Delta Series Workshop

CONSUMPTION 1

SASB Standards Development Team
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Contents

Issues & Questions for Discussion

The following issues will be discussed at the Consumption I Delta Series Workshop. This material has been provided for your reference. Please do not distribute.

CLIMATE CHANGE ADAPTATION

Relevant SASB Industries:

DIRECT Impact: Agricultural Products; Meat, Poultry, and Dairy

INDIRECT Impact (Supply Chain): All Industries except Tobacco and HH Products)

Key Elements of the Issue:

- **Adaptation to precipitation and temperature** changes due to extreme weather conditions, water scarcity, and increased prevalence of pests and disease
- Increased operational **risk of water shortages and/or rising water costs**
- **Effects** on crop yield, quality of land, and animal feed supply, and other sourcing risks

Key Metrics (Climate Change Adaptation):

Question	Industry
1. Discussion of risks and opportunities related to **crop cultivation** presented by climate change	Agriculture
2. Discussion of strategy to manage risks to **feed sourcing and livestock production** presented by climate change	Meat, Poultry, and Dairy
3. Discussion of processes and procedures to manage risks to **tobacco supply** presented by climate change	Tobacco

Key Metrics (Supply Chain Management):

Question	Industry
1. Description of the process for managing **crop cultivation and sourcing risks** arising from environmental and social issues	Agriculture
2. List of priority raw materials and discussion of **sourcing risks due to environmental considerations**	Processed Foods Non-Alcoholic Beverages Alcoholic Beverages
3. Percentage of **feed sourced from water-stressed regions**	Meat, Poultry, and Dairy

Questions:

1. **Capturing differentiated impact of climate.** Climate has direct impact on operations, indirect impacts on supply chain. It also impacts availability of water, which is a standalone issue for most industries in this sector.

    a. Are we capturing the right impacts for each industry (e.g. direct impact for meat)?
    b. Should we consider a tiered approach for commodities or regions with different levels of risk? If so, what would you recommend we consider?

2. **Decision useful and comparable metrics?** Currently the metrics focus on strategies, risk and opportunities. They also focus on the broad portfolio of company's crops that they are producing or sourcing.

    a. Is it decision-useful to ask for qualitative disclosures about climate risk, opportunities and long-term strategy?
    b. How do we make metrics specific enough to reflect different sensitivity of commodities to climate change yet generic enough that it is comparable?

HEALTH & NUTRITION

Relevant SASB Industries: Processed Foods, Non-Alcoholic Beverages

Indirect: other industries in the Consumption 1 value chain

Key Elements of the Issue:

- Chronic and acute health & nutrition impacts of additives, synthetic sugars, trans-fats, MSG, etc.

- Improving nutritional value of food and quality for growth opportunities (Organic, non-GMO, Natural), non-additives.
- Portion Size
- Product taxes, and bans

Key Metrics (Health & Nutrition):

1. Description of **strategy to address health impacts** from products ingredients, portion size, or nutritional value
2. **Percent** of product portfolio containing **ingredients or additives** outside the FDA category of GRAS
3. Total addressable market and share of market for products **addressing health and nutrition trends**
4. Description of organization's **strategies to address product health profile** and approach to determining health risks of unproven products
5. Number of products that are **zero or low calorie**, and percentage of segment sales that contain **artificial sweeteners**

Questions:

1. **Major Trends/Topics**
    a. Are there specific elements of health/nutritional profiles that are more important (to consumers or regulators) than others (i.e. organic, GMO, sugar-free)?
    b. How do we distinguish between long-term trends and fads?
2. **Corporate Performance**
    a. Should specific ingredients (i.e. BPA, trans-fats, artificial sweeteners, etc) be disclosed separately, or should broader metrics be used?
    b. Do the topics and metrics balance the risks and opportunities relating to this issue (i.e. both "positive" and "negative" aspects)?
    c. Are there additional gray areas "like low artificial" that fall between positive and negative attributes that need to be better defined? E.g. should "low artificial" be accounted for in the metrics?

Initial Issues: IWG Consumption 1 Industries

	Agricultural Products	Meat, Poultry, and Dairy	Processed Foods	Non-Alcoholic Beverages	Alcoholic Beverages	Tobacco	Household & Personal Products
Environment	▪ GHG Emission ▪ Water Management ▪ Land Use & Eco. Impacts	▪ GHG Emission ▪ Water Management ▪ Land Use & Eco. Impacts	▪ Energy Management & GHG Emission ▪ Water Management	▪ **Energy Management & GHG Emission** ▪ Water Management	▪ **Energy Management & GHG Emission** ▪ Water Management		▪ Water Management
Social Capital	▪ Food Safety	▪ Food Safety	▪ Food Safety ▪ Health & Nutrition ▪ Labeling & Marketing Integrity	▪ Health & Nutrition ▪ Labeling & Marketing Integrity	▪ Responsible Drinking & Marketing	▪ Public Health ▪ **Responsible Marketing**	
Human Capital	▪ Labor Conditions	▪ Workforce Health & Safety					
B.Model Innov.	▪ Climate Change Adaptation	▪ Animal Care & Welfare ▪ Climate Change Adaptation	▪ Product Lifecycle Management	▪ **Product Lifecycle Management**	▪ **Product Lifecycle Management**	▪ **Climate Change Adaptation**	▪ **Product Lifecycle Management** ▪ **Product Stewardship**
Leadership & Governance	▪ Supply Chain Management ▪ Management of Legal & Reg. Environment ▪ **Competitive Behavior**	▪ Supply Chain Management	▪ Supply Chain Management	▪ Supply Chain Management	▪ Supply Chain Management	▪ **Supply Chain Management**	▪ Supply Chain Management

Reviewed after IWG, expected to remain in final list ***Seeking additional evidence & inputs*** ***Issue up for removal***

NEW Issues: Suggested by IWG Consumption 1 Members

	Agricultural Products	Meat, Poultry, and Dairy	Processed Foods	Non-Alcoholic Beverages	Alcoholic Beverages	Tobacco	Household & Personal Products
Environment	▪ Waste Mgt ▪ Energy Mgt	▪ Waste Mgt ▪ Air Pollution ▪ Energy Mgt	▪ Waste Mgt	▪ Ecological Impacts	▪ Ecological Impacts ▪ Waste Mgt		▪ GHG & Energy Mgt ▪ Waste Mgt
Social Capital	▪ Food Security			▪ Food Safety			
Human Capital	▪ Employee Health & Safety ▪ Employee Diversity	▪ Working Conditions ▪ Community Relations	▪ Labor Relations/ Working Conditions ▪ Employee Health & Safety ▪ Employee Diversity	▪ Employee Diversity	▪ Employee Health & Safety ▪ Employee Diversity		
B.Model Innov.	▪ Product Lifecycle Mgt	▪ Food Waste	▪ Food Waste ▪ Climate Change Adaptation			▪ Counterfeit Products	
Leadership & Governance	▪ Political Spending		▪ Political Spending				

Reference Materials

The following section contains evidence supporting the above issues, extracted from industry briefs presented to SASB's industry working groups. References and citations have been removed from this document for simplicity, but can be found in the industry briefs, along with additional evidence and value impact discussions. This handout is provided to assist with workshop discussions on the above issues. Please do not distribute.

CLIMATE CHANGE ADAPTATION

Agricultural Products

"Crop responses to rising temperatures vary widely, but it is generally observed that temperatures above the plant's optimal growing range can reduce yields, especially during the plant's reproductive phase. By one estimate, a rise in temperature by between one and two degrees Centigrade could lower average yields by between 10 and 15 percent globally. This is due in part to proliferation of weed and pathogen species in higher latitudes, as well as decreased soil moisture due to increased presence of perennial herbaceous plants. Other important changes are related to precipitation. Factors that decrease yields include increased days without precipitation and increased intensity of precipitation when it does occur. Less balanced precipitation can lead to drought conditions, while increased precipitation intensity can lead to flooding that may increase erosions and reduce soil nutrient content.

Interestingly, rising atmospheric CO_2 levels, a consequence of human activity, may actually enhance crop growth because CO_2 is used by plants during photosynthesis. However, weeds will likewise benefit from this trend, making herbicides less effective. Farmers in the U.S. currently spend approximately $11 billion controlling weeds.

Research by California's Air Resources Board finds that by 2050, average temperatures in the state may rise by as much as 3.6 degrees Fahrenheit, while the Sierra Nevada snowpack, which supplies much of the state's water, may decline by as much as 40 percent. By some estimates, diminished water availability could lead to productivity losses of up to $1,700 per acre in California, the U.S.'s most productive agricultural region. Higher temperatures and water stress are expected to contribute to declining crop yields, increased pests and invasive weeds, soil erosion, and are predicted to lead to revenue losses of as much as $3 billion per year by 2050, the most of any sector, due to reductions in irrigated acres. If action to reduce GHG emissions is taken, losses may fall to $1.5 billion. Correspondingly, a 2014 Stanford University study found that an expected 3.5 degree Fahrenheit warming in Europe could reduce wheat and barley yields by more than 20 percent, while maize yields may fall by 10 percent.

Studies indicate that farms must adapt to climate change via the adoption of new crop management technologies and strategies. Agricultural products companies can adapt to the effects of climate change by implementing alternative cultivation methods, including switching varieties of crop and growing crops suitable to the local environment.

Major companies currently disclose varied risks related to climate change in financial statements. For example, in Bunge's FY2013 10-K, risks related to climate change include "changes in rainfall patterns, water shortages, changing sea levels, changing storm patterns and intensities, and changing temperature levels that could adversely impact our costs and business operations, the location and costs of global agricultural commodity production, and the supply and demand for agricultural commodities. These effects could be material to our results of operations, liquidity, or capital resources."

Shareholder resolutions filed with major food products companies indicate investor interest in the effects of climate change on agricultural production. In 2011, Calvert Asset Management filed a resolution with J.M. Smucker Company requesting that the company detail how it will respond to risks and opportunities presented by climate change to coffee cultivation in the company's supply chain. Nearly a third of shareholders voted in favor of the resolution."

Meat, Poultry, and Dairy

Major industry participants currently disclose business risks related to climate change in financial statements. For example, Hillshire Brands Co. discussed the effects of climate change on animal feed supply in its FY2013 10-K, stating that, "climate change could affect our ability to procure needed commodities at costs and in quantities we currently experience and may require us to make additional unplanned capital expenditures." The primary purchased commodity is animal feed, which, as mentioned above, is a major purchase for the industry. In addition, the negative impacts on pasture quality, as discussed in the Water Management issue, could have a direct impact on animal productivity.

Livestock respond rapidly to temperature changes. Hot and cold extremes can cause animal fatalities, while sustained temperatures outside of an animal's accustomed range can cause it to expend energy and change feeding habits to maintain constant body temperature, negatively affecting health, and in turn, productivity and reproduction. Heat waves in the central U.S. in the 1990s caused concentrated cattle operations to lose more than 100 head of cattle, while severe winters led to the loss of more than 1,000 head in some feedlots. Higher temperatures caused by climate change are the primary cause of increased the prevalence of mycotoxins in animal feed. During the summer of 2012, as much of the contiguous U.S. was in the midst of the most severe drought in decades, approximately half of all livestock production was in areas of severe to extreme drought, while an additional 18 percent was in areas of moderate drought. The industry will likely face an increasing probability of extreme events as climate change advances.

HEALTH & NUTRITION

Processed Foods

The Processed Foods industry is facing increased scrutiny from consumers and regulators over the health and nutritional concerns about the products they create. While there are multiple drivers for obesity including work schedules, lack of exercise, and a person's diet, high calorie snack foods are targets of regulatory scrutiny due to their high density of calories and lack of nutritional value relative to other options. The U.S. Department of Agriculture (USDA) banned multiple forms of unhealthy snack foods in schools, allowing only products under certain sugar and calorie limits. Countries have begun to implement junk food taxes or "fat taxes" to address obesity concerns. In 2013, Mexico approved a five percent tax on unhealthy snack food to abate the country's rising obesity levels and the associated burden on health care costs. Other countries and cities have implemented similar taxes on high-fat products with mixed results. New York City banned the use of trans fats in restaurants, which resulted in a decrease in use from 50 percent to 2 percent in restaurants around the city. Snack food companies including PepsiCo and Snyder's-Lance recognize material risks associated with regulation and taxes on the company's products and ingredients, which can result in increased costs or weakening demand from customers.

Concerns about the long-term health effects of food additives, preservatives, and artificial ingredients are also shaping the processed food industry. Concerns about partially hydrogenated oil, a controversial artificial ingredient that is the primary source of trans fat, have led the FDA to ban the ingredient, as studies showed that it is not "generally recognized as safe" for use in processed foods. The ingredient is used widely in desserts, popcorns, frozen pizza, snack foods, and other processed foods, largely to improve texture and taste for consumption. Reduction in the intake of trans fat can prevent thousands of heart attacks and deaths, according to the FDA.[i]Negative health effects have been linked with the consumption of monosodium glutamate (MSG) which is used widely as a flavor enhancer in many

processed food products including chips and canned soups. Studies have shown that consuming MSG can lead to obesity and other negative health effects such as headaches and nausea. Research published in the American Journal of Clinical Nutrition followed 10,000 adults in China for more than five years to monitor their intake of MSG. They found that men and women who consumed the most MSG were 30 percent more likely to become overweight. These harmful effects of ingredients can present unnecessary risk to consumer health and corporations. Nestlé faced a $5 million class action lawsuit for its use of trans fat in frozen pizza products after a mother claimed the product presented unnecessary health risks to her children and other consumers. While the lawsuit was dismissed, it shows the potential liabilities associated with unintended health impacts. The case was dismissed after the plaintiff failed to present evidence of direct harm to her situation, presenting only facts of long-term health studies. The J.M. Smucker Company, producer of Crisco oil and fats and Jif peanut butter, faced several lawsuits over a two-year period as a result of using trans fats in its products while misleading customers to the nutritional characteristics of its products. While the claims were ultimately dismissed, the company reformulated some of its products to remove trans fats. This evidence highlights just a portion of the harmful ingredients used in processed foods and the unnecessary risks they can create for consumers, and ultimately for food producers as well.

Companies in the Processed Foods industry are beginning to recognize these risks as well as opportunities associated with addressing the health and nutritional characteristics of their products. Processed food companies regularly compete to offer new products that meet the quality, taste, and nutritional value preferences of customers. Nearly every company in the Processed Foods industry, including large snack, confectionary, and packaged food companies, recognize the risk of failing to address shifting consumer demands and tastes as it relates to product health and nutritional preferences in their Form 10-K filings.

In response, companies are shifting their product formulas to introduce healthier alternatives. Frito-Lay, a producer of popular snack foods including potato chips, tortilla chips, and pretzels, has broadened 50 percent of its snack food portfolio to include all-natural ingredients, meaning that these products will contain neither artificial ingredients and preservatives nor controversial ingredients like MSG. Mondelez International has launched “mindful snacking” goals for 2020, which include increasing its “better choice” products by 25 percent, reducing sodium and saturated fat by 10 percent, increasing whole grains by 25 percent, and growing the number of products that contain 200 calories or less by 25 percent. Organic packaged/prepared food products that contain no artificial ingredients or additives and do not contain genetically modified ingredients have experienced double-digit sales growth over the past nine years, compared to only three percent growth in non-organic food categories, further expressing the interest of consumers for products that address ingredient health concerns. Experts estimate that the organic food segment will grow 14 percent annually from 2013 to 2018, representing significant opportunity for processed food companies.

Non-Alcoholic Beverages

The beverage industry is facing increasing pressure from legislators and consumers over obesity concerns. While there are multiple drivers for obesity in America, including work schedules, lack of exercise, and a person’s diet, it is often beverage companies that are a focus of public concern because they are seen as low-hanging fruit for improving public health. A regular 20-ounce soft drink contains over 227 calories, or more than 10 percent of the total recommended daily calories for an adult woman to maintain a healthy weight. This abundance of calories in beverages is the main reason for regulatory and public scrutiny of the industry.

In recent years, “sugar taxes” have been placed on sugary beverages sold in many jurisdictions. For example, New York City attempted to place a cap on the amount of sugared soda consumers were allowed to purchase in a single serving. The cap was later repealed, and the city’s unsuccessful appeal

failed to reinstate the soda cap. Despite the unsuccessful attempt to instate a cap on sugary beverages, these efforts highlight the public and governmental pressure to address public obesity issues. Additionally, countries struggling with high obesity rates such as Mexico have placed soda taxes on soft drinks sold in the country. Effective January 1st, 2014, Mexico placed a tax of 1 peso, or around 8 cents, per liter on sugar-added beverages. The tax will lower sales by 5 to 7 percent, according to Coca-Cola Femsa, Coke's second-largest bottler. The company recognizes the material impact in their 20-F filings as Mexico is the largest per-capita consumer of Coke products in the world. Company executives stated that they have already begun to increase prices and may be forced to close facilities due to lower sales volumes.

While regulations related to the nutritional content of beverages present a risk to the industry, changing consumer preferences are also affecting the industry through a decline in demand. U.S. consumption of soda has been in decline for more than nine straight years and is currently at its lowest level in more than two decades. Industry experts state that the obesity epidemic and health concerns are the largest contributing factors to this decline. Nearly every large beverage manufacturer, including Coca-Cola, Pepsi, and Monster, recognize consumer health and obesity concerns as a risk to operations in their Form 10-K filings. Monster Beverages stated that "[t]here is increasing awareness of and concern for the health consequences of obesity. This may reduce demand for our non-diet beverages, which could reduce our revenues and adversely affect our results of operations.

In an effort to curb weakening demand for sugar-sweetened beverages, companies have begun introducing low- or no-calorie alternatives that contain artificial sweeteners, which have their own set of public health concerns. Currently, Diet Coke ranks as the second most-consumed soft drink behind Coke Classic, and for the first time in history, 4 out of the top 10 purchased soft drinks in 2013 were diet sodas, showing the demand for low-calorie substitutes. There are currently five artificial sweeteners tested and approved by the FDA, including acesulfame K, aspartame, saccharin, sucralose, and neotame. The FDA has also approved the use of stevia, a sugar substitute processed from the naturally growing stevia plant. Despite this growing abundance of new low-calorie drinks, total soft drink consumption volumes declined 3.2 percent year-over-year during 2013, which was led by a 7 percent decline in diet soda consumption during the year as health concerns about sugar substitutes weighed down consumer demand.

While sugar substitutes provide zero-calorie alternatives to sugar, studies have found conflicting results regarding the health implications of consuming them. The FDA has stated that sugar substitutes are a safe alternative to sugar, and some studies have shown that these ingredients are not linked to cancer and other diseases, while other studies have found multiple negative health effects from consuming regular amounts of sugar substitutes. For example, a University of Maryland study on the acute, subacute, and chronic toxicity effects of aspartame, a sugar substitute, found no evidence of adverse health effects, nor any links to cancer. However, a University of Minnesota study on diet soda found a link between regular consumption of diet soda and risk of metabolic syndrome (which is linked to obesity, high blood pressure, and heart disease) and type 2 diabetes compared to non-consumption. These health and safety concerns over artificial sweeteners are likely contributors to the decline in diet soda sales. Other studies have shown that brown soft drinks contain quantities of a cancer-causing chemical known as 4-methylimidazole (4-Mi), a byproduct of creating caramel-brown food coloring that is required to be labeled on beverages sold in California. Coke and Pepsi have since directed their suppliers to limit the levels of 4-Mi in their caramel coloring in an effort to curb negative perceptions.

Companies have launched new lower-sugar products in an attempt to address the health concerns of high sugar and artificial sweeteners. Both Coke and Pepsi have launched new beverage lines of their traditional colas (Coke Life and Pepsi Next) that contain up to 60 percent less sugar, balanced with the natural sweetener stevia. These alternatives offer consumers up to half the calories of regular soda. Coke has stated that the product has been successful at adding incremental volume in Argentina and Chile and will be launched in the U.S. during 2014.[ii] To further combat the weakening demand for carbonated soft drinks, large competitors have diversified their beverage product portfolio to address the shift in consumer

tastes toward healthier alternatives. While carbonated soft drink sales have declined, other beverage categories including water, juices, tea, sports and energy drinks, and coffee have been growing steadily over the past several years, presenting new opportunities. Coca-Cola's tea segment, including Gold Peak, Honest Tea, and Fuze Tea grew 11 percent in 2013. Ready-to-drink teas maintain a healthy perception as they include natural ingredients and antioxidants with perceived health benefits. The ready-to-drink tea industry is expected to grow 6 percent annually until 2018.[iii] Other non-carbonated beverage segments over the past 9 years have remained strong, including bottled water, juices, sports and energy drinks, and ready-to-drink coffee, which have grown at an annualized rate of 3.2, 1.4, 7.5, and 2.5 percent respectively.[iv] These alternative segments may present opportunities for non-alcoholic beverage companies to introduce healthier products that can help address health and obesity issues while providing a balance to their declining core carbonated-beverage segment.

The newest and fastest-growing segment of the beverage market includes energy drinks, which contain high levels of caffeine and other ingredients to provide energy to consumers. These new beverages have been subject to FDA complaints, which cite that these products are responsible for numerous health risks stemming from their large amounts of added caffeine, sometimes in excess of 215 milligrams, compared to a regular cup of coffee, which contains 100 to 150 milligrams. Popular energy drinks have been alleged to contribute to serious life-threating complications, including heart attack and death, which have led to lawsuits for energy drink manufacturers.[v] Living Essentials, manufacturer of 5-Hour Energy shots, faced a $150 million civil lawsuit after a man suffered a heart attack and died after consuming the small drink. Currently, the small energy shot is cited as having potential involvement in over 13 deaths, which are now being investigated by the FDA.[vi] Monster Energy drinks has also been subject to litigation regarding complications stemming from the consumption of its popular 24-ounce energy beverages. Companies may benefit from addressing these concerns proactively, in spite of the fact that they maintain their products are safe and currently meet appropriate FDA standards for caffeinated beverages and dietary supplements.

Companies in the industry also recognize the risk of costly product recalls and liabilities that may stem from poor quality and contamination, resulting in a tarnished brand reputation. Companies including Coke, Pepsi, Dr. Pepper, and Monster Beverage have all listed product recalls and potential liabilities as a material risk to operations in their form 10-K filings. In 1999, Coca-Cola Enterprises took a $103 million expense charge after the company recalled 17 million cases of soft drinks in Europe due to hundreds of consumers complaining of nausea, dizziness and headaches after consumption. The products were banned in Belgium and Luxembourg for over a week during the incident investigation, and facilities in France were forced to shut down after a phenol compound was traced to the pallets carrying the cans. The recall was the largest in Coke's history and represented over 6 percent of the bottlers' total overseas volume.

