Director Notes

The Sustainability Business Case

A Model for Incorporating Financial Value Drivers

by Marc Bertoneche and Cornis van der Lugt

While much has been published on the business case for sustainability during the last decade, businesses have been slow to adopt the green innovation and sustainability agenda. Reasons include a lack of consistency in the indicators employed by analysts, and a failure to effectively incorporate financial value drivers into the equation. This article defines a green business case model that includes seven core financial value drivers of special interest to financial analysts.*

Researchers, management experts, and activists have published extensively over the last decade on the business case for sustainability. The accumulated evidence and experience makes it clear that sustainability actions do not have a negative or neutral impact on the financial performance of a business. Rather, it is a question of the degree to which sustainability actions have a positive impact on financial performance. One research overview has identified more than 60 benefits, clustered into seven overall business benefit areas.[1]

As greater attention is paid today to integrated thinking and more sustainable business models, the link between sustainability actions and corporate financial performance remains central. However, the business case evidence collected to date has failed to have the expected scale of impact. One reason for this is the lack of consistency in indicators employed by analysts in their examination of possible cause and effect relations. Another is the gap in discipline between sustainability experts and financial officers, with each community conversing in its own language (jargon). Sustainability activists have failed to get a better grasp on corporate finance, while financial officers have failed to get a better grasp on the sustainability agenda.

In the following pages, we present a business case model that focuses on environmental action areas known to sustainability experts and their link with important indicators widely used by financial officers and investors. We present

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a model in which sustainability initiatives are assessed in an economic manner and pursued on the basis of a clear link to financial performance.[2] The model positions sustained financial performance and market value as the ultimate test, with cost benefit analysis at the heart of its approach. As far as dependent variables are concerned, we suggest research and analysis should focus on the core financial value drivers defined by Alfred Rappaport, author of *Creating Shareholder Value,* and others since the 1980s. These drivers help define a longer-term approach that is forward looking and strategic.

A New Business Case Model

Business case analysis traditionally works with two sets of indicators—sustainability actions on the input side and indicators of financial performance on the output side—to prove causality or a positive correlation.

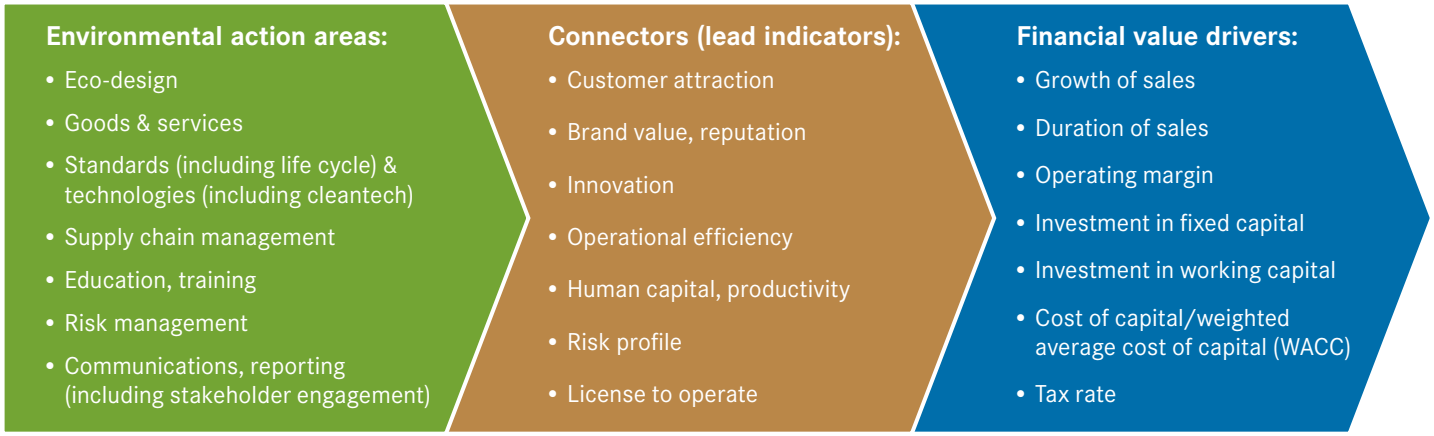
Understanding of the critical indicators that organizations should focus on has evolved considerably. With respect to the input side, the last decade has seen extensive analysis and stakeholder dialogue on preferred actions and indicators to steer sustainability performance. These include multistakeholder and expert processes (e.g., those convened under the auspices of the International Organization for Standardization and the Global Reporting Initiative), as well as theme-specific disclosure initiatives such as the Carbon Disclosure Project.

With respect to the output side, there has also been substantial evolution in the understanding of the ultimate purpose of business and in how far the goals of profit maximization and shareholder value live up to this purpose. Business managers, analysts, and scholars have a new understanding of how different aspects of organizational performance create value in a more sustainable and longer-term way. This includes moving away from some outdated accounting concepts and fixation with quarterly earnings to a more forward-looking understanding of what really drives value and creates economic value added.

The need to more effectively speak to the finance and investment community has become evident in recent years. To do this, it is critical to use a refined set of factors related to financial performance and the drivers of financial value. This can be done by incorporating a list of "financial value drivers" commonly agreed upon by financial analysts as critical indicators.[3] They include the cost of capital employed, namely the cost of borrowed capital (debt) and owners capital (equity), as well as capital invested in the form of fixed assets and working capital.

These financial value drivers are listed in Figure 1 on the right (output side). The figure illustrates how sustainability actions can ultimately help the company increase its revenues, widen its operating margins, use assets more efficiently to reduce its capital expenditure, lower its applicable tax rates, and reduce its cost of capital. The list of drivers does not include ratios often used in business case analysis—such as return on assets (ROA), return on sales (ROS), return on equity (ROE), return on investment (ROI), and return on capital employed (ROCE)—but rather focuses on important indicators that feed into the calculation of those ratios.[4] Whether an analyst is more interested in the evaluation by shareholders (ROE), creditors and investors (ROA,

Figure 1
The green business case model



Source: Marc Bertoneche and Cornis van der Lugt, "Finding the God Particle of the Sustainability Business Case: Greener Pastures for Shareholder Value," Harvard Business School Working Paper, No. 13-072, February 2013.

ROI, ROCE), or trading partners and consumers (ROS), the financial value drivers are the key building blocks of the analysis.

In addition, our proposed business case model includes a list of intermediary indicators that serve as connectors between sustainability actions and the financial value drivers. Our review of past analysis highlighted a need to better categorize indicators, separate "apples" from "pears," and identify a set of intermediary indicators that facilitate the link between the input and output indicators. The logical flow in the resultant model is one of a financial value driver (such as sales), which is boosted by a precursor or leading indicator (such as customer attraction), which is again boosted by relevant sustainability actions (such as environmental product improvements).

Our business case model therefore moves beyond the typical two-dimensional analysis to a chain of cause and effect that has three components: (i) sustainability actions and (ii) precursors or leading indicators that connect their impact with (iii) financial value drivers.[5] The following pages explore a one-to-one relation between each input, intermediary, and output indicator in the model, mindful that, in a real-world situation, cross linkages between the three sets of indicators also exist. The one-to-one relations are illustrative of the overall business case logic.

A Green Business Case Model

We propose a Green Business Case Model with key environmental factors or action areas on the input side. The focus of the model is on environmental actions by business as entry point to deliver not only enhanced business financial performance, but also broader socio-economic goals. These entry points can function as important building blocks of a larger model of a new form of responsible capitalism or values-based capitalism. (The same analysis can be undertaken by referring to social action areas.)

Based on the evolution of the field of environmental performance management over the last 20 years, the Green Business Case Model provides a listing of environmental action areas that goes beyond a simple distinction between "process and product interventions." These are listed in Figure 1 on the left (input) side. They are:

- Eco-design
- Goods and services
- Standards (including life cycle, eco-efficiency, and cleaner production)
- Technologies (including cleantech)
- Supply/value chain management (including product service systems)
- Education, training
- Risk management
- Communications, reporting (including stakeholder engagement)

This list is not comprehensive but is meant to include the full spectrum of environmental action areas for consideration by business. It covers a range of management tools and approaches that have been developed and tested by businesses worldwide. Some of the action areas are not exclusive to the environmental field.

Applying the Model

The following sections cover the seven financial value drivers, addressing under each the most related connectors and providing evidence from some case examples of how environmental actions can lead to improvement at the level of the intermediary and output set of indicators. In each section, a one-to-one relation between the input, intermediary, and output indicator is discussed. The most obvious one-to-one relations are addressed, starting each section with a hypothesis that sets out the relevant logic.

Sales

Growth of sales As market and regulatory demand for sustainability grows, the business that (i) makes effective use of design for sustainability and delivers greener products and services will be in a position to (ii) boost its innovation ability and attract more customers, which (iii) will show positive results in its growth of sales. This implies the introduction of new products, revamping of existing product lines, entering new markets, and doing these better than competitors (i.e., gaining market share and a more sustainable competitive advantage).[6] The differentiating advantage of green products is time bound and requires continual improvement.

A company's ability to attract and retain customers through interesting products, targeted pricing, attractive brands, and customer services are all critical in driving sales. The growth in customer interest in and the progressive mainstreaming of green products and services signal that business innovation in design for sustainability and the development of green products and services are increasingly paying off for businesses that fully adopt these processes. It confirms the proposition by management experts

such as CK Prahalad that sustainability has become the key driver of innovation, in new products and services as well as business models.[7] Adoption of such products and services is boosted by more reliable information (e.g., labeling), client willingness-to-pay and imitation barriers (e.g., green patents).[8]

Today, consumers (B2C) and business customers (B2B) with sustainability strategies are more demanding, in their focus on the implementation of green targets and ensuring that suppliers meet new standards for, just to name two, carbon footprints and environmental quality. In the United States, this has been referred to as "the Wal-Mart effect." An example from Europe is PUMA, whose "environmental profit and loss (P&L) account" places a monetary value on environmental impacts along its entire supply chain.[9]

A survey of CFOs and investment professionals by McKinsey and Boston College has cited innovation, new products, new customers, and new markets as specific areas where sustainability factors have demonstrable impact on overall organizational growth.[10] For some, this involves entrepreneurial spirit in setting up new businesses to meet local development needs. Some companies are involved in creating new product lines and diversification of business, while others are transitioning to a whole new business model or completely new business. For example, Suzlon, originally a family textile business in India, transformed itself into major player in the renewable energy sector. The catalyst was the company's struggle with unreliable or expensive power, which led it to use wind turbines to secure supplies.[11]

Responses from most of the world's 500 largest public companies in the FTSE Global Equity Index Series (Global 500) in 2010 showed high interest in the commercial opportunity associated with the development and marketing of products and services that enable customers to reduce their GHG emissions.[12] Facing climate and broader resource efficiency challenges, green leaders will need to continue their excellence in product and service innovation. For example, Brazilian cosmetics producer Natura built a strong international reputation as an eco-friendly company through unconventional research and development investments, and it has maintained a rate of innovation higher than industry norms.[13]

Consumer interest in green products is growing. Companies initially feared these products would require higher production costs, but now that the green trend is well established, the assumption is that environmental quality becomes an inherent part of overall product quality. While some suggest that the romance with green and sustainable products may prove to be short lived, customers will increasingly expect all products to be environmentally friendly and socially responsible. The green benefits of a product become part of the core characteristics that differentiate a brand (i.e., price, quality and effectiveness).

CEOs seem convinced that consumer demand for environmental and social quality is here to stay. Almost half of the 1,201 CEOs interviewed by PwC for its 14th Annual Global CEO Survey expected consumers to factor environmental and corporate responsibility practices into purchasing decisions.[14] They indicated that they intend to change their strategy in the next three years to capture this sentiment.

Major retailers are among those who progressively see positive sales results. With a solid overall growth in sales of 5.5 percent in 2010, retail giant Carrefour had almost 60 percent more own-brand organic food products by 2010 compared to 2007, and 220 percent more fair-trade products on its shelves.[15] Whole Foods Market, a Fortune 500 company and largest retailer of natural and organic foods in the United States, has seen its sales grow from $92.5 million in 1991 to $10.11 billion in 2011, at a compounded annual growth rate of 26 percent.[16] In 1993, Coop set a goal to become the first major Swiss retailer to provide customers credible and affordable organic products. By 2011, Coop had over 2,000 organic food products on its shelves and sales of around 800 million Swiss francs. Its turnover from sales of its full range (not only food) of own-label sustainability brands and labels was approaching 2 billion Swiss francs in 2010.[17]

Duration of Sales The business that (i) introduces greener goods and services to the market, backed up consistently by recognized standards and labels, will (ii) reap the benefit of greater brand value and reputation, which again will (iii) enable the business to sustain a good growth of sales with longer duration. The latter will reflect greater loyalty among existing, satisfied customers and continual improvement in reaching new ones.[18]

Surveys of senior managers and investment professionals in global firms have found that brand equity and corporate reputation are perceived as the most important areas where sustainability actions bring benefit and add value.[19] Brand and reputation management needs to consider not only B2C but also B2B relations with care. If a brand is to provide a guarantee of product safety and quality, and consumers want to know more of what is behind the product, the ongoing performance of all tiers of suppliers in the value chain becomes critical.

Any assessment of the financial health of a company needs to consider not only its "growth of sales" over the last quarter or year, but also the "duration of sales" (e.g., looking at trends over a five-year period). To examine the impact of a greener product offer on revenues, management needs to know whether the boost in sales of a greener product is simply determined by the latest seasonal fashion or whether it reflects a longer-term trend of growing consumer demand and customer appreciation of its offer. The ability to not only reach new customers but also maintain their loyalty and trust over the longer term is determined by a range of factors, all of which serve to build company or product brand value. (For a list of 10 factors used by Interbrand to determine brand strength, see box on right.)

As the greening of goods and services and the processes behind them enter the mainstream, a more direct positive impact of offering green goods and services on brand value can be expected. Companies who took the initiative early will reap greater benefits. This is where sustainability attributes will show their value as differentiators for consumers and business clients who seek environmental quality and proven green solutions. Failure to act can also have a negative effect on brand value. For example, Samsung Electronics quantified its exposure to the loss of brand value in the Carbon Disclosure Project 2010 Global 500 Report this way: "A 1 percent decrease in brand value of the company due to unfavorable evaluations from investment organizations and/or NGOs, caused by insufficient climate change response is equivalent to losing about US$ 200 million."[20]

Negative shock events can cause an overnight erosion of reputation and brand value. Recent responses by brand managers to times of industrial disaster and environmental crisis have shown the importance of clear and deeply internalized sustainability values in pre-empting crisis and avoiding longer-term damage.[21] Accompanying the attributes of greener products and services with greener standards in operations will serve to further boost the reputation of both product and company. In the long run, the sustained offering of quality products and services that provide solutions to recognized environmental and socio-economic challenges will serve to protect brand value and secure positive duration of sales.

In a recent survey of 1,375 consumers and 575 senior executives of companies with revenues of over $500 million in China, Brazil, the United States, and the United Kingdom, 78 percent of respondents indicated they do not buy a product if they do not like the parent company.[22] In addition, 67 percent indicated they check product labels to find the parent company, and 56 percent would think twice if they could not find information about the company behind it. The survey showed that more Internet-connected consumers in emerging markets and elsewhere are progressively making the link between a company's reputation and its product brands. This suggests a game change in branding and corporate reputation.

Ten criteria used by Interbrand to determine brand strength

Clarity Does the brand clearly stand for the values of greening and sustainability?

Commitment Is the business internally committed to the green or sustainable brand?

Protection Is the green brand globally secure?

Responsiveness Is the brand in touch with greening opportunities and sustainability challenges?

Relevance Does the brand fit with customer/consumer sustainability needs?

Authenticity Is the brand built on a heritage or well-grounded values of environmental care?

Differentiation Does the brand offer a distinctive green solution?

Consistency Does the brand reflect commitment to sustainability at all times?

Presence Is the green brand talked about positively by all and open to dialogue for improvement?

Understanding Do customers understand the distinctive qualities of the brand and its sustainable company?

Source: Interbrand (www.interbrand.com/en/best-global-brands/best-global-brands-methodology/Brand-Strength.aspx)

Operating margin and capital expenditure

Operational efficiency Through (i) the use of recognized standards and cleaner technologies in its own operations to use resources more sustainably, as well as advancing those through its supply chain, a business can (ii) improve its operational efficiency—its ability to turn inputs into productive outputs in a cost-effective manner, as a result of

which (iii) it will improve its operating margin or net profit margin, earning more per dollar of sales thanks to lower production costs, and optimize its capital expenditure. [23]

Greater operational efficiency also serves to improve investment expenditure related to fixed capital and working capital. Improved efficiency in use of resources will, for example, drive more optimal use of fixed assets (e.g., land, buildings, equipment, machinery, vehicles). The use of product service systems (PSSs) in the form of leasing rather than buying equipment may bring significant savings alongside its environmental benefits. This includes efficiencies due to services provided at scale—onsite or offsite—by an external business partner.[24] More sustainable land management and protection of bioregions can raise the valuation of properties. This comes in addition to steering a business clear of liability and operational risks associated with the supply of key services by local ecosystems.

In the case of working capital, green efficiency improvements can serve as a driver for innovation in the way inventory and customer or supplier relations (receivables or payables) are managed. Sustained growth in sales of greener products and services will boost the number of accounts receivable.

Amidst growing evidence of resource scarcities, the role of resource efficiency in operations is increasingly recognized, especially in industries in such highly competitive markets as information and communications technology (ICT), car manufacturing, and consumer goods. Cutting production costs has certainly been a top priority for many businesses at a time of economic recession. European CEOs in a 2011 survey cited cost optimization as a top priority.[25]

Traditional analysis on the business case has tended to start off by highlighting cost savings, in particular savings related to energy use. Driven by the climate debate, many business case studies focus on energy efficiency. Yet energy efficiency remains a "low-hanging fruit" with much room for improvement. In addition to cost savings, more companies have also started to focus on increased revenues and competitive market position. This implies that the business case for operational efficiency is getting more strategic, moving from the site level to corporate headquarters.

Noting this trend, McKinsey concluded that companies that succeed in improving their resource productivity are likely to develop a structural cost advantage and improve their ability to capture new growth opportunities.[26] McKinsey has found that 70 percent of productivity opportunities today—from improving the energy efficiency of buildings to moving to more efficient irrigation—have an internal rate of return (IRR) of more than 10 percent at current prices.[27]

Increased revenues and profit margins featured prominently in a 2011 survey of reporting by the world's largest corporations. KPMG found that almost half of the G250 companies and a third of N100 companies report gaining financial value from their CSR programs.[28] Companies who reported financial benefits were most likely to cite increased revenues, improved cost savings, and market share. From its survey of 378 corporate senior executives of all regions, KPMG also found similar recognition of positive financial returns.[29] In 2008, it found that only 31 percent of respondents thought that the biggest benefit of adopting sustainability would be increased profitability. Three years later, 48 percent of executives believed implementing sustainability strategies would boost financial performance either by cutting costs (27 percent) or increasing profitability (21 percent). Along with this trend came more effective use of sustainability-related metrics for management and reporting purposes.

The cost of raw material inputs is affected by growing natural resource constraints, which puts at risk the profit margins and earnings before interest and taxes (EBIT) of a range of sectors. The past decade alone has reversed a 100-year decline in resource prices.[30] Analysis of fast-moving consumer goods companies by WRI and ATKearney considered the impact of commodity price rises.[31] They calculated an eco-flation scenario in which natural resource constraints cause a reduction of 13-31 percent in earnings before interest and taxes (EBIT) by 2013, and 19–47 percent by 2018 for companies that do not develop strategies to mitigate the risks posed by environmental pressures. Examining data from six firms with a global presence in producing food, beverages, personal care, and household care items, they found that, on average, raw materials and packaging costs each equaled 15 percent of revenues.

More business case evidence is also emerging from collaboration with suppliers for efficiency improvements along with programs to improve quality and reliability. External spending on everything from production components to outsourced services is the largest cost center for most companies. Savings on that spending have a direct impact on profit. From its assessment of the climate actions of 1,000 suppliers of 57 leading global companies, the 2011 Carbon Disclosure Supply Chain Report found that 25 percent of suppliers achieved cost savings linked to emission reduction programs.[32]

Human capital and productivity The (i) use of recognized environmental and other standards, combined with quality human resource management including education and training in the use of such standards, as well as the promotion of related education and training among suppliers, enables a company (ii) to improve its attractiveness to employees and the productivity of its employees and those of its suppliers, which (iii) serve to boost operating margin and optimal capital expenditure. The latter results from better-trained employees, for example, who manage fixed assets more efficiently, operating under better environment, health and safety conditions.

Well aware of the importance of a content work force for productivity, enterprises succeed to varying degrees in effectively engaging their employees and achieving the status of highly desired employer. What is of special interest here is the ability of greening programs to achieve not only environmental goals, but also human capital benefits. These relate to both the recruitment and retention of employees, including productivity, safety, and sense of satisfaction at work. Agencies are seeing how many talented employees are more attracted to businesses with green or socially responsible credentials. Employees remain with businesses where they are recognized and awarded for initiating sustainability innovations. Green building councils in the United States and elsewhere are also reporting impressive evidence of how daylight, natural ventilation, and other innovations for improved indoor air quality result in measured improvements in productivity and sales gain.[33]

Leading business organizations today recognize the business case for incorporating sustainable development measures into employee rewards and incentives, seeing how sustainability programs can motivate employees to perform to their highest potential.[34] Life and material sciences company Royal DSM links almost one-quarter of management compensation to the company's performance in eco-product development, energy efficiency, and employee engagement. The company's 22,000 employees deliver annual net sales of about €9 billion. ECO+ products constituted 40 percent of running business sales in 2010.[35]

One of the significant characteristics of leading sustainability innovators is that they engage their workforce effectively.[36] Natura of Brazil invests heavily in training its managers to identify socio-environmental challenges and turn them into business opportunities. South African retailer Woolworths pays special attention to boost employees' pride in their jobs, ensuring they are rewarded for contributing sustainability ideas that improve the business.

The war for talent is taking on new colors. "Green talent" has been described as the goal of organizations to nurture talent and develop new environmentally friendly skills and behavior of their employees.[37] For example, U.K.-based communications services company BT set up an online sustainable marketing program in 2006 to promote best practice and provide training to develop the "green talent" of its marketing staff. A BT carbon club scheme encourages employees to collaborate on climate action, and a BT Green Apprentices Club exchanges ideas for applying cleaner technologies.[38]

Programs in support of physical and mental health are also well suited to including exposure to nature as part of inspirational and recreational activity. In 2002, HSBC launched "Investing in Nature," a $50 million partnership with conservation organizations focused on the environmental and social education of its own employees. The program included sending employees on field research projects around the world who can bring new knowledge of biodiversity and ecosystems back to the company. An independent evaluation concluded that 80 percent of senior HSBC managers agreed that the program contributes to embedding sustainability into the "DNA" of the business.[39]

Cost of Capital and Taxes

Cost of capital A company that (i) has effective environmental risk management systems in place, and communicates their use effectively through reporting and other means, is in a position to (ii) secure a better risk profile, which again opens the way for (iii) obtaining capital at lower cost. This applies to both debt capital and equity capital, and overall its weighted average cost of capital (WACC).

Banks that integrate environmental and broader sustainability criteria into their existing products and services can offer debt capital at a lower cost. Banks that offer new products and services that are thematic and specifically labeled as "green" or targeting cleaner technologies can do the same. Banks must incorporate environmental risk management criteria into all phases of their credit risk management process—rating, costing, pricing, monitoring, and workout. Being held legally and financially responsible for environmental degradation caused by clients has driven North American banks to incorporate environmental risk into their credit risk policies.[40] Experience in emerging markets from banks such as Santander in Brazil and FirstRand in South Africa has shown the importance of adequate training staff from relevant departments to apply appropriate credit risk management frameworks such as that of the Equator Principles.[41]

Emerging opportunities for green thematic products and services relate to green commercial real estate (recognizing the growth in green building standards), growing carbon markets, and clean technologies. Some banks have started to specialize in one or more clean technology types. A report by the UNEP Finance Initiative has shown that green products and services are also being introduced by banks from developing markets. In 2010, investment in renewable energy by developing countries bypassed that in developed markets. In addition, new equity raisings on public markets by renewable energy companies worldwide reached $15.4 billion in 2010, up from $12.8 billion in 2008. At the same time, greater availability of bank debt was signaled by an increase of up to 30 percent in the share of debt deals in asset financing (renewable energy generation projects).[42]

Companies across all sectors will increasingly see that improved environmental risk management enables them to obtain equity capital at a lower cost. Socially responsible investment funds are progressively more effective in penalizing laggard firms. Statistical analysis of U.S. companies in the Standard & Poor's 500 has shown that companies that lower their systemic risk profile through improved environmental risk management experience less volatility in performance and are rewarded by lower costs of equity capital.[43] Financial markets are therefore willing to accept lower risk premiums on their equity. Such companies are also likely to be more attractive to institutional investors that explicitly apply green or responsible investment criteria, as well as to those that simply reward better economic performance (having more resource-efficient processes and effective environmental risk management systems in place).

Stock markets are very susceptible to short-term events, such as political boycotts, industrial disasters, the announcement of liability charges or environmental fines, and the disclosure of pollution inventories. Yet evidence in the form of academic literature is starting to paint a picture in which longer-term factors (e.g., environmental performance and risk management) are having a more fundamental impact.[44] As the market is more confident that a company will provide high returns on invested capital and is able to reduce the systemic risk of an investment, it is more willing to pay for the opportunity to capture the expected returns. Conversely, as the price of "dirty" stocks fall, investors will demand compensation with higher return and the cost of capital for the companies implied will increase.[45]

Analysis by asset manager RCM of the performance from 2006–2010 of stocks on the MSCI World, MSCI Europe, and MSCI U.S. indexes, found that investors' portfolios are not negatively affected by the use of sustainability criteria in stock selection.[46] There is also a probability of outperformance over the longer term. Investors could have added 1.6 percent a year to their investment returns by allocating to portfolios that invest in companies with above-average sustainability ratings. The research reviewed also indicated that analysts are showing growing awareness of sustainability factors.

Researchers from Harvard recently analyzed a matched a sample of 180 American companies—90 "high sustainability companies" that have adopted clear sustainability policies since the early 1990s and 90 "low sustainability companies" that have not adopted such policies—to compare their longer term performance.[47] Examining their performance from 1993 to 2010 showed that the sustainability-committed companies outperform their traditional peers in both stock performance and accounting performance (e.g., ROE and ROA).[48] The former displayed higher performance and lower volatility.

Tax rates Having (i) procedures in place for systematic and principled stakeholder engagement is critical for (ii) securing the local license to operate, on the basis of which a company (iii) can improve the conditions under which it operates, including an optimal tax regime under which its green innovations are recognized and awarded. This is especially significant when norms of sustainability and responsible behavior become an implicit or explicit qualification for operating in a given market (and entry barrier for laggard competitors).

While discussion of "tax rate" as a financial value driver normally refers to revenue or income tax, our analysis uses a broader definition to consider possible tax benefits for a company that takes sustainability actions and reducing its environmental footprint. As more governments pursue green growth strategies, a tax shift could see social taxes reduced in return for new sources of public revenue from the introduction of taxes such as carbon taxes, green duties on imported goods, severance taxes on extracted resources, product taxes, waste disposal taxes, landfill taxes, and site value taxes or license fees.

Compared to other policy interventions, green taxes are seen by many governments as instruments that leave businesses with more flexibility to determine least-cost ways to reduce environmental damage.[49] They provide an ongoing incentive to innovate and improve. Their arrival in more

markets also sends warning signals to some emerging market giants. Analysis of an emerging markets portfolio benchmarked against the S&P/IFCI LargeMidCap Index has shown varying carbon exposure at the company level. At $108 per metric ton (tonne) of carbon dioxide equivalent (CO_2e) by 2030, carbon costs could equate to more than 100 percent of earnings before interest, taxes, depreciation, and amortization (EBITDA) for 16 firms from emerging markets.[50]

Tax benefits also influence a company in the way it structures its debt versus equity capital. Analysis in the United States has confirmed that companies that apply higher levels of environmental risk management reap higher tax benefits arising from their debt financing.[51] This implies that the firm with more effective environmental risk management systems in place may be perceived as holding less risk by the market, and therefore may be able to shift its financing from equity to debt capital, increasing its leverage and ability to have more income shielded from taxation, since debt interests are tax deductible.

The ability to make optimal use of tax benefits and find common ground with regulators on most effective tax instruments is highly dependent on a healthy license to operate and a common understanding of local market conditions. License to operate refers to the level of acceptance of the company by its stakeholders. The license can be "granted" by stakeholders such as regulators, politicians, local communities, the general public, and the media. In the case of regulators, it refers to actions such as being registered as a business and granted a permit to operate a facility. These permissions come with certain obligations, including the duty to pay tax. Improved relations and collaboration with the regulator may result in benefits such as tax breaks and concessions.

While improved relations and reputation are dependent to some extent on effective communications, in the local environment, perceived poor performance can significantly erode a company's welcome. The impact of the 2010 Deepwater Horizon disaster on oil and gas company BP's reputation is a case in point.[52] The level of influence of external stakeholders is particularly strong where they have a high level of (commercial) power and legitimacy with respect to the industry involved.[53]

Stakeholder engagement and sustainability communication via nonfinancial reporting has become increasingly scientific in the last decade, boosted by the use of standards such as AccountAbility's AA1000 standards and the GRI Guidelines. Research shows that companies with a culture of sustainability are more proactive, more transparent, and more accountable in the way they engage with stakeholders.[54] Improved reporting and stakeholder management supports superior shareholder wealth creation by enabling companies to develop intangible assets in the form of strong long-term relationships that become a source of competitive advantage.

Conclusion

Many past sustainability business case analyses have not effectively incorporated key financial value drivers into the discussion. The Green Business Case Model described here provides a framework for companies to use "connectors" or leading indicators such as customer attraction and brand value, to link environmental action areas with core financial value drivers that are well-known to finance officers and investors. Of course, agreement on core sets of indicators will not produce sustainable enterprises overnight. A company's own time frame, as well as the level of (un)certainty associated with longer term scenarios, are critical in its investment decision-making and its business case analysis. But focusing on the seven core financial value drivers helps capture the real longer term value creation potential (three to five years and beyond) of environmental actions and green innovation.

ENDNOTES

1 These are (i) brand value and reputation, (ii) employees and future workforce, (iii) operational effectiveness, (iv) risk reduction and management, (v) direct financial impact, (vi) organisational growth and (vii) business opportunity. The overview was done by the Doughty Centre for Corporate Responsibility. It involved analyses of articles published and business practices over 2003-2010. See "The Business Case for Being a Responsible Business," Business in the Community, March 2011; and Joshua Margolis, Hillary A. Elfenbein and James P. Walsh, "Does it Pay to be Good? A Meta-analysis and Redirection of Research on Corporate Social and Financial Performance," Harvard University Working Paper, July 2007.

2 See approaches highlighted by Ida Berger et.al., "Mainstreaming Corporate Social Responsibility: Developing Markets for Virtue," *California Management Review*, 49, no. 4, 2007, pp. 132–157; and Archie B. Carroll and Kareem M. Shabana, "The Business Case for Corporate Social Responsibility," The Conference Board, *Director Notes*, 3, no. 11, 2011.

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