

THE SMART ECONOMICS OF CARBON ACCOUNTING

Developing a 2020 Vision for your brand's environmental & financial impact

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Executive Summary

Measuring and managing carbon footprints is a challenge many companies still fail to adequately address.

A shift in corporate mindset from “tracking and disclosing” to “actively managing” carbon emissions would result in direct economic gains for companies. A 2013 study by KPMG of the S&P 500 companies found that firm value decreases on average by \$212,000 for every additional thousand metric tons of carbon emissions produced.¹ According to the Carbon Disclosure Project (CDP), companies that are leaders in sustainability reporting have higher overall returns than companies in the Global 500. Furthermore, companies that systematically track their carbon emissions across product lifecycles find ways to improve resource allocation, eliminate waste, and reduce inefficiencies. Studies have found that 79% of US companies report higher returns from investments aimed at reducing carbon emissions than the average business investment.²

Why is it important for companies to understand their carbon emission footprint?

There are three major reasons for companies to better understand and manage their carbon emissions:

- ➔ Economic drivers
- ➔ Regulatory requirements
- ➔ 2020 vision

Along with economic incentives, stricter sustainability disclosure requirements will also compel companies to engage in sustainability efforts in the coming years. Multiple initiatives such as the EU's Product Eco-labeling (set to launch in 2017), the Corporate Reporting Dialogue's proposed global standards on sustainability reporting frameworks, developed by the International Integrated Reporting Council (IIRC), and others will require companies to develop accurate and speedy processes to measure and disclose their carbon footprints across product lifecycles.

Problem Definition

Over the last decade, businesses have been paying greater attention to sustainability metrics and the impact their operations have on the surrounding environment. Companies have responded positively to an increasing demand by their shareholders, customers, employees, regulators, and all sorts of stakeholders to disclose information through their annual sustainability reports.

Yet, many businesses have still not fully grasped the importance of making the process of monitoring, analyzing, and implementing decisions related to their carbon emission footprint an integral part of their management processes – like the way they conduct their annual budget or five year strategy reviews.

Understanding the carbon emission footprint of companies is more important today than it ever was before, yet businesses are not as engaged as they should be. Failure to adequately face this problem can be attributed to a number of reasons:

➔ Businesses fail to understand the direct economic benefit to their bottom line and valuation by reducing their carbon emissions. More and more research shows that companies that monitor and disclose their carbon emissions and work actively on reducing them outperform their peers.³

➔ Businesses also lack an understanding of the processes needed to effectively align their operations with their carbon emission goals.⁴ This will make it increasingly difficult for them to adhere to global reporting standards (GRI), and the slew of new reporting requirements expected in the near future.

➔ Finally, businesses lack the tools required to accurately collect and analyze carbon emission data across their operations and distribution channels. While companies do collect data, it is often not tracked by product, but by business unit or facility, and doesn't cover the rest of the supply chain.⁵ Companies also lack an intuitive program to create summarized reports to aid them in drawing conclusions and making decisions related to their carbon emissions.

Why is it important for companies to understand their carbon emission footprint?

In the past, businesses have thought about their carbon emission footprint in the context of Corporate Social Responsibility (CSR), their brand perception, and regulatory requirements. Moving forward, however, carbon emissions will take a front-stage presence as the direct economic impact on companies that produce high emissions starts to be felt. There are three major reasons for companies to better understand and manage their carbon emissions:

1. Economic Drivers

A 2013 study by the accounting firm KPMG, of companies listed on the S&P 500, found that firm value decreases on average by \$212,000 for every additional thousand metric tons of carbon emission produced by the firm.⁶ This means at least some investors are paying attention to carbon emissions. Furthermore, the study found that the median value of companies that disclose information on their carbon emissions is \$2.3 Bn higher than similar companies that do not.

A 2013 report from The Carbon Disclosure Project (CDP), a global not-for-profit organization, shows that companies in the Carbon Disclosure Leadership Index (CDLI) outperform the Global 500 (see Figure 1). The CDLI is an index created by the CDP of the top 10% of companies in the Global 500 based on a set of disclosure and performance metrics compiled by the CDP.

The economic benefits, also extend to cost savings that companies can achieve by reducing their greenhouse gas (GHG) emissions. The US corporate sector must reduce its emissions by 3% per year, or 1.2 gigatonnes by 2020, for the global average temperature to not exceed the 2°C above pre-industrial threshold, beyond which climate change is irreversible. A 2013 report by CDP and World Wildlife Fund (WWF) shows that the 3% projected annual carbon emission reductions can save the US corporate sector up to a present value of \$190 Bn by 2020. The savings would come from improved energy efficiency through behavioral change, technology, and the deployment of low carbon energy such as solar photovoltaic systems.⁷

Companies that systematically track their carbon emissions across product lifecycles, while keeping an eye on the bottom line, find ways to improve resource allocation, eliminate waste, and reduce inefficiencies. As described by Wim Bartels, the global head of sustainability services at KPMG, “As soon as you start collecting information on any topic, companies will see ways to improve performance. If the subject is energy use, then a company will look at ways to reduce consumption. So reporting becomes the basis for innovation. Companies can learn from it.”⁸ It should not be surprising then that carbon reduction investments produce higher returns. Companies surveyed by Sustainable Brands in 2014 cited “manufacturing cost savings” as the most important business benefit they’ve achieved from their product sustainability program.⁹ Seventy-nine percent of

US companies earn more from investments aimed at reducing carbon emissions than from their average overall capital expenditures because by understanding which parts of the lifecycle produce the most carbon emissions, they can uncover “low-hanging fruits.” As an example, a Life Cycle Assessment (LCA) of Ben & Jerry’s products completed in 2008 by Native Earth revealed that the Vermont-based company could significantly reduce emissions by using the dairy off-waste resulting from their production process to feed anaerobic digesters to produce electricity. This reduced electricity and waste disposal costs while simultaneously reducing emissions associated with their ice cream products.

During the recent 2014 Sustainable Brands Conference in San Diego, Paul Herman, CEO of HIP Investor commented “We have observed for at least a few years now that about 80% of S&P 500 stock market valuation is driven by factors that are not accurately captured and valued on financial statements – like people (human capital), natural resources (ecological capital) and trust (social capital). In a breakthrough new research project, HIP Investor shows how sustainability considerations can lower risk and enhance potential financial returns for investment portfolios, all while creating net benefit for society.”

By accurately measuring the impact of their sustainability efforts, companies are able to allocate their capital and resources in the most cost-efficient manner as they make strides to reduce their carbon emissions.

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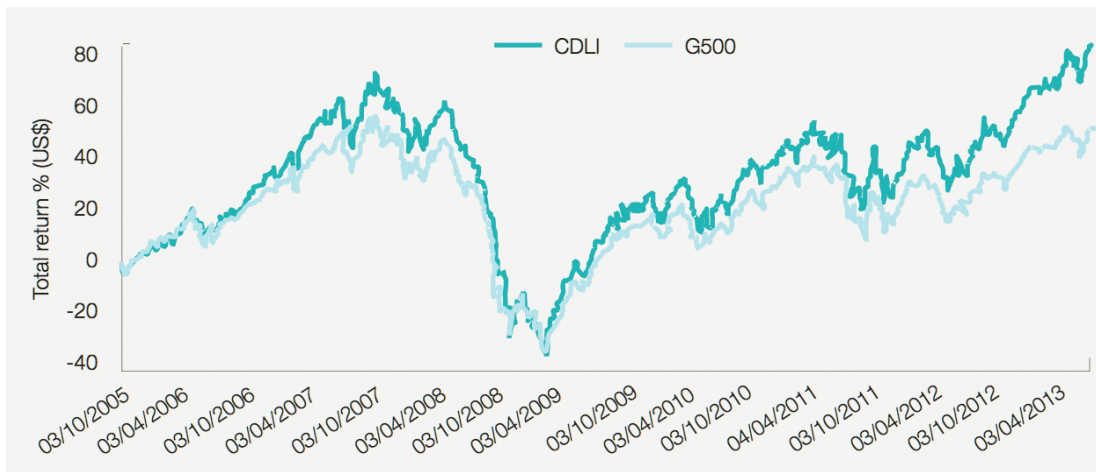


Figure 1:
CDLI (2005 – 2013)
returns against overall
Global 500

Annual analysis of the companies that have achieved leadership positions on Climate Disclosure Leadership Index (CDLI) in the past suggests that companies that achieve leadership positions in climate change generate superior stock performance.

2. Regulatory Requirements

As the discourse on global greenhouse gas emission levels continues to evolve, both the public and private sectors have increased the pressure on companies to disclose emission data. For example, France’s Grenelle II Act of 2012 mandates French companies and subsidiaries of international, including US, companies to disclose their carbon emissions starting in the next three years.¹⁰ In addition to mandatory disclosure requirements, companies with best-in-class sustainability practices have led the way in producing sustainability reports with more detailed information on emissions and resource efficiency management. Along with satisfying regulatory requirements, these reports stimulate innovation by highlighting areas where efficiency might be increased.

Non-government led initiatives are also calling for better corporate sustainability reporting. As mentioned in the introduction the International Integrated Reporting Council launched the Corporate Reporting Dialogue (CRD) in June 2014 to align global standards on reporting frameworks for sustainability in response to market demands. The CRD includes participants from multiple international and national regulatory bodies such as the Climate Disclosure Standards Board (CDSB), Financial Accounting Standards Board (FASB), and International Accounting Standards Board (IASB).

The Global Reporting Initiative (GRI) released its G4 Sustainability Reporting Guidelines in 2013. Subsequently, the GRI framework has been adopted by government agencies, companies, and other organizations worldwide as the standard sustainability-related reporting format used to comply with policy and regulatory requirements.

In addition to the more detailed and stringent reporting guidelines, international institutions such as the EU are imposing stricter regulations on the private sector. On April 25th, 2014 the EU announced that product-level LCA disclosure will become mandatory by 2017 to attract eco-labeling. These new eco-labeling requirements will put further pressure on companies to accurately track and measure their carbon emissions in order to comply with the new regulations.

The private sector has also led the way in increased emissions reporting. The number of companies that issued sustainability reports increased from less than 500 in 1999 to close to 5800 in 2011, constituting an increase of 23% annually.¹¹

3. 2020 Vision

The year 2020 is a milestone in the world's campaign to fight climate change. What makes 2020 so important?:

- ➔ The general consensus of governments and scientists globally is that a world warmer than 2°C above pre-industrial averages will bring about very dangerous and potentially irreversible climate change. To avoid that, the developed world needs to reduce carbon emissions by 25–40% below 1990 levels by 2020.¹²
- ➔ The EU 2020 strategy has three objectives: 20% reduction in greenhouse gas emissions from their 1990 levels, raising the share of renewable energy to 20%, and improving the EU's energy efficiency by 20%.¹³ The EU Eco-label project is an important part of the strategy and identifies products that have reduced their environmental impact throughout their life cycle. An LCA is required for products to obtain an Eco-label.
- ➔ The UN calculates that a third of the world's population is suffering from water shortages. By 2020 water use is expected to increase by 40%. According to a recent report by the Center for Naval Analyses (CNA), our current rate of water usage will lead to water scarcity that would affect 30-40% of the world's population by 2020.¹⁴

To limit global warming to 2°C annual global greenhouse gas emissions must peak by 2020, and reduce steeply thereafter. (IPCC)

Leaders in corporate sustainability

Nike

Leading the efforts on sustainability in the footwear and apparel industry, Nike is targeting a 20% reduction in carbon emissions per unit from 2011 levels by 2015. Nike's aim is to “drive innovation and collaboration and engage in public policy advocacy to deliver carbon reductions across the value chain.”¹⁵ Nike's efforts have focused on the reduction of emissions in manufacturing, increased use of renewable energy, and the continuous assessment and performance management of Nike's energy and carbon footprint. In 2013, Nike reduced its carbon emissions per unit by 13% from 2011 levels.

Heinz

Heinz took a new approach to its manufacturing in 2011 to achieve absolute emissions, waste and energy-use reductions and reduce costs at the same time. The company achieved a 13.2% reduction in greenhouse gas emissions as well as significant reductions in waste and water consumption. This was made possible through employee-led projects such as mixing hot and cold water in processing lines to reduce reheating needs, along with a comprehensive plan to conserve water and increase the use of renewable energy.¹⁶

Unilever

Unilever's Sustainable Living Plan is perhaps today's boldest corporate-led effort to mitigate the company's impact on the environment. Unilever has set out to halve the carbon emissions of its products across their lifecycle by 2020, all the way from sourcing raw materials to consumption and disposal.¹⁷ Unilever's emissions from production have been reduced by 32% since 2008, however, overall emissions

per consumer have increased by 5%. The challenge is in reducing emissions from consumption, which contribute to 68% product lifecycle emissions, by driving change in consumer behavior. To effectively identify opportunities to reduce emissions, Unilever continuously works to improve its processes for measuring and tracking carbon emissions across the lifecycle of its products and in 2012 implemented an automated process to improve the accuracy and speed of footprint calculations of over 2000 products in 14 countries.¹⁸

CoClear's work with Ben & Jerry's

CoClear's first project with Ben & Jerry's involved running an analysis on 21 SKUs and making recommendations for emission reduction opportunities such as reducing

distribution storage freezer time as well as scaling up production in Henderson Nevada to meet west coast demand rather than fulfilling demand with products shipped from east coast plants. The results were so impressive that the Manager of Natural Resources, Andrea Asch, presented CoClear's recommendations to the CEO of the company, Jostein Solheim, who stated:

“CoClear's innovative approach to understanding and measuring the environmental life cycle of our ice cream is critical for our unique business model and appeals to our core consumers.”

Asch, agreed, stating that “The CoClear “pilot” study provided us excellent insight and information regarding our carbon emissions. From the study we can set goals for emissions reductions focusing on the appropriate targeted areas.”

HOW COCLEAR CAN HELP COMPANIES TAKE ACTION

CoClear (www.coclear.co) provides a web application for companies to integrate their environmental and financial metrics. The application provides secure and central data storage, produces interactive & exportable reports, and tracks annual performance. CoClear's team of LCA experts also provides ongoing consultancy services. Some of the benefits of interactive LCA are the ability to:

- ➔ Track annual product and brand performance
- ➔ Share metrics throughout a company
- ➔ Provide environmental data to marketing departments
- ➔ Build brand integrity, differentiation & leadership
- ➔ Deliver certifiable product LCA for eco-labeling
- ➔ Export reports for annual, sustainability or regulatory requirements
- ➔ Maximize productivity of existing personnel by generating reports automatically in the web application

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