



# SUSTAINABILITY AND THE CFO:

## *Challenges, Opportunities and Next Practices*

Ram Nidumolu  
CEO, InnovaStrat

P.J. Simmons  
Chairman, Corporate Eco Forum

Terry F. Yosie  
President & CEO, World Environment Center

**April 2015**

# Contents

<b>Executive Summary</b> . . . . .	<b>1</b>
<b>I. Introduction: Why the CFO?</b> . . . . .	<b>2</b>
<b>II. Improving Risk Management</b> . . . . .	<b>3</b>
Key Sustainability Challenges Threatening Business Value . . . . .	4
Case Studies: Swiss Re, Shell and Vodafone . . . . .	6
<b>III. Driving Capital Productivity</b> . . . . .	<b>8</b>
Case Study: UPS . . . . .	9
<b>IV. Enabling Innovation and Growth</b> . . . . .	<b>10</b>
Case Study: Unilever . . . . .	11
Case Study: Ecolab . . . . .	13
<b>V. Success Factors: Lessons from Alcoa and Puma</b> . . . . .	<b>14</b>
<b>VI. Updating Traditional Financial Analysis Tools &amp; Methods</b> . . . . .	<b>16</b>
Next Practices – Integrated Reporting . . . . .	17
Next Practices – Natural Capital Accounting . . . . .	17
Case Study: The Walt Disney Company . . . . .	18
<b>VII. Conclusion: Opportunities for the CFO to Engage</b> . . . . .	<b>19</b>
Materiality Assessment . . . . .	19
Risk Assessment . . . . .	19
Data Collection . . . . .	19
Business Decision Making . . . . .	19
<b>Take the Next Step</b> . . . . .	<b>20</b>
<b>Endnotes</b> . . . . .	<b>21</b>

# Executive Summary

Until very recently, most CFOs viewed “sustainability” as someone else’s job—a matter of compliance or philanthropy unrelated to the pressing concerns that typically keep financial executives up at night. A growing number of prominent CFOs have adopted a sharply different view and, in so doing, are sending a powerful message to their peers in corporate finance:

*Take a closer look, and you will find increasing opportunities to leverage sustainability thinking for value creation—especially when dealing with pressures to reduce short-term business costs and strengthen your organization’s foundation for long-term growth.*

CFOs can leverage sustainability to improve enterprise performance in three areas: **(1) risk management, (2) capital productivity, and (3) innovation and growth.**

Sustainability enables better **risk management** by giving firms far greater visibility into potential exposures that could cause on-balance sheet risks down the road, including: price volatility around energy and commodity prices; impact from more stringent regulations; supply chain disruptions or lack of access to key product development inputs; damage to reputation, brand, stock value, or license to operate; and future exposures and losses related to stranded assets.

Sustainability unlocks opportunities for greater **capital productivity** through reducing compliance, operating and product development costs; optimizing supply chains; boosting employee productivity; driving business processes improvement; reducing cost of capital; and opening new financing options.

Sustainability enables stronger **business innovation and growth** by creating new customer relationships; inspiring new products and business models that drive growth; anticipating future growth problems during mergers and acquisitions; and in some pioneering companies, by creating new markets for ecosystems services.

The relationship between CFOs and sustainability is being played out in the context of a business system

that is slowly evolving from a shareholder-driven model based on short-term expectations of financial performance to one that is beginning to incorporate broader considerations.

Key sustainability-related business challenges that CFOs need to pay attention to include: an uptick in the pace of sustainability-related regulations internationally; growing constraints on the price and availability of key operational inputs; increasing activism among concerned shareholders; growing financial reporting pressures and requirements to include sustainability criteria; increasing public expectations of corporations regarding sustainability; and increasing importance of sustainability to younger generations of talent.

CFOs who grasp the potential for sustainability to maximize business value for their organizations can play a vital complementary role in the following areas of corporate strategy and execution:

- *Assessing the materiality of sustainability factors to the business;*
- *Enhancing data collection and analysis of sustainability-related data;*
- *Developing smarter tools and methods to help business functions better integrate sustainability-related costs and benefits into financial analysis and decision making;*
- *Pioneering new ways to evaluate the riskiness of all investments in light of sustainability megatrends;*
- *Helping organizations chart a smarter course to compete effectively in a world where sustainability-related challenges become more dominant.*

Overall, the sustainability-related challenges, opportunities and “next practices” discussed in this report are beginning to alter the economic, environmental and social landscape within which business is being conducted. The CFOs interviewed for this report are a useful barometer for how CFOs at other large companies are likely to modify their understanding of sustainability and their corporate finance practices as they strive to help their companies perform better in an increasingly uncertain and complex world.

# I. Introduction: Why the CFO?

Over the past decade, sustainability has emerged as a business megatrend that could shift the foundations of competition in every industry in every marketplace. Sustainability strategy has moved from the periphery to the mainstream in the Fortune 500: most leading global companies today see sustainability as important, if not central, to their strategy for controlling costs, avoiding risks, enhancing brands, attracting the best talent, fueling innovation, and driving top-line growth.

Yet until recently, there has been little focus on why and how chief financial officers (CFOs) should pay attention. This is a major shortcoming of business thought leadership, since CFOs are playing an increasingly vital role in overall business strategy.

This report explores why and how the CFO and other senior corporate finance executives should care about sustainability. How is their role evolving with regard to sustainability and relevant changes in the broader financial system? What are the business challenges that matter to them? Most importantly, which practices are best poised to help realize sustainability-driven opportunities for improving business performance?

The report is based on in-depth interviews with innovative CFOs from The Walt Disney Company, Ecolab, Unilever, and UPS; not-for-attribution roundtables involving sustainability and financial executives from the Corporate Eco Forum and World Environment Center memberships; and a review of existing secondary research in this area.

Since research on CFOs and sustainability is still at an early stage, we focus here on the broader (rather than industry-specific) case for CFO engagement. However, CFOs should keep in mind that the materiality of specific challenges and opportunities is heavily influenced by the particular industry in which they operate.

In their role as financial stewards of companies, the CFO's primary role is to manage risk and improve corporate performance. Sustainability has the potential to assist CFOs as they face great pressure to reduce costs in the short-term while building the financial foundation for long-term growth.

In this report, we highlight a select number of innovative CFOs at leading global corporations who are viewing sustainability as a means to improve their company's business performance by managing both risks and opportunities. They are beginning to integrate sustainability into their analytical models, value propositions and leadership initiatives. While these CFOs differ by business sector, company purpose and values, and their own individual characteristics, they share a common trait: they see sustainability-related challenges as opportunities for minimizing business risk, creating business value and strengthening financial performance.

## WHAT IS "SUSTAINABILITY?"

While precise definitions vary widely, at the core sustainability is quite simply about **protecting and strengthening foundations for long-term success**—whether for individuals, communities, companies, or future generations.

In the corporate realm, it's about **being farsighted and planning ahead** so companies can make smart decisions today that avert problems tomorrow. It also generally refers to the ability of companies to do business in ways that **minimize social and environmental harm**, while **maximizing business opportunities** associated with rising market demands for solutions to sustainability-related challenges including climate change, resource scarcities, the collapse of critical natural ecosystems, rising global demands for food, water, energy, housing, transportation, and health care, and greater urban resilience.

Currently, sustainability is not yet a central concern of most CFOs. As Jay Rasulo, CFO of Disney told us, “There is not yet a rich dialogue on sustainability within the CFO community.” Nevertheless, there are different levels of conversation on sustainability among CFOs. As Rasulo pointed out, “Most CFOs are focused on compliance. But there are other CFOs who are moving from compliance toward sustainability as risk management. And there are some CFOs who are in tune with sustainability having a central place in business strategy.”

Leading CFOs are exploring how sustainability thinking can impact three key areas of business performance: **risk management, capital productivity, and innovation and growth**. We hope that their experiences will provide practical guidance to other CFOs seeking to improve corporate performance through sustainability.

## II. Improving Risk Management

Many CFOs serve as *de facto* “chief risk officers” who proactively manage risks that could impact the financial position of the company. CFOs currently review a myriad of business risks facing their companies—some of which derive from external drivers (e.g., global megatrends or government regulation), while others originate within their market sectors or are internal to the company. Increasingly, these risk factors are broadening both in scope and materiality, thus stimulating some CFOs to examine their impact on business performance, now and in the future.

Sustainability-related risks on the horizon include climate change, uncertainty about future fossil fuel use, resource scarcity, insecure or insufficient food supplies, ecosystem and biodiversity decline, and the global spread of diseases. The World Economic Forum’s 2015 list of Top 10 Risks to the global economy in terms of impact included three related to environmental sustainability: “Water Crises,” “Failure of Climate Change Adaptation,” and “Biodiversity Loss and Ecosystem Collapse.”<sup>1</sup>

As concern about sustainability risks grows globally, so too are regulations to address them. In 2014, for instance, the US Environment Protection Agency (EPA) proposed regulations requiring existing utilities to reduce their carbon emissions in 2030 by 30% over 2005 levels. Also in 2014, China began requiring existing coal plants to comply with emissions standards that are even tougher than the EU. India recently passed a law requiring over 2000 India-based corporations to set aside 2% of their net profits (\$2 billion country-wide) for sustainability-related activities.

While the cost of complying with tightening regulations varies by industry and region, there are other sustainability-related challenges that are beginning to appear on the CFO radar. They range from fluctuations in the price and availability of inputs (such as commodities and natural resources) to an increasing awareness of sustainability among key stakeholders such as NGOs, institutional investors, credit rating firms, and the general public.

Research in 2014 by McKinsey & Co. found that the business value at stake because of sustainability-related challenges could be as high as 25%-70% of earnings before interest, taxes, depreciation and amortization (EBITDA) through restrictions on license to operate, reputational harm, rising operation costs, and supply chain disruptions.<sup>2</sup>

## KEY SUSTAINABILITY CHALLENGES THREATENING BUSINESS VALUE

- Operational resources:** Supply-side drivers are increasingly being affected by long-term shifts in the availability and price of fossil fuels, agricultural commodities, minerals and other raw materials, water, and other resources. While resource prices fell on average by 0.5% per year during the 20th century, they increased by more than 100% since 2000, while price volatility has more than tripled from the 1990s.<sup>3</sup> The challenge for CFOs is to work with supply chain and other functions to better anticipate and manage the cost increases and volatility around resources, which are critical to the company's operational costs and risks.
- Government regulations:** While progress on international agreements has stalled, governments and federal agencies are introducing new sustainability-related regulations. The challenge for CFOs is to move beyond compliance to proactively anticipate and prepare for these new regulations that may increase cost of operations and have the potential to restructure market demand and terms of competition.
- Mergers and acquisitions:** As companies continue to adjust their portfolios through the acquisition and divestiture of assets, there needs to be an accompanying recognition among CFOs of the sustainability impacts of such decisions. Carbon and water footprints, waste generation and energy use are just some of the factors that will change through M&A decisions.
- Major investors:** Institutional asset owners and investment managers are beginning to show greater interest in environmental, social and governance (ESG) factors when making investments.<sup>4</sup> As a Global COO of BlackRock recently noted: "When we are looking at companies, one of the things we are concerned with is: are they taking a short-term risk that may bump earnings up in the near term, but at the expense of the long-term viability of the company?"<sup>5</sup> The CFO's challenge is to recognize that this interest is only going to increase and to prepare the company for a future where cost of capital is impacted by ESG factors.
- Activist shareholders:** Shareholders are introducing more sustainability-related resolutions every year. So far, 2014 has seen 20% more resolutions than the corresponding 2012 period.<sup>6</sup> Nearly 40% of all shareholder resolutions in 2014 were environment related. The challenge for CFOs is to help business units recognize and resolve the underlying issues that lead to these resolutions, which have top-line (reputation) and bottom-line (costs of fixes and lawsuits) financial implications.
- Reporting requirements:** External sustainability-related reporting needs (whether mandatory or voluntary) are growing considerably. The challenge for CFOs is to implement greater integration of financial and sustainability reporting, and to prepare for a future where credit ratings are impacted by sustainability factors.
- Talent acquisition:** Employee acquisition (especially of millennials) is increasingly affected by the company's sustainability performance and reputation. The CFO's challenge is to work with human resources and other functions to maximize return on talent by improving recruitment and retention through their sustainability efforts.
- Public expectations:** The public's sensitivity to sustainability issues, which varies by industry and region, is an indirect but important driver of business success. The challenge for CFOs is to enable communications and other functions to anticipate and reduce disruptions to (or improve) the company's social license to operate, which has major impacts on the cost of operations and corporate/brand reputation.

As UPS CFO Kurt Kuehn has pointed out, “a sustainability lens presents a new way of looking at forecasts and risks.”

<sup>7</sup> Integrating sustainability into risk management can help companies to:

- Proactively manage the volatility around energy and commodity prices, which CFOs perceive to be the biggest risks to financial performance in the near term.<sup>8</sup>
- Stay ahead of sustainability-related regulatory developments that could limit product or production choices for the company, or take actions today that head off shareholder lawsuits, and civil and criminal fines and penalties.
- Avoid future property damage costs, cleanup costs from an accident, or ecosystem restoration costs.
- Avoid damage to corporate reputation, brand and license to operate by avoiding spills, accidents, product recalls, or other performance issues.
- Avoid supply chain disruptions and shocks by managing exposure to scarce natural resources, extreme weather events, and energy price volatility.
- Anticipate and plan for future exposures and losses related to “stranded assets”—i.e. assets that could lose significant economic value well ahead of their anticipated useful life due to new regulations, market forces, technological innovation, changes in societal norms, or environmental shocks.<sup>9</sup> Fossil fuels represent the largest class of assets at risk if governments adopt strict policies to curb climate change.<sup>10</sup> Other examples of potential stranded assets include water-intensive crops and processing plants hit by extreme drought, or buildings and infrastructure in flood zones incapacitated by rising rivers and oceans.<sup>11</sup>

#### *Next Practices – Corporate Risk Management*

Sustainability-related risks are often left out of financial and investment decisions because of the dominance of short-term considerations, the lack of mechanisms to measure and analyze these systemic risks, and the lack of a system for measuring, valuing and integrating externalities into business planning.<sup>12</sup>

Smart risk management in the years ahead will necessitate understanding how these systemic risks interact with other mega drivers such as emerging markets, increasing urbanization, and a growing middle class to impact the *particular context* in which the company operates.

Emerging best practices in corporate risk management include:

- Managing risks due to fluctuations in prices and availability of energy and commodities through hedging, reduced usage, or substitution. This could include the hiring of experts with particular expertise in these specialized areas.
- Focusing the treasury risk management programs on better forecasting of cash, working capital and liquidity, stress testing cash flow projections under hedged and non-hedged scenarios, and strengthening the governance of financial reporting.<sup>13</sup>
- Strengthening the programs for managing risks around water, which is critical to the cost and continuity of operations, brand image and community relations in many industries.
- Incorporating sustainability considerations into the enterprise risk management (ERM) framework. One such established ERM approach is the Committee of Sponsoring Organizations’ (COSO) framework.<sup>14</sup> It distinguishes between strategic, operational, compliance and reporting-related risks. For each category of risk, it identifies the following activities: objective setting, risk identification, risk assessment, risk response, control activities, information and communication, and risk monitoring.
- Using dynamic “risk-adjusted forecasting and planning” methods—as outlined in a Deloitte report by the same name in 2012—to factor in multiple sustainability-related variables, produce “more robust and transparent evaluation of the risk and uncertainty in budgets and plans,” and provide “insights into opportunity for capturing upside as well as managing downside risk.”<sup>15</sup>

### *Next Practices – Project Risk*

CFOs who want to make better decisions about the sustainability-related risks of capital projects can also implement the following practices:<sup>16</sup>

- Assess how much of the project’s performance is impacted by existing sustainability-related sources of risk, even before new risks are introduced
- Ensure that investment projects are being compared consistently
- Prioritize projects by risk-adjusted returns, rather than by returns alone
- Identify the best overall portfolio approach, where projects with different risk-return profiles are combined together and evaluated as a portfolio.

## CASE STUDIES

### ***Reinsurance: Swiss Re***<sup>17</sup>

Swiss Re, headquartered in Zurich, is one of the largest reinsurers in the world and among the first to address sustainability risks through a comprehensive risk management approach incorporating these core elements:

- Because sustainability risks are industry specific, the approach defines framework policies that are tailored to industries, including defense, oil and gas, mining, dams, animal testing, and forestry and logging.
- When an underwriter submits a reinsurance transaction for review, internal sustainability and risk experts conduct a due-diligence evaluation to assess its “sensitive business risks” (SBR), using the industry-specific policies.
- The outcome of the review is a go-ahead, a conditional go-ahead, or a decision not to go ahead. Disagreements between the underwriter and the risk expert are escalated to the next level of management.
- Risk experts continue to monitor the transaction using the framework, in order to stay relevant with regard to its sustainability risks.
- Certain kinds of economic activities that are particularly unsustainable, or countries with an especially poor human rights record, are excluded from consideration.

Swiss Re has seen significant increases in SBR referrals for its transactions, which reflects the growing importance of sustainability risks for insurance companies.

### ***Oil and Gas: Shell***<sup>18</sup>

Shell, the oil and gas giant that pioneered the concept of scenario planning and analysis, uses the following practices for managing sustainability-related business risks:

- Expert panels comprising external parties provide feedback on sustainability issues of importance to the company.
- Shell’s risk control framework relies on a set of standards that guide how sustainability-related risks are treated throughout the company.



## CASE STUDIES

### *Oil and Gas: Shell*<sup>18</sup> (continued)

- Risks include climate change impacts, reputational impacts from failing to meet sound business practices, and the risks of operating in unstable or politically sensitive areas.
- All Shell businesses also maintain their own risk matrices and use frameworks that include the local context, in addition to enabling the enterprise-wide system.

### *Telecommunications: Vodafone*<sup>19</sup>

Sustainability risks are managed through three separate risk management processes which combine to provide a comprehensive approach for Vodafone:

- An issues management process tracks issues that affect business performance;
- A reputation management process tracks the sustainability-related views of stakeholders, media and legal entities that could affect Vodafone's reputation; and
- An internal audit control process annually tracks sustainability-related questions completed by Vodafone's locally operated companies and attested by their CEOs.

## III. Driving Capital Productivity

Sustainability offers a variety of opportunities to help companies cut costs, improve efficiencies, and eliminate waste—all of which can help advance the CFO's objectives around optimizing the deployment of capital.<sup>20</sup> Key opportunity areas include:

- **Reducing compliance costs:** Cut or avoid compliance costs by reducing pollution and toxics that otherwise would increase regulatory paperwork, fees, and cleanup obligations.
- **Reducing operating costs:** Drive operational efficiencies through improved internal resource management (e.g., water, waste, energy, carbon, employee engagement) in buildings, manufacturing facilities, data centers, fleet operations, and other functions.
- **Reducing product development costs:** Sustainability tools can drive an increase in resource productivity, reduce energy intensity, reduce materials required as inputs, and extend product and equipment lifetimes.
- **Optimizing supply chains:** Improve resource management and reduce environmental impacts in supply/demand chains by reducing distribution and warehousing costs, costs of producing inputs, fluctuations in resource availability and setting aligned performance goals.
- **Boosting employee productivity:** Sustainability provides an opportunity for employees to be inspired around common objectives and engage in shared business opportunities for eliminating waste, increasing efficiency, improving resource productivity and innovating new processes and products.
- **Driving business processes improvement:** Because sustainability emphasizes cross-functional collaboration and sharing, it can help reduce a “silo” business mentality that leads to duplication of efforts and redundant costs. Investment in information technologies for traceability, for example, has enabled chemical and pharmaceutical companies to track and trace the use of materials across their value chains

to prevent unwanted product use or tampering, enhance security and protection of confidential business information and avoid environmental releases.

- **Reducing cost of capital:** Companies that emphasize sustainability potentially have greater control over the risks described earlier, which can reduce their cost of capital, especially from investors and lenders who factor sustainability criteria into their investment decisions.
- **Opening new financing options:** Companies can identify new ways to finance sustainable operations, e.g., PPAs, off-balance sheet financing, performance-based investments such as social/green impact bonds.

Better resource management of energy, water and waste is the most common of all sustainability-related activities for improving business productivity. In a recent survey, 97% of companies established energy efficiency initiatives, 91% targeted waste, and 85% focused on water priorities.<sup>21</sup>

## CASE STUDY: UPS

At UPS, CFO Kurt Kuehn calls sustainability a “strategic imperative.” It connects directly with his mandate, which is “using resources wisely and ensuring that an enterprise can thrive for decades to come.”<sup>22</sup> As a founding member of UPS’s sustainability steering committee, Kuehn has witnessed myriad business benefits accrue to UPS due to its sustainability strategy. As just one example, the company has cut fuel costs dramatically due to rigorous efforts to drive efficiencies and reduce emissions across its fleet.

Today, Kuehn views sustainability as part of a company’s “enlightened self-interest” and takes an approach rooted in two core beliefs: “that companies have a responsibility to contribute to society and the environment, and that every investment a company makes should return value to the business.”<sup>23</sup>

Kuehn asks himself two questions regularly:

- How do I allocate resources so that our efforts generate maximum societal and environmental benefit for the least incremental expense/investment?
- How can I help our sustainability leaders be more relevant?

These questions essentially reframe the conventional approach to sustainability used in many companies. Rather than maximize the business returns from limited sustainability investments, they try to maximize the *sustainability* returns from business investments. According to Kuehn, a CFO needs to approach sustainability from the viewpoint of how best to apply the company’s strengths and momentum to accelerate positive change. This “going with the flow” approach comprises five steps:<sup>24</sup>

1. **Assess your strengths:** Assess your core competencies, infrastructure and relationships to identify what sustainability partners lack in order to succeed.
2. **Choose your spots:** Use a materiality matrix to map the sustainability issue according to its importance to stakeholders and its influence on business success.
3. **Find momentum:** To identify specific initiatives, focus on areas where your company’s efforts could add momentum to activities that are already in motion.
4. **Build productive partnerships:** Articulate clearly to potential partners that you wish to add your strengths to build momentum and then create clear rules of engagement.
5. **Convene other sources of strength:** Combine strengths and increase momentum by including the extended supply chains and other networks of participating companies.

The key advantage of this approach is that it promotes opportunities that increase corporate profits and improve the planet. By working on sustainability challenges, the company benefits from the external perspective that partners bring to the table. Employees realize that their business skills are also valuable to society, which increases their commitment to the company. By integrating sustainability more closely with their business work, they also identify new ways to improve the business.

## IV. Enabling Innovation and Growth

While sustainability can enable greater control of risks and improve the productivity of capital, it can also potentially provide business value through sustainable business growth.

Opportunities for sustainability-driven business growth include the following:

- **New customer relationships:** Sustainability expands expanding existing customer relationships through new offerings. Since many companies are still in the early stages of their sustainability strategy and implementation, CFOs could explore business growth opportunities from educating their customers on the value of sustainability for their own businesses (see Ecolab case study on page 14).
- **Growth-related innovations:** While improving existing products and enabling greater productivity of capital, sustainability also potentially leads to entirely new sustainability-driven product offerings, business models and business platforms that drive business growth.<sup>25</sup> GE's Ecoimagination initiative is one of the leading examples of driving business growth through sustainable products and services. More recently, new sustainable business models such as those based on the sharing economy are enabling entirely new multibillion-dollar markets and posing a threat to established businesses. Since changes in business models and platforms often change how assets, revenues and costs are recognized, the CFO plays an important role in deciding whether to invest in such innovations.
- **M&A activities:**<sup>26</sup> While sustainability concerns do not typically loom large in M&A activities, they could potentially be important, depending on the industry and region. Business growth through M&A could be challenged by near-term sustainability factors such as impaired assets, expenses for remediation, indemnification, and regulatory and environmental liabilities, and long-term factors such as natural resource constraints. M&A in emerging markets is especially impacted by these factors.
- **New markets for ecosystems services:** In the last decade, many CFOs have had to become familiar

with new sustainability-financing instruments such as carbon offsets, power purchase agreements, and off-balance sheet financing. These instruments have stimulated the growth of new markets for clean tech companies, energy service providers, and others. A newer class of instruments, called payments for ecosystem services (PES), enables corporations to create entirely new markets for ecosystems services that go beyond carbon and energy. While governments and international agencies initially dominated PES markets, corporations are increasingly getting involved. Examples include water funds, environmental (or social) impact bonds, and other instruments where market-determined payments are made to (or by) corporations in exchange for targeted environmental and social outcomes or inputs. Although climate change/PES markets are still evolving, they are expected to grow substantially over time as large financial institutions get involved. For example, the value of climate-themed bonds outstanding in 2013 was \$346 billion, which was almost double the 2012 estimate.<sup>27</sup> JP Morgan and The Nature Conservancy are raising \$1 billion over the next three years to create a market for carbon sequestration, watershed protection, biodiversity conservation, and other services. Corporate CFOs will likely become important players in such arrangements, because of the financial complexity of these instruments.

Despite their variety, sustainability-driven opportunities for business growth are considerably harder for CFOs to leverage, when compared to those for sustainable risk management and sustainable capital productivity. One key reason is that customers in many industries are not yet making sustainability a key priority in their purchasing decisions.

In some industries, such as consumer goods, the corporate finance function is beginning to recognize sustainability's value in driving business growth. As Unilever's Vice President of Investor Relations, Roger Seabrook, pointed out to us, "What sustainability does for us is to make our business grow faster. It gives us opportunities to grow our brands, and to have brands that really have more meaning and traction with consumers."

## CASE STUDY: UNILEVER

Unilever, the Anglo-Dutch consumer products and foods company, is universally recognized as one of the most sustainable companies in the world.<sup>28</sup> While Unilever's situation may not translate directly to companies in other industries or regions, its corporate finance experience with sustainability could nonetheless provide useful pointers for how sustainability can enhance the corporate finance function.

Paul Polman, CEO of Unilever since 2009, has been a highly visible and committed advocate of sustainable business. Jean-Marc Huët, the CFO since 2010, has also been a strong advocate of a sustainable finance function. As Jean-Marc Huët at Unilever told us, "We're very much focused on making sure our finance people can understand and identify the impacts of societal and environmental factors on strategic growth, access to capital markets, on working with governments and regulators, and in making sure we're competitive against our peers."

Unilever's sustainability efforts are described in the Sustainable Living Plan, an ambitious plan launched in 2010 to improve health and wellbeing, reduce the company's environmental impact, and enhance livelihoods. By 2020, the plan's goals are to help more than a billion people improve their health and wellbeing, halve Unilever's environmental footprint across its value chain, and enhance the livelihood of millions of people (especially smallholder farmers).

According to Roger Seabrook, Vice President of Investor Relations at Unilever, sustainability creates both challenges and opportunities for corporate finance.

### *Challenges*

1. **Population growth:** The world's population is projected to grow to nine billion by 2050. Moreover, as emerging markets industrialize and urbanize, billions of new consumers will demand the kinds of consumer goods provided by Unilever. While this presents a significant business opportunity, it will also lead to greater pressure on increasingly scarce resources.
2. **Climate change:** Natural disasters such as flooding and fires caused by extreme weather, in part triggered by climate change, are becoming more frequent and intense. Large, global companies such as Unilever are exposed greatly to these changes, especially in their supply chains. According to Seabrook, "Over the past few years, our business has been very challenged by flooding in Southeast Asia and other natural changes... As our business grows bigger and we're more dependent on emerging markets, we effectively become more exposed to some of the more extreme weather events and other environmental effects that can occur."
3. **The digital revolution:** As billions of people connect with one another through social media, their ability to influence Unilever's activities also increases dramatically. Seabrook told us, "Social media has driven huge changes for business.... In the past, consumers weren't really able to organize and put their points of view across as one. But now with social media, it's very easy for people to join up the dots and put pressure on a business which isn't acting responsibly... So the need to be transparent has become paramount, both in the progress companies are making and the challenges they're facing."

## CASE STUDY: UNILEVER *(continued)*

### *Opportunities*

1. **Risk management:** For Unilever's finance function, sustainability is also helping to manage risk. According to Seabrook, "When we talk about how sustainability is helping to manage risk, we are talking about ensuring continuity and surety of supply of raw materials. We take a long-term view that investing in sustainable sourcing will deliver huge benefits in the long term through improved availability and quality. It's why our work educating and supporting smallholder farmers is so important, because collectively they represent such a significant proportion of production in key crops. For example, around two thirds of the tea we consume is grown by smallholders.
2. **Capital productivity:** From a CFO perspective, sustainability increases capital productivity through cost savings and improved talent recruitment.
  - **Cost savings:** Sustainability can also help reduce costs. According to Seabrook, "The obvious win-wins are in terms of energy consumption and water, resource management, reducing packaging in our products, and smarter logistics solutions for distribution which use less diesel. For example, in Europe we've saved millions of Euros in efficiencies by coordinating thousands of transport movements across road, rail, sea and air to ensure that the vessels carrying our products are as full as possible and that routes are optimized."
  - **Talent recruitment and retention:** Sustainability has also enabled Unilever to improve its talent recruitment and retention. Seabrook told us, "The most amazing thing to us as financial leaders at Unilever is that the Sustainable Living Plan is mentioned again and again as the reason why people want to join. There's a real difference in the attitude and expectations of new generations coming through. They really care about these themes in a way that many of us had not anticipated. Our taking the long-term view, and trying to do good as well as to do well from a financial point of view, is making a huge difference in our ability to attract and retain talent."
3. **Innovation and growth:** Unilever also sees sustainability as a driver of new revenues for the company. According to Seabrook, "That's exactly why Paul Polman has been so passionate about putting the Sustainable Living Plan at the center of what we do, rather than leaving it as a corporate social responsibility addendum. His strong conviction, which is now the way the company thinks and works, is that environmental and social sustainability will enable us to grow our brands faster. For us, that is the fundamental opportunity. Companies that don't get it will quite quickly be at a disadvantage as the world and consumers change. What's really encouraging is the number of examples we now have where this is playing out. For example, the Lifebuoy brand has educated millions of people in developed and emerging markets about the importance of hand washing, and has enjoyed double-digit growth over the past three years."

Unilever has deepened the sustainability-corporate finance relationship by issuing the first-ever "green sustainability bond" in the sterling marketplace. Announced in March 2014 and capitalized at £250,000,000 (due in 2018), the fund provides investor opportunities for reducing greenhouse gas emissions, water consumption and waste generation. Unilever has developed specific goals for each of these investment areas and continues to generate a portfolio of projects in which bond proceeds will be applied.

## CASE STUDY: ECOLAB

Ecolab is the global leader in providing water, hygiene and energy technologies and services for customers in the food, healthcare, energy, hospitality and industrial markets in more than 170 countries around the world. Headquartered in St. Paul, Minnesota, it had sales of \$13 billion in 2013 and employs more than 45,000 people. Ecolab's CFO, Daniel Schmechel, has been with the company for nearly twenty years.

### *Challenges/Opportunities*

For Ecolab's customers, water availability and quality has become an increasing challenge. As Schmechel told us, "Our customers are concerned about their current water use and also the future availability of water to meet their operational needs. We serve as true partners to our customers in delivering on their goals for business growth, operational efficiency, and sustainability. We work with our customers to improve their business processes, to reduce the amount of water that comes into our customers' facilities, and to reduce the need for water in these facilities. And reducing water consumption typically reduces energy consumption too."

However, the lack of effective pricing of water can be an obstacle to making the case for water saving investments. As Schmechel put it, "One of the real challenges we and our customers face in making investment decisions is the issue of appropriately valuing water consumption and availability. Quite simply, water prices often don't reflect the real value of water in a given watershed. If you're not paying the full price for the impact of your decisions, it's very hard to motivate behaviors that are consistent with the impact you want to have. It's been a challenge from a finance perspective—how to make the business case for investments that help you reduce water use? At the end of the day, it is about expected consequences to the business, and what the implications of existing or emerging regulations might be, and the potential for not getting the water you need, even if the price is low."

### *Sustainable Growth Conversations*

Water is a critical input for Ecolab's customers and their ability to grow in emerging markets, and the company understands the importance of delivering solutions that minimize water use.

As Schmechel clarified, "a big part of our business strategy and innovation pipeline is to introduce new products that help customers optimize operational efficiencies and better manage their costs by reducing water and energy use. We work to continually evolve our product and service programs that solve customer challenges and deliver immediate operational and sustainability benefits."

### *Strategic Perspective*

Even if there were better valuation tools for the true cost of water over the long term, it's first important to identify the strategic opportunities and risks. According to Schmechel, "If companies can focus conversations more toward where the big water consumption and availability risks are, and how they can address them from a strategic viability and economic perspective, they are taking the first step to addressing their water challenges. We help our customers determine how to effectively manage their operations and improve their environmental impact. At the end of the day, it is a cost-optimizing value and a strategic play. Honing in on areas of strategic opportunity and risk comes before any conversation about what the appropriate valuation tools may be."

A big challenge in having this strategic conversation, whether internally or with customers, is about understanding the big picture. As Schmechel put it, "This is a 'total foot print' conversation. In many cases, if you don't have the view 'here's how my organization is impacting the whole picture,' any decision at the margin becomes interesting but not compelling." But finding people with this end-to-end knowledge is challenging. As Schmechel put it, "In finance and business execution, including sustainability, having end-to-end people with strong process knowledge is important. A key part of this is having a broad enough experience base to see enough of the total chain and how one thing impacts another."

## V. Success Factors: Lessons from Alcoa and Puma

Sustainability leaders such as Puma (the sporting lifestyle company) and Alcoa (the aluminum company) have found that sustainable business growth strategies need to combine both the head and the heart in order to be successful.<sup>29</sup> Their experiences can be useful for CFOs who want to enable sustainable business growth in their companies:

### ***1. Creating a sustainable growth viewpoint***

The initial focus of Alcoa's sustainability efforts, headed by the President of the Growth division, was to get senior management to recognize that sustainability was not just about environmental, health and safety (EHS) issues. It was also about innovative products and services to meet the sustainability-related challenges their customers in the automotive, aerospace, construction, and other industries were going to face in the future. Eco-friendly business growth became the viewpoint around which senior management coalesced.

For Puma, the starting viewpoint was ethical growth, which emphasized ethical thinking and interactions between employees and business partners. Ethical growth was defined as business growth that was fundamentally fair, honest, positive, and creative, a combination of traits it called the 4Keys. An enterprise-wide initiative called PUMAVision, supported by the CEO and CFO, became the vehicle through which ethical growth was implemented in the company.

### ***2. Initiating changes to managerial and employee mindsets***

Alcoa organized several workshops on sustainability and innovation based on the best global corporate practices of eco-friendly growth. The workshops included group presidents of the midstream and downstream divisions, the CFO of the primary products group, the chief technology officer, and several core business unit presidents and directors. This peer inspiration led to new thinking and action around sustainable growth opportunities that the core business groups could pursue.

Puma used peer inspiration to drive changes in mindsets among their product designers. For example, they developed the Creative Africa Network, the world's largest network of African artists, which generated designs that increased Puma's visibility in leading design magazines. They also recruited a leading industrial designer to create the Clever Little Bag, an innovative and eco-friendly way to package a new line of sporting shoes.

### ***3. Connecting sustainable growth to organizational identity***

At Alcoa, eco-friendly growth became linked to organizational identity through two fundamental questions asked by Alcoa's customers: "Why aluminum?" and "Why Alcoa?" Depending on the industry, aluminum competes against steel, carbon fiber-reinforced polymer (CFRP), and PET. It also provides environmental benefits such as greater recyclability (against CFRP and PET) and more fuel-efficient structures (against steel). Eco-friendly business growth therefore enabled Alcoa to be more identified as a company that produced sustainable products that were the preferred environmental choice for customers.

Puma's sustainable growth strategy resulted in a change to the corporate mission of the company. Before PUMAVision, the corporate mission was "to be the most desirable Sportlifestyle brand in the world." Afterwards, the mission was redefined "to be the most desirable and sustainable Sportlifestyle company in the world." The brand identity became "We are the DJ: the brand that joyfully mixes the influences from sport and lifestyle with the desire to contribute to a better world."

### ***4. Institutionalizing sustainable growth***

At Alcoa, sustainable growth is reinforced through an employee compensation system that includes performance incentives that are linked to sustainability. Also, each business unit is required to report on its sustainability progress to the company's executive council during the quarterly business review meetings.



At Puma, sustainable growth is reinforced through a sustainability index for products that tracks the use of sustainable materials such as organic cotton or recycled polyester, as well as energy emissions, energy consumption, water use, and waste production. Most importantly, Puma pioneered the development and use of the environment profit and loss (EP&L) statement, which tracks the economic costs to society and nature because of Puma and its value chain. These costs, or externalities, measure the environmental impacts of carbon emissions, waste, changes in land use, and energy consumption.

These growth-related practices have enabled Puma and Alcoa to generate billions of dollars of new revenues through sustainable products and services, while pioneering other business innovations:

- By 2015, 50% of Puma's product portfolio is expected to be from sustainable products, representing \$3 billion in annual sales.
- Alcoa, whose chief sustainability officer during 2009-13 was previously the CFO of the primary aluminum group, generated over \$2 billion in revenues annually through new, sustainable products in the automotive, aerospace, and buildings sectors.

## VI. Updating Traditional Financial Analysis Tools and Methods

The business benefits that accrue from sustainability investments—in the form of reduced risks, higher capital productivity, and increased business growth—are not always easily quantifiable. This is especially true when it comes to putting numbers on the value of improved corporate and brand reputation, employee recruitment and retention, societal and environmental externalities, better community relations, and avoided costs of future regulations.

As a result, sustainability-related projects that look exciting on paper don't always pencil out in terms of corporate ROI-related hurdle rates for IRR, payback period, and NPV. In such situations, some corporate leadership teams show a greater willingness to use judgment in order to establish the business case.

Citing the example of water, one contributor explained:

*"A lot of it comes down to judgment. The cost of water today is so far from its economic value in most places that you rarely get a financial payback on water-saving investments. It's not an imminent problem, so it's quite easy to roll it down the road and get on with delivering short-term results... Our initial response was, we must not lower the drawbridge and allow sustainability projects to be treated without the same financial rigor [as other projects]. But it became clear that unless you overlay some judgment, you will not make progress in some areas. We decided to allow longer payback periods for water investments, recognizing that there is a dislocation between the economic cost of water and the actual bill that you get from your local utility company. Unless we act today, we won't be well positioned for a potential situation tomorrow where water is much more expensive or it's scarce to the point where the factory becomes nonviable."*

Some of the newer practices that CFOs are using to incorporate sustainability considerations into the business case for investments include:<sup>30</sup>

- Setting aside dedicated funds for sustainability-related investments
- Qualitatively weighting sustainability-related criteria, often through stakeholder participation, to complement traditional financial analysis
- Using a portfolio approach that bundles high-sustainability projects with high-ROI projects in order to meet hurdle rates
- Using a different (typically lower) hurdle rate for sustainability-related investments, either strategically for a few projects or across all projects (as in the example above)
- Using sustainability-related performance indicators, such as return on resources (ROR), productive to non-productive ratio (P2NP) and others, in addition to traditional indicators of evaluating investment performance
- Making the investment to quantify many of the intangible benefits of sustainability
- Setting an internal price for carbon for all investment projects in order to include the cost of carbon emissions in the calculations

One example of these changing financial considerations for sustainability-related investments is carbon pricing. The Carbon Disclosure Project (CDP) recently studied the use of an internal price for carbon by 29 leading corporations in the US, across sectors such as consumer goods and services, energy, financials, industrials, IT, materials, and utilities.<sup>31</sup> Carbon prices per ton included: \$6-\$7 (Microsoft), \$10-\$20 (Walt Disney), \$14 (Google), \$20 (Xcel Energy), \$30 (Ameren), \$40 (BP, Royal Dutch Shell), and \$60 (Exxon).

These 29 companies considered internal carbon pricing as an important way to prepare for a future of climate change, plan for greater regulatory oversight, conduct strategic planning, guide decisions on capital investment, identify business risks and opportunities, and provide an incentive to maximize operational efficiencies and cost reduction.

### *Next Practices – Integrated Reporting*

At the crux of the sustainable business case is how to describe the variety of ways in which financial investments create business value that goes beyond conventional measures of financial costs and benefits. Reporting such value to corporate investors is an important emerging issue for CFOs.

The Prince of Wales' Accounting for Sustainability (A4S) and the International Integrated Reporting Council (IIRC) have led the efforts, mainly out of Europe, to report value creation that includes financial, societal, environmental, and other costs and benefits. Such integrated reporting can apply to investments in projects as well as corporations.

IIRC has created an integrated reporting approach, called the International <IR> Framework<sup>34</sup>, whose main purpose is to explain to investors how an organization creates value over time. A wide variety of stocks of value, or capital, are described, including financial, manufactured, intellectual, human, social and relationship, and natural capital.<sup>35</sup> The framework describes a set of guiding principles and content elements that should be included in reports to providers of financial capital.

In the US, the Sustainability Accounting Standards Board (SASB) has led the efforts for creating standards for disclosing material sustainability issues in mandatory SEC filings. These standards are being developed for more than 80 industries across 10 sectors.

Currently, both the <IR> Framework and the SASB standards are at early stages of development and have not yet coalesced into clear accounting practices that CFOs could implement. Nevertheless, they are worth tracking by CFOs as they gather momentum.

### *Next Practices – Natural Capital Accounting*

Over the past five years, a movement has gained significant traction to assess the financial value of healthy natural ecosystems to businesses—and to monetize the damage their companies cause to those systems.

Each year, our planet's complex land and water systems produce an estimated \$72 trillion worth of free goods and services essential to a thriving business community and well-functioning global economy. Earth's natural capital infrastructure performs vital services: it purifies massive amounts of drinking water and breathable air, generates abundant and stable supplies of raw materials and commodities integral to supply chains, replenishes fertile soil and fish stocks needed to meet growing food demand, and protects infrastructure from the worst effects of floods, droughts, fires and extreme weather events.<sup>32</sup>

In 2012, KPMG and Trucost estimated that companies would lose 41 cents for every \$1 in earnings if they had to pay for their own environmental bills, to date dismissed as academic externalities.<sup>33</sup> With the likelihood of more analysts, investors and activists putting numbers on these externalities in years ahead, "natural capital accounting"—i.e. assessing the financial and non-financial costs and benefits of ecosystem systems for a business—is emerging as a next practice for leading companies.

Several of the world's largest companies — Dow Chemical and Puma among the earliest — have been pioneering methods in natural accounting. Puma issued a first-of-its-kind "Environmental Profit & Loss Account" (EP&L) to measure and place a monetary value on the use of ecosystem services across its entire supply chain as explained on page 15. That same year, Dow Chemical launched a landmark partnership with The Nature Conservancy to develop a methodology for monetizing not only the company's impacts (positive and negative) on the environment as Puma's EP&L does, but also what healthy natural ecosystems do for Dow's business so it can make better business and investment decisions.

The Natural Capital Hub ([www.naturalcapitalhub.org](http://www.naturalcapitalhub.org)) is a leading source of case studies and business practices used by global corporations on natural capital accounting and management.

## CASE STUDY: THE WALT DISNEY COMPANY

### *CFO Role*

CFO Jay Rasulo has responsibility for both the company's finances and corporate citizenship at Disney. This connection goes back to Disney's founding where financial performance and corporate citizenship were considered inseparable. As Rasulo said to us, "At Disney, citizenship is more than a set of guidelines or focus areas; it is an integral part of our businesses and our growth strategy. It drives competitive differentiation and strengthens our relationships with customers and the communities in which we operate."

### *Challenges and Opportunities*

At Disney, the CFO office sees sustainability as an input to content, brand decisions, and capital authorization requests, along with other key business areas. Sustainability is not a "sidecar" activity but is instead an important driver of business challenges and opportunities:

- **Business challenges:** Disney needs to protect against threats to its brand and reputation in a context where consumers are increasingly aware of a corporation's impacts on the environment and society. For Disney, the answer is greater transparency on these impacts and its efforts to address them.
- **Business opportunities:** The new markets being created in emerging countries are big opportunities for Disney. Delivery of content through mobile technology is a specific opportunity, since these devices are often the only way to reach consumers. They also provide an opportunity for business growth through digital offerings, which have less environmental impact than growth through material goods.

### *Costs and Benefits of Sustainability*

- Disney sees sustainability as a long-term investment that has strategic value. The primary value proposition is that it strengthens corporate reputation and relationships with consumers. As a result, the CFO's office is open to discussing sustainability initiatives that don't have immediate payback.
- Disney's approach to sustainability is to create and institutionalize a process that generates data, measures the results, and enables executives to set goals.
- The concept of "collateral benefits" to society and nature is important to Disney. It motivates Disney's decisions on issues such as zero waste to landfills, reduced carbon emissions, conversion of fleets to lower-carbon fuels, and revenues from healthier foods.
- In addition to benefitting corporate reputation, the business advantage of seeking collateral benefits is that it can also stimulate innovation within the company and help save money while benefiting society and nature. It has enabled Disney with newer ways of framing and solving challenges related to sustainability.
- Disney has created a Climate Solutions Fund, funded by an internal carbon price that is tied to the emissions of business units. This fund has invested more than \$48 million in certified carbon-offset projects around the world. These projects have been located in countries such as Inner Mongolia, Peru, China, Democratic Republic of Congo, and US states such as Virginia and California. The internal carbon pricing is also an incentive for Disney engineers to create innovative ways to make internal operations more energy-efficient in their theme parks, cruise ships and corporate buildings.

## VII. Conclusion: Opportunities for the CFO to Engage

In recent years, the CFO role has expanded significantly beyond that of a high-powered accountant to one of co-decision maker in corporate governance and business strategy. This expanding purview has necessarily required a bigger lens on the variables and trends that could affect business as usual—with sustainability-related issues becoming increasingly paramount. CFOs with insight into sustainability megatrends will help their organizations chart a smarter course to compete effectively in a world where sustainability-related challenges become more dominant.

As the business case for integrating sustainability into a company's core value proposition gets stronger, we expect more CFOs to follow the lead of the farsighted executives we encountered in our research. **CFOs who grasp the potential for sustainability to maximize business value for their organizations can play a vital complementary role in the following areas of corporate strategy and execution:**

### *Materiality Assessment*

CFOs could explore ways to improve their business by participating actively in assessment of the materiality of sustainability factors. Materiality assessment helps them identify the sustainability-related challenges and the magnitude of their impacts on business performance, which helps focus them on specific areas of improvement. For example, BASF creates a materiality matrix that maps 38 sustainability-related issues against their importance to the company and its stakeholders. As Lauralee Martin, COO and CFO of Jones Lang LaSalle says, "I think this is one of the things that chief financial officers are increasingly watching, which they may not have been doing before."<sup>36</sup>

### *Risk Assessment*

One of the CFO's chief responsibilities is to assess and reduce long-term risks and avoid unfortunate surprises in the future. CFOs can help their organizations pioneer new

ways to evaluate the riskiness of all business investments because of future resource constraints, threats to operational readiness, supply chain disruption, and loss in future value of assets, to name a few. Some CFOs are spending more time and resources understanding and anticipating these hidden financial risks in order to be effective. As UPS CFO Kurt Kuehn says: "a sustainability lens presents a new way of looking at forecasts and risks."<sup>37</sup>

### *Data Collection*

As experts in data collection and analysis, CFOs can help their organizations get smarter about how to better collect the sustainability-related data—on emissions, energy, water, waste, ecosystem dependencies, and ecosystem impacts—that can enhance real-time decision making and strategic planning. Some CFOs already see this kind of data collection as an important part of their own mission. As Armin Wiersma, Chief Financial Officer, Kelag says, "We in finance are directly leading the collection of all sustainability-related data from across the business. We provide the platform, and guide our colleagues in other departments on data collection and calculation."<sup>38</sup>

### *Business Decision Making*

CFOs can help develop smarter tools and methods to help business functions better integrate sustainability-related costs and benefits—often difficult to quantify or monetize—into financial analysis and decision making. As Roger Seabrook, VP Investor Relations at Unilever told us, "We have a big role in terms of working with colleagues in R&D, marketing, sales and supply chain to help them translate these [sustainability-related] factors into decisions relating to the development and commercialization of our products... That's what it all comes down to, trying to help the business as a whole make better decisions."

## Take the Next Step

Consult the following resources for details on practical tools and methods to integrate sustainability factors into financial analysis and decisions:

**The Prince's Accounting for Sustainability (A4S) CFO Leadership Network** practical guides:

- "Managing future uncertainty: an introduction to integrating risks resulting from macro sustainability trends into business decision making"
- "CAPEX: a practical guide to embedding sustainability into capital investment appraisal"
- "Enhancing investor engagement: a practical guide for investor relations teams to engage on the drivers of sustainable value"
- "Natural and social capital accounting: an introduction for finance teams"

Available at: [www.accountingforsustainability.org](http://www.accountingforsustainability.org)

**"Show Me the Money: Demonstrating Green Business Value to Skeptics"** by P.J. Simmons and M.R. Rangaswami (Corporate Eco Forum, 2009). Includes a detailed chart (pp. 11-17) outlining various tools and approaches to monetizing sustainability-related costs and benefits. Available at: <http://bit.ly/1DQbT2k>

**"Chapter 17: Accounting and Finance,"** in *The Green to Gold Business Playbook* by Daniel C. Esty and P.J. Simmons (John Wiley & Sons, 2011), pp. 297-311.

## ENDNOTES

- <sup>1</sup> "Global Risks 2015," World Economic Forum, 2015 ([http://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_2015\\_Report15.pdf](http://www3.weforum.org/docs/WEF_Global_Risks_2015_Report15.pdf))
- <sup>2</sup> S. Bonini, S. Swartz, "Profits with Purpose: How Organizing for Sustainability Can Benefit the Bottom Line," McKinsey, 2014, page 12 (<http://bit.ly/1xMPFeX>)
- <sup>3</sup> "Resource Revolution: Tracking Global Commodity Market," McKinsey Global Institute, Sept 2013
- <sup>4</sup> "The 21st Century Investor: CERES Blueprint for Sustainable Investing," CERES, June 2013 (<http://www.ceres.org/resources/reports/the-21st-century-investor-ceres-blueprint-for-sustainable-investing-summary/view>)
- <sup>5</sup> Helle Bank Jorgensen, "Blackrock, Unilever, PVH on sustainability from investors to boards of directors," Greenbiz, March 11, 2015 (<http://www.greenbiz.com/article/Blackrock-Unilever-PVH-investors-boards-business-sustainability>)
- <sup>6</sup> "Proxy Preview 2014," As You Sow, 2014
- <sup>7</sup> D.C. Esty, P.J. Simmons, *The Green to Gold Business Playbook*, John Wiley & Sons, 2011, pg. 297, citing Kurt Kuehn, "Five Ways to Convince Your CFO" Greenbiz, April 13, 2010 (<http://www.greenbiz.com/blog/2010/04/13/five-ways-convince-your-cfo-sustainability-pays>)
- <sup>8</sup> "Sustainability: Why CFOs are driving savings and strategy," Deloitte, Sept 13, 2012 ([http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/CFO\\_Center\\_FT/us\\_cfo\\_cfo-Insights\\_sustainability\\_091312.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/CFO_Center_FT/us_cfo_cfo-Insights_sustainability_091312.pdf))
- <sup>9</sup> "Stranded Carbon Assets," Generation Foundation, October 2013 (<http://genfound.org/media/pdf-generation-foundation-stranded-carbon-assets-v1.pdf>); and [http://en.wikipedia.org/wiki/Stranded\\_asset](http://en.wikipedia.org/wiki/Stranded_asset)
- <sup>10</sup> "Unburnable Carbon 2013: Wasted Capital and Stranded Assets," Carbon Tracker Initiative and Grantham Research Institute, 2013 (<http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2014/02/PB-unburnable-carbon-2013-wasted-capital-stranded-assets.pdf>)
- <sup>11</sup> Joel Makower, "Exxon, Stranded Assets, and the New Math," April 2014, Greenbiz (<http://www.greenbiz.com/blog/2014/03/24/exxon-stranded-assets-and-new-math>)
- <sup>12</sup> "Financial Stability and Systemic Risks" IISD Report, June 2102 ([http://www.unepfi.org/fileadmin/documents/Lenses\\_\\_Clocks\\_web.pdf](http://www.unepfi.org/fileadmin/documents/Lenses__Clocks_web.pdf))
- <sup>13</sup> "Making Headway in a Volatile World," Ernst & Young, Sept 2011 ([http://www.ey.com/Publication/vwLUAssets/Making\\_headway\\_in\\_a\\_volatile\\_world\\_-\\_the\\_challenges\\_of\\_achieving\\_sustainable\\_growth/\\$FILE/makingheadway.pdf](http://www.ey.com/Publication/vwLUAssets/Making_headway_in_a_volatile_world_-_the_challenges_of_achieving_sustainable_growth/$FILE/makingheadway.pdf))
- <sup>14</sup> "Enterprise Risk Management – Integrated Framework," Committee of Sponsoring Organizations of the Treadway Commission, Sept 2004 ([http://www.coso.org/documents/coso\\_erm\\_executivesummary.pdf](http://www.coso.org/documents/coso_erm_executivesummary.pdf))
- <sup>15</sup> "Risk Adjusted Forecasting and Planning," Deloitte 2012 (<http://www2.deloitte.com/ie/en/pages/energy-and-resources/articles/risk-forecasting-planning-energy.html>)
- <sup>16</sup> M. Pergler, A. Rasmussen, "Making Better Decisions About the Risks of Capital Projects," McKinsey Insights & Publications, May 2014 ([http://www.mckinsey.com/insights/corporate\\_finance/making\\_better\\_decisions\\_about\\_the\\_risks\\_of\\_capital\\_projects](http://www.mckinsey.com/insights/corporate_finance/making_better_decisions_about_the_risks_of_capital_projects)) ([http://www.mckinsey.com/insights/corporate\\_finance/making\\_better\\_decisions\\_about\\_the\\_risks\\_of\\_capital\\_projects](http://www.mckinsey.com/insights/corporate_finance/making_better_decisions_about_the_risks_of_capital_projects))
- <sup>17</sup> "Swiss Re's Sustainability Risk Framework," Swiss Re, 2012 ([http://media.swissre.com/documents/Swiss\\_Re\\_Sustainability\\_Risk\\_Framework.pdf](http://media.swissre.com/documents/Swiss_Re_Sustainability_Risk_Framework.pdf))
- <sup>18</sup> "Sustainability Integration Into Business Processes," Stratos, July 2007, pg. 12 ([http://www.stratos-sts.com/wp-content/uploads/2013/04/2007\\_07\\_Sustainability-Integration-Short.pdf](http://www.stratos-sts.com/wp-content/uploads/2013/04/2007_07_Sustainability-Integration-Short.pdf))
- <sup>19</sup> *Ibid.*, pg. 12
- <sup>20</sup> See also: P.J. Simmons, M.R. Rangaswami, "Show Me The Money", Corporate Eco Forum, November 2009 (<http://www.corporateecoforum.com/wp-content/uploads/2013/06/Show-Me-the-Money-Overview.pdf>); and D.C. Esty, P.J. Simmons, *The Green to Gold Business Playbook* (Chapter 4: Making the Internal Business Case for Going Greener), John Wiley & Sons, 2011
- <sup>21</sup> S. Bonini, S. Swartz, "Profits with Purpose: How Organizing for Sustainability Can Benefit the Bottom Line," McKinsey, 2014, page 12 (<http://bit.ly/1xMPFeX>)
- <sup>22</sup> D.C. Esty, P.J. Simmons, *The Green to Gold Business Playbook* (Chapter 4: Making the Internal Business Case for Going Greener), John Wiley & Sons, 2011, pg. 297
- <sup>23</sup> Kurt Kuehn and Lynnette McIntire, "Sustainability a CFO Can Love," Harvard Business Review, April 2014 (<https://hbr.org/2014/04/sustainability-a-cfo-can-love/ar/1>)
- <sup>24</sup> "Sustainability a CFO Can Love," by Kurt Kuehn with Lynnette McIntire, Harvard Business Review, April 2014 (<http://hbr.org/2014/04/sustainability-a-cfo-can-love/ar/1>)
- <sup>25</sup> R. Nidumolu, C.K. Prahalad and M.R. Rangaswami, "Why Sustainability is Now the Key Driver of Innovation," Harvard Business Review, Sept 2009 (<http://hbr.org/2009/09/why-sustainability-is-now-the-key-driver-of-innovation/>)
- <sup>26</sup> "Sustainability and M&A", Deloitte, 2010 ([http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/MA/us\\_ma\\_M&A%20and%20Sustainability\\_102110.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/MA/us_ma_M&A%20and%20Sustainability_102110.pdf))
- <sup>27</sup> "Bonds and Climate Change," Climate Bonds Initiative, 2014 ([http://www.climatebonds.net/files/uploads/2013/08/Bonds\\_Climate\\_Change\\_2013\\_A4.pdf](http://www.climatebonds.net/files/uploads/2013/08/Bonds_Climate_Change_2013_A4.pdf))
- <sup>28</sup> "The 2014 Sustainability Leaders," GlobeScan/Sustainability, 2014
- <sup>29</sup> R. Nidumolu, K. Kramer, J. Zeitz, "Connecting Heart to Head: A Framework for Sustainable Growth", Stanford Social Innovation Review, Winter 2012 ([http://www.ssireview.org/articles/entry/connecting\\_heart\\_to\\_head](http://www.ssireview.org/articles/entry/connecting_heart_to_head))
- <sup>30</sup> See for example, P.J. Simmons, M.R. Rangaswami, "Show Me The Money", Corporate Eco Forum, November 2009 (<http://www.corporateecoforum.com/wp-content/uploads/2013/06/Show-Me-the-Money-Overview.pdf>); D.C. Esty, P.J. Simmons, *The Green to Gold Business Playbook* (Chapter 4: Making the Internal Business Case for Going Greener), John Wiley & Sons, 2011; A.S. Winston, *The Big Pivot* (Chapter 9: Redefine Return on Investment to Make Better Investment Decisions), Harvard Business Review Press, 2014
- <sup>31</sup> "Use of Internal Carbon Price by Companies as Incentive and Strategic Planning Tool," CDP, December 2013 (<https://www.cdp.net/CDPResults/companies-carbon-pricing-2013.pdf>)
- <sup>32</sup> P.J. Simmons, "The Next Global Debt Crisis," September 20, 2011, Forbes (<http://www.forbes.com/sites/csr/2011/09/20/the-next-global-debt-crisis/>); and [www.naturalcapitalhub.org](http://www.naturalcapitalhub.org)
- <sup>33</sup> "Expect the Unexpected: Building Business Value in a Changing World," KPMG, 2011 ([www.kpmg.com/dutchcaribbean/en/Documents/KPMG%20Expect\\_the\\_Unexpected\\_ExtctveSmmry\\_FINAL\\_WebAccessible.pdf](http://www.kpmg.com/dutchcaribbean/en/Documents/KPMG%20Expect_the_Unexpected_ExtctveSmmry_FINAL_WebAccessible.pdf))
- <sup>34</sup> "The International <IR> Framework", IIRC, December 2013 (<http://www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf>)
- <sup>35</sup> The International <IR> Framework, 2013
- <sup>36</sup> "The Chief Financial Officer's Perspective," Accenture, 2013, pg. 12 (<http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-Sustainable-Organization-CFO-Perspective.pdf>)
- <sup>37</sup> D.C. Esty, P.J. Simmons, *The Green to Gold Business Playbook*, John Wiley & Sons, 2011, pg. 297, citing Kurt Kuehn, "Five Ways to Convince Your CFO" Greenbiz, April 13, 2010 (<http://www.greenbiz.com/blog/2010/04/13/five-ways-convince-your-cfo-sustainability-pays>)
- <sup>38</sup> *Ibid.*, pg. 11



Corporate Eco Forum (CEF) is an invitation-only membership organization for large companies that demonstrate a serious commitment to environment as a business strategy issue. CEF's mission is to help accelerate sustainable business innovation by creating the best neutral space for business leaders to strategize and exchange best-practice insights. Members represent 18 industries and have combined revenues exceeding \$3 trillion.

[www.corporateecoforum.com](http://www.corporateecoforum.com)

World Environment Center (WEC) is an independent, global non-profit, non-advocacy organization that advances sustainable development through the business strategies and practices of its member companies and in partnership with governments, multi-lateral institutions, non-governmental organizations, universities and other stakeholders. WEC's mission is to promote business and societal value by advancing solutions to sustainable development-related challenges.

[www.wec.org](http://www.wec.org)