

The Single Bottom Line

Daniel Altman*

Jonathan Berman**

June 13, 2011

ABSTRACT

With a long enough time horizon, many social benefits created by the operations of for-profit companies can generate private benefits for the companies themselves. As a result, executives planning for the long term create social benefits in the most efficient way when they target a single bottom line – profit. Though calculating the private value of social initiatives under a single bottom line requires the use of estimates and probabilities, this approach offers greater efficiency in decision-making and more sustainable social benefits than schemes such as corporate social responsibility, creating shared value, and double- or triple-bottom lines.

The authors are grateful to Andrew Stern, John Perry Barlow, Jane Metcalfe, and Peter Schwartz for comments on this material and to Vijay Vaitheeswaran for providing the impetus for this paper.

* Department of Economics, Stern School of Business, New York University and Dalberg Global Development Advisors (daniel.altman@dalberg.com)

** Dalberg Global Development Advisors

1. Introduction

Capitalists and corporations in wealthy countries have adopted several ways of promoting social and economic development in the places where they do business. The personal philanthropy of successful industrialists at the turn of the twentieth century eventually became a part of corporate structures. Beginning in the 1950s, definitions of “corporate social responsibility” – the idea that for-profit companies should be good citizens in their communities – began to proliferate in discussions of the role of business in society, followed in the 1990s by “double and triple bottom lines.” The latter concept encouraged companies to add social and environmental impact to profit as their primary objectives. Most recently, Porter and Kramer [2011] proposed the idea of “creating shared value” (CSV) as a way of combining a company’s traditional objectives with additional benefits for society.

This paper argues that all of these concepts are inefficient workarounds or substitutes that should ultimately lead back to a single bottom line – profit – with a long time horizon and rational expectations. Executives targeting profitability with a sufficiently long time horizon will make investments that generate social benefits because these investments serve the interests of their companies. Moreover, companies that take this approach will generate social benefits more efficiently and sustainably than those using typical strategies for CSR or CSV.

This approach will not solve every market failure associated with public goods or positive externalities generated by the private sector. As Drucker [1984] argues, there is still a need for government, consumer movements, or other forms of collective action to

influence the equilibria in markets where for-profit companies are the most efficient producers of social benefit and are underproviding it. Putting these influences to one side, we argue that for-profit companies will only maximize the benefits they generate for society when they pursue investments that support a single bottom line of profitability in the long term. When executives' time horizons are sufficiently long, social benefits will arise automatically from these investments.

2. A Brief History of Capitalists and Social Benefits

As Western countries industrialized in the late nineteenth century, creating social benefits for their communities was not often a high priority. Companies polluted freely, exploited workers, and used natural resources without concern for their sustainability. The telegraph and telephone allowed investors to buy shares in companies far removed from their hometowns, so the divide between capitalists and workers became geographic as well as economic.

The first sign of a turnaround came with the philanthropists of the booming economies in the United States and elsewhere. Andrew Carnegie, Paul Mellon, John D. Rockefeller, and others led a wave of philanthropy, setting an example as wealthy capitalists giving back to the countries that housed and supported their businesses. They built universities, libraries, museums, hospitals, and the like, and they also set a trend: possessions were no longer enough to guarantee status amongst the upper class of the industrializing world's major cities; one had to be a patron of the community as well.

(Of course, philanthropy was nothing new. Ancient leaders of Rome, China, and other empires showed their magnanimity when it was in their interest, when it made them feel good, or when their gods told them to do so. The philanthropic activities of family-

conglomerates like the Medicis, too, could be considered analogs or precursors to what Bishop and Green [2008] call “philanthrocapitalism.”)

Philanthropy soon made the jump from individual decisions to corporate decisions, and companies – especially those concerned about their public image – started to spend their profits on the same sorts of projects. They also began to run more hands-on programs with worthy goals: cleaning up city parks, tutoring poor children, collecting money for international charities, etc. These programs were not just philanthropy; they also involved the companies’ employees in activities that could help morale and improve loyalty.

Philanthropy was later joined (and in some cases supplanted) by corporate social responsibility, a concept whose popularity became widespread in the 1990s, though Carroll [1999] traces its roots back to the 1950s. Though it has had numerous definitions, perhaps the most complete was also proposed by Carroll: a company demonstrates CSR by doing what society expects of it – making profits, obeying the law, behaving ethically, and taking additional roles in society according to the norms of the day.

CSV fits neatly into this definition of CSR. It is, in fact, a recognition that the first and fourth components – making profits and taking additional roles that create social benefits – may overlap. As such, CSV is not in itself a new way of thinking about the roles of companies in society but rather a cognitive tool for fulfilling two of those roles.

Because Carroll’s definition of CSR and others like it separate profit from other objectives, they lend themselves easily to the discussion of multiple bottom lines – the idea that social benefits could be measured alongside profits. Companies that adopted the CSR philosophy also began keeping accounts with double- and triple-bottom lines, the former distinguishing between private benefits (i.e. financial benefits to the companies) and social benefits and the latter adding a new category for environmental returns.

3. The Problem with CSR and CSV

Companies, especially multinational companies, are complex organizations with the capacity to do remarkable things: moving materials and money around the world, generating new ideas for useful products, bringing together thousands of people to deliver a range of services, and much more. Their daily operations often have incidental effects on people who are not involved in the production or consumption of their products; these are externalities. Some externalities increase wellbeing, such as lower crime as a result of rising employment or healthier children as a result of the use of vaccines.

The movements supporting CSR and CSV have encouraged companies to go beyond these incidental benefits and take an active role in creating “social impact.” In CSR, these efforts may have little to do with a company’s core business or capacities; for example, a mining company might build a school in a community where its workers live. In CSV, there is more of an overlap, as companies make decisions that allow them to use their capacities in a way that benefits society. Companies “create economic value by creating social value,” as Porter and Kramer put it; they design products and processes with a social goal in mind, and then happily discover that the market will support these initiatives. In essence, the externalities are internalized as companies recognize the economic value that they create, though this appears to happen in an idiosyncratic fashion.

The fact that CSR and CSV continue to be priorities for companies is evidence that they are indeed creating private benefits for shareholders. These benefits may not be well quantified, but shareholders (and executives) must have a sense that their investments in

CSR and CSV are delivering value for money. As decision-makers, they are like the billiard player in Friedman [1953], who “made his shots *as if* he knew the complicated mathematical formulas that would give the optimal directions of travel” (Friedman’s italics).

Just like the billiard player, however, shareholders and executives using CSR and CSV to create private benefit will sometimes miss. CSR and CSV are imperfect tools, like the human eye and brain, which are workarounds or substitutes for actual calculations. For the billiard player, computing optimal directions of travel during a game is impractical, and so the eye and brain are useful stand-ins. But for companies, measuring the contribution to the single bottom line of initiatives that create social benefits is feasible and promotes efficiency.

4. Returning to the single bottom line

Social benefits are not always easy to quantify, but the private benefits that they may generate often are. Consider this non-exhaustive list of the private benefits that a company may receive from the social benefits of its operations:

- Better reputation amongst consumers, leading to higher demand for products
- Better relationships with government, leading to easier regulatory compliance and lower costs of operations
- Better relationships with communities hosting operations, leading to fewer work stoppages, protests, sit-ins, etc., and thus lower-cost operations
- Increased loyalty among employees, reducing the costs of hiring and training new workers

- Increased job satisfaction among employees, which may substitute for financial compensation
- Increased competitiveness of firms in communities hosting operations, reducing the number of foreign suppliers needed and thus lowering operating costs
- Increased skill levels amongst local workers, leading to more efficient production
- Increased incomes and general economic development in local communities, eventually leading to more demand for products

All of these benefits are quantifiable for a company with a long enough time horizon and a willingness to assess probabilities. Despite the current slavish focus on quarterly earnings reports, a company's market capitalization still represents – in theory – the expected value, in today's money, of all of its future profits. Under this conception, embraced by textbooks and investors (especially institutional investors) alike, a big change in profits some years into the future might be expected to have the same weight as a small change in profits today. In other words, the time horizon for a company's decision-making should be infinite.

To be sure, most companies have limited time and resources for making decisions, so they cannot handicap every potential risk and opportunity that may arise between now and the end of time. But the private benefits generated by investments that create social benefits can be very large, and so considering them may be as worthy of executives' time as other parts of their companies' operations. As these private benefits are recognized and computed, the investments that create social benefit can be assessed alongside all the other investments that a company might contemplate.

Consider three examples:

a. Creating higher demand. An energy company has just won a contract to extract offshore oil from the government of a small developing country. The company is considering whether to invest in a package of community initiatives that would help local economic development but have little near-term impact on its operations. Soon, the government will solicit proposals for another parcel of offshore oil. Executives of the company estimate that a successful investment in community initiatives would increase the chance of winning the second contract by 1 percent. The second parcel would be expected to generate a stream of profits worth \$50 million in today's money. If the cost of successful community initiatives is \$400,000 in today's money, their expected rate of return would be 25 percent. The formula for computing the expected rate of return on investment is

$$\text{Expected rate of return} = \frac{\text{Expected benefit}}{\text{Expected cost}} - 1$$

or in this case

$$E(R) = \frac{(P_1 - P_0) \cdot V}{C} - 1$$

where R is the rate of return, P_1 is the probability of winning the bid with the initiatives, P_0 is the probability of winning the bid without the initiatives, V is the present value of the profits from winning the bid, and C is the present value of the cost of the initiatives.

b. Improving employee loyalty. A software company is considering an investment in a program that creates educational software for inner-city schools. Surveys of its 5,000 employees suggest that the investment would raise morale and improve the annual retention rate by one percentage point; 50 fewer employees would leave the

company per year. The cost of searching for, hiring, and training a new employee is \$40,000, so the savings from the investment would be \$2 million annually. If the investment costs \$2.5 million, it would not be considered profitable under the single bottom line; the expected rate of return is negative 20 percent. If as a rule the company will make investments only when they are expected to generate a rate of return of 15 percent, then the maximum it will pay for this program is roughly \$1.74 million. The figure comes from solving the following equation for cost C :

$$0.15 = \frac{0.01 \cdot 5,000 \cdot \$40,000}{C} - 1$$

- c. Substituting for financial compensation.** The chief executive of a major electronics manufacturer is deciding whether to develop a line of low-cost smart phones for sale at a small margin in poor countries. This investment would cost \$100 million and generate an expected rate of return of only 2 percent. However, the chief executive is convinced that the investment is a moral one, and she would get substantial personal satisfaction from making it. Her salary is due to increase by \$3 million during the period in which the investment would take place, but she will accept a raise of only \$1 million if the investment goes forward. With this additional factor in mind, the expected rate of return on the investment doubles to 4 percent; it is now more competitive with the other investment opportunities in the company's portfolio. The total expected rate of return on the investment therefore has two parts:

$$E(R) = 0.02 + \frac{(S_0 - S_1)}{C}$$

where S_0 is the chief executive's original salary over the period, and S_I is the new salary with the smaller raise.

Examples (a) and (b) might have been considered CSR, but they can be assessed more precisely under the single bottom line. Example (c) would fall under the definition of CSV, but it, too, can come under the single bottom line. Indeed, example (c) may imply a number of private benefits that go beyond substituting for financial compensation. Consumers in rich countries may demand more of the company's products because of its reputation as a creator of social benefits in poor countries. And growing recognition of the company's brand amongst consumers in poor countries will help to ensure that they buy the company's more advanced, higher-margin products as their incomes rise.

Even if the private benefits attached to social initiatives take a long time to accrue or accrue with low probability, their size may mean that they represent a substantial contribution (in expectation) to the single bottom line. For example, say attaching a sanitation program to a roads project would improve by 5% a company's chance of winning another roads project that may be put up for bid in 10 years' time with 50% probability. If the future project would generate \$20 million in profits, and we use a discount rate of 8% (3% time preference and 5% inflation) then the expected return from the sanitation program is roughly \$230,000 [$\$20 \text{ million} \cdot 0.5 \cdot 0.05 \cdot \frac{1}{(1.08^{10})}$]; the company should only invest in the program if it costs less than that amount.

Also, it is not necessary – and indeed it is probably impossible – to attach precise probabilities to the accrual of private benefits generated by social initiatives in the future. A range of probabilities is usually sufficient to indicate the magnitude of the expected value

that such initiatives may generate. In the previous example, the sanitation program might improve the chance of winning the future project by somewhere between 0% and 20%, depending on the government official who will select the winner in 10 years' time. In this scenario, executives calculating the expected value of the sanitation program might need to make an assumption – perhaps that the officials' preferences for social initiatives were distributed according to a normal distribution. Here, too, an expected value could be attached to the sanitation program, and with confidence intervals; the calculation would be more complex but no less valuable to the executives making decisions today. Of course, investigating the officials' preferences explicitly would help to make the calculation more precise and the decision more efficient.

5. Discussion

The use of the single bottom line to assess investments with social benefits is not new, though it may be new to some in the West. For example, the Tata organization has undertaken investments to promote India's economic development and raise living standards for more than a century, with the idea that the country's growth could only be good for the company [Tata Group, 2011]. The Tata attitude became inculcated in the company's culture many years before communications technology made financial information move at the speed of electrons. Yet the company's success – it now competes in several markets against the biggest conglomerates in the West – may lead others to follow its example.

As companies return to the single bottom line, will there still be a role for CSR or CSV? There would undoubtedly be some overlap between CSR and CSV programs undertaken

today and investments made under the single bottom line. But some CSR programs may not have a positive return when judged by long-term private benefits for companies. And adherence to CSV may favor investments that, though potentially profitable, would not offer competitive long-term returns within a company's portfolio.

We argue that this is no bad thing. In these cases, it is likely that one of two situations is present. One is that the company is not the entity best-suited to running the program in question; for example, a mining company would probably be better off training workers who could contribute to its supply chain than managing a primary school. The other is that the initiative has a low enough ratio of private benefits to social benefits so that government subsidies or public provision would be most efficient; the initiative is essentially a public good. Put another way, the single bottom line keeps companies doing what they are good at and improves the overall efficiency of investments in society's wellbeing.

This efficiency stems not just from companies' improved selection of investments and sharper focus on their core operations, but also from their renewed adherence to the objective of profit. For-profit companies are expected to maximize value for shareholders. To do otherwise without shareholders' guidance would be to create agency problems and informational asymmetries.

Furthermore, a return to the single bottom line does not imply that companies' involvement in activities that create social benefits will diminish. On the contrary, we argue that these activities will become more common as companies make a case for them in terms of the single bottom line. The soft standards of CSR and CSV and the as-if maximization described above essentially imply that companies are making decisions about the relevant activities with incomplete information. Under these conditions, they are likely

to do less of the activities rather than more; as in other areas, uncertainty should be expected to make companies more conservative. Using the single bottom line will help companies to avoid misallocating resources and, with fewer unproductive projects on their balance sheet, likely increase their appetite for activities that create social benefit.

Using the single bottom line also makes investments that generate social benefit more sustainable. If companies view social initiatives as cost centers rather than contributors to profitability, then these initiatives are likely to become procyclical, being cut in downturns and then reinstated when balance sheets are flush again. Their budgets will be arbitrary rather than being linked to a rate of return. As investments expected to be competitive and profitable, by contrast, social initiatives will enjoy more durable support from executives and become a core part of corporate operations.

The main challenge facing the single bottom line is the issue of time horizons. Today's publicly traded companies face unprecedented pressure to satisfy short-term expectations set on a quarterly basis. Encouragingly, some companies – mainly European ones such as Nestle and AXA – have not been swept up in the quarterly earnings culture and publish results only annually. Also, a positive aspect of the fallout from the recent financial crisis has been the reorientation of some executives' pay packages to focus their efforts on long-term results. But a more fundamental change in shareholder attitudes, linking rewards for executives to long-term performance and ceasing to punish those who accept upfront sacrifices for long-term gains, may be necessary before the single bottom line yields its greatest rewards for both companies and society.

6. References

- Bishop, Matthew and Michael Green [2008], *Philanthrocapitalism: How the Rich Can Save the World* (New York: Bloomsbury Press)
- Carroll, Archie B. [1999], "Corporate Social Responsibility: Evolution of a Definitional Construct," *Business & Society*, Vol. 38, No.3 (September)
- Drucker, Peter F. [1984], "The new meaning of corporate social responsibility," *California Management Review*, Vol. 40, No. 2 (Winter)
- Friedman, Milton [1953], "The Methodology of Positive Economics," *Essays in Positive Economics* (Chicago: University of Chicago Press)
- Porter, Michael E. and Mark R. Kramer [2011], "The Big Idea: Creating Shared Value," *Harvard Business Review*, Vol. 89, No. 1-2 (January/February)
- Tata Group [2011], "Our Commitment,"
www.tata.com/ourcommitment/index.aspx?sectid=ei6stgDjpgA (accessed June 10)