Chapter 3

TOWARDS A MONETISED TRIPLE BOTTOM LINE FOR AN ALCOHOL PRODUCER

Using Stakeholder Dialogue to Negotiate a 'Licence to Operate' by Constructing an Account of Social Performance

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Abstract: Forum for the Future has been working in partnership with an alcohol producer, "AlcCo", in its aim of making sustainable development possible by being a model of a sustainable business. With AlcCo, the social and environmental accounts are each composed of a monetary valuation of externalities and the 'shadow costs' of avoiding or restoring that externality. For the environmental accounts the 'shadow' cost was derived by identifying the gap between current and sustainable environmental performance and the present market price of closing that gap; the externalities were derived using public information. The social dimension was created through wide stakeholder engagement to construct a social externality that they believed the company was responsible for and the how much it would cost the company to discharge its responsibility for this damage. Work is continuing on a sector-wide approach so that the alcohol industry and the government can step out of the cycle of promoting the place of alcohol in society only to service the consequential misuse. Stakeholder engagement is a source of feedback for AlcCo and provides validity for the approach. It is allowing AlcCo to negotiate a new role in contributing to a sustainable society.

1. INTRODUCTION

Forum for the Future ("Forum") is the UK's leading sustainable development charity, which works in partnership with industry, government and education institutions researching and establishing new practices with the aim of making the transition to a sustainable way of life. Forum and AlcCo,

S. Schaltegger, M. Bennett and R. Burritt (Eds.), Sustainability Accounting and Reporting, 61-82.

a drinks producer, have been working for over 4 years on sustainability issues relating to the alcohol industry.

The paper is structured as follows:

- The remainder of Section 1 introduces AlcCo, Forum's sustainability accounting method and the role of alcohol in the UK
- Section 2 explains how the environmental accounts were constructed
- Section 3 explains how the social accounts were constructed
- Section 4 provides conclusions

1.1 Introducing AlcCo

AlcCo is a leading UK producer of 'long' drinks (such as beer and cider), with a turnover of around £600m and a UK market share of 3.5% by alcohol volume. AlcCo aims to become a model sustainable business through:

1. Demonstrating a workable economic model, with subsidy structure, to support sustainable agriculture
2. Practising environmentally-benign manufacturing
3. Expressing a positive social role for the alcohol industry

Since 1999, AlcCo and Forum have been developing an accounting methodology to describe the company's environmental and social damage cost, and the cost of restoring and avoiding the damage in ways that can add value for shareholders. The work is moving towards a 'monetised' Triple Bottom Line, or a set of financial sustainability accounts.

Accounting for the economic, social and environmental impacts of AlcCo serves two purposes. AlcCo can use the sustainability accounts to take the right strategic and operational decisions to move it towards sustainability. For instance, the sustainability accounts have informed a decision to move towards responsible marketing as a strategic and operational course to fulfil its responsibilities and mitigate its regulatory risks. The company can also use them to engage different audiences, which can both hold AlcCo to account and be shown how AlcCo is taking its share of responsibility.

The ultimate aim is a business model which adds value for shareholders and stakeholders across the different dimensions of sustainability, economic, social and environment. Therefore, the aim of the sustainability accounts is to play a significant role in linking the financial viability of the alcohol industry with the environmental impacts of its manufacturing practices and with occupying a positive role in society.

1.2 Forum for the Future's Financial Sustainability Accounting

Forum's work on sustainability accounting has grown out of its environmental accounting methodology, as described in a joint publication with the UK Chartered Institute of Management Accountants in October 2002 (Howes 2002). Forum uses the following definition of 'financial sustainability accounting':

"The generation, analysis and use of monetised environmental, social and economically-related information in order to improve corporate environmental, social and economic performance."

This framework for financial sustainability accounting is based on three dimensions:

1. *Timing of impact*: Is the data a snapshot in time of the state of the *stock* or does it show the *flow* of goods and services arising from the stock over a period?
2. *Location of impact*: Is it a valuation within the company's financial reporting boundaries (*internal*); a cost or benefit imposed outside the boundaries (*external*), or the cost or benefit to the company of avoiding or restoring the external impact (*shadow*)?
3. *Type of impact*: Is the impact environmental, social or economic?

Under this framework, traditional financial accounting is narrow: it only considers *internal*, *economic* Balance Sheet *stocks* and Profit and Loss account *flows*. Financial sustainability accounting expands to not only include *environmental* and *social* impacts but also consider the *externalities* created plus how much it would cost the company to avoid or restore those impacts (or *shadow* cost). The difference is illustrated in Figure 3-1.

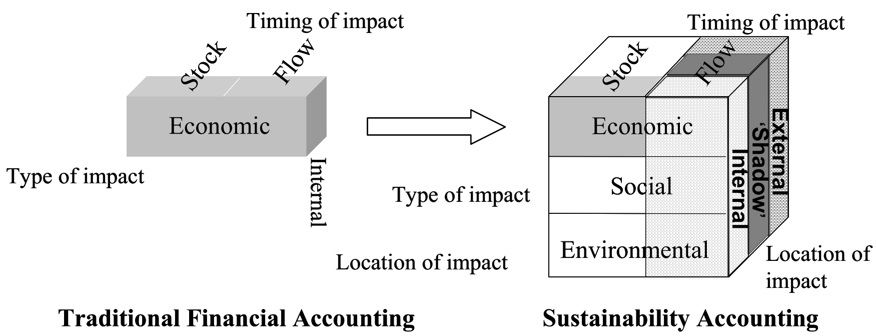

Figure 3-1. Comparing traditional and sustainability accounting.

According to Bebbington et al. (2001), an externality arises where private decisions do not reflect either the public costs (borne by the whole of society) or the private costs (borne by people other than the decision-maker) of the decision. They argue that externalities indicate how current prices fail to incorporate environmental and social issues and that for the current system of economic organisation to operate in an environmentally sensitive and socially just manner then externalities must be internalised in some way.

Forum uses ‘shadow costs’ to mean either the avoidance or restoration cost which the organisation would have had to spend in the last period so that the externality would not have been created. In effect, the shadow cost is synonymous with the cost of internalising the externality. If the company takes steps towards being more sustainable – for instance, by moving to renewable energy sources and so not contributing to climate change – then the costs of not creating the externality have been incurred (it is now an *internal, economic* flow); no externality has been created, and so there is no shadow cost. Put another way, the shadow cost is a measure of the cost to the company of meeting new stakeholder expectations of ‘normal’ business or of new regulatory standards. It can be thought of as a measure of exposure to regulatory or political risk.

For preference, the shadow cost is calculated from specific plans to avoid environmental impacts, such as a quote from a renewable energy provider. However, where these are not available, general restoration costs are used, for instance the cost per tonne of carbon sequestration.

In terms of the comprehensive framework proposed in Burritt et al. (2002), Forum’s Financial Sustainability Accounting is a monetised-approach based on past oriented, routinely generated information which considers performance over the last year. Organisations which use this method produce annual accounts for stakeholder reporting purposes (which Burritt et al. refer to as ‘external accounts’) and potentially more frequently for internal decision-making (referred to by Burritt et al. as ‘internal accounts’).

A monetised triple bottom line of any organisation is greater than the financial results of its operations or the net financial impacts of environmental or social initiatives. A complete monetised triple bottom line also considers externalities imposed on the rest of society, now and in the future, plus the cost to the company of not creating the externalities.

The Forum approach assumes that it is possible to:

- Define a level of performance which is sustainable for the company and society
- Calculate the avoidance or restoration cost of moving to sustainable performance
- For the company to pay for the transition

Other writers in the field contest each of these assumptions. For instance, Gray and Milne (2002) ask "is the future safe in the hands of business?" and state that "our reading of the evidence is that our current systems of economic, financial and social organisation are moving us in the wrong direction – i.e. our current systems are making us more unsustainable". Nevertheless, Forum believes it is possible to make progress to a sustainable society with these assumptions in place.

Understanding the triple bottom line in this extended way acknowledges that any organisation is part of the wider social context. The results of a complete monetised triple bottom line can be used to demonstrate where there is a case for a company's operations being consistent with sustainable development. They can also be used to show where the market incentives of a company are not aligned to the economic good of society as a whole, through the social or environmental cost imposed. Where this is the case, the full set of sustainability accounts can be used to argue for government and other participants to intervene and re-write the rules of the market. Forum's work with AlcCo has been to produce a wide, though not complete, set of sustainability accounts, as illustrated in Figure 3-2.

The missing elements of the cube indicate that the sustainability accounts are still a work in progress. In particular the economic and social external benefits of alcohol have not yet been included, though they will be for the next iteration. The first estimates of social shadow costs are to be revised in the light of experience over time. For this set of sustainability accounts the limited resources were focussed on the most important areas, where there are the greatest stakeholder concerns. These matters are discussed in more depth in Section 3.

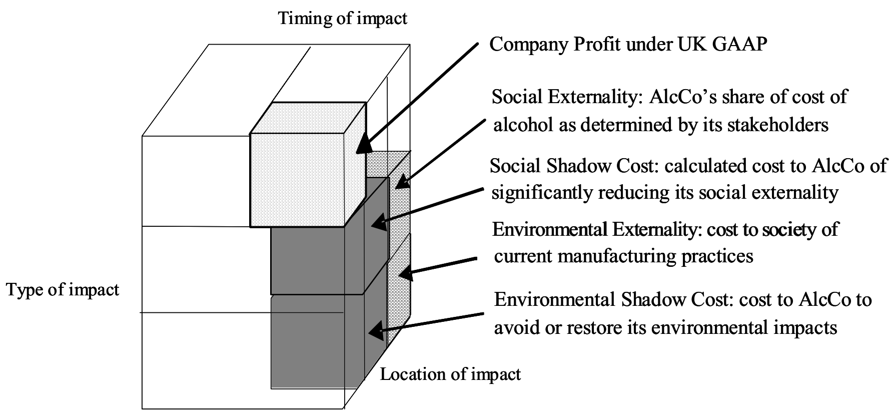

Figure 3-2. AlcCo's sustainability accounts.

1.3 Alcohol in the UK

Alcohol is a normal part of social life in the UK. As the Cabinet Office, the civil service department which administers on behalf of the UK Prime Minister, recently reported, "the vast majority of people enjoy alcohol without causing harm to themselves or to others – indeed they can gain some health and social benefits from moderate use" (Cabinet Office 2004:7). In addition, the alcohol industry employs up to a million people and contributes some £30b to the UK economy.

But alcohol consumption also leads to addiction, health problems, domestic violence and anti-social behaviour with impacts on the community such as late-night disorder in towns. The Cabinet Office report continues that, in England, alcohol misuse causes significant harms, which can be valued as £1.7b of health expenditure; £7.3b as the result of crime and anti-social behaviour; £6.4b in lost productivity and profitability, and £4.7b of human and emotional suffering – a total of £20.1b a year. The Cabinet Office valuation is based on costs to public services (such as treatment of disease or of dealing with alcohol-related crime); lost productivity and profitability (from alcohol-related absence and premature death) and from human and emotional suffering. As with any economic analysis, there are a number of assumptions with the Cabinet Office calculations. However, the figures are broadly accepted and form part of the policy landscape for the industry and civil society.

Furthermore, while consumption has fallen over recent years in most of the wine-producing countries, British alcohol consumption continues to rise. If present trends continue, the UK will rise to near the top of the consumption league within the next ten years (Cabinet Office 2004).

Historically, the UK government has placed a tax at the point of sale (an excise duty, also known as the alcohol duty; which is charged at the point of sale to the consumer; the current UK rate is about £0.35 per pint of beer). The purpose of this tax has been to reduce consumption and raise money for paying for the government services that treat alcohol misuse and its consequences.

The alcohol industry is under pressure from shareholders to increase its returns. Therefore, industry and government find themselves in a dilemma: As industry increases its volumes sold, government must raise duty to cover the extra social burden. Industry and government are apparently trapped in promoting the place of alcohol and then servicing the consequential misuse.

2. ENVIRONMENTAL ACCOUNTS

The starting point for Forum's work with AlcCo in 1999 was the environmental impacts of the manufacture and delivery of its product. Therefore, Forum and AlcCo created a set of environmental accounts which estimate the external cost imposed on society of AlcCo's manufacturing and distribution, and a market-price shadow cost of avoiding or restoring that externality. For reasons of space it has not been possible to give more detail on how the calculations have been performed. However, the operational workings of on the methodology can be found in Howes (2002, 2003).

2.1 Outline Steps

The following steps were taken in calculating these accounts:
1. Identification of the most significant environmental impacts
2. Determining the environmental sustainability gap
3. Valuation of those impacts

2.1.1 Identification of the Most Significant Environmental Impacts

The environmental accounts were prepared for AlcCo's UK operations. The starting boundary for the manufacturing process was growing of the raw material; the final boundary was the journey from AlcCo's factory to the distributor's depot. The main environmental impacts of AlcCo's UK operations have been identified as:

- Impacts to Air
  - *Climate change gases emissions*

    These gases are emitted supplying non-renewable energy for production purposes, and from transport such as the distribution of AlcCo products.
  - *Gaseous emissions such as sulphates (SOx) and nitrates (NOx)*

    These pollutants are emitted by the same energy sources as above. Their impacts include poor urban air quality, asthma, respiratory disease, cancer and loss of habitat.
- Impacts to Land
  - *Agricultural production*

    Growing the raw materials has an environmental impact through the farming methods used, such as the run-off of fertilizer, herbicides and pesticides. For the sake of simplicity, tractor fleet emissions to air are included in this cost.

- Impacts to Water
  - *Water extraction and discharge*

  The manufacture of cider requires that production water is drawn from local sources and discharged into a local river. Both abstraction and discharge have environmental impacts.

2.1.2 Determining the Environmental Sustainability Gap

The environmental sustainability gap is the difference between impact on the environment over the last year and the level of impact that would be environmentally benign. When looking at the year ending 31 March 2003, AlcCo's finance department, with assistance from the authors, calculated the levels of emissions using the in-house Environmental Management System and records of activity.

In considering the level of benign environmental impact the method is guided by the latest available scientific evidence or international guidelines. For climate change gases the Intergovernmental Panel on Climate Change (IPCC) suggests that emissions of greenhouse gases need to be reduced by about 60% (compared to their 1990 levels) in order to prevent dangerous anthropogenic interference on climatic systems. On road transport emissions, the World Health Authority (WHO) air quality standards require a reduction in ancillary pollutants, like NOx, of 50-60%.

2.1.3 Valuation of those Impacts

In these accounts there are two valuations: the avoidance or restoration shadow cost and the externality cost.

Shadow costs

As far as possible, shadow costs are based on real market prices of avoidance or restoration initiatives. The particular price depends on the source of the impact and what options AlcCo has available.

In the case of climate change gases, the emissions generating energy for the production process are based on a renewable energy surcharge, an avoidance cost. However, where emissions are not avoidable, such as burning natural gas for heat, the cost of sequestering carbon, a restoration strategy, has been used.

For the agricultural impact to land the valuation is based on widely quoted research on the external cost of agriculture (Pretty et al. 2000). The valuation of the impact to water was made in two steps. The first is to assess the cost of building a new water filtration system. The second is to depreciate that capital investment over the lifetime of the system, giving an annual charge.

Externalities

Pricing externalities involves greater judgement than pricing shadow costs, mainly because when a company chooses an avoidance or restoration strategy it is possible to try to find a market price for that option. By definition, externalities are costs borne outside the normal market system as they are not reflected in the market price. So any externality measure is more subjective than the market-based shadow price.

However, there is research into the externalities of environmental impacts, such as climate change (DEFRA 2003). To acknowledge the relatively subjective quality of these prices, a sceptical stance has been adopted and costs selected at the low end of the ranges. However, this does mean that the calculation of externalities is almost certainly an underestimate. For instance, the low range estimate of the external cost of climate change does not include the costs of more extreme weather events or of catastrophic changes, such as the ending of the Gulf Stream.

In the case of climate change, a Department for the Environment, Food and Rural Affairs (DEFRA) seminar in July 2003 (DEFRA 2003) gave at least three alternative ranges for the cost to future society for every tonne of carbon emitted today. The figure used is £6 per tonne of carbon, at the low end of the range from that seminar.

The external costs of the gaseous emissions are based on the ExternE (1997) research by the EU, which gives a low valuation of NOx and SOx of almost £5,000 per tonne each.

2.2 How AlcCo Plans to Avoid its Environmental Impacts

There are some capital investments AlcCo can make which would internalise almost half of its shadow environmental cost:

- *Biomass energy plant:* A biomass plant could supply AlcCo's electricity needs and release no 'new' carbon dioxide gases into the atmosphere, as an amount of CO_2 comparable to that released is fixed when growing the the next cycle of raw material for the generator.) This switch to locally-generated green energy would reduce the environmental shadow cost by £365k and the externality by around £1,125k.
- *Re-instating a railhead:* Re-instating a disused rail siding in the factory will allow AlcCo to have raw materials delivered and part of its distribution performed by rail. This initiative would potentially reduce AlcCo's transport emissions by 20-30%, reducing the environmental shadow cost by a further £210k, and the externality by around £110k.
- *Investing in a new water treatment works:* A new water treatment works could take non-product water through many more cycles, reducing

abstraction and discharge considerably. The impact to water shadow cost and the estimate of externality would both reduce by £200k.

Although the biomass energy project meets conventional pay-back criteria, the other projects do not. Therefore, overall it is hard to reconcile the compelling environmental case for AlcCo's avoidance and restoration programme with an equally compelling commercial case.

The environmental accounts for the year ending 31 March 2003 are given in Table 3-1.

Table 3-1. AlcCo's shadow and external environmental cost accounts.

	Shadow Cost	External Cost Low Estimate
	£'000	£'000
IMPACTS TO AIR		
Energy	410	1,196
Transport	832	2,772
Production and Manufacture	59	138
	1,301	4,106
IMPACTS TO LAND	215	214
IMPACTS TO WATER	200	200
TOTAL	**1,715**	**4,520**

3. SOCIAL ACCOUNTS

For the last two years Forum and AlcCo have been working to create a set of social accounts. The environmental accounts provide a starting point on how to build the social accounts. The environmental accounts assume that the level of environmentally sustainable performance is a scientific question, and, therefore, set an environmental sustainability gap based on latest sound science.

However, the question of what is the level of impact of sustainable social performance is different. Alcohol plays a complicated role in society, and touches the lives of many people. Each person has their own opinion on what the role of alcohol should be in the future in order to have a 'benign' or positive impact on society. Therefore, a stakeholder engagement method was chosen as the most valid approach to constructing the social accounts.

3.1 Outline Method

Constructing AlcCo social accounts has involved the following steps:
1. Apportion the costs of alcohol to AlcCo's products
2. Build a stakeholder consensus on external cost
3. Identify and cost practical measures to reduce social harm

The approach taken focuses on the social costs but there are also economic and social benefits of alcohol. However, these benefits were not included in the stakeholder engagement for several reasons. As noted above, the sustainability accounts remain a work in progress. Economic and social external benefits need to be included in the next iteration to give a more complete picture. Nevertheless, there are a number of reasons why the accounts remain useful.

First, in economic theory how much someone is prepared to pay is a measure of the utility they derive from the product. Therefore, most of the social benefits of drinking are included the price paid by the consumer and so are in the internal profits of AlcCo. There are some people who might be willing to pay more and in the next iteration of the accounts this 'consumer surplus' could be included to give a fuller valuation of the social benefit. In addition, the employment and contribution to economic growth of AlcCo and its products are an economic benefit, and could be included in the next stage.

However, the social and economic benefits do not accrue to the same people as the social costs. Therefore, under the Forum sustainability accounting method, these costs should not be subtracted from benefits to derive a 'net' figure as this would not accurately reflect alcohol's impacts on people (Similarly, there is some evidence to show that the annual deaths avoided from the medical benefits of moderate drinking exceed the premature deaths from alcohol consumption. However, in the eyes of most stakeholders a 'net' positive mortality count does not remove the need to understand the responsibilities of individuals, government and industry for the deaths that are attributed to alcohol.)

3.1.1 Apportioning the Costs of Alcohol to AlcCo's Products

The Cabinet Office built up a calculation of the social cost of alcohol in the UK by considering all of the different sorts of costs that were being carried, and arrived at a figure of around £20b (Cabinet Office 2004). Under the assumption that alcohol volume is the best available indicator of damage, it is possible to apportion costs to AlcCo's products by using its share of the drinks market by alcohol volume of 3.5% for the year ending 31 March 2003, in round numbers.

Apportioned cost = National Estimate x Share of alcohol market
= £20b x 3.5%
= £700m

The figure of £700m represents an allocation of the monetised social costs of alcohol in the UK to AlcCo products. Taking this percentage proportion approach assumes that all units of alcohol give rise to the same harms overall from misuse. This assumption was made to give a place to start in constructing the social accounts. Like any assumption, it can be improved, but it is hard to think of an alcohol category that is exempt from abuse of one form or another. In misuse terms, AlcCo's products are as associated with misuse as any other, but especially with underage drinking, binge drinking, street drinking and domestic violence, but perhaps less with long-term alcohol addiction than other categories.

3.1.2 The Stages to Build Stakeholder Consensus on External Cost

Having established a monetary value for the social cost of AlcCo's products, stakeholder consensus was sought on how much of that cost AlcCo should take responsibility for.

Allocation of responsibility is complex. Following structuration theory (Giddens 1984), while players are not responsible for the actions of others, each does reaffirm the social structures in which other players make their choices. For instance, just as producers respond to the changing tastes of their consumers, individuals change in response to the advertising messages they receive, public health initiatives and peer pressure. This in turn generates a new context for the producer. There is a feedback loop: producers and consumers dynamically lead and follow each other as if in a series of dance steps. If the harm from alcohol is stitched into society, an approach is needed which allows players to affirm new social structures.

While structuration theory implies that responsibility cannot be divided up and fixed in place for ever, the process of allocating responsibility can be part of affirming new social structures where new choices are now possible. These new structures must take into account changing perceptions of the role of the state, companies and people. Therefore a stakeholder consultation was established that moves to allocate responsibility through the explicit negotiation of AlcCo's licence to operate.

At AlcCo's request, a team from Forum undertook the stakeholder consultation process over the period July 2002 – January 2003. The key tasks started with identifying key stakeholders. A series of semi-structured interviews were then conducted and finished with a stakeholder workshop.

When identifying the key stakeholders, those involved in and affected by the distribution, sale and consumption of AlcCo's products were focussed on. Stakeholders were selected from the following main categories:

- *Commercial*: These are stakeholders that have a commercial interest in the sale of AlcCo's products in particular, as well as those that have an interest in the commercial aspects of the alcohol industry. They included representatives of AlcCo (the producer) as well as advertisers & media companies; distributors; retailers (on- and off-trade: in the UK on-trade refers to places where alcohol is both bought and consumed – such as a bar or restaurant – and the off-trade refers to places where is only bought, such as a supermarket) and government departments (such as DEFRA; Customs and Excise).
- *Consumers*: This included representation of the end consumer of alcohol products in general, and AlcCo's products in particular. Stakeholder views were drawn from related studies by MORI, The Portman Group and AlcCo itself.
- *Caring*: These are stakeholders that have an interest in the economic, social and health impacts of alcohol misuse. They included NGO organisations such as Alcohol Concern; and government departments (such as the National Health Service and the Home Office).

Semi-structured interviews (face-to-face and telephone) of selected stakeholders were undertaken over the period August-November 2002. Interviews revolved around the following key questions:

- What are the social costs of alcohol misuse?
- What types of initiatives could be taken to reduce these impacts?
- How can responsibility for these social impacts be allocated across different stakeholders?

The final part of the consultation process was the alcohol stakeholder workshop held in London on 17th January 2003. The event was attended by stakeholders from a range of sectors and was facilitated by Forum. The workshop was organised around the same questions posed in the individual interviews. The main objectives were to:

- Reach consensus on how the social costs of alcohol misuse should be allocated across different stakeholders
- Identify measures that an alcohol producer can take to reduce these impacts

3.1.3 The Outcomes of the Stakeholder Consultation on External Cost

The results of the stakeholder consultation (including individual interviews and workshops) are summarised in this section. The consultation process addressed two key questions:

- The Allocation Problem: How might the responsibility for the social costs of alcohol misuse be shared amongst different stakeholders?
- What practical measures can an alcohol producer take to discharge their responsibility for the social costs of alcohol misuse allocated?

In establishing AlcCo's share of the social costs of its products, three stages were set out: understanding the role of government; allocating responsibility between consumers and commercial players; and allocating responsibility between commercial players.

Understanding the Impact of Government

Government has multiple interests with respect to the alcohol industry. These include regulation of and revenue raising from the industry through taxation; and provision of public services for remedial or preventative action (such as health treatment; crime prevention; public education campaigns). AlcCo contributes to public funds in several different ways: corporation tax, VAT payroll taxes as well as excise duty. Of these, the excise duty is the only alcohol specific tax which has a purpose of internalising the social costs of alcohol. The duty only applies to the alcohol trade. (Excise duty raises about £7b per annum, or about a third of the social costs identified by the Cabinet Office.)

Therefore, AlcCo's excise duty of £100m was offset from the apportioned cost of £700m a year, to derive an outstanding balance of £600m per annum as the share attributed to AlcCo's products.

Allocating Responsibility between Consumers and Commercial Players

The stakeholders start from very different positions on this key issue.

At one extreme, it could be argued that consumers are 100% responsible for the products they choose to consume. But various factors lessen this argument: manipulative social conditioning through the medium of consumer advertising; the addictive nature of the product; the degree to which consumers are informed and fully aware of the associated risks; and the extent to which they are already internalising the cost burden (e.g. through private payments for rehabilitation).

At the other extreme, it could be argued that suppliers are 100% responsible – they design the products (such as high concentration beer) ; create the advertising messages; make the product available; sell at an affordable price; and create the conditions for over-consumption (e.g. certain types of drinking establishments). In addition, marketing messages can avoid communicating the real risks of alcohol.

The interaction of these two extremes, and the mitigating arguments against each, illustrate the dance between the alcohol industry and the consumer. As a working hypothesis, the starting point of sharing responsibility equally (i.e. according to the ratio of 50:50) between consumers and suppliers was taken. There was broad agreement amongst the participants at the stakeholder working group that this was a reasonable starting point.

For AlcCo's products this means that the consumers share is 50% of the total social cost of £600m, or £300m a year. The remaining annual sum of £300m is shared amongst different commercial stakeholders in the supply chain (including AlcCo as an alcohol producer) in the next stage of allocating responsibility.

Allocating Responsibility between Commercial Players

The second stage is to understand how responsibility should be shared along the supply chain. From production to consumption, the commercial supply chain includes production; marketing; distribution and retail (on- and off-trade – for meaning see Section 3.1.2).

Table 3-2. AlcCo's external social cost accounts.

	£m
1. Apportion social cost of alcohol to AlcCo's products	
Social Cost of Alcohol (Cabinet Office)	20,000
AlcCo market share (by volume of alcohol consumed)	3.5%
Social Cost allocated to AlcCo's products	**700**
2. Build consensus on AlcCo's share of responsibility for the social cost of its products	
i. Understanding the impact of government	
less Alcohol Duty, that already contributes to alleviation of social cost	(100)
Social cost to be shared throughout AlcCo's products supply chain and consumer	**600**
ii. Allocating responsibility between consumers and commercial players	
Apportioned 50:50 between	
Consumer	300
Commercial players	300
iii. Allocating responsibility between commercial players	
AlcCo's revenue share (as available proxy for profit share)	19%
AlcCo's annual share of External Social cost	**57**

The simplest criterion, and the one that had greatest resonance for the stakeholders, was that responsibility should be shared according to relative profit. However, the stakeholders agreed that revenue share was used as a proxy for profit share since profit data (per unit of alcohol) is not readily available. Revenue share was calculated as the proportion of the price paid by the consumer that is retained by the company. For an average retailer the price per pint was £1.98, of which the retailer kept £1.51, the distributor £0.06, the advertiser £0.03 and AlcCo received £0.38. This method biases the allocation against those players with lower profit margins, probably the retailers.

AlcCo's revenue share is 19%. Therefore, its yearly share is £57m of the total £300m allocated annually to the commercial sector.

These steps are summarised in Table 3-2.

3.1.4 Identify Practical Measures to Reduce the Social Harm

The last section described the stakeholder process which allocated about 8% of the damage cost of AlcCo's products to AlcCo itself. This section describes the avoidance and restoration actions AlcCo can take for its 'shadow' cost.

None of the stakeholders proposed that AlcCo should pay for its share of social costs in cash terms, for instance increasing the excise duty by £57m. The stakeholders believed that this would be a counter-productive step. Instead, they were concerned with changing the dynamic of the situation so that there was less social cost in the first place.

The stakeholders agreed on several ways in which AlcCo can fulfil their responsibilities:

Responsible Marketing and Communications

AlcCo's stakeholders required that AlcCo's marketing messages should generate and reward responsible behaviour. This covers sponsorship, promotions, information and education on the impacts of alcohol. Responsible marketing means that all messages to all stakeholders – consumers, civil society and government – demonstrate a consistent approach.

The stakeholders were concerned about targeting of young people, binge drinking and the way in which advertising and sponsorship generated brand qualities through association with desirable images and social icons.

The MORI study on alcohol (Portman Group 2000) shows that the public expect industry to be a key source of information on health impacts – but at present the industry fails to meet public expectations. The stakeholders agreed that advertising messages were misleading and unrelated to the real effects of alcohol.

AlcCo are working on a study into responsible marketing and communications plan. The key elements are to develop sustainable marketing messages to: link product, brand and corporate identity; change target audience attitudes and behaviours, and sell the sustainability message and generate demand for more sustainable products and services.

In order to estimate the shadow cost of adopting a responsible marketing and communications the following question needs to be asked: how much extra would it cost AlcCo to go down this route? Internally it would need to re-train its marketing people and to put in new systems to check that messages carried the sustainability branding. An estimate, based on information from the marketing department, is that the cost of retaining might be as much as £100k. There should be no extra cost from examining all communications for consistency as this should happen already.

There is also the shadow cost of whatever profit had been lost if sales reduced from taking a responsible marketing approach. Clearly, it is not possible to know the effect on consumers of changing AlcCo's brand message. However, responsible values, and advertising based on product quality, represent an opportunity to the cider industry. The authors suspect that there would actually be no direct impact on profits. Therefore, a first estimate shadow cost of changing to responsible marketing messages is £100k per year.

As AlcCo puts the responsible marketing plan into action it proposes to track the internal costs (such as training and internal time) plus the changes in revenue and profitability. There will also be a study to examine whether and how the new responsible market plan is changing consumer behaviour. The degree to which social costs are being avoided or restored will be incorporated into future sustainability accounts.

Social Interventions

Stakeholders believed that, if AlcCo moved to responsible marketing, it should also continue to support public health investments in remedial activities or in measures that interrupt the spiral of alcohol misuse. Many such schemes are underfunded by government. A foundation related to AlcCo is already taking significant strides in this direction.

However, stakeholders were wary of alcohol services becoming financially dependent on the alcohol industry. Supporting public health investments, could include paying for social workers to make brief interventions at A&Es or in criminal courts. In order to retain stakeholder confidence any initiative should include highly transparent governance procedures, including long-term commitment, associated research into effectiveness and autonomy for the public services funded.

As noted by the Wanless Report, "there is generally little evidence about the cost-effectiveness of public health and prevention policies or their practical implementation."(Wanless 2004:5). Therefore any estimate of a shadow cost to discharge AlcCo's share of the social cost of alcohol can only be tentative. Furthermore, different initiatives will have an impact on different parts of the social cost; brief interventions have limited benefit for alcoholics, for instance. Therefore, as a way to start AlcCo's long-term commitment to transparently funding social interventions, AlcCo are committing £600k per annum to the local Community Alcohol Service. This step will allow AlcCo to learn about appropriate funding and governance and add to the wider evidence base on cost-effectiveness of alcohol services (as recommended by the Cabinet Office Strategy).

Again, this first estimate is being tested in practice. The impacts of the public health programmes AlcCo supports are being tracked. The degree to which social costs are being avoided or restored will be incorporated into future sustainability accounts.

A Sustainable Business Model

Stakeholders were clear that AlcCo should continue to develop a sustainable business model by becoming a transparent and accountable company that creates opportunities through reducing risk, deepens stakeholder engagement, attracts socially responsible investment and exerts leadership and influence on its peers.

As there is already a budget committed to sustainability issues, there is no shadow cost associated with this recommendation.

These different recommendations are summarised in Table 3-3.

Table 3-3. AlcCo's shadow social cost account.

	£'000
Responsible marketing and communications	100
Social interventions	600
Sustainable business model	–
Annual Total	**700**

Clearly, the calculation of a shadow cost is at an early stage. However, even if the shadow costs are under-estimated by a factor of ten, then the cost of meeting stakeholders' expectations of responsible behaviour are still less than 1.5% of the social cost stakeholders believe AlcCo is responsible for.

3.2 Summary of the Social Accounts

The model assumes responsibility is shared equally across consumers and suppliers and across the supply chain according to revenue share. It takes into account the payment of excise taxes on alcohol (assumed to be shared equally between consumers and producers).

Based on the stakeholder allocation model, AlcCo's share of responsibility for the social costs of alcohol misuse is estimated to be £57m. The social costs of alcohol misuse are the single most important external cost to AlcCo and represent a very significant business risk.

Turning this share of responsibility into a social provision involves AlcCo taking measures which reduce its impact by as much as possible**.** AlcCo can take practical measures to discharge its responsibilities in the eyes of its stakeholders. These measures will also reduce the social costs of alcohol misuse relating to its products. A first estimate of the shadow cost is £700k. At the stakeholder workshop, the following measures were identified as high priority areas:

- Responsible marketing and communications
- Social interventions
- Sustainable business model

Over time the social accounts will need to develop based on AlcCo's actions in meeting stakeholders' expectations and the behaviour of other industry players. This first iteration has established a baseline of externality that AlcCo's stakeholders' believe it is responsible for, and a first estimate of the shadow cost of discharging that responsibility. Over time the social accounts will need to evolve with evidence on changes to the total social costs, the success (or otherwise) of the shadow measures, and trends in stakeholder expectations. In the future stakeholders may believe that AlcCo is discharging its responsibility, in which case the allocated externality and shadow cost would reduce.

Conversely, AlcCo may not follow through on the actions above, the proposed measures may not be successful or the expectations stakeholders have of the industry may increase, in which case the allocated externality and shadow cost may increase. Either way it is clear that the role of alcohol in society is a sector-wide issue, and so a sector wide approach is needed.

4. CONCLUSIONS

4.1 AlcCo's Monetised Triple Bottom Line

From the work describe above it is possible to write a monetised Triple Bottom Line for AlcCo, either as Figure 3-3 or as Table 3-4.

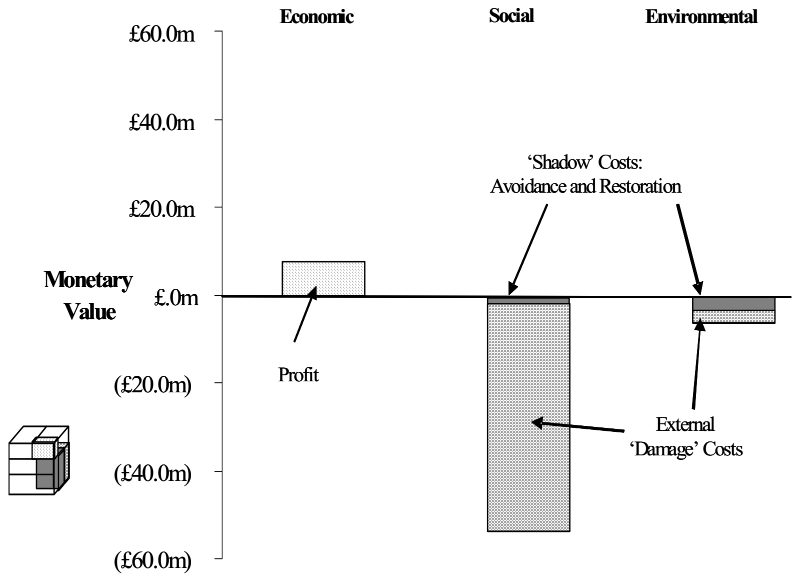

Figure 3-3. AlcCo's sustainability accounts as a diagram.

Table 3-4. AlcCo's sustainability accounts for year ending 31 March 2003

	Economic £m	Social £m	Environmental £m
Internal			
– financial impacts already included in the accounts	**7.4**	*	*
Shadow			
– cost of avoiding or restoring external impacts	*	**(0.7)**	**(1.7)**
External			
– damage cost to wider society, now and in the future	*	**(57.0)**	**(4.5)**

* not calculated for this set of accounts (see Section 1.2 for explanation)
The £7.4m is AlcCo's profit for the year, taken from its published accounts.

4.2 Sustainability Accounting to Negotiate a Licence to Operate

Using financial valuation for social accounting is an evolving process. However, the work to date demonstrates that an alcohol company can begin to negotiate its licence to operate with its stakeholders. Quantitative date can be used to ground the negotiation between companies and stakeholders on roles and responsibilities. The feedback from stakeholders inside and outside the company is that the accounting approach made discussions more meaningful. This initiative pilots an approach which allows players to begin renegotiating the role of alcohol in society.

If a company discharges the responsibility that stakeholders have allocated to it, by undertaking all the shadow cost measures, it will not necessarily mean that all of the social externality will be reduced to zero, though it is possible that they will be reduced. Instead, a new relationship will have been set up between the stakeholders and the company, and the company will have been acting within its licence to operate.

However, the expectations of stakeholders and wider society will evolve over time. Any organisation will need to continuously engage with its stakeholders (including shareholders) if it is to maintain its licence to operate. From the point of view of senior management and shareholders, this process will reduce strategic business risks, such as regulatory and political risks.

The stakeholder allocation accounting method (or perhaps 'participative accounting') above is not the only way of engaging with stakeholders with this purpose in mind: there are other forms of stakeholder engagement and dealing with social trends. It is possible that different methods would elicit different results. Usually for a business to address these long-term questions it must be able to point to short-term stability and financial viability. The stakeholder allocation accounting method can create an opportunity to affirm (and then re-affirm) new social structures, where the social harm is reduced and the financial sustainability of the business is more secure in the long-term.

At present the authors believe that the stakeholder allocation accounting method could be applied where:

- The industry as a whole is facing a significant question over its role in society
- The questions of individual, corporate, civil society and government responsibility are tightly bundled and not well addressed in public
- There is some independent economic analysis of positive and negative externalities
- There are articulate and identifiable stakeholders
- The debate is not yet so polarised that the different parties cannot conceive of undertaking the process

The costs of this approach compare favourably with producing a standard financial Annual Report. The potential upside is large: the company has the opportunity of the financial benefits of mitigating political and regulatory risks as well as keeping in touch with wider stakeholder trends.

With these tentative conditions in mind, areas where this work might be extended include the:

- Pharmaceutical industry and generic medicines
- Energy utilities and climate change
- Convenience food industry and obesity.

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REFERENCES

Bebbington J, Gray R, Hibbitt C and Kirk E (2001) *Full Cost Accounting: An Agenda for Action* (Research Report No. 73) London, The Association of Chartered Certified Accountants (ACCA)

Burritt R, Hahn T and Schaltegger S (2002) Towards a Comprehensive Framework for Environmental Management Accounting. Links Between Business Actors and Environmental Management Accounting Tools *Australian Accounting Review* Vol. 12, No. 2, 39-50

Cabinet Office (2004) *Alcohol Harm Reduction Strategy for England* [online] [cited 28 May 2004] Available from Internet URL <:http://www.strategy.gov.uk/output/ Page3669.asp>

DEFRA (2003) *Carbon Seminar* [online] [cited 04 Nov 2003] Available from Internet URL <:http://www.defra.gov.uk/environment/climatechange/carbonseminar/>

ExternE (1997) *CAPRI Final Report* [online] [cited 13 Sep 2001] Available from Internet URL <:http://www.europa.eu.int/comm/transport/extra/final_reports/strategic/capriann exes.pdf>

Giddens A (1984) *The Constitution of Society: Outline of the Theory of Structuration* Berkeley, University of California Press

Gray R and Milne M (2002) *Sustainability Reporting: Who's Kidding Whom?* [online] [cited 4 Oct 2004] Available from Internet URL <:http://www.agenda-scotland.org/documents/ Gray%20Milne%20paper.pdf> (a later version of this paper appeared under the same title in *Chartered Accountants Journal of New Zealand* Vol. 81, No. 6, July 2002, 66-70)

Howes R (2002) *Environmental Cost Accounting: An Introduction and Practical Guide* London, Elsevier

Howes R (2003) *The Sigma Guidelines – Environmental Accounting Guide* [online] [cited 28 May 2004] Available from Internet URL <:http://www.projectsigma.com/Toolkit/ SIGMAEnvironmentalAccounting.pdf>

Portman Group (2000) *Alcohol and Society: Research Study Conducted MORI for the Portman Group* London, Portman Group

Pretty JN, Brett C, Gee D, Hine RE, Mason CF, Morison JIL, Raven H, Rayment MD and Bijl G van der (2000) An Assessment of the Total External Cost of UK Agriculture *Agricultural Systems* Vol. 65, 113-136

Richardson J and Bent D (2003) *The Sigma Guidelines – Sustainability Accounting Guide* [online] [cited 28 May 2004] Available from Internet URL <:http://www.projectsigma. com/ Toolkit/SIGMASustainabilityAccounting.pdf>

Wanless D (2004) *Securing Good Health for the Whole Population* [online] [cited 28 May 2004] Available from Internet URL <: http://www.hm-treasury.gov.uk/consultations_and_ legislation/wanless/consult_wanless03_index.cfm>