deliberative mapping, and stakeholder decision/dialogue analysis. Stagl (2007); International Finance Corporation CommDev (2009). Yet another approach, the Financial Valuation Tool for Sustainability Investments, International Finance Corporation CommDev (2009). has been developed specifically for the extractive industries (mining, gas and oil exploration, etc.) and could serve as an example for other industries. Until appropriate methods are developed and widely adopted, businesses are left to use common financial metrics.

#### Capital Budgeting Investment

**Capital budgeting** decisions allow companies to use financial metrics to compare and prioritize investments in sustainability projects. Return on investment, payback period, and unit cost of service can be utilized in cases that have explicit costs and revenues related to sustainable investment. The use of basic capital budgeting tools, such as internal rate of return, net present value, and cost–benefit ratio, will require some adjustments and cautious use in order to accommodate sustainability analysis. Total cost accounting and life cycle costing analysis are excellent tools for a comprehensive analysis of sustainability-related investments (see Chapter 8 for a full discussion).

Once capital budgeting projects are analyzed, selected, and prioritized, there may exist various outside financing options for sustainability-related projects. The **Database of State Incentives for Renewables and Efficiency (DSIRE)** Retrieved March 23, 2009, from <http://www.dsireusa.org> is a good starting point. State and federal regulations related to renewable energy have resulted in state and federal rebates, performance-based incentives, tax credits, tax incentives, power-purchasing agreements, revolving loan funds, and grants. Among some of the incentives you may find at the DSIRE Web site are tax rebates of up to \$350,000 per entity to governmental agencies that purchase alternative fuel vehicles for business and official activities. Manufacturers of vehicles designed to operate on alternative fuels or hybrid diesel/electric may get financing assistance from the Alternative Fuels Conversion Program (AFCP). The AFCP will generally fund up to 50% of the additional cost of purchasing hybrid diesel or

electric vehicles instead of a regular vehicle. As a result of the American Recovery and Reinvestment Act of 2009, additional sources of financing for investments in sustainability projects will become available.

Another option is performance contracting. Performance contracting is considered a remodeling or construction financing method whereby the business does not pay up front for energy efficiency projects to be integrated into the current project budget but rather finances projects through guaranteed energy savings expected in the future.

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