

**UBS Investment Research**

**Food and Beverages: Corporate Responsibility**

	Issue	Potential scale	Timing	Potential Catalysts
1	Obesity	Broad and significant	Ongoing and developing	Consumer sentiment, regulation and government policy.
2	Climate Change	Broad and significant	Long term	Energy prices, consumer sentiment, changes in weather. Also, see below-water issues.
3	Supply chain	Depends on the specific issue	Ongoing	Event risk in general. Also trends in obesity, climate change, raw material inputs (including water), product risk, and waste management all relevant here.
4	Availability of fresh water	Broad and significant. Water a critical supply chain component.	Medium term	Supply and demand imbalance, changes in weather.
5	Product risk	Specific to firm, but "globalisation" means product risk can affect the industry more broadly.	Unpredictable	Unpredictable
6	Waste management	Specific to firm	Ongoing	Regulation, energy and other commodity prices, consumer sentiment.

Source: UBS

**Top Issues: Obesity, Climate Change, Supply Chain**

■ **Does "social" risk have business and financial implications?**

In our view, the most important determinant of the impact of risk (including financial, economic, environmental, social or governance) on businesses and share prices, is how firms handle the risk. We explore this question for three key issues: obesity, climate change, supply chain.

■ **Obesity**

In this section, we demonstrate that the way companies respond to obesity-related risk, with respect to its impact on business models and finance, may matter more than the presence of the risk per se.

■ **Climate change**

Environmental indicators of relevance in area of climate change appear to say something about a company's operational management. Strong environmental performance indicators in the presence of below-average profitability may signal an investment opportunity.

■ **Supply chain**

If there is adequate risk-control infrastructure in place to handle supply-chain risk, this appears to control the business impact. When this is the case, share price weakness associated with product recalls appears to be temporary. However, it is also fair to say that, at times, supply-chain risk and its consequences can be beyond control.

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This report follows a request from a group of asset managers working with the United Nations to analyse the environmental, social and governance issues that may be material for company performance and to then identify potential impact on company valuations<sup>1</sup>. The United Nations Environment Programme Finance Initiative (UNEP FI) works closely with 160 financial institutions worldwide, to develop and promote links between the environment, sustainability and financial performance. UNEP FI Asset Management Working Group (AMWG) explores the association between environmental, social, and governance considerations and investment decision-making. Asset Managers that have participated in this project have combined mandates of US\$1.7 trillion.

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<sup>1</sup> The views expressed in this document are not necessarily those of UNEP or UNEP FI or its signatories nor do UNEP, UNEP FI or its signatories take any responsibility for actions taken as a result of views or opinions expressed in this report. For more information about UNEP, UNEP FI or the AMWG please contact the project team: Philip Walker, Helen Bloustein and Gordon Hagart. email: investment@unepfi.org Website: www.unepfi.org

## Executive Summary

How firms compete, what society cares about, and how costs are distributed determine which CSR<sup>2</sup> issues are likely to be important for an industry or for individual firms, in terms of financial impact<sup>3</sup>, together with the extent of a firm's exposure anywhere in the business<sup>4</sup>. However, this is not the whole story.

In our view, the most important determinant of the impact of risk (financial, economic, operational, environmental, social, or governance) on the business and the share price, is how firms handle the risk. The larger the firm, the more important this may be - the high profile of large firms also, of course, contributes to the significance of the risk. "For big companies, maintaining a culture of corporate responsibility may require work - and even significant investment. For example, as Starbucks has grown larger, it has worked hard to emphasize its value system. We believe Starbucks' efforts help it to maintain the company's ethos and values, and, in particular, serves as a powerful motivator for its rapidly growing workforce<sup>5</sup>".

In this piece of research, we used our usual framework<sup>6</sup> to identify the most important issues for the food and beverage sector. We identified six issues: obesity, climate change, supply chain, availability of fresh water, product risk, and waste management. We do not cover all six here, but focus on the top three - obesity, climate change, and supply chain. By considering climate change and supply chain, we inevitably cover the water issue to some extent, since it ties in to both. We touch very briefly on product risk, because it is relevant to supply chain risk. And we leave the topic of waste management for another day, but signal that it is important for the companies in these industries. The approach, in this report, is to identify the risks, and then take a case study approach to consider what impact the risks - and the that strategies companies chose to manage them - may have on the company business models, or share prices.

Key questions and answers are as follows:

### Obesity: Food and Beverages Sector, and Public Opinion

**Question:** Has obesity risk as first observed in 2002 by UBS<sup>7</sup>, and subsequently discussed in other publications, affected share prices?

**Answer:** What matters for the share price performance is, apparently, not the risk *per se*, but how companies responded to it<sup>8</sup>.

The significance of any given CSR issue is only half the story. How CSR risk is handled is the key point.

We identify key risks using the usual UBS framework, and then take a case study approach to consider their impact in business and financial terms.

Obesity, climate change, supply chain and related risks such as fresh water availability, and product risk are, in our view, all developing risks. These case-studies should be regarded as a snapshot in an ongoing story in each case.

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<sup>2</sup> CSR is used as short hand for environmental, social, governance and some economic risks. It stands for "Corporate Social Responsibility".

<sup>3</sup> Financial impact can mean anything from impact on costs, to impact on asset prices.

<sup>4</sup> For example, % of sales exposure, % of cost-base affected by the issue, prportion of labour force affected, and so on.

<sup>5</sup> SRI Conference Call of 14 April: Key Points. SRI: an Integral Part of Financial Analysis. Julie Hudson, David Palmer, and other UBS Analysts. 25 April 2005.

<sup>6</sup> Q-Series: Corporate Social Responsibilities. Why Try to Quantify the Unquantifiable? Julie Hudson, 11th April 2005.

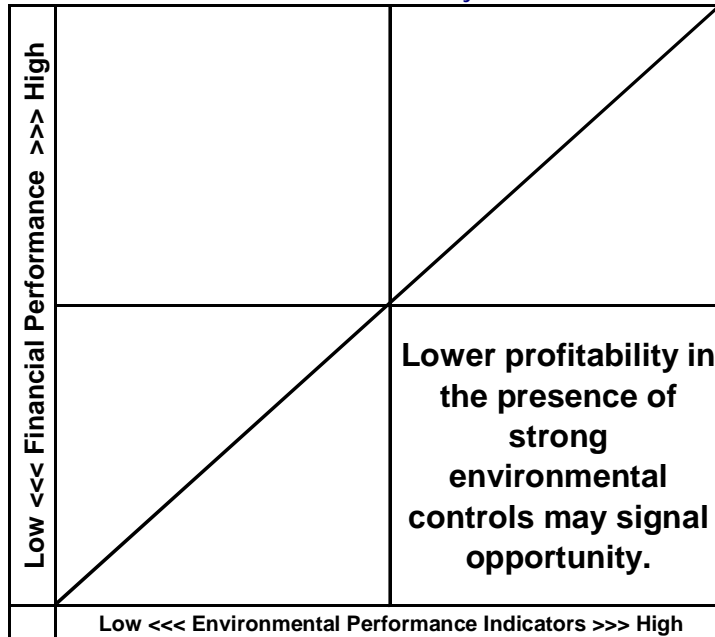
<sup>7</sup> Absolute Risk of Obesity. Food and Beverage Companies, Not so Defensive? Jason Streets, 27 November 2002.

Climate change case study: Brewery firms, and skill transfer from emerging to developed markets

Question: Do environmental performance indicators say anything relevant about the business risk or valuation of firms?

Answer: Yes. Environmental performance indicators appear to be a possible indicator of strong operational performance. Strong environmental indicators in the presence of below-average profitability may signal an investment opportunity, in our view. This is shown diagrammatically below.

Figure 1: Environmental Performance and Profitability: Informative Combination?



Source: UBS

Supply chain case studies: Sudan 1, Coca-Cola India

Question: Do supply-chain-related incidents affect share prices and business models?

Answer: Information arising from the Sudan 1 case study to date suggests that supply-chain-related incidents can and do affect the share price, but the way the risk is handled by firms (and perhaps also by the industry) appears to be more important than the risk itself. However, the Coca-Cola case-study suggests that supply chain risk may at times be beyond the control of the firm. In such situations, the impact of “realised” supply chain risk may be longer lasting.

<sup>8</sup> See also Q-Series: Risk of Reformulations? David S. Palmer and Pam Murtaugh, Pam Murtaugh & Co. 14th October 2005.

## Competitive forces, industry structure, and potential CSR Issues

### Summary

How firms compete, what society cares about, and how costs are distributed tend to determine which CSR issues are likely to be material, as well as the way they play out. A brief description of the food and beverages industry in these terms, below, suggests that the following may at various times emerge as front burner issues: The competitive landscape may lead to issues in relation to fair trade, access to natural resources (and the price paid for access), and the way advertising is used. The importance of the customer as a stakeholder, together with the extremely competitive nature of the industry, indicates that health and safety in relation to the way products are used (eg obesity), as well as the way they are made (health and safety, product risk), are likely to be material issues for firms. The global reach of many firms, together with the predominance of agricultural materials in product content, indicates that the supply chain may be the context in which fair trade and health & safety issues may crop up. Significant local community impacts are likely to be above all environmental owing to the nature of the raw inputs required by the industry-agricultural produce, water, and energy.

These issues drop out of a brief competitor analysis based on the framework described in Q-Series®: Corporate Social Responsibilities. Why try to quantify the unquantifiable?<sup>9</sup>, and set out in the next few paragraphs.

### Competition, pricing, and supply discipline

Food and beverage firms operate by competing for the share of the consumer's wallet. This competitive dynamic entails building, and then maintaining, a strong market share by a combination of advertising to establish the brand, and R&D to feed product development. It is likely that large firms will have a competitive advantage, in the sense that they have substantial advertising dollars and R&D spend at their disposal even at a relatively low percentage of sales; however, with size (large market share) comes substantial market impact and therefore responsibility.

In commercial terms, to get a large number of people emotionally attached to a product would clearly constitute a substantial commercial success. However, the way advertising and promotion are implemented to achieve such a success will also matter: Social issues such as health (eg the impact of salt, sugar and fat and alcohol in food and drink products) will arise when specific products are widely used. When the relevant product market is non-discretionary (as it can be in food and drink items for less wealthy customers), large firms may find that by accident or design, they spend advertising dollars in such a way as to build semi-captive audiences (currently alleged to be an issue in the junk food industry).

Industry structure suggests that health and safety, supply chain risk, and product risk, are key issues for food and beverage firms

Firm size translates to a bigger impact, and that translates to a need for greater corporate responsibility

Advertising practices are widely recognised as potentially raising social issues, therefore they are already quite highly regulated.

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<sup>9</sup> Published 11th April 2005

With respect to the supply chain there can be issues around access to natural, and essential, resources (such as water). The presence of developing countries in the supply chain may introduce the risk of trade barriers and other non-price discrimination. Alternatively, there may be a failure to pay a fair price (or a fair wage); in an SRI context this risk is described as the “fair trade” issue.

Large firms can be powerful relative to their supply chain

#### Relationships with key stakeholders

A substantial market share can give individual firms or groups of firms the ability to shape consumer trends and preferences, because the fragmented customer base may have little countervailing power to influence the firm’s product behaviour directly. For example, social change has resulted in far less home cooking and far more widespread use of pre-prepared (or otherwise processed) food items; this has clearly presented a tremendous opportunity to food companies to introduce a larger element of value-added in products. However, with this opportunity came increased risk in product safety (eg hygiene), environmental impacts (eg increased packaging), and product risk (eg sufficiency or otherwise of nutritional content).

Now ubiquitous pre-prepared food increases risks in the area of product safety

Not only are the customer base, supplier base and workforces of firms in this sector often fragmented, there can also be substantial differences in wealth within all three. In some product markets, this can “invisibly” restrict choice: Food, for example, is a discretionary item to some and a non-discretionary item to others. Lower-price food items probably tend, on average, to contain higher levels of salt, fat, and additives. The obesity problem (in recent years converted to a CSR issue by consumer lobbying and lawsuits) may have arisen as a direct consequence of this area of the competitive landscape.

Obesity issue: may be a direct consequence of the competitive landscape

A properly functioning supply chain is critical to food and drink firms; relationships with suppliers of raw materials may raise issues in the areas of resource use (water, energy, land), agricultural practices, fair wages, and new technologies.

Suppliers: key stakeholders

Last but not least, some products may do harm if they are not appropriately consumed. Most obviously this includes alcohol, but, of course, applies to other food products, too. Risks to children are on the radar screen for this sector.

Children: key stakeholders

#### Complexity and information gaps

Consumer products often entail asymmetries of information. Processed food and drink can be a good case in point, in that the individual ingredients used to manufacture these items may not be apparent to the user unless the product is properly labelled; and, even if labelled, the ingredients themselves may be better understood by the manufacturer than the user. This can make it difficult for consumers to make informed choices. Beyond this, technology is important to product development, differentiation, and manufacturing costs, and, so product risk should be considered a potential risk in both industries. Good examples in the consumer field include product safety (for example, the full testing of GMOs and other new products based on new technology; the safety of synthetic products in food, such as aspartame and monosodium glutamate).

Technology brings in issues of information (labelling) and product risk

### The environment and the wider community

Agricultural produce, water and energy are key inputs to food and beverage manufacture. The growing profile of climate change as an environmental issue more generally is therefore highly relevant to the food and beverage sector. Additionally some food and beverage items are transported long distances, so transport-related CSR issues such as carbon emissions may be relevant to firms and their supply chains. Elsewhere, we note that in some cases there may be 'externalised' development costs (such as GM crop trials for instance). Some firms in the food and beverage industries may, in the manufacturing process, generate pollutants and emissions that may affect a broad community. Owing to the size of some product categories, CSR issues relating to specific products can affect a large number of people.

## Which are the front-burner issues?

*“Public opinion is everything.” –Abraham Lincoln*

*“The courts throughout American history have tended to follow public opinions rather than challenge it.” –Robert McCloskey, Harvard*

In our Q-Series®: Corporate Social Responsibilities<sup>10</sup>, we noted that the significance of SRI issues is likely to be determined by three things: how firms compete; how costs are distributed; and how much society cares about the issue. A brief review of the competitive landscape (above) suggests health and safety, supply chain risk, and product risk are likely to be important most of the time. The following paragraphs pick up issues that appear to be exercising public opinion for consumer sectors in general, but with a heavy focus on food and beverages. Note that we look beyond the immediate sector because we think a lot of “noise” in one sector may cross to other apparently unrelated sectors.

Public opinion may be the catalyst for significant structural shifts in the food and beverages industries.

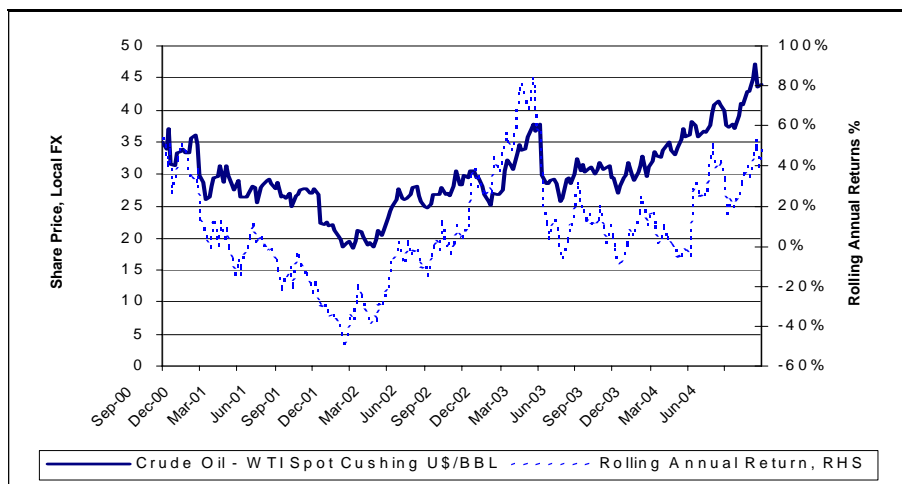
### The wider context: What “society” cares about

#### Environment: Climate change

Since the inauguration of the ETS in January 2005, the G8 Summit (July 2005), steady coverage in the press, and strength in the oil price, have kept this climate change firmly on the front page.

Basic materials, consumer, energy, financials, industrials, utilities

Chart 1: Oil Price - WTI Spot Cushing



Source: Primark Datastream

The issue is clearly here to stay as a policy agenda internationally speaking. Although the USA did not ratify the Kyoto Protocol, there are press reports of state-level activity: in a recent example the Guardian reports that “nine north-eastern US states are expected to announce a plan next month to freeze carbon

<sup>10</sup> 11th April 2005

dioxide emissions from big power stations by 2009 and then reduce them by 10% by 2020<sup>11</sup>”.

In our view it is likely that consumer firms, in general, will need to change their business models in response to changes in the energy market, as a minimum. Any changes in climactic conditions arising from the effects of global warming can also be expected to have a direct impact on the supply chain of food and beverage firms.

Climate change increasingly on the agenda for food and beverage firms

#### Environment: Polluter pays

■ In Europe, a steady stream of regulatory effort aims to push firms to internalise pollution costs. Directive 2004/35/EC on the prevention and remedying of environmental damage was adopted on in April 2004<sup>12</sup>. Relevant liabilities include site contamination and damage to biodiversity as well as to health and property. Elsewhere the EU ratified the Stockholm Convention on Persistent Organic Pollutants. The Press Release identified the key issue for Europe as the unintentional release of dioxin and PCBs<sup>13</sup>.

Basic materials, consumer, energy, financials

#### Environment: Waste management

■ Waste management is receiving attention from many directions. From 13 August 2005, producers (manufacturers, distributors and sellers) will be responsible for financing the collection, treatment, recovery and disposal of Waste Electrical and Electronic Equipment<sup>14</sup>. This is likely to have significant cost implications for ‘producers’, and perhaps also some retailers. For food and beverages firms, packaging is clearly a significant cost. Beverage firms are increasingly moving to PET packaging<sup>15</sup>, which is advantageous for beverages because of the much-improved content to weight ratio, in addition to being easily recycled for other uses.

Technology, consumer

#### Environment – Water

Of all the water on the surface of the planet, 97.5% is salt water, leaving just 2.5% freshwater. By use, agriculture (irrigation) accounts for 90% of water use. The UN expects two thirds of the world’s population to be living in water-stressed countries by 2025<sup>16</sup>. Water is, obviously, a critical input for food and beverage firms. The importance of the issue has clearly been recognised, however it is still an ongoing issue, particularly since it is closely bound to global warming, which can be expected to affect supplies. SABMiller notes that water use in breweries has been reduced to a very significant extent. 25 years

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<sup>11</sup> Julian Borger. 25 August 2005. The Guardian, UK. See also the BBC, 24th August 2005. The states are Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

<sup>12</sup> EU, Official Journal L143 of 30 April 2004. This relates to the White Paper on Environmental Liability of 9 February 2000.

<sup>13</sup> See the EU website. [www.eubusiness.com/EUnews](http://www.eubusiness.com/EUnews). 18 November 2004.

<sup>14</sup> 2002/96/EC. See the website of the European Commission. [www.europa.int](http://www.europa.int). See also guidance from the UK Department of Trade and Industry, at [www.dti.gov.uk/sustainability/WEEE](http://www.dti.gov.uk/sustainability/WEEE)

<sup>15</sup> Pan-European Plastics Manufacturers Association. [www.apme.org](http://www.apme.org)

<sup>16</sup> United Nations. Comprehensive Assessment of Freshwater Resources of the World as summarised for Earth Summit+5, Special Session. UN Assessment of Freshwater Resources.

ago typical usage was between 25 to 30 hectolitres of water per hectolitre of beer. Currently, good practice is in the order of 3.5 hl/hl<sup>17</sup>

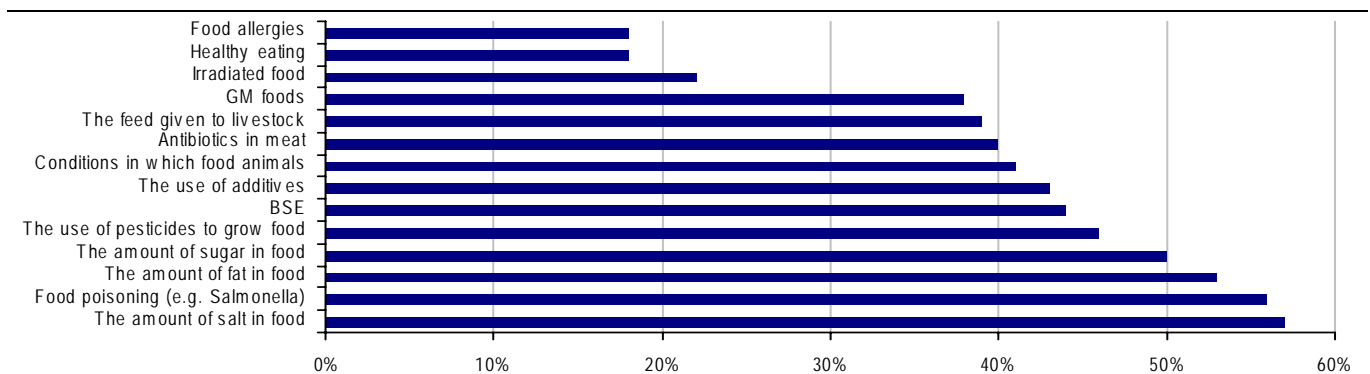
Product responsibility: Customer health and safety

‘Under a market system, it is the relation between fixed cost and market size that determines which products are produced and which products are not produced. A market system will not automatically produce all socially desirable products<sup>18</sup>’. In our opinion, this is an established issue for utilities, and regulatory frameworks are in place to handle universal access. It is also known as an issue in the pharmaceutical sector, where firms have announced policies with respect to HIV/AIDS and malaria drugs, and the diseases of developing countries. It has also manifested itself with a good deal of press profile in the consumer sector, in the guise of the obesity issue (‘access’ in the sense that it has been much cheaper and easier to obtain “empty” calories than real food).

Consumer, Healthcare

Products that affect many individuals in a direct way (such as food, drink, and drugs, taken into the body and having an impact on mental and physical wellbeing) are likely to be something that people feel strongly about. A good example is to be found in the UK, where the Food Standards Agency (FSA) has been conducting in-depth consumer attitude surveys for the last five years. Its most recent report (February 2005) found that seven in ten respondents are concerned about food safety issues – a number that has remained consistent over the life of the survey.

Chart 2: UK consumer concerns about specific food issues (prompted) 2004



Source: “Consumer Attitudes to Food Standards Wave 5: UK Report” prepared for the Food Standards Agency and COI Communications by MORI (February 2005)

In the context of this report on obesity, it is particularly noteworthy that food used inappropriately - as opposed to food that does accidental harm- appears to be on the rise as a concern. (When prompted, the amount of salt in food was the issue of most concern and had overtaken food poisoning as the number one concern for the first time since the survey’s initiation in 2000). The amount of fat in food, and the amount of sugar in food, follow closely behind food poisoning. When issues elicit strong feelings, they often have a higher media profile. Hence the following in our consumer team’s report. “We believe recent

<sup>17</sup> The Corporate Accountability Report of SABMiller, 2004. p. 12

<sup>18</sup> Stephen Martin, Advanced Industrial Economics, p. 16. Blackwell 1993.

media focus *has led to the criminalization* of nutrition-related issues like harmful trans-fats and the potentially explosive issue of marketing of unhealthy foods to children<sup>19</sup>”.

### Product Responsibility - Supply Chain

Getting the supply chain right is critical to many businesses, as recent events in the airlines industry clearly demonstrate. “One of the main benefits of outsourcing is often, in our view, to reduce labour leverage. ...unless, like GG, it is sole, not-easily replaceable source. There are benefits to sole-sourcing catering, but multi-sourcing makes repetition of costly disruption less likely, we think<sup>20</sup>”. For the food sector, the presence of unwanted ingredients in food (such as salmonella, and pesticides) come high on the list in the above chart. When unwanted items appear in food, this generally happens because of a problem somewhere in the supply chain, and can be quite unpredictable. A good example arose recently in the UK with the Sudan 1 food scare<sup>21</sup>. Another issue that has been known of for some time<sup>22</sup> and has recently been in the news is the acrylamide issue. Finally, it is worth noting that ISO standards are being developed for supply chain management. Companies following ISO 14001 regularly report on this, and this has added to the information available on the way companies handle environmental risk. ISO 22000 is to be the new standard for safe food supply chains, scheduled for September 2005<sup>23</sup>, and may well have the effect of bringing some transparency to a very complex area. “Requirements for any organization in the food chain, can be applied to organizations ranging from feed producers, primary producers through food manufacturers, transport and storage operators and subcontractors to retail and food service outlets - together with inter-related organizations such as producers of equipment, packaging material, cleaning agents, additives and ingredients”.

### Product Responsibility - Product Risk

When new technologies are developed, it can be difficult to assess the risks for many years in some cases. Mobile phone radiation is the obvious example in the telecommunications sector. In food and beverages, the best-known examples of widely-used products for which the long-term effects of regular use are still unknown are artificial sweeteners, aspartame, and sucralose.

### Summary

Taking into account how firms compete, what society currently appears to care most about, and potential “scale”, we believe the issues we have identified above for the food and beverages sector rank as shown below, in the table.

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<sup>19</sup> Obesity Conference Take-Aways: Expanding Waistlines/Contracting Multiples? David Palmer, Caroline Levy, 3 March 2005.

<sup>20</sup> UBS Airline Research: British Airways Catering: Brinksmanship. 23 August 2005. Robert N. Ashcroft.

<sup>21</sup> See First Read, Premier Foods. Retain Buy1 Rating. Polly Barclay, Alan Erskine, Susanne Seibel. 18 February 2005

<sup>22</sup> In 2002, Scientists in Sweden discovered large amounts of acrylamide (cancer-causing in animals) in starches cooked at high temperature. Research is still under way. The substance is not well understood. The Food Standards Agency, UK. [www.food.gov.uk/safereating/acrylamide\\_branch/](http://www.food.gov.uk/safereating/acrylamide_branch/)

<sup>23</sup> The International Organisation for Standardisation. Press Release dated 26th May 2005. See [www.iso.org](http://www.iso.org)

In the following sections, we focus on aspects of the top three of these issues. However, we note that they overlap with each other. In particular, we note that the globalisation of the food and beverage industries has the potential to magnify some of the issues through the supply chain.

**Table 1: Issues and Ranking**

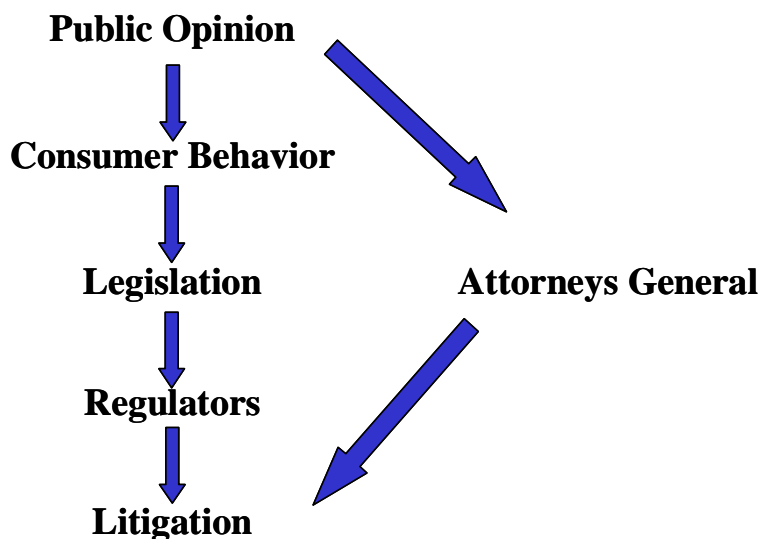
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4	Availability of fresh water	Broad and significant. Water a critical supply chain component.	Medium term	Supply and demand imbalance, changes in weather.
5	Product risk	Specific to firm, but "globalisation" means product risk can affect the industry more broadly.	Unpredictable	Unpredictable.
6	Waste management	Specific to firm	Ongoing	Regulation, energy and other commodity prices, consumer sentiment.

Source: UBS

## Issue No 1: Obesity

For consumer sectors, the obesity issue seems to us to loom largest as a health issue. There is a clear catalyst in place to bring about change, and that is public opinion in the context of the US legal framework.

Figure 2: How Public Opinion Drives Litigation



Source: Bermanco

Once the catalyst has done its work, momentum tends to take over. For example, in spite of the fact that the number of obese Americans has actually declined since reaching peak levels in 2002, the media is increasingly focused on the issue. At the March UBS obesity conference, one panellist<sup>24</sup> observed that **the number of times the phrase “obesity epidemic” has appeared in the popular media had increased to 9,023 in 2004 from only 4,400 times in 2002.** At the same conference, most of our panelists agreed that public opinion would be the key arbiter in the obesity debate, and would ultimately determine the risk to the companies that feed us. As Rick Berman, Center for Consumer Freedom consultant, said, to “lose public opinion is to lose everything.” Simply put, if the public becomes convinced over time that obesity is a big enough problem to require governmental regulation, or that companies are somehow to blame, then the courts and politicians will likely follow.

We believe recent media focus has led to the criminalization of nutrition-related issues like harmful trans-fats and the potentially explosive issue of marketing of unhealthy foods to children. Souring public opinion on these issues may be setting the stage for increased attention from lawyers and government officials on food, beverage, and restaurant companies who contribute so directly to the American diet.

David Palmer, Consumer Team. Tel +1 212 713 9315

If the public becomes convinced that obesity is a problem that needs governmental regulation, or that companies are somehow to blame, the courts and politicians will likely follow.

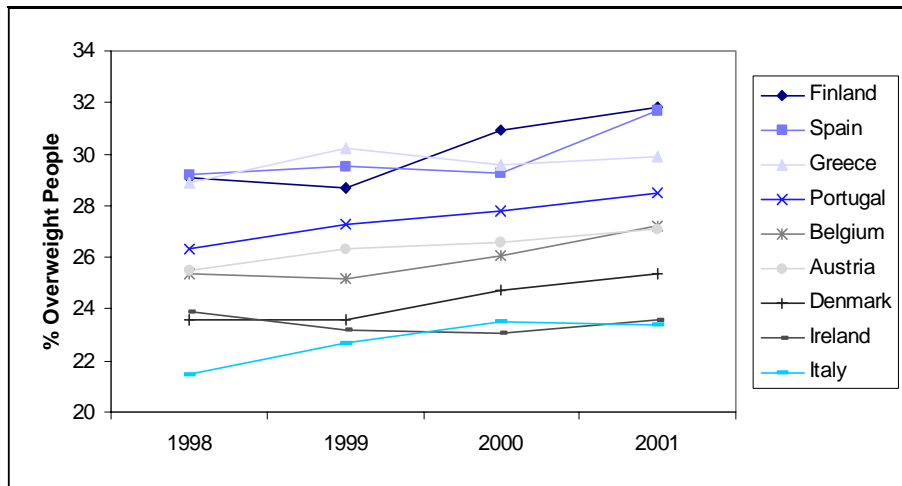
Public opinion seems most focused on harmful substances such as trans-fats and the marketing of unhealthy foods to children

<sup>24</sup> Mr Richard Berman, President of Berman and Company (founder of Center for Consumer Freedom).

Although our US team was writing about society and markets from a US perspective, the fact is that companies, and their markets, are global. The catalyst may have originated in one market, but, the problem is relevant to policy makers in many countries (chart below), and firms, wherever they are, face open, competitive, global markets.

The point that the strongest catalyst for change was originally in the USA is irrelevant. The relevant point is that product markets are global.

Chart 3: % of Overweight People (BMI>27)



Source: Eurostat

### Managing Potential Obesity Risk

Most of our obesity panelists at the UBS Obesity Conference of March 2005 agreed that the best thing companies can do to manage their obesity-related risk is to improve the healthiness of their products. And when designed to be indulgences, companies should label packaging accordingly to alert consumers to the lower nutritional content of these products. At the same conference Mr. McClain<sup>25</sup> noted that attorneys will typically avoid companies like PepsiCo that have launched programs to improve the healthiness of their products and Kraft, which is taking steps to curb advertising of some snack foods to children.

Trial attorneys may largely avoid companies that are pro-active about addressing health-related harm that may be caused by their products.

Tort reform attorney Victor Schwartz<sup>26</sup> suggested that the most important thing these companies can do is speak openly with the public about the impact their products have on consumers' health. McDonald's seems to be embracing this philosophy with recent better-for-you menu additions and by making nutritional information available at all locations.

### Examples of groups proactively managing obesity risk

Many food, beverage, and restaurant companies seemed to have learned a lesson from the tobacco industry and are proactively taking steps to increase the healthiness of their products.

<sup>25</sup> Kenneth B. McClain. Tobacco and Asbestos Litigator.

<sup>26</sup> Victor Schwartz, Tort Reform Lawyer, General Counsel of the American Tort Reform Association. See Presentation, David S. Palmer, US Restaurants and Packaged Foods. July 14th 2005.

Conversely, the tobacco industry attempted to attack the facts on smoking-related health issues—blaming health problems on everything from poor air quality to lack of physical activity. The US food, beverage, and restaurant industries have taken a much more pro-active approach to obesity concerns through product reformulation and increased support for active lifestyles. (See Table 2 for examples of recent health initiatives<sup>27</sup>).

**Table 2: Recent Health Initiatives by Large Food, Beverage, and Restaurant Companies**

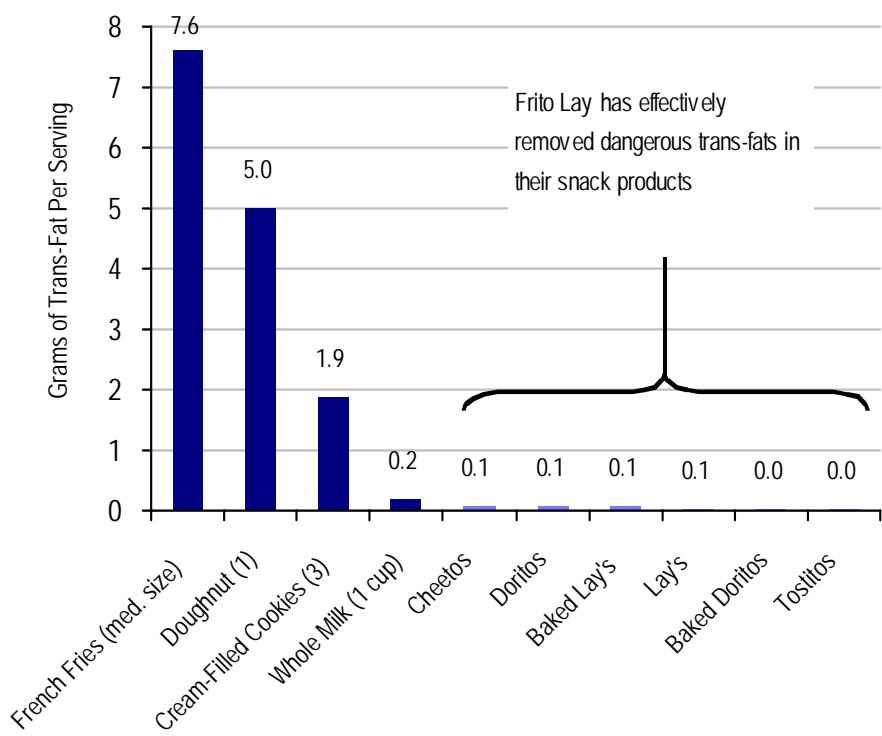
Company	Comments
<b>Pepsi Co.</b>	Pepsi hired the Cooper Aerobics Center in 2002 to help reduce the amounts of harmful trans-fats in its Frito Lay products. As a result, Frito Lay may reduce the amount of trans-fats consumed by Americans by up to 55 billion pounds over the next 12-months (\$50m hit to 2003 profits). The company also began labeling their products with a "Smart Spot" stamp to alert consumers that products are better-for-you offerings (with a target of 50% of all products as better-for-you).
<b>Kraft</b>	Kraft recently launched its "Sensible Solutions" labeling program to help consumers identify better-for-you Kraft products and said that it would limit its advertising to children under 12 to these products. The company purveys a broad portfolio of healthier choices (reduced calorie/fat, Snackwells, organic brands etc) and is regarded as a pioneer in working to reduce the amounts of trans-fats in its snack foods.
<b>General Mills</b>	General Mills recently reformulated its entire Big G line to be a good or excellent source of whole grains. It has also introduced 75% lower sugar versions of popular kids cereals that are sweetened with Splenda.
<b>McDonald's</b>	McDonald's has recently been increasing its focus on better-for-you menu items. The company has also been highlighting physical activity for children in recent advertisements.

Source: Company reports, UBS

Several large companies have launched initiatives to increase the healthiness of their products and promote active lifestyles

<sup>27</sup> See Obesity Conference Take-Aways, David Palmer, Caroline Levy. 3 March 2005.

Chart 4: Average Amount (in Grams) of Trans-Fat Per Serving (Frito-Lay Products)



Pepsi's Frito-Lay business has reduced the amount of trans-fats that will be consumed by Americans by 55 billion pounds over the next 12-months

Source: U.S. Food and Drug Administration, Cooper Aerobics Center

As would be expected, we also find evidence of a proactive stance with respect to the obesity issue from European companies. Examples are shown in the following table.

**Table 3: Recent Health Initiatives by European Food and Beverage, and Restaurant**

Company	Comments
Nestle	Putting in place a Corporate Wellness Unit to "integrate nutritional value-added in our food and beverage business", and among other things will steer Nestle's response to obesity. Nestle also provides nutrition education. Also lean cuisine products (Stouffer). Source: 2004 Year-End Management Report.
Unilever	By the end of 2005 ULV's nutrition enhancement programme will have screened and scored their entire food and beverage portfolio. Begun in 2004, this programme is achieving further reductions in trans fat, saturated fat, sodium and sugar levels. Industry leader: in the mid 90s eliminated almost all trans fats from margarine. Frying oil changed from palm (45% saturated fat) to sunflower (12%). Source: 2004 Social Report.
Danone	In 2004 the Danone Institute in France launched an awareness campaign to aid in early detection of childhood obesity. Integrated strategy: R&D, public awareness initiatives. Several initiatives to attack a problem of obesity alongside malnutrition in several countries. Source: Annual Report 2004.
Tate & Lyle	Tate's portfolio of ingredients include SPLENDA® Sucralose, a no calorie sweetener, and also a range of fat-replacing ingredients that help our customers provide new reduced-fat options. Tate & Lyle is committed to working with our partners across the food chain to ensure that people have the knowledge, information and range of foods they need to make choices that maintain a healthy lifestyle. Tate & Lyle is participating in a range of initiatives to address these issues at an employee, community and industry level, some of which are listed below.

Source: Company Reports

## Case-Study

■ In November 2002, Jason Streets (UBS) wrote "Absolute risk of obesity-Food and drink companies not so defensive"? He ranked companies according to the proportion of EBIT (or in some cases revenues) that, at the time, came from foods having a high calorific intensity. In this way, he estimated a very approximate "obesity exposure". Of course, risk exposure is not the only thing that matters: how it is handled is equally important, in our view. Hence, "obesity risk" may be defined in terms of exposure in terms of business mix, and risk management. Risk management is something that cannot be observed easily – it requires detailed knowledge of firms and their management. However, we believe that the social ratings published by Innovest<sup>28</sup> may give us a window into the way a firm is handling its social risk including obesity where relevant. Jason calculated obesity exposures in 2002. The social rankings for most of the firms in the list have not changed since the Autumn of 2003. We therefore think it reasonable to use these two measures in combination, in order to classify companies according to their "obesity risk".

On the basis of the combined data, four types of firm can be identified: those with high product exposure and likely to be managing the risk well; those with high product exposure and lower levels of risk management; lower exposure and

<sup>28</sup> Please note that these rankings are proprietary to Innovest Value Advisers. They do not necessarily reflect the views of UBS analysts.

low levels of risk management; lower exposure and higher levels of risk management.

**Table 4: Classifying Firms by Risk Profile**

		Innovest Ranking	
		Low	High
Obesity Exposure	High	LH	HH
	Low	LL	HL

Source: UBS

It is interesting to inspect the returns of the stocks in each of the boxes, above. Weighted average total returns (relative to the country benchmark) turn out to be highest (+43% between November 27<sup>th</sup> 2002 and July 27<sup>th</sup> 2005) for the high (obesity) risk stocks having a lower Innovest social rating, top left in the above chart. Next come stocks having low obesity exposure and a high social ranking (+33%), bottom right. Next come the stocks having high product exposure and a high social ranking. The most pedestrian returns came from the “low obesity risk” stocks having lower Innovest social ratings.

**Table 5: Return and Risk Profile, Obesity Exposure and Internal Controls**

		Innovest Ranking	
		Low	High
Obesity Exposure	High	Return: 43%. Volatility: 21%	Return: 18%. Volatility: 18%
	Low	Return: 5%. Volatility: 21%	Return: 33%. Volatility: 16%

Source: UBS

On the face of it, this performance pattern is not too surprising, except for one point, and this is the much stronger performance of the stocks having high product exposure and a lower Innovest ranking. The higher volatility of the higher risk lower rated stocks is also of note. Looking into the numbers, of the 43% delivered by the “LH” basket, McDonalds contributed 26%, and Hershey 11%, with 3.5%. We believe that the following, published in October 2004 by the consumer team, may help explain these numbers:

“In our “Forces Colliding” conference and associated report released on June 22 2004, we revealed seven key consumer-related opportunities for McDonald’s over the next decade. While Starbucks was our top “futures pick” (e.g., the best positioned to take advantage of these broad consumer opportunities), we believe McDonald’s may be the “most improved<sup>29</sup>”. Similarly, since our November '02 report, Hershey has moved into several more nutritious (or less “unhealthy”) product lines like weight management (SmartZone) bars, chocolate suitable for diabetics, and dark chocolate with flavonols/antioxidant benefits. The company markets its products as treats (and not directly to children), maintains detailed nutritional disclosure on its website, and has a section dedicated to “better for you” products, which we think should approach 2-3% of sales. While Hershey may not be at the forefront in managing obesity risk (that Kraft is), we think it is doing an admirable job in managing the operational risk of participating in the confectionery category<sup>30</sup>.

David Palmer identifies two strategic improvers-defined as firms that responded effectively to the increasing profile of obesity as an issue- have performed well

When looking at performance numbers in this way, we believe there are several caveats to apply: there is no way of knowing what explains the above performance. Equity returns are believed, in some quarters, to follow a random walk, so, this could quite simply be a random movement! One possible explanation may be, however, that strategic changes made by firms, translating to tighter risk management, have been reflected in the price. If this is right, it suggests that taking a contrarian stance and investing in “improvers” may be an interesting strategy to follow in SRI for the consumer sector in particular.

This comment is made on the basis of a very limited data analysis. We believe it is probably little more than common sense. After all in consumer sectors getting the brand right is fundamental to growth, and consumer trends are social phenomena. Getting the social issues right (or wrong) is more likely to have direct financial impacts in consumer sectors, and, for the reasons named above, the food and beverage sectors are likely to be particularly sensitive to this.

### Introduction to reformulation risk

In our view, it’s not the risk *per se* that really matters. It’s the way firms handle it. Recent work by David Palmer takes the obesity saga a step further, by identifying what can go wrong when products are reformulated in response to risk. UBS proprietary analysis “shows that products may deliver significantly different usage than the original<sup>31</sup>”, and that translates to potential risk. David highlights General Mills and Kraft Foods as at risk, having reformulated products amounting to 10-15% of sales in each case.

<sup>29</sup> See McDonalds Corp, Our Most Improved “Futures” Player. 14th October 2004. David Palmer. p. 4. Please also refer to Forces Colliding, David Palmer, 5th May 2004.

<sup>30</sup> David Palmer, UBS Food and Beverages

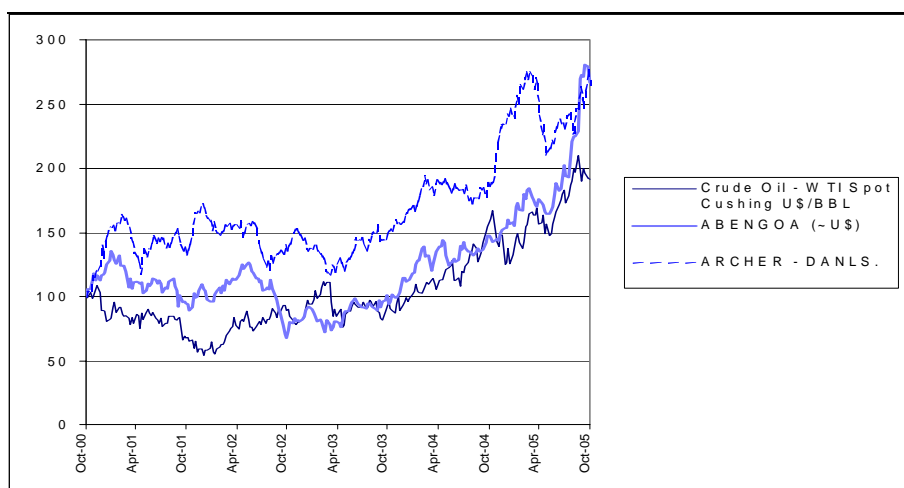
<sup>31</sup> Q-Series: Risk of Reformulations. David S. Palmer, UBS, and Pam Murtaugh, Pam Murtaugh & Co. October 14 2005.

## Issue No 2: Climate change risk

Food and beverage companies have substantial raw inputs from agriculture. In addition they are heavy users of water and energy. This makes them one of the sectors more vulnerable to climate change. In recent years we believe the steady flow of scientific data over the years is enough to suggest that global warming is more than the product of an active imagination. However, without doubt the most powerful catalyst putting climate change into the spotlight in recent months has been the price of energy. Of course, many factors are responsible for current trends in oil prices. Nevertheless, it is likely that question marks over the sustainability of supplies of fossil fuels have been raised by the events of the late summer of 2005, if nothing else, by signalling the vulnerability of the supply chain. Biofuel stocks in the US and Europe alike appear to be moving in reaction to the oil price currently, and this is likely to be because higher energy prices have moved the economic goal posts for such businesses.

Biofuel stocks increasingly moving with the oil price: this suggests that that markets are starting to price in some of the risks associated with climate change.

Chart 5: Biofuel Stocks and the Oil Price in US\$, Rebased to 100 in Oct 2000



Source: Primark Datastream

### Further out...

Currently the response of bio-energy stocks to the oil price is a short-term response, and we have no doubt that, should the oil price reverse, share prices in alternative energy stocks would follow, in the short term. However, we view climate change, and changes in the structure of the energy market, as a medium term issue. Food and beverage firms in particular face medium-term structural risk arising from changes to the environment that may follow from climate change, because this is expected to have a direct impact on crop yields. "Most researchers believe that higher temperatures and droughts caused by climate change will depress crop yields in many places in the coming decades<sup>32</sup>". CO<sub>2</sub> is believed to boost photosynthesis, and the expectation has been that this would substantially offset the overall reduction in production volume. Recent scientific experiment however has suggested that this expectation could be optimistic. "If Long's findings prove correct, even CO<sub>2</sub> fertilisation will not prevent the world's crop yields from declining by 10% to 15%" by 2050.

<sup>32</sup> The New Scientist. 26 April 2005. Article by Fred Pierce. See [www.newscientist.com](http://www.newscientist.com)

2050 is perhaps too far off for financial markets to think about. However, in our view, this trend is likely to affect global food and beverage firms much earlier than 2050.

**Table 6: Company Actions relating to Climate Change Mitigation**

Company	Highlights
Danone	Danone's main environmental impact is energy consumption and greenhouse gas emissions linked to refrigeration of fresh products. Green plant program to reduce consumption of water, and energy resources. Groundwater sources protection policy. Numeric targets set and progress measured.
Kraft	Kraft is "committed to reducing environmental impact" of the firm's activities. Kraft monitors water consumption, water discharge, energy usage, CO2 emissions, and solid waste generation and recycling rates. Numeric evidence of performance given per tonne of production.
McDonalds	Retail food service is inherently and energy intensive business, involving refrigeration, cooking, heating, venting, air conditioning and lighting. Energy is McDonald's most significant direct environmental impact. Their restaurants consume, on average, 350,000 kilowatt hours (kWh) per year – in all, nearly 11 billion kWh. Managing energy uses not only brings environmental benefits, but can also reduce energy expenditures by 10% or more.
Pepsico	Environmental task force created in 2001. 2003: GRI Guidelines adopted. Sustainability task force oversees water, packaging, energy, emissions. Member of the Energy Star programme. Between 1999 and 2004, Fritolay reduced water consumption by 25%, fuel by 18%, electricity consumption by 13%.
SABMiller	A new environmental strategy, developed during the year, will accelerate the reduction of our water, energy, waste and packaging costs. Plans in place to achieve lower levels of GHG emissions include the firm's Greenhouse Gas Protocol Initiative, and changes in fuel mix, with alternative fuels used in some breweries
Tate & Lyle	In 2000, Tate set a target of reducing group energy consumption per unit of production by 3%. 2.4% achieved. 3.6% annual reduction in group water index achieved
Unilever	Energy sources account for 94% of ULV's emissions from manufacturing. Since 1995, the firm has reduced energy use in manufacturing by 25% per tonne produced. Water usage per tonne of produce has been more than halved. Sustainability guidelines established for key crops, being rolled out to other crops.

Source: Company Reports

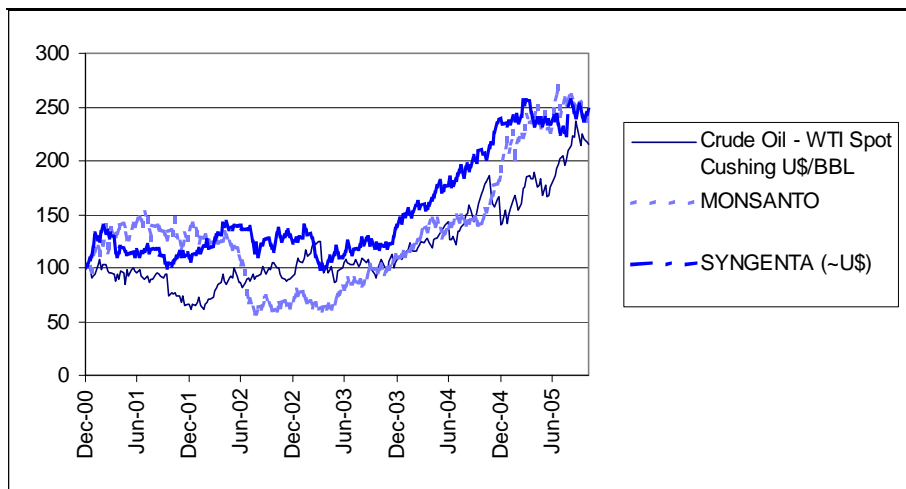
Observable direct effects of global warming on global food supplies may be far off and remote, but it is something consumers may feel strongly about well

before the event. In addition, there is no shortage of evidence<sup>33</sup> to suggest that corporations are increasingly expected to take (and increasingly taking) a pre-emptive role with respect to such “social” issues. The table above summarizes some of the things food and beverage companies are doing in this area<sup>34</sup>.

Of course, companies are unlikely to be able to head off such problems alone. Nevertheless, security and quality of raw material inputs are key issues for firms, affecting the business directly, and therefore affecting profitability and valuation directly. For food and beverage firms, a well-diversified portfolio of resources may offset some of the risks of climate-change-induced changes in crop yields. Unfortunately, as we know from finance, diversification cannot protect anyone against systematic risk – a general trend will affect everyone in proportion to his/her exposure. Productivity improvements may be one answer to the threat of lower crop yields globally. New seed technology (leading players being Monsanto, Syngenta, and Delta& Pine Land) may be one part of this solution.

We do not believe the market has yet begun to focus on the potential significance of climate change risk for “new technology companies”, and so, we think it unlikely that the risks are reflected to any relevant extent in the share prices of food and beverage companies. In the following chart, oil does not appear to be the main driver of share prices: Monsanto’s share price started accelerating in December 2004, before the oil price started moving, and Syngenta peaked in the Spring of 2005.

Chart 6: “New Technology” Stocks in the Food and Beverage Food Chain



Source: Datastream

<sup>33</sup> Ironically, the obesity issue itself is such a catalyst for the food and beverages industry.

<sup>34</sup> A topical example: “Champagne houses are considering exporting the production to the Garden of England. Climate change and the chalk geology of hills in Kent and Sussex has led to three French firms thinking of making the move”. BBC News, 15th April 2004. See [news.bbc.co.uk](http://news.bbc.co.uk)

## Case-Study

### Taking Good Practice from Emerging Markets to Developed Markets

For the brewing industry, access to pure water and reliable energy sources is critical, and such resources tend to be under pressure in emerging markets, owing to local conditions such as the prevailing climate and the state of the local infrastructure. Thus, the pressures to be economical with water and energy are much stronger in emerging markets than in many developed markets. A 2003 merger, between SAB in South Africa, and Miller in the USA, gives us an interesting opportunity to explore this issue. Taking SABMiller as a case study, the hypothesis we began with was that SAB would, owing to its experience in dealing with environmental pressures in South Africa, have superior operating skills to bring to the table. In short, we thought it likely that the relative environmental performances of SAB and Miller would be a “marker” (which we had not looked at, at the time of the merger) for what followed.

Case Study: SABMiller. Can we find any evidence of skills in the area of environmental management crossing borders?

#### Example No 1: SAB Miller

When SAB acquired Miller in 2002, Miller was already widely regarded as an efficient company. Yet, the combination was, rather surprisingly in the view of the UBS team (see below), able to deliver further cost cuts.

The story evolved as follows in UBS research:

##### Expectation

November 2002- Miller: “We continue to believe that the challenges of improving performance at Miller, combined with limited volume growth and relatively high risk in the core South African beer business, are likely to outweigh the attractive growth prospects, in our view, of SABI<sup>35</sup>.

The local (environmental) requirement for an economical use of energy and water appear to have helped hone operating practices that brought financial benefits when applied elsewhere in the group.

##### Outcome

October 2003-Miller: “The company has identified some US\$50m annualised cost savings by FY06E to offset the adverse impact to EBITA from the forecast continued share losses. We believe that the company is well on the way to realising these savings<sup>36</sup>”.

##### Share price

November 2003: “SABMiller reported a good set of numbers. H1 04 EPS at 35.5c is 10% ahead of UBS estimates (EBITA +9% ahead of our estimates and net sales +5% ahead). Key area of out performance in H1 04 relative to our estimates is Miller operations (UBSe EBITA at US\$185m versus reported at US\$249m). Some of this is better than expected mix from Miller Lite, but most is the delay of an advertising campaign into H2 worth US\$35m which represents

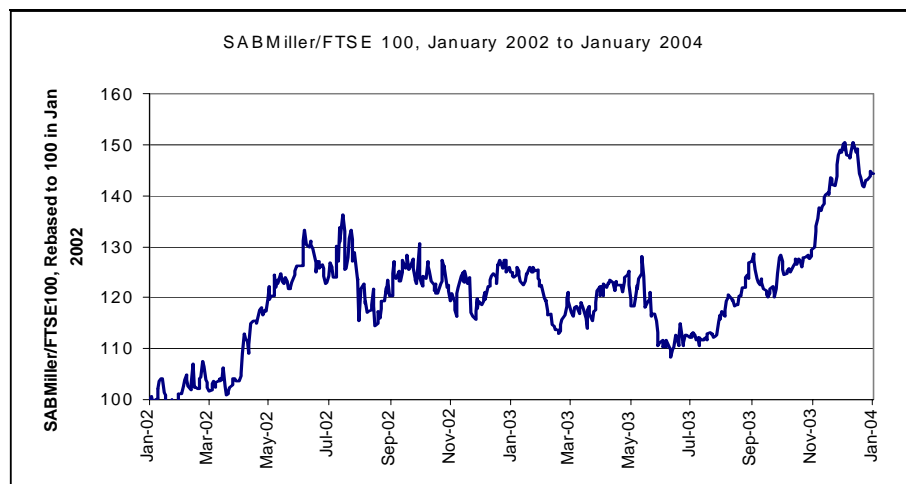
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<sup>35</sup> SABMiller Company Report. Renier Swanepoel, Chris Pitcher. 29th November 2002.

<sup>36</sup> SABMiller. Positive Trading Update. Chris Pitcher, Rene Swanpoel, Melissa Earham, 1st October 2003.

60% of the US outperformance. If we adjust for this marketing spend delay, EBITA is +5% ahead of estimates<sup>37</sup>.

Chart 7: SABMiller Share Price Performance, 2002-2003



Source: Datastream

A chart of SABMiller's share price performance over the relevant period is shown above. Of course there is no basis on which we can say for sure that an unanticipated improvement in fundamentals was what moved the share price, particularly because "this was supported in part by Rand appreciation, as well as improving fundamentals"<sup>38</sup>. It is nevertheless interesting that outperformance is coincident with the improvement in newsflow.

Our food and beverage team, when asked about brewery firms and operating efficiency in all respects (financial and environmental) did not hesitate in citing this as a good example of a transfer of management know-how from South Africa, to the US. The question is, then, would it have been possible to take the emerging market counterparty's environmental management as a "marker" of strong operational management before the event?

#### Environmental Performance

The answer, rather surprisingly, turned out to be no! What we found, in the 2003 Corporate Accountability Report, was evidence of stronger environmental performance at Miller than at SAB, summarised below. As we can see from the following, the addition of Miller appears to have enhanced the group's overall environmental performance KPIs (Key Performance Indicators).

<sup>37</sup> SABMiller. Breaking Results. Chris Pitcher. 20 November 2003.

<sup>38</sup> This insight was provided by Melissa Earlam, UBS Beverages analyst.

Table 7: Environmental Key Performance Indicators (KPIs).

Focus	KPI	SAB, 2002	SAB Miller, 2003	2003 excl Miller	Comment from SAB Miller CAR Report
Energy Efficiency	KWh/hl	10.2	8.9	9.5	Some of the reduction is attributable to good performance from Miller.
Water Efficiency	hl/hl	5.7	4.6	5.3	Improvement mainly due to the inclusion this year of Miller operations, which are very economical regarding water use.
Effluent reduction	hl/hl	4.1	3.4	nr	The improvement is largely attributable to the efficiency of Miller operations in the United States.
Greenhouse gas emissions	CO2 kg/hl	15.6	16.0	nr	Absolute CO2 emission rose owing to the inclusion of Miller. However the increase in the KPI was mainly owing to an increase in the emission figures of ESKOM, the South African Electricity generator.

Source: SABMiller Corporate Accountability Report 2003

It appears that stronger operating practices than those in place at SAB, in the area of environmental controls, were already in evidence at Miller, even if this was not apparent (before the merger) at the level of financial performance. This is clearly not a simple case of strong environmental (as a marker for operational management) crossing borders with new management.

We think what we may be observing is the following: we think it likely that SAB went in to Miller with managers who understood how to generate profit *while also* dealing with difficulties in key operating areas (energy efficiency, water efficiency). They were therefore arguably well-equipped to leveraged off some solid, and pre-existing, technical operating skills<sup>39</sup> at Miller to the bottom line in a way that perhaps had not happened before<sup>40</sup>.

The key points to emerge from this case study are as follows, in our view:

- Environmental performance metrics are informative indicators with respect to a firm's overall operational management. For industries where operational management matters – such as the food and beverage industries – environmental data should be regarded as a routine company performance metric in the context of financial analysis.
- This is a story of skill transfer from emerging to developed markets. The environmental metrics, in this case, suggest that it is also a story of hidden operating performance brought into the light of day by a management experienced in doing just that owing to the emerging market experience curve.

### Example No 2: Inbev

InBev was formed in 2004 when Interbrew and Companhia de Bebidas das Américas (AmBev) combined. InBev became the largest global brewer with

<sup>39</sup> We interpret the strong environmental KPIs of Miller as evidence of technical skill at the level of operations.

<sup>40</sup> cf comments on the firm's profitability, from the same CAR Report. "Cost reductions exceeding the original US\$50 million have been identified".

In fact, Miller's environmental KPIs were stronger than those of SAB.

volumes of 208mhl per year (14% market share), ahead of Anheuser-Busch (10%), SABMiller (8%) and Heineken (8%).

The Ambev/Interbrew merger story appears to be similar in nature. Once again, emerging market management was sent to the developed market operations of the new group. In Brazil, Ambev would have had long experience of operating in an environment in which electricity demand was constantly running ahead of growth in generating capacity<sup>41</sup>. The merger story evolved as follows in UBS research:

#### Expectation

August 2004: “In terms of delivering stated operating synergies, few brewers have AmBev management’s track record, and therefore we believe that they can deliver or exceed the US\$140 million in stated synergies in a three-year period<sup>42</sup>”.

#### Management Change

August 2004: “By naming Carlos Brito (currently in charge of Brazilian operations) to the North American presidency (which for now encompasses only Labatt’s Canadian unit), AmBev is assigning its most seasoned operator to the task of bringing Labatt’s costs (and ROIC) to AmBev standards. Luiz Fernando Edmond, currently Sales & Distribution Director, will be co-CEO for LatAm<sup>43</sup>”.

This strategic management change appears to have been reflected in valuations reasonably quickly:

#### Valuation

October 2004: “Our respective fair value targets for Heineken and InBev would imply that InBev continues to re-rate to a 4% premium to Heineken on both EV/EBITDA and P/E, which we believe is justified given the higher level of earnings and ROIC momentum that the stock offers over the next 2 years. Moreover, this would imply that the strategic premium that Heineken has historically commanded has now been eroded by the competition<sup>44</sup>”.

#### Environmental Performance

Unfortunately, we have not been able to collect any environmental performance data for Inbev, and so we are unable to pursue the analogy for our second case-study at this point.

For the food industry, however, we believe it is common sense to suggest that there is an association between lower costs and good environmental practice. Table 6 above lists selected climate change action taken by global food and

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<sup>41</sup> Energy Information Administration (EIA), DOE. Country Analysis Briefs. Brazil, Electricity. See [www.eia.doe.gov](http://www.eia.doe.gov)

<sup>42</sup> Ambev/Interbrew Merger Update (#4). In the Final Stretch. Jose J. Jordan, Chris Pitcher, Tina Barroso. 25th August 2004

<sup>43</sup> Ambev/Interbrew Merger Update (#5). Management Changes Post Transaction Closing. Jose J. Jordan, Chris Pitcher, Tina Barroso. 30th August 2004.

<sup>44</sup> Inbev. Mixed Q3, Growth from the East. Chris Pitcher. 27th October 2003

beverage firms. The issue is taken seriously, and numeric metrics are disclosed by several firms.

## Environmental Performance Indicators – Brewery Companies

It is clear that, as a cohort, brewery firms are sensitive to environmental issues. The following table shows data collected from the reporting of key performance indicators (KPIs) for a small sample of firms<sup>45</sup>. The inputs, in terms of water and energy per unit of beer produced, are considerable. Gradually each year, an increasing number of firms are reporting on usage of energy and water per hectolitre of beer, and also CO<sub>2</sub> and waste per hectolitre of beer. Even when performance indicators are not reported, these areas often appear in textual commentary, either in the form of a policy statement (the approach taken for instance by Inbev); or in the form of performance reporting in the main financial statements: for instance: Anheuser-Busch Recycling Corporation (ABRC) was created in 1978, to recycle aluminium cans. “Each recycled can means 95 percent energy savings<sup>46</sup>”.

**Table 8: Reported Environmental KPIs, Brewers<sup>47</sup>**

	2003	2003	2003	2003	2004	2004	2004	2004
	Beer	CO <sub>2</sub>	Water	Energy (Elect + Thermal)	Beer	CO <sub>2</sub>	Water	Energy (Elect + Thermal)
Unit	Mn HL	Kg/HL	hl/hl	KWh/HL	Mn HL	Kg/HL	hl/hl	KWh/HL
Carlsberg	28.9	9.9	4.9	39.7	38.2	11.2	4.7	39.2
SAB Miller (Mar YE).	nr	15.5	4.8	40.6	nr	15.2	4.8	nr
Heineken	86.0	12.1	5.4	42.3	105.0	12.1	5.5	41.6
Scottish & Newcastle (A)	31.7	10.8	4.8	42.9	31.7	10.7	4.8	42.5

Source: Company Reports and UBS

The above KPIs must be used with care when looking at the relative performance of firms, because the table may not be comparing apples with apples. For some firms, for instance, the number of production units covered by environmental reporting changes from year to year as new units are added<sup>48</sup>. We therefore think it would be fairly pointless to compare the above metrics to share price performance or valuation. What the numbers do tell us is (to state the obvious) that water, and energy are significant inputs to the brewing process, and CO<sub>2</sub> a significant output. Taking the “sensitivity” of the brewery companies as a sector to be high, we believe the most interesting approach, from an investor perspective, is to look at how environmental issues are handled.

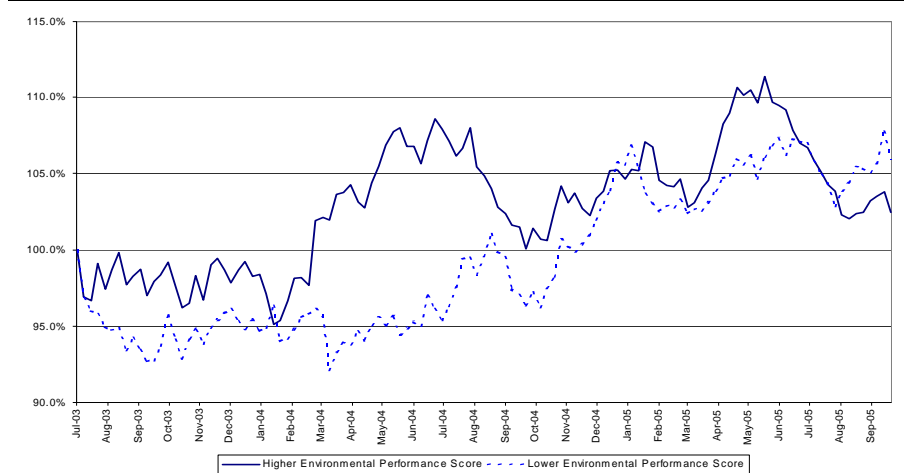
<sup>45</sup> We apologise in advance for any errors or omissions. Numbers are reported in different ways, and in different places in company reports, which means inaccuracies may have crept in. Additionally, sometimes it is not clear if numbers apply to group, or to clear beer operations only.

<sup>46</sup> Anheuser Busch Annual Report 2004.

<sup>47</sup> Carlsberg: breweries only. Numbers reported for 2002 and 2004, some numbers not broken out for for 2003, or shown as bar chart only. SAB: April year end - these numbers refer to reports made in April 2004 (2003/4) and April 2005 respectively.

<sup>48</sup> For example: in the case of Carlsberg, the environmental KPIs for beer covered 37 plants in 2002, 39 plants in 2003, and 44 plants in 2004. Source: Company Reports.

## Chart 8: High Environmental Vs Low Environmental Performers



Source: UBS and Innovest

In the above chart, we focus on environmental performance as expressed in the Innovest environmental rating. We construct baskets of higher and lower-rated firms. The performance of the “higher” and “lower” rated firms (constructed as equally weighted baskets of the stocks) are shown above, rebased to June 2003, which is roughly when most of the firms were ranked.

The higher-rated cohort outperformed in 2004 but beyond that there is little to distinguish between the baskets. However it would be surprising if this narrow perspective on the data over a short period of time said very much at all. A recent piece of research - The Eco-Efficiency Premium Puzzle, by Jeroen Derwall, Nadja Guenster, Rob Bauer, and Kees Koedjik<sup>49</sup> is of note in this context, being based on more thorough and rigorous quantitative analysis. The authors constructed and evaluated two equity portfolios, one of stocks highly ranked, and one of lowly-ranked, stocks, in terms of their eco-efficiency on the basis of Innovest Strategic Value Advisors rating database. Between 1995 and 2003, the highly ranked portfolio substantially outperformed the lower-ranked portfolio in risk-adjusted terms. On balance, we believe it reasonable to expect that firms performing well in eco-efficiency terms, and also working on climate change mitigation in the context of a successful business model, should outperform their peers.

However, in light of the case studies above, we believe that the greatest value is to be extracted from information around a company’s environmental performance in the context of other information.

<sup>49</sup> Jeroen Derwall, Nadja Guenster, Rob Bauer, and Kees Koedjik, 2005. The Eco-Efficiency Premium Puzzle. Financial Analysts Journal, Vol 61, No 2. March/April, pp. 51-63

## Issue No 3: Supply Chain Risk

Supply chain risk is a multi-faceted issue. One perspective on the supply chain has in fact already been explored, above. Climate change risk *is* supply chain risk in many senses of the phrase owing to the need of firms in the industry for sustainable supplies of good quality raw material. In addition, remote supply chains are a fact of life for many food and beverage firms, often, but not always, in emerging markets. The complexity of many supply chains in the context of raw food ingredients indicates a requirement for strong hygiene and quality controls throughout. Processing itself may introduce risk in the form of unwanted content. We do not pretend to cover the area in every detail in this document. These risks are widely known about and fully incorporated into the operating practices of competitive food companies. We believe the key point to be that what happens within the supply chain is often less important than how it happens, and how firms respond

**We believe that what happens within the supply chain is often less important than how it happens, and how firms respond.**

## Two Brief Case-Studies

### Case-Study: Sudan 1

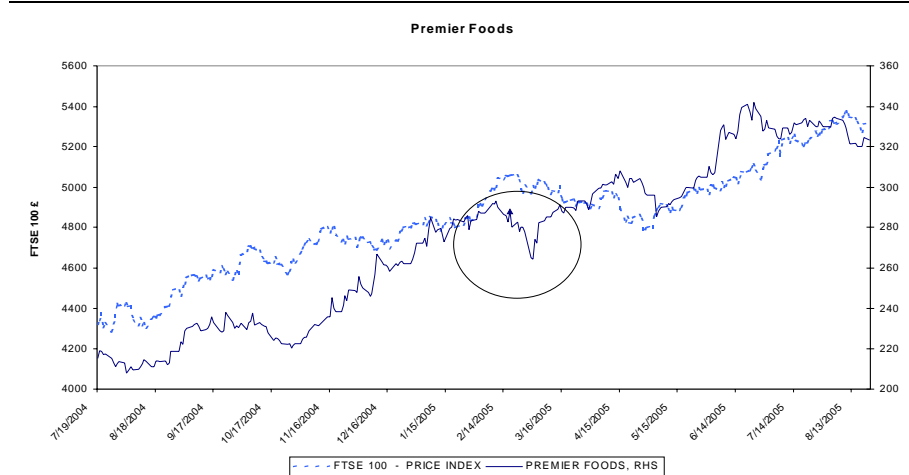
On February 18<sup>th</sup> 2005, the Food Standards Agency in the UK advised people not to eat foods that had been inadvertently contaminated with an illegal dye, Sudan I. The Agency announced that the dye was in a batch of chilli powder used by Premier Foods to manufacture a Worcester sauce, which was then used as an ingredient in a wide range of products<sup>50</sup>. The website also supplied a list of foods that had been affected by the dye, and this was updated at rapid intervals. Although incidents such as this can never be described as good news, the good news was the speed with which affected products could be identified and withdraw from stock by food retailers, and, more importantly, the list was readily available to any member of the public with internet access.

As we said earlier, how an issue is handled will very often be far more important than its absolute scale. In our view, this was a very good example of good risk management, and it can only have been possible because the necessary information and infrastructure were in place. The impact on the share price of Premier Foods appears to have been minor: on February 18<sup>th</sup> it fell by just 3%, and, having fallen slightly further in subsequent days, it bottomed on March 1<sup>st</sup> and is now substantially higher.

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<sup>50</sup> Food Standards Agency, Press Release dated February 18th 2005. See [www.food.gov.uk](http://www.food.gov.uk)

## Chart 9: Premier Foods Share Price



Source: Primark Datastream

UBS Analysts reported on the event as follows:

#### First Read: Premier Foods – 18 February 2005

We maintain our Buy 1 rating and price target of 330p following a 3% fall in the shares on the back of the Foods Standards Board (FSA) announcement that a batch of Worcester sauce manufactured by Premier Foods contains an illegal dye that may cause cancer.

Polly Barclay, Alan Erskine, Susanne Seibel. 18<sup>th</sup> February 2005

#### Premier may look to pass on any liability

In 2002 when Premier Foods received the contaminated chilli there was no legal obligation to check for Sudan 1. In 2003, when all chilli and spice mix needed to be certified as safe Premier Foods received a written certification from its supplier, Unbarrothon. Premier Foods may therefore look to pass on any potential liability.

#### 350 products effect

Of the 350 products effected only 4 are end products manufactured by Premier Foods and include the Crosse & Blackwell and Lloyd Grossman sweet & sour brands. The remaining 346 products contain potentially contaminated Worcester sauce supplied by Premier Foods as ingredients.

#### Valuation: Buy 1 PT 330p

While clearly not a positive for the company, we believe this news is not as bad as it first read. Although much will depend on how the story is treated in the weekend press. We have a Buy 1 rating and 330p price target, which is derived from CY05E PE of 12.1x and EV/EBITDA of 8.3x, the average of the UK food peers.

#### Later Comments

Later comments from the analysts are as follows.

“Both in the results statement and at the analyst meeting this morning management said it “does not have a material financial exposure” to the Sudan 1

First Read: Premier Foods-FY04 Result Preview. Worcester Sauce Recall. 2 March 2005. Polly Barclay, Alan Erskine

issue, although we note that its auditors may refer to 'uncertainty' in their report. The company's line remains that its insurance cover is sufficient to meet potential look to pass liability on to its supplier, Unbar Rothern”.

The recovery in the Premier foods share price is, in the view of the analysts, testimony to the way Premier Foods handled disclosure in response to the event, together with the insurance cover.

## Case-Study: Coca-Cola India

### Pesticide Allegations Hamper Volume Growth

Beginning in the fall of 2003, Coca-Cola and PepsiCo began experiencing a severe disruption in volume growth in India due to allegations of extensive pesticide usage its products. Both companies reported sales declines of 30-40% shortly after a report by the Center for Science and Environment was made public on August 5<sup>th</sup>. According to the report, the environmental agency claimed that Coca-Cola and PepsiCo's products contained pesticide residues up to 40-times the accepted level. The allegations ultimately proved to be false and the report was withdrawn. Despite an announcement by the Indian government that both company's products have tested safe for the public, the industry continues to struggle to regain consumer trust.

**Kaamil S. Gajrawala**

### Lost Market Share

Almost two years since the initial report, carbonated soft drink sales continue to be soft in region as consumer have since switched to waters and juices (much of what they had consumer prior to switching to “finished goods”). Moreover, some consumers have switched to private-label, locally made and bottled products.

### Public Relations Ineffective Thus Far

While Coca-Cola has launched a series of public relations campaigns to regain consumer trust, we have yet to see a reversal in volume declines. In the most recently reported second quarter, volume in India were down 14% (volumes were also partially down due to a price increase). The company recently announced a reorganization in the region and thus will likely pursue a host of new strategies focused on regaining consumer trust.

## Handling Supply Chain Risk – Examples

Table 9: What Companies Are Doing

Company	Highlights
Coca-Cola	Coca-Cola has recently initiated an Agricultural Water Initiative with Business for Social Responsibility (BSR) that aims, among other things, to 1) develop supply chain tools that enable corporations to assess, monitor and improve water management strategies in their respective supply chains, 2) create sustainable water management tools for producers, and 3) to create water management indicators and an assessment tool that becomes a widely used industry standard.
Danone	Supply-related risks are managed by the Food Safety Center, which characterizes existing risks and identifies emerging dangers. The Center actively monitors scientific developments, integrating new expertise into its knowledge base. Working with the business lines, the Center ranks risks by severity and frequency, enabling each line to identify the risks specific to its own ingredients and production process. Risks are then grouped into four categories: chemical, physical, microbiological and allergy-related.
Kraft	Kraft uses science-based risk identification and management processes to systematically assess and control factors that potentially could compromise ingredients, packaging, manufacturing processes or finished products
McDonalds	McDonald's has had a Code of Conduct for Suppliers since 1993. It has undergone several revisions, the most recent in 1997. The Code establishes both substantive and procedural expectations for suppliers. It covers local legal requirements, forced labour and child labour, working hours. McDonald's global food safety system is based on a "Hazard Analysis Critical Control Point".
Tate & Lyle	Tate & Lyle Ethical Commitments and Policy Guidelines were first published in May 2001 on the company's website. Relationships with suppliers vary from those that are directly with corporate entities to those with growers that are less structured. In other cases, raw materials are purchased via commodity exchanges, state-owned suppliers or under international conventions. Tate gives strong preference to dealing with commercial partners who demonstrate their commitment to the principles of this code by accepting compliance as a contractual requirement and reserve the right to terminate our contractual relationship with commercial partners that consistently fail to meet the Group's standards.
Unilever	Unilever works with approximately 19,000 suppliers. 65% of raw materials come from agriculture. Global standards apply in safety, efficiency, and quality. Particular focus is given to agriculture, fish and water, in partnership with governments, NGOs and local producers.

Source: Company Reports

### Further Out...

One important, general supply chain risk for food and beverages relates to product risk. We think it is interesting to illustrate the potential scale of this for the food and beverage sector by thinking about the way artificial sweeteners are used. Aspartame is a non-calorific sweetener widely used in food and beverage products. It has been approved for use in food products since 1981 in the USA, and much scientific work has gone into assessing its safety<sup>51</sup>. Sucralose is a more recently developed no-calorie sweetener. It is “made from sugar, so it tastes like sugar, and is approximately 600 times sweeter than sugar<sup>52</sup>”. It was

<sup>51</sup> See Aspartame Information. [www.aspartame.info](http://www.aspartame.info)

<sup>52</sup> The website of Tate and Lyle, Products section. [www.tate-lyle.co.uk](http://www.tate-lyle.co.uk)

approved for a wide variety of use in food products by the FDA in 1998<sup>53</sup>. Although the available evidence suggests that both these products are safe for consumption, it is widely recognised that it is impossible to test for very long-term effects over the short term.

In the following table we apply a sub-set of the competitor analysis applied in “Why Try to Quantify” to draw out the potential scale of the risk.

**Table 10: Competitive Positioning – Artificial Sweeteners**

	Essential nature of product or service	Importance of technology to product differentiation	Asymmetry of information/ Product complexity	Potential impact on diffuse community
<b>Artificial sweeteners</b>	Incorporated in widely used staples. Used to reduce caloric content in food therefore a benefit to users from a health perspective, and may help mitigate the more general obesity issue.	Artificial sweeteners are the product of new technology, and this point is critical to the owners of the intellectual property rights.	Artificial sweeteners are the product of new technology, and therefore are unlikely to be fully understood by the average user.	Yes, widely used

Source: UBS

Both products are increasingly widely used, all the more so in recent years because increased awareness of the importance of improving calorie control has increased demand for low-calorie foods. In response to this trend, for example, Coke recently launched a new product, “Diet Coke with Splenda” in response to demand from consumers who prefer sucralose<sup>54</sup>. Pepsi has also launched a new product called “Pepsi One” that uses Splenda<sup>55</sup>.

It may well turn out to be the case, 50 years hence, that artificial sweeteners were perfectly safe and indeed saved lives by helping consumers to control their weight. The aim of this short section is not to say anything specific about artificial sweeteners per se, but to illustrate just how wide spread product risk could hypothetically become, within the supply chain, in global markets.

<sup>53</sup> See the website of the US Food and Drug Administration (FDA). [www.fda.gov](http://www.fda.gov). Talk Paper prepared by the Press Office, 1 April 1998.

<sup>54</sup> See Press Release, on the Company website. Coca-Cola Announces Plans to Launch Diet Coke Sweetened with Splenda. 7th February 2005.

<sup>55</sup> Source: Company website. See [www.pepsiworld.com](http://www.pepsiworld.com)

## Evaluating potential financial impacts

In section 1 of our Q-series report, Corporate Social Responsibilities, why try to Quantify the Unquantifiable<sup>56</sup>, we defined a corporate social liability as follows<sup>57</sup>:

- A corporate social liability is an obligation to make a future expenditure due to past or ongoing manufacturing or other commercial activity, which adversely affects any aspect of the environment, the economy, or society.
- A *potential*<sup>58</sup> corporate social liability is a *potential* obligation to make a future expenditure due to past or ongoing manufacturing or other commercial activity, which adversely affects any aspect of the environment, the economy, or society.
- “A ‘potential corporate social liability’ differs from a ‘corporate social liability’ because an organisation may have an opportunity to prevent the liability from occurring by altering its own practices or adopting new practices in order to avoid or reduce adverse environmental, economic or social impacts”.

It is likely that most potential CSR issues will lead to liabilities rather than assets. Nevertheless, we believe that investment by a firm to limit the risk may have the characteristic of an asset. Elsewhere, the EPA refers to ‘the potential for environmentally beneficial investments to yield significant financial payoffs. One such payoff is the avoidance of environmental liabilities<sup>59</sup>’. In our view, the definitions above, and the theoretical frameworks we are working with in this piece, are able to incorporate corporate social assets, should the need arise.

The framework described above fits neatly into standard financial models, such as cash-flow, or sum-of-the parts approaches. For UBS, the value of a firm is its enterprise value, define as either 1. the net present value of the sum of enterprise cash flows or 2. the market value of all claims on the business. Any potential liability unknown in terms of amount timing or probability cannot be recognised in financial statements because accounting rules forbid it, so, the only way firms can disclose the risk of any material potential liabilities is in their footnotes. Nevertheless, the presence of a potential corporate social liability that is known to the market should affect the enterprise value of the firm in proportion to it size, its timing, and the probability that it will crystallise. In simple terms, the potential impact of CSR issues on valuation can be depicted as shown below. “If the market has not recognized a potential corporate social liability it should be understood that when the market does recognize the liability the value of the

A potential corporate social liability an obligation to make good environmental, economic or societal damage that is unknown in terms of quantity, timing or likelihood; a potential investment in risk control of the future; or, an amount not (yet) invested in risk control plus damage done and not (yet) recognised

There is ‘potential for environmentally beneficial investments to yield significant financial payoffs. One such payoff is the avoidance of environmental liabilities.’ (EPA)

<sup>56</sup> Published 11th April 2005

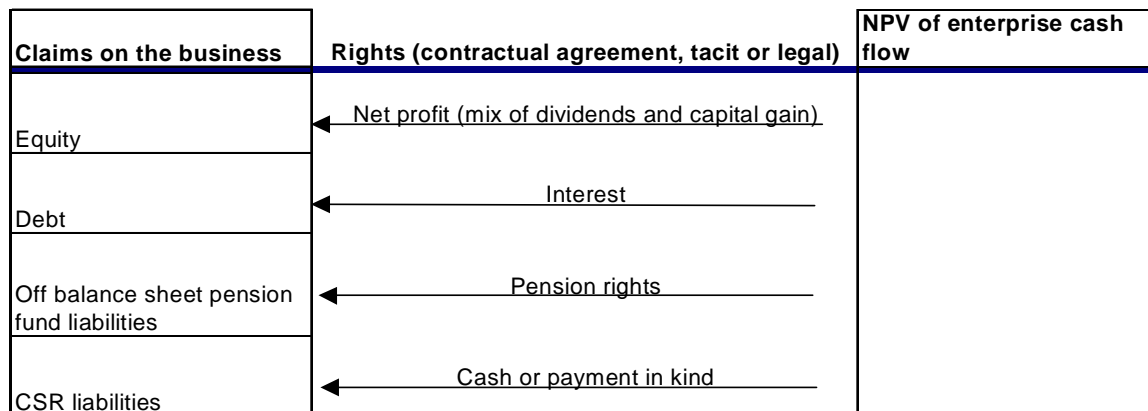
<sup>57</sup> Valuing Potential Environmental Liabilities for Managerial Decision-Making: a Review of Available techniques. EPA, 1996. p. 8. In this report the EPA defines environmental liabilities (and assets). We have simply adapted this thinking to all areas of corporate social responsibility.

<sup>58</sup> Potential: depends on future events, or a law or regulation creating the liability is not yet in effect

<sup>59</sup> Valuing Potential Environmental Liabilities for Managerial Decision-Making: a Review of Available Techniques. EPA, 1996. Section 1.1

other claims, in particular, equity's claim, on EV will decline". (Valuation and Accounting Group). And of course, the reverse – a failure of the market to recognise potential returns to a CSR-related investment (on the right hand side below) – would have the opposite effect.

Figure 3: CSR Effects and Valuation Models



Source: UBS

Of course, this is all very well in theory. Does anyone actually value CSR issues in this way, and, are they likely to? A search through UBS company reports will probably not find a single example of such a structured approach to the incorporation of costs and benefits into valuation. Or, so it would appear. In fact, we believe that the negative effects of CSR risks, and the positive effects of investment in risk reduction, are present in analyst models when the analysts believe that they will have financial impact. It is simply not overtly acknowledged.

■ We have been able to identify some examples in the food and beverages sector. “In their “Forces Colliding” conference and associated report released on June 22 2004, the UBS US consumer team revealed seven key consumer-related opportunities for consumer companies over the next decade. Extracts follow:

Pepsico

“We believe PepsiCo management has proactively positioned the company to capitalize on many of the opportunities that came out of our futures work across all lines of its business. Management has proven to be both aggressive (Quaker acquisition) and nimble (removing trans-fats before it became big news), and generally keeps the consumer in mind when implementing new strategies or innovating. Most important is PepsiCo’s willingness to accept change- its management seems best able to recognize trends early and face them honestly. We expect PepsiCo to continue to deliver 13% earnings growth over the next five years, driven by 6%-8% sales growth<sup>60</sup>”.

This is all very well in theory. What about practice?

Q-Series: Forces Colliding? Caroline S. Levy, David Palmer, Neil Currie. 21 June 2004. Food and Beverages. Tel 1-212-713 9315

Socially beneficial investments expected to yield financial payoffs.

<sup>60</sup> Forces Colliding? Rethinking Valuation in the Face of Societal Change Forces, 21 Jun 2004, p. 56

**This is nothing more than an expectation that socially beneficial investments are likely to yield financial payoffs.**

Of course, the investment is not purely altruistic: it is there because it strengthens the business model.

### Starbucks

The team describes the many dimensions of Starbucks brand strategy. This includes: “Commitment to values. Starbucks publishes an annual Social Responsibility report. This year’s issue, at 86 pages long, reads like a scorecard for the company against its value-oriented goals. This report is just one way that the company has proactively reinforced the culture that has made the brand what it is today<sup>61</sup>”.

Values are a value-driver, in combination with the many other aspects of the firm’s corporate strategy

The overall business model (including the impact of the firm’s value-system on the business) translate to “revenue growth and free cash flow growth congruent with our US\$46 price target”. The team also flagged short term risks: “In our view, even a slight hiccup in same-store sales momentum could cause significant multiple contraction—and thus negate much of the near-term benefit of Starbucks 23% plus EPS growth”.

### McDonalds

■ McDonalds was not one of the firm’s top “futures” picks (more on this subject later). However we would like to flag the following paragraph as clear indication that investment in risk prevention has clearly been taken into account in the analyst’s model in this case. “McDonald’s menu initiatives not only moved its menu to the premium and value margins, it redefined value in terms that have taken the obesity bull’s eye off its brand. ...[This] has essentially freed up the brand from some of the deep cynicism that encumbered it through the late 1990s to the present.... The combination of these menu moves has contributed greatly to the chain’s rebound in customer satisfaction scores, something that augurs well for McDonald’s stock, in our view<sup>62</sup>”.

Changes to the menu driven by social issues strengthening the business model, and inevitably considered in the analyst’s valuation model.

In an earlier paragraph we noted that consumer sectors are particularly vulnerable to public opinion, when it comes to social risk. This makes it inevitable that CSR issues are considered within the business model, and, similarly, inevitable that they are present in analyst models.

### Case-Studies

The product recall example in this piece is just one of many examples indicating that “social” issues affect share prices. The beer sector examples suggest that environmental performance indicators give insight into broader issues relating to company management. Here, too, we find CSR issues are simply “part of the furniture” for firms.

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<sup>61</sup> Forces Colliding? Rethinking Valuation in the Face of Societal Change Forces, 21 Jun 2004, p. 58

<sup>62</sup> Forces Colliding? Rethinking Valuation in the Face of Societal Change Forces, 21 Jun 2004, p. 17

## Appendix-Profiling CSR Effects

In terms of profile, the impact of news relating to a CSR liability on a firm's financial statements, and on its share price, may be quite different. If the firm has kept shareholders informed of the potential risks, the outcome may be an effect on the firm's valuation over a period of time, or at intervals, and a major one-off change in the P&L or the balance sheet, so that, when the news comes out, it appears to have no effect on the share price.

A series of potential profiles is summarised below.

### One-off effects: Event risk

1. A one-off 'hit' on a firm's P&L arising from a specific event, such as legal action or a fine, or an incident involving a product. Both P&L and valuation may be affected.
2. A one-off hit on the value of a brand (or the firm's reputation), arising from a specific incident or accident. There is likely to be no P&L impact, but there is potentially an impact on the firm's valuation.
3. A one-off hit on the value of intellectual property following on a change in the structure of the market. The immediate impact is likely to be on the share price. The P&L may be hit by the change to the structure of the market, and intangibles on the balance sheet may also have to be adjusted in future periods.

### Cumulative effects

4. A steady stream of added costs – such as an increase in employment benefits – affecting profit margins over a long period of time.
5. A steady erosion of sales and fall in price, reducing profits over a period of time.
6. Levies or taxes charged over a period of time.
7. Preventative measures or investment over a period of time.

### Cumulative effects leading to catastrophe

8. Cumulative damage can sometimes build up sufficiently to bring about catastrophic conditions, without an obvious catalyst.

### Opportunity cost

- New business opportunities forgone (and therefore growth foregone) because of perceived or actual CSR risk.

## Innovest Strategic Value Advisers

Innovest Strategic Value Advisers are an international investment research firm specialising in analysing ‘non-traditional’ drivers of risk and shareholder value, including environmental, social, and strategic governance issues.<sup>63</sup> . Innovest use environmental and social performance measures as leading indicators for management quality and long-term financial performance, not as commentaries on the intrinsic ethical worth of the companies. The level of a company’s environmentally and socially driven investment risk is balanced with the company’s managerial and financial capacity to manage that risk successfully, and profitably, into the future. They are relative to the standards and performance of the company’s industry peers.

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<sup>63</sup> see: [www.innovestgroup.com](http://www.innovestgroup.com)



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## ■ Statement of Risk

This document presents a particular perspective on the food and beverages sector. The SRI issues raised here often have to do with so-called "extra-financial" risk. Throughout the document, the theme we explore is the link between "CSR" risk and business and financial risk. Nevertheless, this should not be taken as a complete view of any of the firms, or industries, discussed here.

Note that obesity risk is regularly mentioned in the risk disclosures relating to research published by UBS analysts on food and beverage firms. In addition, several segments of the industry are highly regulated, all segments of the industry are highly competitive. Revenue growth and profitability can be affected by shifts in consumer preferences. Many of the firms in these industries invest heavily in brand building, which means that reputational risk can also be significant.

## ■ Analyst Certification

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

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### UBS Investment Research: Global Equity Ratings Definitions and Allocations

UBS rating	Definition	UBS rating	Definition	Rating category	Coverage <sup>1</sup>	IB services <sup>2</sup>
<b>Buy 1</b>	FSR is > 10% above the MRA, higher degree of predictability	<b>Buy 2</b>	FSR is > 10% above the MRA, lower degree of predictability	<b>Buy</b>	37%	35%
<b>Neutral 1</b>	FSR is between -10% and 10% of the MRA, higher degree of predictability	<b>Neutral 2</b>	FSR is between -10% and 10% of the MRA, lower degree of predictability	<b>Hold/Neutral</b>	50%	32%
<b>Reduce 1</b>	FSR is > 10% below the MRA, higher degree of predictability	<b>Reduce 2</b>	FSR is > 10% below the MRA, lower degree of predictability	<b>Sell</b>	13%	28%

1: Percentage of companies under coverage globally within this rating category.

2: Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS; as of 30 September 2005.

#### KEY DEFINITIONS

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (an approximation of the equity risk premium).

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

**Rating/Return Divergence (RRD)** This qualifier is automatically appended to the rating when stock price movement has caused the prevailing rating to differ from that which would be assigned according to the rating system and will be removed when there is no longer a divergence, either through market movement or analyst intervention.

#### EXCEPTIONS AND SPECIAL CASES

**US Closed-End Fund ratings and definitions are:** Buy: Higher stability of principal and higher stability of dividends; Neutral: Potential loss of principal, stability of dividend; Reduce: High potential for loss of principal and dividend risk.

**UK and European Investment Fund ratings and definitions are:** Buy: Positive on factors such as structure, management, performance record, discount; Neutral: Neutral on factors such as structure, management, performance record, discount; Reduce: Negative on factors such as structure, management, performance record, discount.

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-10% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned table in the relevant research piece.

## Companies mentioned

Company Name	Reuters	Rating	Price	Price date/time
<b>Abengoa</b>	ABG.MC	Buy 2	€13.19	17 Oct 2005 23:43 BST
<b>Anheuser-Busch Inc.</b> <sup>2a,4a,5,6a,6b,6c,7,16</sup>	BUD.N	Reduce 1	US\$42.47	17 Oct 2005 19:37 EDT
<b>Archer-Daniels-MdInd</b> <sup>16</sup>	ADM.N	Not rated	US\$24.42	17 Oct 2005 19:37 EDT
<b>Carlsberg A/S</b>	CARLb.CO	Reduce 1	DKr347.00	17 Oct 2005 23:43 BST
<b>Coca-Cola Co.</b> <sup>4a,6a,6b,6c,7,16,22,23</sup>	KO.N	Buy 1	US\$42.09	17 Oct 2005 19:37 EDT
<b>Danone</b> <sup>16</sup>	DANO.PA	Neutral 2	€87.40	17 Oct 2005 23:43 BST
<b>General Mills Inc.</b> <sup>2a,4b,16,23</sup>	GIS.N	Neutral 2 (RRD)	US\$49.07	17 Oct 2005 19:37 EDT
<b>Heineken</b> <sup>16</sup>	HEIN.AS	Reduce 1 (RRD)	€26.97	17 Oct 2005 23:43 BST
<b>InBev</b> <sup>16</sup>	INTB.BR	Buy 2	€32.65	17 Oct 2005 23:43 BST
<b>Kraft Foods Inc.</b> <sup>2b,4a,6a,16,23</sup>	KFT.N	Neutral 1	US\$29.60	17 Oct 2005 19:37 EDT
<b>MDC Holdings, Inc.</b> <sup>16</sup>	MDC.N	Not rated	US\$70.12	17 Oct 2005 19:37 EDT
<b>Monsanto</b> <sup>16</sup>	MON.N	Buy 1	US\$59.33	17 Oct 2005 19:37 EDT
<b>Nestlé</b> <sup>2b,4a,5,16</sup>	NESN.VX	Buy 1	CHF375.25	17 Oct 2005 23:43 BST
<b>PepsiCo Inc.</b> <sup>2a,4a,5,6a,6b,6c,7,8,16,22</sup>	PEP.N	Neutral 1	US\$57.76	17 Oct 2005 19:37 EDT
<b>Premier Foods</b> <sup>18</sup>	PFD.L	Buy 1	298p	17 Oct 2005 23:43 BST
<b>SABMiller</b> <sup>14,16</sup>	SAB.L	Neutral 2	1,030p	17 Oct 2005 08:19 BST
<b>Scottish &amp; Newcastle</b> <sup>4a,5,14</sup>	SCTN.L	Neutral 1 (RRD)	472p	17 Oct 2005 23:43 BST
<b>Starbucks Corp.</b> <sup>5,16</sup>	SBUX.O	Buy 1	US\$53.09	17 Oct 2005 19:37 EDT
<b>Syngenta</b> <sup>2a,4a,5,14,16</sup>	SYNN.VX	Buy 1	CHF135.80	17 Oct 2005 23:43 BST
<b>Tate &amp; Lyle</b> <sup>8,16</sup>	TATE.L	Neutral 2	464p	17 Oct 2005 23:43 BST
<b>The Hershey Company</b> <sup>2b,4a,5,16</sup>	HSY.N	Buy 1 (RRD)	US\$58.56	17 Oct 2005 19:37 EDT
<b>Unilever Plc</b> <sup>2b,4a,14,16</sup>	ULVR.L	Reduce 2	587p	17 Oct 2005 23:43 BST

Source: UBS. BST: British summer time; EDT: Eastern daylight time.

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