Leading and Lagging Indicators Can Help You Build a Sustainable Organization

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Executive Summary

Where will your business be in 10 years? 20? Longer? Will your organization still exist? Will it be healthy—or foundering? Is it possible to make any sort of realistic prediction regarding the matter?

Maybe so. Of course, no one has a flawless crystal ball, and there are always things that can't be anticipated, but the emerging business practice of sustainability accounting can give your organization a much more accurate idea of whether your business practices are contributing to continued growth—or an untimely demise.

Unlike financial accounting, sustainability accounting is not a straightforward matter of balance sheets and dollar figures. It doesn't even consistently involve quantifiable measures of performance. How, then, can you account for—and track the effectiveness of—your sustainability efforts? One way is to track your sustainability metrics via two metrics:

1. **Leading indicators**, which are tracked on the front end of initiatives as a way to preemptively assess and manage risk, and
2. **Lagging indicators**, which are used to assess the outcomes of initiatives on the back end.

Performance Indicators, Risk, and Long-Term Survival

Key performance indicators (KPIs) are often used to craft reports on various aspects of a company's performance for regulators or shareholders. Most commonly, these have been direct indicators of an organization's financial health, such as balance sheets and income statements that are reported to shareholders and compliance indicators that are reported to regulators. They are also used in executive compensation schemes. Unfortunately, the practice of linking compensation primarily or exclusively to financial performance metrics can be detrimental to an organization's long-term performance. Such a compensation scheme "incentivizes CEOs to maximize short-term financial performance … emphasizing such measures can encourage executives to pay too much attention to short-term results at the expense of long-term value creation."[1]

In addition, an overemphasis on financial performance metrics coupled with a failure to fully identify, characterize, and control risks before their impact turns up on a balance sheet can result in crippling damage to the organization.

For example, failure to identify and manage supply-chain risks can result in operational and production delays, as well as damage to an organization's reputation. Consider the case of the major chocolate producers that have struggled with lawsuits and damage to their reputations over issues of child labor in the harvesting of cacao beans—and who, in attempting to solve those problems, may face difficulties getting an adequate supply of raw materials for their product.[2]

Risk management failures can also result in problems for organizations that are required to provide information to shareholders about major hazard risks. Organizations that fail to provide material information about risks could find themselves liable under Section 10(b) of the Securities Exchange Act of 1934. That statute (15 U.S.C. § 78j(b)) makes it unlawful for organizations to mislead shareholders. Organizations may find themselves subject to civil lawsuits filed by shareholders, who can argue that insufficient disclosure of risk results in the purchase of shares at artificially high share prices.

Enter sustainability accounting as a way of addressing these concerns. Sustainability accounting is a deliberate attempt to measure indicators of business performance and risk that cannot yet be accounted for in dollars and cents.

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[1] O'Connell, Vincent, and Don O'Sullivan (2016). "Are Nonfinancial Metrics Good Leading Indicators of Future Financial Performance?" MIT Sloan Management Review. Retrieved July 27, 2017 from http://sloanreview.mit.edu/article/are-nonfinancial-metrics-good-leading-indicators-of-future-financial-performance/.

[2] O'Keefe, Brian (2016). "Inside Big Chocolate's Child Labor Problem." Fortune. Retrieved July 27, 2017, from http://fortune.com/big-chocolate-child-labor/

Organizations use sustainability metrics to account for the impact of environmental performance indicators on a company's overall performance, such as "green" business practices, and social performance indicators, such as attempts to eliminate child labor from the organization's supply chain. These indicators are considered, in the realm of sustainability accounting, to be forms of "nonfinancial capital" that can have a measurable effect on an organization's long-term survival.[3]

In fact, shareholders are becoming increasingly vocal about demanding this kind of information as part of their investment decision-making process. Called "shareholder activism," it is changing business practices in many high-profile organizations. Members of the Ceres Investor Network, for example, "pressure stock exchanges and capital market regulators to improve climate and sustainability risk disclosure, and advocate for stronger climate, clean energy and water policies at all levels of government."[4]

As with indicators of financial performance, sustainability metrics are classified into "leading" and "lagging" indicators. In other words, some of them are predictive ("leading" indicators), enabling organizations to more accurately identify and manage risks before they impact performance. Others are confirmatory ("lagging" indicators), enabling an organization to assess the outcomes of a given business strategy. Both types of indicators can be important in your efforts to create a sustainable business model.

Lessons from Deepwater Horizon

Unfortunately, identifying effective leading and lagging indicators is not necessarily an obvious or straightforward process. It is, rather, an evolving field of study. Consider as an example the case of Deepwater Horizon. On April 20, 2010, the Deepwater Horizon drilling rig was located 50 miles off the Louisiana coast, completing temporary abandonment activities at the Macondo oil well. An uncontrolled release of hydrocarbons—a "blowout"—from the well led to a series of explosions and a fire that killed 11 people, injured 17 more, and released 4 million barrels of oil into the Gulf of Mexico, causing extensive damage to marine life and nearby coastal areas.

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[3] Sustainability Accounting Standards Board (2017). Fundamentals of Sustainability Accounting. Retrieved July 26, 2017, from http://bit.ly/2v9BF2U

[4] Ceres Investor Network on Climate Risk and Sustainability. Accessed July 27, 2017, from http://www.ceres.org/investor-network/resolutions

On April 20, 2016, the U.S. Chemical Safety and Hazard Investigation Board (CSB) issued its final report on the Macondo well blowout. In its report, The CSB looked at the nonfinancial performance indicators that were being tracked by the two major corporations responsible for the Macondo well and Deepwater Horizon—BP and Transocean–and found them wanting, despite the fact that in most respects, their documented policies met or exceeded existing regulatory requirements for risk management.[5] The "leading indicators" used by BP, for example, were actually lagging indicators that had been misidentified—as such, they lacked the predictive value that a leading indicator should provide. In addition, the safety indicators used by BP—the total recordable injury rate, fatality rate, and near-miss frequency rate—were very tightly focused on personal safety and correlated poorly with major accident prevention. [6]

To improve the shareholder utility and predictive value of nonfinancial indicators, the CSB included recommendations aimed at an independent nonprofit organization, the Sustainability Accounting Standards Board (SASB). The SASB develops and publishes voluntary standards that enable organizations to evaluate and report nonfinancial indicators of long-term organizational viability, including environmental stewardship, social policies, and corporate governance.

The CSB recommended that the SASB revise its sustainability standards to better predict the possibility of major disasters like the Macondo well blowout. Specifically, the CSB recommended that the SASB develop additional leading and lagging indicators "and emphasize the greater preventive value of disclosure of a company's use of leading indicators to actively monitor the health and performance of major accident safety barriers and the management systems for ensuring their effectiveness."[7] Apparently, it is CSB's understanding that the purpose of tracking such indicators should, at least in some measure, serve to control risk and create a sustainable organization. However, the CSB felt that the existing leading and lagging indicators published by the SASB were inadequate for the purpose.

The SASB is one of the world's leading sustainability standards-setting organizations. If even SASB's recommended indicators have turned out to be of limited effectiveness, how can organizations that depend on third-party standards expect to get it right?

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[5] U.S. Chemical Safety and Hazard Investigation Board (2017). Investigation Report, Volume 3: Drilling Rig Explosion and Fire at the Macondo Well. Csb.gov. Introduction, p. 20 (Retrieved July 24, 2017, from http://www.csb.gov/assets/1/19/Macondo_Vol3_Final_20160527.pdf)

[6] Ibid., chapter 8.0, p. 226.

[7] U.S. Chemical Safety and Hazard Investigation Board (2017). Investigation Report, Volume 3: Drilling Rig Explosion and Fire at the Macondo Well. Csb.gov. Chapter 5.4, p. 224. Retrieved July 24, 2017, from http://www.csb.gov/assets/1/19/Macondo_Vol3_Final_20160527.pdf

Limits and Uses of Lagging Indicators

Organizations have long relied on lagging indicators to assess how successfully they are accomplishing their goals. Lagging indicators measure change that has already occurred; for example, the unemployment rate and labor costs are lagging indicators of how the economy is doing. Lagging indicators show you what has already happened.

Many traditional measures of business performance are lagging indicators. CSB's report on the Macondo well blowout, for example, notes that most of the performance indicators used by BP were lagging indicators. To assess workers' safety performance, BP tracked fatalities, recordable injuries and illnesses, and days away from work. To assess the safety of its operation, BP tracked process safety incidents, fires, and explosions; losses of primary containment; flammable gas releases; and the number and volume of oil spills. None of those indicators could predict these problems, giving BP an opportunity to control those risks.[8]

What, then, is the value of lagging indicators?

Lagging indicators are valuable because:

- *They are easy to identify, measure, and compare*. Because a lagging indicator is a measure of outcome, it is often readily quantifiable: How many accidents did we have this quarter? How much waste did we generate? How much energy did we use compared to last quarter?
- *They enable you to set organizational goals*. Because the outcome is what you're working toward, lagging indicators make handy goals.
- *They can be used to drive behaviors*. Be careful with this one because the goal will indeed drive the behavior—as many managers have learned to their chagrin. Setting a goal of zero reported incidents, for example, may just suppress reporting, meaning that you don't hear about things you really need to know. So, when you're selecting an indicator by which to set a measurable goal, ask yourself: What is the easiest path to this goal? That's the one you can expect workers to take, so make sure it's the one you want to see

[8] Ibid., Chapter 3.2.1, pp 137-139

Developing Strong Leading Indicators

Leading indicators are desirable for their ability to identify a trend while there is still time to react—either to strengthen a positive trend or reverse a negative one—and to consequently reduce risk and enhance overall organizational sustainability. Lagging indicators can tell you what you've accomplished; leading indicators can help you chart a course forward. As the CSB observed in its Macondo well report, "Preventing incidents requires a shift in focus from past successes to current risk reduction activities. Ultimately, risk reduction efforts must be continually accounting for inevitably changing circumstances."[9] Unfortunately, many organizations have found that it can be difficult to identify and implement consistently actionable leading indicators, and benchmarking for leading indicators can be sporadic and nonstandardized.[10]

Research from the Campbell Institute at the National Safety Council determined that effective leading indicators provide "timely information that can be effectively turned into action."[11]

Leading indicators, according to the Campbell Institute's research, tend to fall into three broad categories:

- *Operations based*. Some indicators can tell you how well your infrastructure is functioning. Examples include measures of compliance, risk assessments, training, and management of change.
- *Systems based*. Some indicators can tell you whether your management systems are on track, for example, hazard analyses, preventive and corrective actions, worker perception surveys, and hazard identification and recognition metrics.
- *Behavior based*. These can measure the behavior of either individuals or groups in the workplace, such as off-the-job safety, leadership engagement, and area walkarounds

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[9] U.S. Chemical Safety and Hazard Investigation Board (2017). Investigation Report, Volume 3: Drilling Rig Explosion and Fire at the Macondo Well. Csb.gov. Introduction, p. 16. Retrieved July 24, 2017, from http://www.csb.gov/assets/1/19/Macondo_Vol3_Final_20160527.pdf.

[10] Inouye, Joy. Practical Guide to Leading Indicators: Metrics, Case Studies, and Strategies (2015). The Campbell Institute at the National Safety Council. Introduction, p. 3. Retrieved July 27, 2017, from http://www.nsc.org/CambpellInstituteandAwardDocuments/WP-PracticalGuidetoLI.pdf.

[11] Ibid., "Methods," p. 4

Accounting for Sustainability

In order to build a sustainable organization, you need a way to account for the measures that affect long-term survivability. That means having a strong grasp not just of your organization's current financial strength but also of the indicators that can affect whether your organization is at risk of environmental and social missteps that can lead to catastrophic losses. Understanding how to identify and utilize leading and lagging indicators in those areas is a vital part of building a sustainable organization.