



# Food and Nutrition Security Thematic and Impact Investing

19 October 2017



## A cookbook for a healthier portfolio

### What's it all about?

As diets based on natural, healthy food continue to lose ground to ultra-processed products, the world's food habits have led to a spike in obesity and have put more pressure on the environment. Amid heightened customer and government scrutiny to crack down on unhealthy business models, we publish our cookbook to build investment baskets that benefit from a transition towards healthier and more environmentally-friendly food systems. Based on carefully selected "homemade ingredients" and "recipes", we introduce our "sustainable food and lifestyle" framework to map stocks across the Sustainable Development Goals (SDGs) impact spectrum (2030 UN global policy agenda); we highlight the most attractive long-term plays, transformation stories, as well as the laggards.

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# 360 in 1 minute

## **The "sustainable food and lifestyle" transition comes of age**

Our diets impact the environment and public health in unparalleled ways. Nutritional problems now affect most of the global population, which faces hunger in some regions, rising obesity rates in others, or a combination of the two, with fewer and fewer resources. With consumers and governments increasingly pushing for change, the transition to a more sustainable food system is gathering pace. We think this metamorphosis is a positive catalyst to unlock long-term growth.

## **Our screener to look at both opportunities and net impact**

Against this backdrop, we introduce our proprietary "sustainable food and lifestyle" framework to screen companies that are reaping the benefits from the structural trends that help advance food and nutrition security in relation to the UN global sustainability agenda ("Sustainable Development Goals", or SDGs). Our methodology builds on: 1) our European Consumer sector analysts' research expertise across our large coverage universe and the entire value chain, including from our Head of European Consumer research, Jon Cox; 2) ESG Analyst Julie Raynaud's latest report on methodological headways to assess companies' net environmental impacts ([link](#)); 3) Rabobank Food and Agri research's insights; and 4) external input regarding developments in the science-based assessment of products' nutritional profiles, such as the Access to Nutrition Index (ATNI).

## **Key findings: 1) Best names in healthy food and nutrition**

First, our scorecard highlights the most attractive "healthy food" plays (Acoma, Bonduelle, Danone, PureCircle, Total Produce, Wessanen), transformation stories (Nestlé), and those currently in conflict with positive nutrition trends (Coca-Cola European Partners, Suedzucker).

## **2) Food for thought in obesity prevention and remediation**

Second, we emphasise the upside in related segments that are set to expand due to demand for wellness products and more responsible lifestyle choices: 1) Food safety (Eurofins, GEA, Biomérieux); 2) Gym, mobility, Sport equipment (Technogym, XXL, Accel); 3) Pharma, Healthcare, including diabetes (Novo Nordisk, Cellnovo).

## **3) How to become an environmentally friendly chef**

Third, we identify best practices for the main environmental topics, such as climate change and food waste. While we see a less conspicuous business case for "green food", as opposed to "healthy food", an array of factors is transforming the landscape, as seen in the vibrant "natural" and "organic" markets. Our "sustainable food" picks overall are Bonduelle and Wessanen.

## Forewords

*In our introduction, we include a brief foreword by Rachel Crossley, a Senior Advisor to the Access to Nutrition Foundation, a leading investor-focused initiative that assesses companies' nutrition profiles.*

### Introduction to the Access to Nutrition Indexes

#### Rachel Crossley, Senior Advisor



Poor nutrition underpins a major global crisis affecting both the developed and developing worlds. The World Health Organisation (WHO) estimates that nearly 800m people worldwide are chronically undernourished, with undernutrition an underlying cause of 45% of worldwide deaths in children under five. Meanwhile, 1.9bn people are overweight or obese, and 70% of deaths worldwide are caused by diet-related chronic diseases.

Nutrition underpins every person's ability to grow, learn, and work. Suffering from malnutrition has been proven to have a dramatic impact on long-term life outcomes. Investing in nutrition can unlock socioeconomic gains, affecting educational and employment outcomes, long-term health outcomes and the economy. It is one of the most critical issues that the food and beverage sector must grapple with, alongside sustainable food production and reducing food waste.

The Access to Nutrition Indexes (ATNI) are designed to measure the contribution of the world's largest food and beverage manufacturers to addressing these nutrition-related challenges. They have been developed and published by the Access to Nutrition Foundation (ATNF), an independent charity based in The Netherlands.

**Global Indexes:** The first Global Access to Nutrition Index was published in 2013, followed by a second edition in 2016. The third Index is due to be released in early 2018, and every two years thereafter. These indexes are designed to provide an independent benchmark for investors, health advocates and companies by scoring and ranking companies' policies, practices and disclosure on:

- Nutrition strategy, management and governance, and engagement with stakeholders and policymakers.
- Formulation and delivery of appropriate affordable and accessible products.
- Influencing consumer choice and behaviour.

**Spotlight Indexes:** In addition to the Global Indexes, ATNF has developed single-country 'Spotlight' Indexes to assess food and beverage manufacturers in markets with a high double burden of malnutrition: countries with populations that are undernourished and increasing numbers of overweight and obese people. The first Spotlight Index for India was published at the end of 2016. The purpose was to provide stakeholders in India with an independent assessment of the extent to which the country's ten largest food companies are addressing India's nutritional challenges. ATNF is currently researching the first US Spotlight Index which will be published in mid-2018.

**Marketing of baby food:** The indexes also include the only comprehensive assessments available of the policies, practices, and disclosure of the world's six largest baby food manufacturers which gauge whether their marketing of breast milk substitutes (BMS) aligns with The International Code of Marketing of Breast milk Substitutes, still the gold standard in this area and very much a relevant issue today: UNICEF estimates that the deaths of 832,000 infants a year could be avoided if they were optimally breastfed. Each Global Index and Spotlight Index includes these assessments which include detailed primary research in key emerging markets.

**Product Profiling:** ATNF is also pioneering the concept of Product Profiling. This involves assessing the nutritional quality of individual products made by the manufacturers. The first Product Profile was published as part of the India Spotlight Index. The nutritional quality of over 900 products made by the ten Index companies was analysed, as well as their suitability to market to children. Only around 12% of beverages sold by the Index companies and 16% of foods were of high nutritional quality. See page 111 for more detail on ATNF's approach to product profiling.



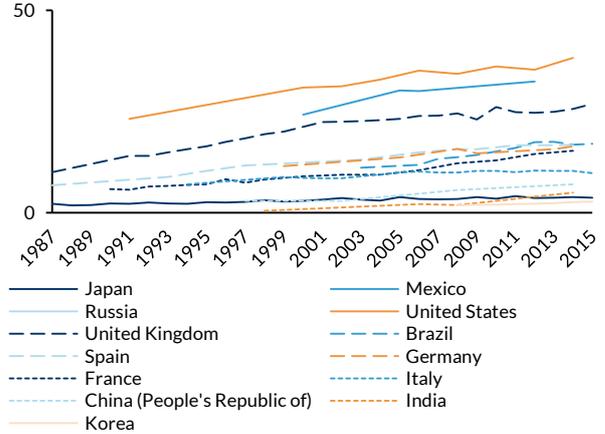
# Investment case in six charts

Chart 1: "Sustainable food and lifestyle" framework



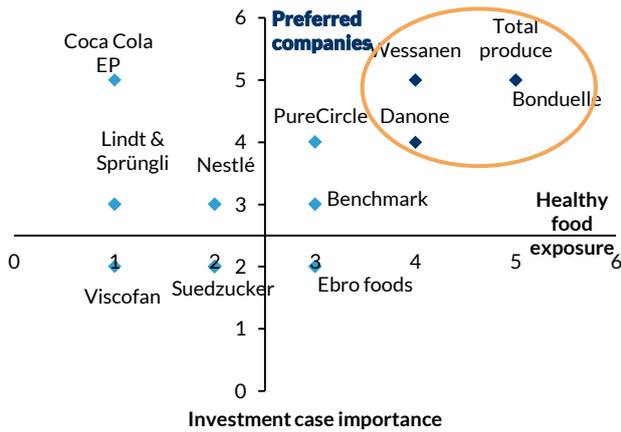
Source: Kepler Cheuvreux

Chart 2: Rising obesity trend in OECD countries



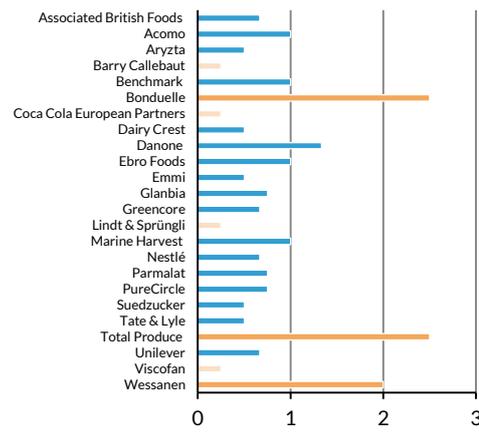
Source: Kepler Cheuvreux, OECD. Obesity defined as Body Mass Index (BMI)  $\geq 30\text{kg/m}^2$

Chart 3: Healthy food versus investment case scores



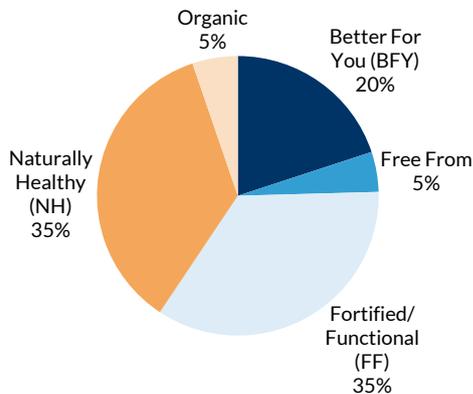
Source: Kepler Cheuvreux (1=Low; 5=High)

Chart 4: "Sustainable food" ratio (healthy food/brown food\*)



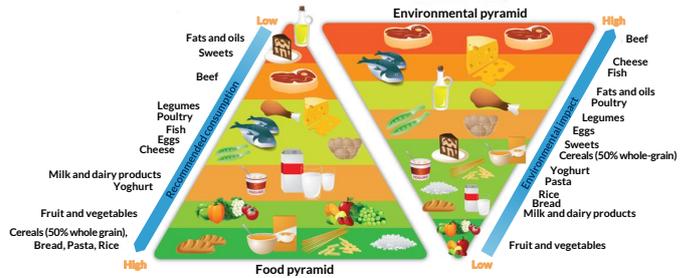
Source: Kepler Cheuvreux (\*"Brown" score a benchmark for negative environmental impact)

Chart 5: Health and wellness market breakdown



Source: Kepler Cheuvreux, Euromonitor

Chart 6: The food and environmental pyramids



Source: Barilla Center for Food and Nutrition

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# Kepler Cheuvreux food/lifestyle universe

Table 1: Kepler Cheuvreux core food universe: "healthy and nutrition" and "unhealthy" related activities\*

Company	Sector	Country	Cap (EURm)	Analyst	Food business exposure (estimated approximate share of group sales)		Activities description (illustrative, not exhaustive)	
					"Healthy"	"Unhealthy"	Healthy food-related activities	Unhealthy food-related activities
<b>Food and Beverages</b>								
<b>Diversified Food</b>								
Associated British Foods	Food	United Kingdom	31,903	Jon Cox	>10%	19-36%	High-value ingredients for food applications (mainly), specialist nutritional feed, small part of Grocery division	Grocery business as a whole, including bakery, cooking oils and packaged meats; sugar
Danone	Food	France	38,801	Jon Cox	>47-80%	<20%	Fresh dairy, water, medical and early life nutrition, plant-based and organic	Traditional coffee creamers, deserts
Ebro Foods	Food	Spain	3,017	Inigo Egusquiza	50-100%	0-10%	New rice and pasta products based on e.g. ancient grains, gluten-free, quinoa, whole-grain, high-fibre, vitamins, minerals	Macaroni and cheese meals, sauces, pre-cooked food
Greencore	Food	Ireland	1,472	Karel Zoete	<55-60%	>40%	Part of sandwiches, salads and sushi (fresh, convenient food and "on-the-go" consumption). Overall portfolio seen as conflicting with healthy diets though.	Rather unhealthy food profile to be amplified by Peacock acquisition e.g. prepared meals, fatty cakes and deserts or sandwiches
Nestlé	Food	Switzerland	209,724	Jon Cox	>25%	26%	Water, healthy science (e.g. metabolic conditions, obesity, food allergies, gastrointestinal health) and baby food. New products, e.g. vegan milk drinks, whole-grain cereal (Nesfit), low-fat yogurts with reduced sugar (Molico), fortified infant cereals	Ice cream, prepared dishes, confectionery
Unilever	Personal care	Netherlands	113,105	Karel Zoete	0-10%	<30%	Part of soup, rice, pasta, tea, spreadable (e.g. margarine Becel pro-active brand)	Ice cream and frozen desserts, seasonings, dressing and sauces, spreadable fats
Viscofan	Food	Spain	2,305	Inigo Egusquiza	0-10%	90-100%	Manufacture of artificial casing for vegetarian and fish sausage - indirect impact	Artificial casing for meat sausages (pork sausages, chicken sausages, turkey) - indirect impact
Wessanen	Food	Netherlands	766	Karel Zoete	89%	11%	Dairy alternatives, bread replacers, breakfast cereals, hot drinks, veggies meals.	Sweet in between e.g. Mrs Crimble's (UK) e.g. coconut rings, macarons; Alter eco (France), e.g. organic chocolate
<b>Cocoa</b>								
Barry Callebaut	Food	Switzerland	5,677	Jon Cox	0-10%	90-100%	Dedicated categories ("I feel good" "better for you", and "free from" lactose, dairy-added or vegan and gluten-free), reformulation range . Cocoa flavanols	Cocoa and chocolate products
Lindt & Sprüngli	Food	Switzerland	13,658	Jon Cox	0-10%	90-100%	New sugar-free categories e.g. Russell Stover products	Chocolate products (world's biggets in luxury)
<b>Fruits and Vegetables</b>								
Bonduelle	Food	France	760	Baptiste de Leudeville	100%	0%	Worldwide leader in processed vegetables (sales of EUR1.9bn). Sales breakdown: canned (49%), frozen (30%), and fresh (21%).	Very low exposure to ultra-processed vegetables
Total Produce	Food	Ireland	EUR	Not covered	100%	0%	Pure player in the fresh food segment, mostly fruits (63%of sales), followed by vegetables (37%). Diversified portfolio.	No exposure

Continued on next page

					Food business exposure (estimated approximate share of group sales*)		Activities description (illustrative, not exhaustive)	
Company	Sector	Country	Cap (EURm)	Analyst	"Healthy"	"Unhealthy"	Healthy food-related activities	Unhealthy food-related activities*
<b>Sweeteners</b>								
PureCircle	Food	United Kingdom	898	Anton Brink	100%	0%	Sources, refines, and markets stevia rebaudiana plant extracts for ingredient use in the Food and – especially (75% of sales) - Beverage (F&B) industries.	No exposure
Suedzucker	Food	Germany	3,023	Richard Withagen	6-28%	45-73%	Part of the Specialty products (28% of sales) and Fruit divisions (17%). Beneo: inulin (functional ballast substance).	Sugar. Special products division subsidiary, Freiburger manufactures frozen and chilled pizza as well as frozen pasta dishes and snacks, PortioPack Europe, Starch and Beneo. Bulk ingredients (sweeteners, starches)
Tate & Lyle	Food	United Kingdom	3,640	Anton Brink	<40%	60%	Specialty food Ingredients (low-sugar, high-fibre products)	
<b>Fisheries</b>								
Benchmark	Food	United Kingdom	418	Patrick Roquas	100%	0%	Focused on upstream (genetics, health and nutrition); leader in Artemia (scarce brine shrimp dormant eggs) and dietary products for the shrimp industry	No exposure
Marine Harvest	Food	Norway	6,581	Fredrik Ivarsson	100%	0%	One of the largest seafood companies in the world and by far the largest producer of Atlantic salmon with a c. 20% market share. The company controls its entire value chain and has production sites in the six largest salmon-producing countries in the world.	No exposure. Note biosecurity concerns including antibiotics use
<b>Bakery</b>								
Aryzta	Food	Switzerland	3,576	Jon Cox	0-10%	>50%	Natural/organic grain breads (eg La Brea)	Part of Savoury division, sweet baked goods and morning goods
<b>Nuts and seeds</b>								
ACOMO	Food	Netherlands	539	Patrick Roquas	100%	0%	Sources, processes, trades, packages and distributes natural agricultural products, like spices, nuts, edible seeds and tea, for food and beverage industries around the world.	No exposure
<b>Dairy</b>								
Dairy Crest	Food	United Kingdom	1,092	Karel Zoete	0-10%	>67%	Lower fat options for dairy products	Cheese, cooking spray, spreadables
Emmi	Food	Switzerland	2,804	Jon Cox	0%	100%	No evidence of dedicated categories	Milk, butter, cream and cheese, specialty chilled dairy products.
Glanbia	Food	Ireland	4,961	Karel Zoete	7-53%	>0-26%	Sports nutrition (powders, capsules and tablets, drinks, smoothies, bites and bars), whose health effects and claims raise questions. Nutritional solutions (whey protein, specialist vitamin and mineral blends, plant-based ingredients and functional beverages)	Cheddar, sold to cheese brands, quick service restaurants, supers. Pre-workout segment
Parmalat	Food	Italy	4,447	Daniele Ridolfi	53%	45%	Milk, dairy products (yogurt) and fruit-based beverages	Cheese
<b>Beverages</b>								
Coca-Cola European Partners	Beverages	Netherlands	16,329	Richard Withagen	0-30% of sales	73-93% of sales	Sugar-sweetened beverages with lower or no sugar content	Sugar-sweetened beverages

Source: Kepler Cheuvreux (\* Our simplified definitions of "healthy" and "unhealthy" food categories refer mainly to those recommended in high/low quantity as part of a healthy/balanced diet, or with manifest nutritional benefits/disadvantages or indulgence. It does not mean that those are healthy or unhealthy (or harmful) per se nor that we believe in a binary approach to the food industry. This data needs to be contextualised and complemented by numerous other factors to be assessed based on both a comprehensive nutritional profile and health outcome basis, including the relevant consumer group. Moreover, this should not downplay the potential to reformulate and adapt portion sizes of these categories as a tool to curtail poor nutrition. Finally, our list of companies and sectors is illustrative based on our coverage universe and is not exhaustive.

**Table 2: Kepler Cheuvreux food universe: Other healthy food-related segments (ingredients, food safety)**

Company	Sector	Country	Cap (EURm)	Analyst	Group business exposure (estimated approximate share of sales)	Activities
<b>Ingredients</b>						
BASF	Chemicals	Germany	65,171	Christian Faitz, CFA	3%	Nutrition and Health division (food and feed, flavour and fragrance, pharma).
Corbion	Food	Netherlands	1,260	Patrick Roquas	0-10%	Innovative microalgae fermentation e.g. omega-3
DSM	Chemicals	Netherlands	9,414	Martin Roediger, CEFA	30%	Nutritional products e.g. as vitamins, feed enzymes, carotenoids, minerals, eubiotics, nutritional lipids
Evonik	Chemicals	Germany	12,933	Martin Roediger, CEFA	<15%	Consumer health (small): nutraceutical formulations
Givaudan	Chemicals	Switzerland	16,108	Patrick Roquas	7%	Consumer health and nutrition e.g. TasteSolutions® Salt (reduced sodium levels), TasteSolutions® Sweetness (lower sugar levels)
Kerry	Food	Ireland	13,225	Patrick Roquas	<78%	Worldwide leader in taste and nutrition e.g. protein, probiotics, lipids and bases
Symrise	Chemicals	Germany	7,780	Patrick Roquas	20%	Nutrition segment: sensorial and nutritional solutions from natural based ingredients, organoleptic and nutritional functional solutions, Pet food, Aqua and probiotic plant cell culture and aquaculture.
<b>TIC</b>						
Eurofins	Support services	France	5,972	David Cerdan	29%	Food tests
<b>Capital goods</b>						
GEA Group	Capital goods	Germany	8,024	Hans-Joachim Heimbuerger	75%	Processing equipment

Source: Kepler Cheuvreux

**Table 3: Kepler Cheuvreux "healthy lifestyle and wellness" universe**

Company	Sector	Country	Cap EUR	Analyst	Group business exposure (estimated approximate share of sales)	Activities
<b>Home and personal care</b>						
Accell Group	Household durables	Netherlands	517	Guido Nunes	100%	Bicycle manufacturer
Adidas Group	Textile and apparel	Germany	25,011	Jürgen Kolb	100%	Sports products
Technogym	Household durables	Italy	812	Marco Baccaglio, CFA	100%	Fitness equipment
XXL ASA	General retail	Norway	1,310	Hans-Marius Lee Ludvigsen	100%	Sports retailer
<b>Pharmaceuticals and Health Care</b>						
Biomérieux	Medtech and services	France	4,682	Maja Pataki	18%	Leader in bacteriology (industrial microbiology division)
Cellnovo	Pharma and biotech	France	89	Arsene Guekam	100%	Patch pump (wirelessly connected) associated with mobile health that improves disease management
Novo Nordisk	Pharma and biotech	Denmark	110,254	David Evans	84%	Diabetes mainly, obesity (tiny, Saxenda)
Sanofi	Pharma and biotech	France	92,567	David Evans	22%	Long-acting insulin Lantus

Source: Kepler Cheuvreux

## Executive summary

In tandem with the energy sector, the food industry is also undergoing a profound transition in which environmental and social drivers are taking centre stage. In this report, we introduce our “sustainable food and lifestyle” framework that maps companies across the spectrum of opportunities linked to the transition towards a healthier and more environmentally friendly food system: from what we eat (food and beverages), to how we live (physical exercise) and are treated and cured for diseases caused by poor nutrition, such as obesity (pharma and healthcare).

First, we believe that food that is seen as healthy will continue to win market share away from products seen as overly processed and industrialised, and that this trend is likely to be enhanced by governments’ efforts to reduce fat and sugar consumption through taxes and other initiatives. We thus highlight companies with the healthiest profile in our coverage universe (albeit to varying degrees: Bonduelle, Danone, Marine Harvest, Total Produce, PureCircle, Wessanen), transformation stories (Nestlé moving to a more attractive portfolio), and those that are currently somewhat in conflict with this trend (Barry Callebaut, Coca-Cola European Partners, Lindt & Sprüngli, Suedzucker).

Second, we identify well-positioned stocks with regard to secular growth themes linked to healthier lifestyles and obesity prevention and remediation such as: Food safety (Eurofins, GEA, Biomérieux), Sport (Technogym, XXL, Accel), and Pharma and Healthcare (Novo Nordisk, Sanofi, Cellnovo).

Third, we look at best practices with regard to the main environmental issues that affect consumers, such as climate change and food waste, and how companies’ environmental footprints can be balanced with social or health outcomes.

Using a holistic approach, we conclude by identifying the companies we think are best-positioned to potentially make a “net” positive contribution to the Sustainable Development Goals (SDGs, set out in the 2030 UN policy agenda for sustainable development): Bonduelle, Total Produce, and Wessanen.

### Macro outlook: a fattening (and polluting) global diet

With traditional diets based on natural, healthy food continuing to lose ground to ultra-processed food products, the world is projected to become increasingly overweight (1.9bn or 38% of the adult population globally, with 2.7bn projected in 2025) and environmental resource-intensive. The majority of the global population is now suffering from nutritional deficits, and is faced with lingering hunger issues and rising obesity rates reaching highly problematic levels in more and more countries. In turn, nutrition-related disease (e.g. diabetes etc.) has been driving up the health costs borne by governments (c. 7% of national health costs in the EU are associated with obesity, while global estimates of direct costs exceed USD2trn). As a result, there has been increasing pressure on government to tighten their nutritional policies.

*Screening stocks benefitting from the transition towards a healthier and more environmentally friendly food system*

*Rising number of health problems related to poor nutrition*

## Rising appetite for better nutritional policies

Global interest in devising better nutritional policies is clearly reflected in the UN Decade of Action on Nutrition 2016-25 and the introduction of the Sustainable Development Goals (SDGs) roadmap (global 2030 sustainability agenda). We expect governments to intensify their crackdown by making companies include nutrient information on food labels (e.g. new US labelling scheme), introducing fiscal policies (e.g. increasing taxes on sugar products, also in the UK and Ireland next year), banning ads for sugary foods, introducing more stringent criteria for health claims approval, and putting pressure on companies to reformulate their products so they are healthier.

## More companies are getting the big trends right

Consumers' greater focus on healthy food and nutrition is having a noticeable impact across the consumer goods space, particularly in the wealthiest/premium segments. Companies are speeding up their portfolio diversification and positioning themselves to seize these opportunities, chiefly through: 1) all-encompassing product reformulations (targeting sugar in particular) and tweaks in portion size (Danone, Kellogg's, Nestlé, Unilever, Wessanen); and 2) M&A in buoyant health and wellness markets (USD1trn in 2017E), such as "free from", "fortified/functional", "plant-based" or "organic", with especially strong momentum among fashionable small brands. In our coverage universe, Nestlé arguably best illustrates these transformational efforts (with strong R&D and M&A ambitions).

## Sugar: public enemy number one

Sugary drinks, or "sugar-sweetened beverages" (SSBs) remain on the frontline from a risk perspective. Coca-Cola European Partners (the bottler of Coca-Cola beverages in western Europe) may be the most affected by the UK sugar tax, but the overall impact is limited, while the company is making headway in developing lower-calorie products (c. 30% of CCEP Group volumes on our estimates). Chocolate is also under fire (Barry Callebaut, Lindt & Sprüngli) in a context of possible broadening of the soda tax to other sugar-heavy food products. Conversely, we see upside for ingredients companies and see PureCircle (which produces stevia as a "natural" alternative to sugar) as a main beneficiary.

## Healthy opportunities: ingredients and food safety

Within ingredients, we expect the traditional flavour and fragrance - F&F - names (e.g. Givaudan) and chemical names (e.g. DSM, Evonik) to further expand into nutrition. Labelling, alongside food safety, is also coming under increasing scrutiny, which opens up markets for other companies providing solutions across the value chain: Testing, Inspection, and Certification, or TIC (e.g. Eurofins), processing equipment (e.g. GEA), healthcare (e.g. Biomérieux).

## Sports and Pharma: obesity prevention and remediation

Aside from pharma (insulin, diabetes for Novo Nordisk, Sanofi, and Cellnovo), the healthy food trend is also having an increasing impact on other sectors further downstream (food retailers, catering, restaurant chains). More importantly from an investment standpoint, we flag several neglected plays in the buoyant wellness and

**Acceleration in companies' transitions to upgrade their portfolio (Nestlé as a case in point)**

**Sugar tax fuels opportunities for natural sweeteners (stevia)**

healthy lifestyles (sport) cluster: Technogym (a fitness equipment manufacturer), XXL ASA (a sports retailer), and Accel Group (a bicycle manufacturer).

### The case for “green” food is gathering pace

Meanwhile, there has also been a growing awareness that the overhaul of agricultural markets will be critical to meet nutritional goals and that both health and environmental issues have to be addressed simultaneously to meet the global challenge. We thus see a more structural, albeit less visible, trend: the inclusion of environmental considerations in food policy frameworks, such as food waste (spearheaded by France) and climate change (10-12% of human-induced GHG - greenhouse gas - emissions stem from the agriculture sector).

### How to become an environmentally-friendly chef

Consequently, we identify companies that are making inroads into reducing their environmental footprint in the following areas: climate change, food waste, and deforestation. Regarding climate change, only a handful of companies have set more ambitious climate mitigation targets aligned with scientific guidelines (Nestlé, beer makers). Nestlé, Unilever, and Danone have implemented more comprehensive deforestation policies, whereas data on cocoa-dependent companies (Lindt & Sprüngli, Barry Callebaut) and traditionally overlooked commodities (soy, cattle) suggest there is room for improvement despite some progress. From a market standpoint, the organic (EUR30.4bn of value in Europe), and plant-based (USD16bn globally) segments are rapidly growing niches that are especially relevant for Danone and Wessanen.

### A transition story: low-calorie meets low-carbon

In our view, there are big similarities between the challenges facing the food and beverage sector and those faced by the energy sector in the sense that: 1) environmental and social-related value drivers are key to effect change; 2) there is increasing evidence that low-calorie/low-carbon products help improve competitiveness; 3) the move to a more sustainable food system will be slow, and gradual and industry giants stand to benefit if they prove to be agile and are able to adapt to change; and 4) customers’ role is more pivotal.

### Our “sustainable food” list: a net impact approach

Against this backdrop, we have developed a proprietary scorecard to assess companies’ “healthy and green” profiles, and spot the best-positioned stocks based on both environmental (natural capital) and healthy diet (social and human capital) evaluations (“net positive” impact approach). Our favourite stocks (which received the top scores based on our “sustainable food” criteria) are Bonduelle (processed vegetables), Total Produce (fresh fruits and vegetables; not covered), and Wessanen (organic).

Among the big brands, we like several aspects in Danone (due to its attractive portfolio) and Nestlé (transitioning). These findings are based on a thorough assessment of our food universe coupled with a review of new methodological developments, including investor-friendly tools such as: 1) product profiling systems, a promising tool promoted by the Access to Nutrition Foundation to look

***Growing awareness that health and environmental issues have to be considered in tandem***

***In our view, there are big similarities between the challenges facing the food and beverage sector and those faced by the energy sector***

***Our favourite stocks based on our proprietary scorecard are Bonduelle, Total Produce (fruits and vegetables) and Wessanen (organic)***

beyond the patchwork of company claims and uneven reporting; and 2) food and environmental pyramids (comparison of product lifecycle environmental impact data with nutritional guidelines).

**Table 4: Our favourite "sustainable food" stocks**

Company	Positive exposure	Themes	Title	Rating	TP	Upside/Downside	Comments
<b>Transformation story</b>							
Danone	>47-80% of sales	Dairy, water, infant nutrition, plant-based, product reformulation, inclusive business	Into adulthood	Buy	EUR80.00	13%	Portfolio with massive potential supported by the company's growth reacceleration and margin expansion plan
Nestlé	>c. 25% of sales	Healthy science, water, Infant nutrition, product reformulation, inclusive business	Nutrition profile at an inflection point	Buy	CHF93.00	11%	Earnings, cash flow generation, and ROIC likely to improve amid portfolio reshuffle, cost savings, innovation and M&A
<b>Pure plays</b>							
PureCircle	100% of sales	Non-caloric "natural" sweetener	Meeting needs for natural no-calorie sweetener alternatives	Reduce	390.00p	-17%	Strong top-line growth, operating margin expansion
Total Produce	100% of sales	Vegetarian (fruits and vegetables)	Champion in fresh fruits and vegetable production distribution	Not covered	Not covered	Not covered	Not covered
Wessanen	89% of sales	Organic, plant-based, vegetarian, fair trade	Pure-play organic food champion well placed to keep the lead	Hold	EUR14.00	-10%	Access to leading brands and benefits of M&A to help outperform the European organic and fair trade food market, growing by 6-8% a year

Source: Kepler Cheuvreux

## Timely alignment with top picks in consumer staples

Our Most Preferred Stocks in the European Consumer Staples space are: ABI, Corbion, Danone, Marine Harvest, Pernod, and Unilever. In the food segment (Preferred Stocks: Corbion, Danone, and Marine Harvest), there is clearly a trend towards healthier products: Corbion is involved in the production of bio-plastics, which we expect to gain ground with consumers concerned about the impact of oil-based plastics. Danone has the healthiest portfolio in large cap diversified staples we believe and should see growth accelerate. Finally, Marine Harvest, as the world's biggest salmon producer, clearly benefits from the move away from animal meat.

### A note on this report's structure

We highlight key market trends and our view of the potential impact on companies, from top-down to bottom-up:

1. Macro outlook: Economics.
2. Macro outlook: Politics.
3. Companies' focus: Healthy food.
4. Companies' focus: Environmentally friendly food.
5. Our framework: Methodological focus.
6. Investment outlook and conclusions overall (input from Head of European Consumer Research Jon Cox).
7. Thematic and company conclusions.

*Investment view from our Head of European Consumer Research Jon Cox: actionable ideas*

We provide snapshots of ten food categories (animal nutrition, bread, chocolate, dairy, fruit and vegetables, infant nutrition, ingredients, organic, sugar, water) and five company pages (our Most Preferred Stocks) at the end of this report.

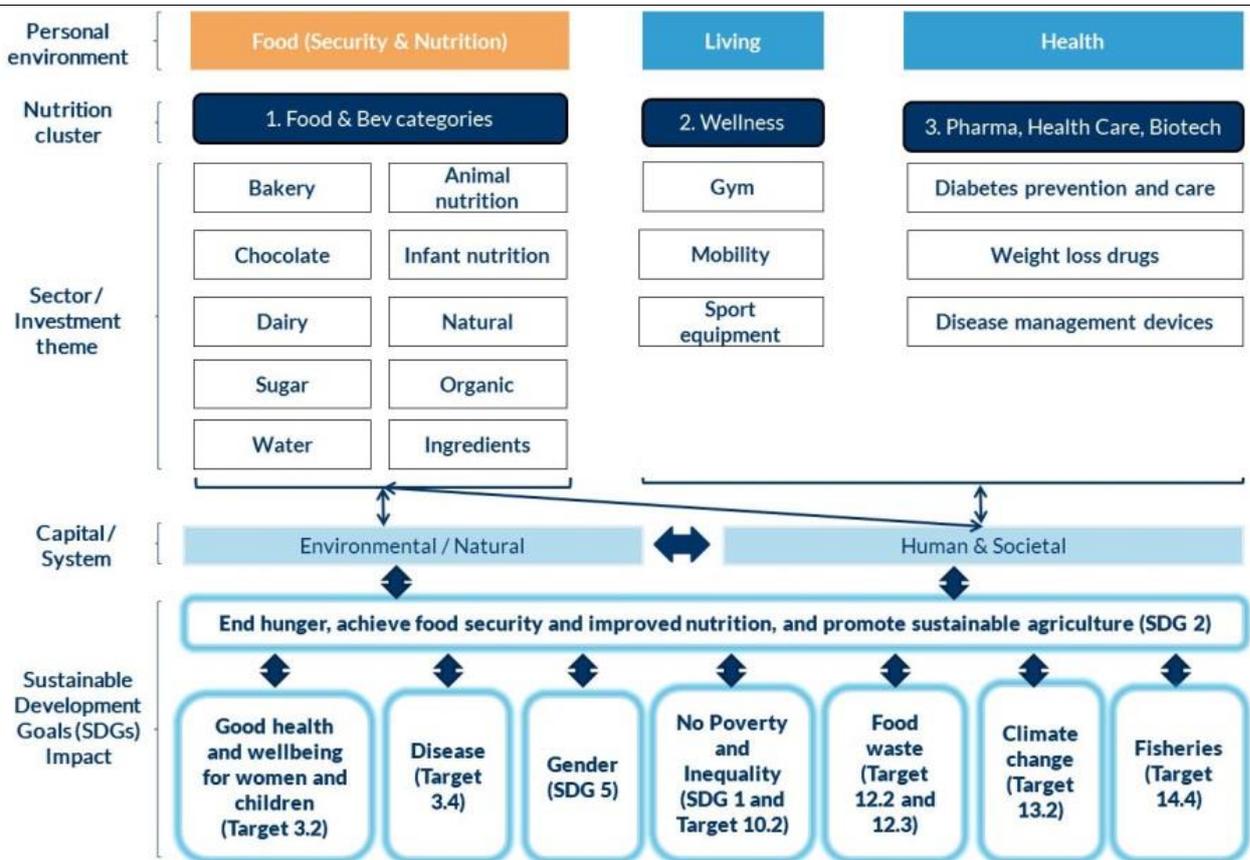
**Note on our framework**

The following chart depicts our in-house framework with which to navigate companies’ “sustainable food and lifestyle” opportunities across three main themes:

1. **Food and Beverages** companies across the entire value chain (from input companies to food retail and catering).
2. **Wellness** (healthy lifestyle and wellbeing): Companies that help reduce obesity and other malnutrition-related diseases by promoting behaviour supporting good physical health (e.g. sports and mobility).
3. **Pharmaceuticals, Health Care and Biotech**: Companies that help deal with the adverse health effects of malnutrition, including diabetes.

*Three main themes to eat and live well*

**Chart 7: “Sustainable food and lifestyle” framework in relation to the Sustainable Development Goals (SDGs)**



Source: Kepler Cheuvreux

**Note on our methodology to score companies**

Our approach to position companies across the health and wellness spectrum and environmental spectrum is based on scores in four areas. Two areas (“healthy food exposure” and “green food exposure”) provide a proxy for reviewing their social and environmental impact profile (potential contribution to sustainability progress or

*A proxy for reviewing companies’ social and environmental impact profiles*

the Sustainable Development Goals), while two other areas aim to determine the importance (positive or negative) of sustainability considerations in the investment case context.

**Table 5: “Healthy food” and “green food” scores: definitions and key criteria used to assess companies**

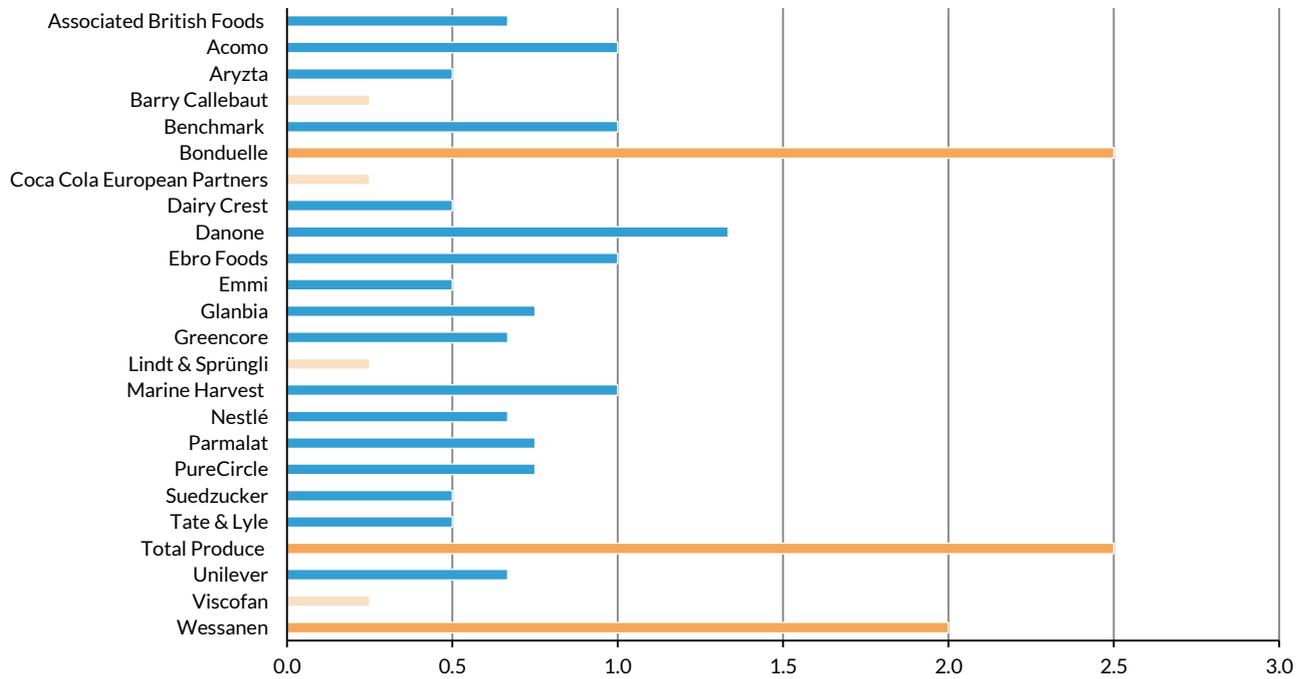
	Scale	Variable / Capital impacted	Main Sustainable Development Goals (SDGs)/Targets	Comments	Drivers and benchmarks used
<b>Healthy food exposure score</b>	From 1=very low to 5=very high	Human system / social capital	2.1 and 2.2 (hunger, food security, nutrition, sustainable agriculture) and 3.2 and 3.4 (healthy lives and wellbeing)	Company's healthy products' impact on the human system (positive nutrition outcomes) h	Increasing access to affordable and nutritious food, based on products' nutritional quality, estimated health outcomes (energy density and nutrient wealth, reduced individual ingredients in processed foods that contribute to weight gain, such as sugar or saturated fat). Based on nutritional recommendations (food-based dietary guidelines). Food fortification and vitamin supplementation programmes to needy populations.
<b>Healthy food's investment case importance score</b>	From 1=very low to 5=very high	Company's financials		Healthy food impact on the investment case	New or expanding markets, higher sales, margins, enhanced customer relationship and brand recognition linked to healthy food and nutrition. Associated with the incorporation of the healthy food and nutrition theme into the long-term strategy (R&D, M&A, marketing and distribution).
<b>Green food exposure score</b>	From 1=very low to 5=very high	Agriculture and food system / natural capital	3.1 and 6.4 (water), 12.3 (food waste), 13.2 (climate change)	Company's products impact on the agriculture and food system	Increasing access to products which minimise negative environmental outcomes. Carbon, water, ecological footprints and relevant broader sustainability issues, such as biodiversity.
<b>Green food's investment case importance score</b>	From 1=very low to 5=very high	Company's financials		Green (environmentally friendly) food impact on the investment case	New or expanding markets, enhanced customer relationship and brand recognition. New or expanding markets, higher sales, margins, enhanced customer relationship and brand recognition linked to healthy food and nutrition. Linked to the incorporation of the green (environmentally friendly) food and nutrition theme into the long-term strategy (R&D, M&A, marketing and distribution).

Source: Kepler Cheuvreux

We derive a “Sustainable food” exposure score that we define as the estimated potential positive contribution to healthier food intake balanced by the negative environmental footprint mapped against the relevant global sustainability agenda targets: Sustainable Development Goals or SDGs (“net impact” approach). This is calculated by dividing companies’ “healthy food exposure” scores by their “brown food” scores (contrary to “green food”, a benchmark for companies’ negative environmental footprint). Both scores are subjected to numerous methodological assumptions and limitations discussed at length in this report.

**Both scores are subjected to numerous methodological assumptions and limitations discussed at length in this report**

Chart 8: Sustainable food ratio ("healthy food" exposure/"brown" food\* exposure)



Source: Kepler Cheuvreux (\*we define "brown food" as a benchmark for companies' negative environmental footprint)

Table 6: Summary of conclusions (exposure, investment case importance)

Theme (SDGs contribution)	Value chain level	Our assessment					
		Exposure/estimated contribution (criteria/benchmarks reviewed)	Selected picks	Policy and Strategy (criteria/benchmarks reviewed)	Selected picks	Investment case/Financial impact importance (rating)	Selected picks
1. Healthy food (2 and 3)	Product	Portfolio's alignment with dietary guidelines, nutrient profiling system, offering to low-income customers	<b>Positive:</b> Acoma, Bonduelle, Danone, PureCircle, Total produce, Wessanen; <b>Challenged:</b> Associated British Foods, Barry Callebaut, Coca-Cola European Partners, Dairy Crest, Emmi, Greencore, Lindt & Sprüngli, Nestlé, Unilever, Suedzucker, Viscofan	Portfolio management, product reformulation, portion control, M&A, innovation, responsible marketing and advertising, food quality and safety	Danone, Nestlé, Wessanen	High	<b>Positive:</b> Acoma, Bonduelle, Danone, PureCircle, Total Produce, Wessanen; <b>Challenged:</b> Barry Callebaut, Lindt & Sprüngli, Coca-Cola EP, Viscofan, Suedzucker
2. Green food (2, 6, 12, 13, 14, 15)	Supply chain, Operation and Product	Portfolio's environmental footprint (water, carbon, food waste, ecological, biodiversity)	<b>Positive:</b> Bonduelle, Total produce, Wessanen; <b>Challenged:</b> Dairy crest, Danone, Emmi, Glanbia, Viscofan (indirect), Suedzucker, Tate & Lyle	Carbon reduction science-based targets encompassing the scope 3, food waste, water, forests and land use reduction commitments and progress	Danone, Nestlé, Wessanen	Low	<b>Positive:</b> Bonduelle, Danone, Total produce, Wessanen
3. Sustainable food	Supply chain, Operation and Product	Portfolio's environmental and social (health) footprint	<b>Positive:</b> Bonduelle, Total Produce, Wessanen			High	<b>Positive:</b> Bonduelle, Total Produce, Wessanen

Source: Kepler Cheuvreux

## Engagement framework: a toolbox against “healthwashing”

The table entitled *Engagement themes and criteria* at the end of this report (page 128) shows the criteria used to benchmark companies across peer groups based on their sustainability practices. While an overarching theme is the need for more harmonised and meaningful reporting, our findings in this report are subject to some comparability challenges.

## Macro outlook: the cost of unhealthy diets

With traditional diets based on natural, healthy food continuing to lose ground to ultra-processed food, the global population has become increasingly less healthy and more overweight. The majority of the people around the world is now suffering from nutritional deficits and is faced with lingering hunger issues and obesity rates reaching highly problematic levels in many countries.

In turn, nutrition-related diseases (diabetes, etc.) have been driving up the health costs borne by governments (total direct economic costs of c. USD2trn, or 2.8% of global GDP). As a result, there has been increasing pressure on governments to develop new approaches and tighten their nutritional policies. This, for example, manifests itself in the calls to broaden the perspective beyond calorie intake, and take into consideration “diet quality” and the “food environment” (all surrounding factors).

Meanwhile, there has also been a growing awareness that the overhaul of agricultural markets will be critical to meet global nutritional goals and that both health and environmental issues have to be addressed simultaneously to meet this challenge.

### The roots of the malnutrition pandemic

*What are the megatrends shaping the “healthiness” of our diets and the future of food and nutrition security?*

#### Long-term economic drivers are unsupportive

The rise of energy-dense and poor quality processed food (high in energy, fats, added sugars, or salt) coupled with an increase in portion size and unfavourable economics (such as increasing fresh produce costs in emerging markets) and other social variables (including demographics and evolving lifestyles) go a long way toward explaining the rise in unhealthy food consumption. The upshot at the individual level has been a huge increase in energy (calorie) intake with a decline in the amount of energy expended in physical activity.

**Key issues:**  
*undernutrition, obesity, and mismanagement of environmental resources*

**Traditional diets based on healthy, natural food have lost ground to ultra-processed food**

**Table 7: Megatrends that are amplifying the food and nutrition security crisis**

Shift	Description/Illustrations
Climate change	Rise in temperature, extreme weather events, land degradation (projected land demand could increase, and exceed available land resources by up to 700% by 2050), water scarcity, prompting for instance a push for new agricultural models amid heightened competition for natural resources, putting pressure on the supply. Elevated levels of CO2 have been linked to significant deterioration in the zinc, iron and protein content of wheat, rice, field peas and soybeans (FAO).
Food prices	The International Food Policy Research Institute (IFPRI) expects food prices to grow by 40-45% and 20-25% to 2050 (vs. 2005 baseline) for maize and wheat, increasing hunger risks (with prices rising by over 60% to 2050 vs. 2010). Climate change is the main driver on the supply side, with shifting diets and population growth increasing the pressure on the demand side
Health	Increasing allergies (food allergies: fourth most prevalent disease globally), genetics for some, increasing use of pharma, insufficient sleep (developed markets) versus widespread malnutrition in developing countries. Malnutrition is most prevalent in Africa and Asia (leading to stunting and wasting).
Globalisation of diets	Dietary transition characterised by increasing meat consumption in low and middle income countries, cheap processed food sold to the masses amid widespread food marketing and bigger portion size; more takeaway food. Jeopardises agricultural biodiversity and contributes to climate change.
Income growth	Rise of the middle class; cheap processed food sold to the masses.
Population (demographics)	Challenges to feed a global population of 9.8bn in 2050 (vs. 7.6bn presently), which means that the planet will need to produce 70% more food than it did in 2009 (FAO), while addressing a changing structure, such as an ageing population.
Technology	Digitalisation, access to information, e-commerce growth have transformed consumers' eating patterns, shopping habits and meal occasions.
Urbanisation	Hectic and sedentary lifestyle choices, greater car ownership.

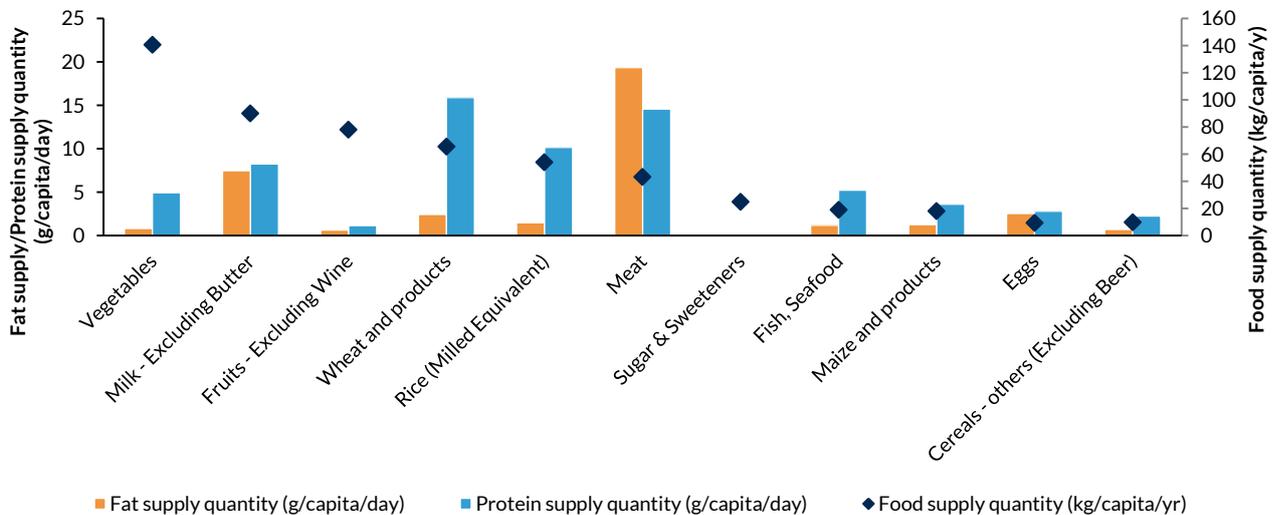
Source: FAO, Glopan, Global footprint network, IFPRI, Bioversity International, Davis et al. Kepler Cheuvreux

### Unhealthy global diet

The most recent studies carried out by the FAO (the Food and Agriculture Organization) point to a steady increase in unhealthy diets characterised by the mounting consumption of meat and processed food (70-85% of global intake) in conjunction with relatively lower or persistently inadequate consumption of fruit and vegetables (c. 7% of calorie intake, as depicted in the following charts).

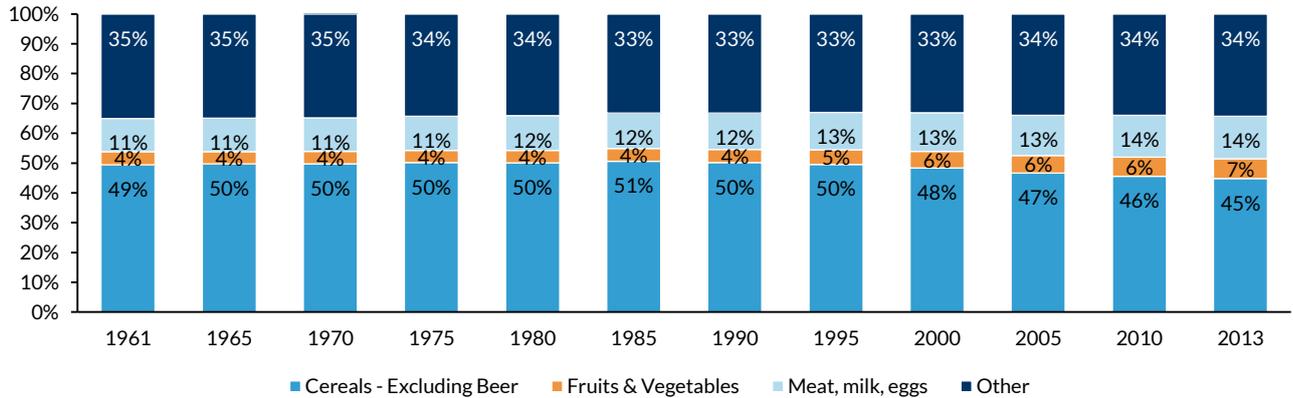
**World population likely to become less healthy due to poor nutrition**

**Chart 9: Per capita values for the supply of all food commodities and the calories, protein, and fat content (Global)**



Source: FAO (2013), Kepler Cheuvreux

Chart 10: Calorie supply breakdown 1961-2013 (kcal per capita per day)



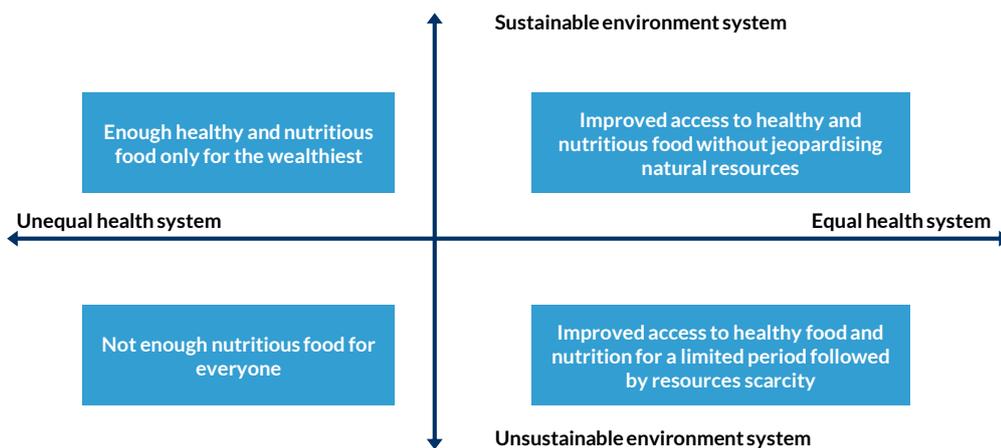
Source: FAO

### A food system war involving both health and the environment

These megatrends have led to a malnutrition crisis amid soaring demand for food, and an environmental crisis against a backdrop of scant resources. This means that, aside from the disparity between traditional diets based on “naturally healthy” food and ultra-processed or “junk” food, the malnutrition problem needs to be seen fundamentally, in our view, in terms of the tension between two systems: the “human system” (our health – the demand side), and the “environment system” (agriculture and food resources – the supply side). In turn, this raises questions regarding global access to healthy food and nutritious products.

**Conflict between what we eat and how it is produced**

Chart 11: Potential scenarios for health and environment systems



Source: Kepler Cheuvreux, Adapted from FOODSECURE

We therefore explore the main trends for each driver (demand and supply sides) in turn and how they interact and could be reconciled.

## Human health: obesity is taking its toll

### Hunger and malnourishment: a twofold challenge

The global population is subject to an increasingly common pattern referred to as the “double burden”: hunger coinciding with obesity in the same country, such as in China’s rural areas or in Latin America. In other words, undernutrition is coinciding with overweight/obesity issues and an array of diet-related non-communicable diseases (NCDs) such as type 2 diabetes, cardiovascular troubles (the leading cause of death related to obesity), heart disease, strokes, and cancer (at least 11 types).

In the following table, we show the main characteristics of these categories (overweight and underweight) and KPIs that help track their respective trajectories.

**Table 8: Malnutrition key data**

<b>Undernutrition (wasting, stunting and micronutrient deficiencies)</b>	
People undernourished	815m
Prevalence of undernourishment	11%
Share of undernourished people living in developing countries	98%
Adults underweight	462m
Women of reproductive age affected by iron-amenable anaemia	264m
Stunted children (short height for age)	155m
Wasted children (low weight for length/height)	52m
% of infants who are exclusively breastfed	38%
Low birth weight among all births	15-20%
<b>Overweight and obesity</b>	
Adults overweight	1.9bn
o/w adults obese	>600m
Projected adults overweight (2025)	2.7bn
Share of the OECD adult population obese	19.5%
Number of overweight or obese young children	41m
Projected overweight or obese infants and young children (2025)	70m
Global prevalence of diabetes among adults	8.5%
Obesity-related cancer burden in North America, Europe, and the Middle East	9%

Source: IARC, FAO, WHO, WOD, OECD

### Hunger on the rise again after dropping sharply

The latest FAO data suggests that the decline in the number of people suffering from undernutrition and hunger (global prevalence declined from 15% in 2000-02 to 11% in 2014-16) may have stalled (from 10.6% in 2015 to 11% in 2016).

### Increasing obesity

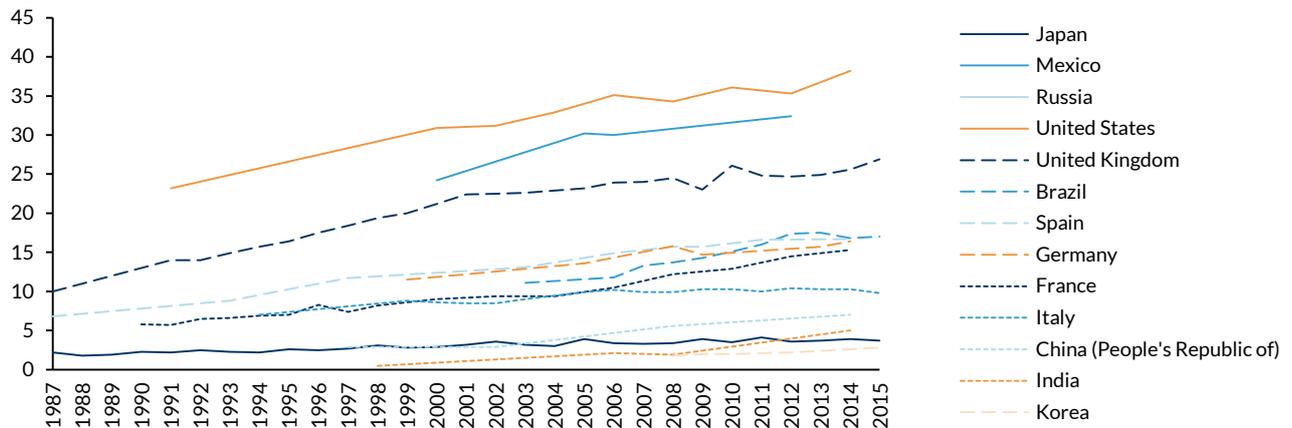
Obesity is an even bigger concern. In OECD countries, the average obese population increased to 15.9% in 2015 (e.g. 38.2% in the US, 32.4% in Mexico), and it is expected to reach an all-time high by 2030 (47% in the US and 39% in Mexico). It is estimated that the number of overweight people in the world could rise from 2bn today to 3.3bn by 2030, with a sharp increase in countries like China and Brazil.

**Nutritional problems (increasingly combined) affect most people worldwide...**

**...with hunger coinciding with obesity**

**The obesity epidemic is harder to treat than undernutrition, with new hot spots emerging (e.g. Brazil)...**

Chart 12: Obesity population rise (self-reported and measured, % of total population)



Source: OECD. Obesity defined as Body Mass Index (BMI)  $\geq 30\text{kg/m}^2$

The fact that obesity is harder to tackle than undernutrition underlines the challenge in shifting the focus to food quality and the surrounding environment rather than quantity only; i.e. not only the energy balance (what goes out versus what goes in). The presence of positive nutrients and reduced levels of nutrients (salt, sugar, and preservatives), together with the factors such as the lifestyle or dietary patterns are also concerns.

### Tracking country profiles and possible patterns

Focusing on the main indicators at the country level (prevalence of adult obesity, prevalence of stunting, under-fives, prevalence of undernourishment, and prevalence of wasting, under-fives, all in percentage terms), we see the largest data dispersion (standard deviation) in the prevalence of stunting. Unsurprisingly, undernourishment and stunting are positively correlated, while obesity and malnutrition still display a negative correlation. Although the dynamics are still evolving<sup>1</sup>, statistical data suggest that obesity remains primarily a problem in middle- to high-income countries (where most of the companies under our coverage are based), implying that there is potentially more scope for changes to government policy.

**...and the focus has shifted to dietary quality**

**Obesity and malnutrition still show a negative correlation**

<sup>1</sup> The recent sharp increase in the population classified as overweight and obese in East Asia, Latin America, and the Caribbean, underlined the speed of the transition from undernutrition to the other end of the spectrum (source: NCD Risk Factor Collaboration, WHO). Furthermore,, while children obesity flattened in high-income markets there has been a step-up in Asia ([link](#)).

**Table 9: Standard deviation, correlation for Sustainable Development Goal 2 (End Malnutrition) desired metrics (2017 data)**

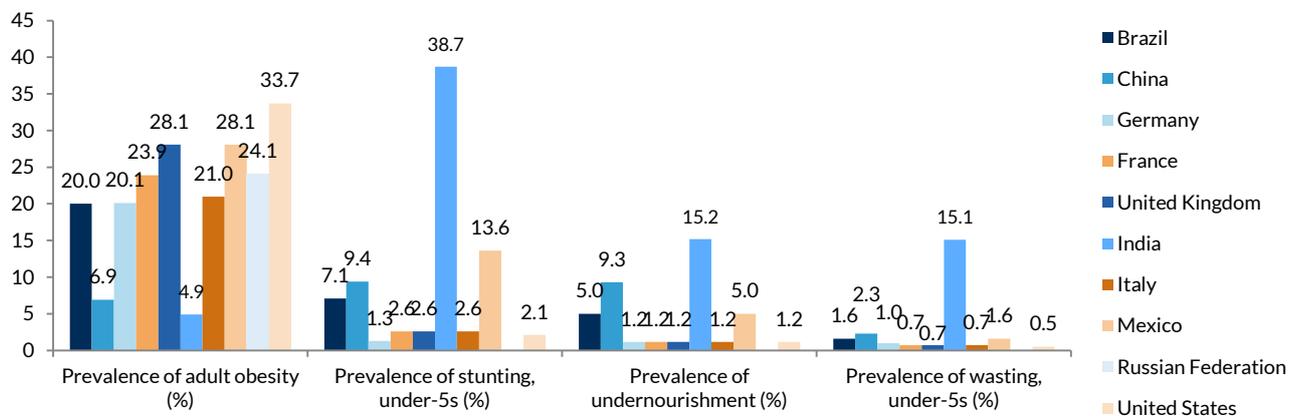
	Agriculture		Nutrition			
	Cereal yield (t/ha)	Sustainable Nitrogen Management Index* (0-1)	Prevalence of adult obesity (%)	Prevalence of stunting, under-fives (%)	Prevalence of under-nourishment (%)	Prevalence of wasting, under-fives (%)
Standard deviation	2.8	0.2	9.2	14.8	11.2	4.6
Correlation:						
Cereal yield (t/ha)	1	-0.3	0.4	-0.5	-0.4	-0.3
Sust. Nitrogen Management Index (0-1)	-0.3	1.0	-0.1	0.3	0.3	0.2
Prevalence of adult obesity (%)	0.4	-0.1	1.0	-0.7	-0.6	-0.5
Prevalence of stunting, under-5s (%)	-0.5	0.3	-0.7	1.0	0.7	0.7
Prevalence of undernourishment (%)	-0.4	0.3	-0.6	0.7	1.0	0.5
Prevalence of wasting, under-5s (%)	-0.3	0.2	-0.5	0.7	0.5	1.0

Source: Kepler Cheuvreux, based on SDG Index (SDSN Secretariat and the Bertelsmann Stiftung), FAO, UNICEF, Xin Zhang, Eric Davidson (\*the SNMI is defined based on two important efficiency terms in crop production, namely Nitrogen Use Efficiency (NUE) and land use efficiency (crop yield), with the NUE measuring the efficiency of nitrogen (N) use in agricultural production. It is usually considered to be positively related to the environmental performance of agricultural production.), WHO

With regard to the biggest economies, India and the US are at opposite ends of the nutritional spectrum. Nonetheless, these simplified figures gloss over the wide variety of country profiles and drivers of malnutrition (vitamin A, iron, iodine calcium, and zinc deficiencies).

**India and the US are at the opposite ends of the nutrition spectrum**

**Chart 13: Nutrition metrics**



Source: SDG Index (SDSN Secretariat and the Bertelsmann Stiftung) Kepler Cheuvreux

**A multi-trillion dollar health burden**

The prevalence of diabetes is increasing along with the global rise in obesity. In turn, this is driving up public health spending (2- 20% of the total expenditure depending on the country and scope), which is reaching particularly high levels in emerging markets. These costs are substantial, as malnutrition increases the incidence of mortality, ill health, stunted physical growth, and impaired cognitive development. The total direct cost (USD2trn or 2.8% of global GDP<sup>2</sup>), including healthcare costs

**Malnutrition is one of the main health cost drivers mainly borne by governments**

<sup>2</sup> The estimated annual global direct economic impact and investment to mitigate obesity, based on a 2014 McKinsey Global Institute discussion paper (including lost productivity due to disability and death). There are other estimates focused on the healthcare costs. Increased healthcare costs required to treat the medical consequences/complications of overweight and obese individuals are estimated at USD600bn currently, which soar to USD1.2trn by 2025, based on the World Obesity Federation assessment that also provides obesity prevalence data by country ([link](#)).

and the wider economic impact, is similar to the costs associated with tobacco use or armed conflicts (source: MGI). Studies indicate that this number could be significantly inflated when factoring in all indirect costs, including obese or overweight workers productivity loss.

**Table 10: Social and economic consequences of malnutrition**

Malnutrition	
Child deaths linked to malnutrition	45%
Cost of malnutrition	USD3.5trn per year
Loss of GDP in Africa and Asia per year	11%
Overweight and obesity	
Number of cancers linked to obesity	11 (c. 5%)
Diet-related number of top 11 risk factors driving the global burden of disease	6
Diabetes 2015 ranking of global causes of death (1990)	7 (17)
Deaths linked to excess body weight	4m
Disability-adjusted life-years caused by excess body weight	120m
Direct economic impact of obesity (McKinsey)	USD2.0trn
Healthcare cost of obesity (2025, World Obesity Federation)	USD600bn
Projected Healthcare cost of obesity (World Obesity Federation)	USD1.2trn
Relative significance of indirect to direct costs of obesity in the US (including productivity loss linked to "presenteeism" i.e. while present at the workplace)	65-88%
Monetary value of the annual total lost productive time (LPT, sum of absenteeism and presenteeism) for obese workers in the US (two-thirds being presenteeism)	USD11.7bn
NHS spending on obesity overweight and obesity related ill health in 2014 to 2015	GBP6.1bn
National health budgets across the EU spent on diseases linked to obesity each year	7%
Global annual health expenditure on diabetes	12%
Obesity-related global health expenditure by 2030	16-18%

Source: IPES-Food, Global Alliance for the Future of Food, Ross A Hammond and Ruth Levine, WHO, MGI, FAO, EC, Global Burden of Disease Study, Scientific articles

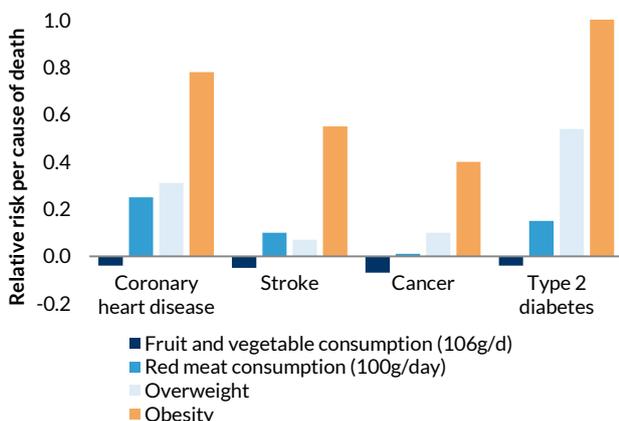
**Six of the top eleven risk factors driving the global burden of disease are related to diet**

### My diet impacts my lifespan

As stressed in ESG analyst Julie Raynaud's report on environmental assessment methodologies (Natural Capital Compass: *Bigger than carbon: a systemic view*; October 2017; [link](#)), several researchers (Springmann et al.) have devised an equation based on an extensive review of the available literature to estimate the marginal risks/benefits of fruit and vegetable consumption, red meat consumption, overweight and obesity on disease incidence. The following table shows the results of their analysis. For example, an increase in meat consumption of 100g per day leads, on average, to a 10% higher risk of suffering a stroke (risk factor=0.10).

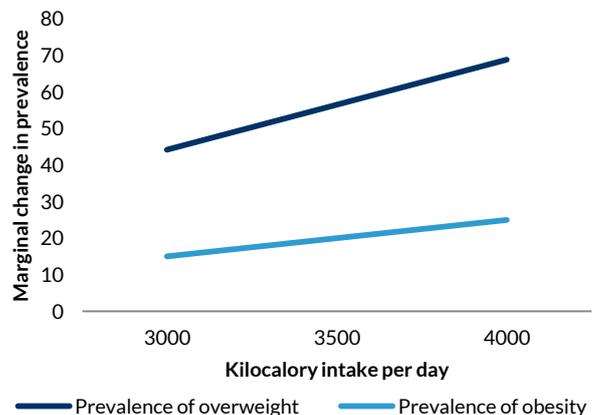
**Input from ESG Analyst Julie Raynaud: examining the link between diet and disease**

**Chart 14: Linking the incidence of disease to diets**



Source: Kepler Cheuvreux, based on Springmann, et al. (2016)

**Chart 15: Historical correlations**



Source: Kepler Cheuvreux, based on Springmann, et al. (2016)

## Environmental outlook: gloomy

### The healthy food and environmental nexus at a glance

Making progress in the fight against malnutrition largely hinges on the progress made in moving towards a more sustainable food system, whose current state is both a cause and consequence of the nutrition crisis, in the context of the ongoing decline in arable land, the increasing impact of extreme weather events on supply (e.g. the El Niño phenomenon, conflicts), and mounting evidence of the adverse impact of mass extinction on the food chain.

Revamping agricultural markets across subsystems (from production to storage, transport, trade, transformation, retail and provisioning) is thus core to meeting nutritional goals, in terms of productivity, genetic diversity, or R&D.

**Table 11: Environmental drivers and consequences**

<b>Biodiversity</b>	
Number of crop that provide 75% of the world's food	12
Number of animal species that provide 75% of the world's food	5
Number of breeds at risk of extinction (2014)	1,458 (78%)
<b>Climate change</b>	
Agriculture share of global human-induced GHG emissions (IPCC, 2010)	10–12%
Livestock share of global human-induced GHG emissions (FAO based on IPCC, 2007)	14.5%
<b>Forest, land and animals resources</b>	
Share of land on earth degraded	20%
Share of human plant-derived foods now depend on three crops (rice, maize and wheat)	>50%
Livestock breeds at risk of extinction	20%
Share of global crops dependent on pollination threatened by the extinction of wild species and the application of insecticides threaten the	35%
<b>Food waste</b>	
Share of food lost or wasted every year	32% (1.3bn tonnes)
Value of food waste every year	USD750bn
Food waste GHG emissions	3.3bnt
<b>Water</b>	
Agriculture share of water withdrawals	69%

Source: IPCC, Biodiversity international, FAO, TEEB, IPES

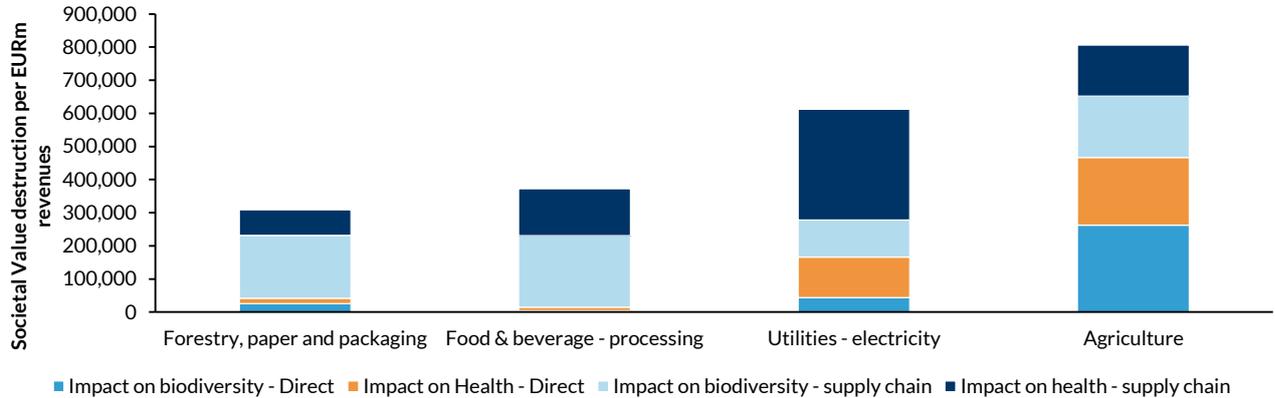
### What does the food environmental footprint look like?

In her investor guide to natural capital, ESG analyst Julie Raynaud also calculated the loss of human wellbeing linked to environmental pressures, from water consumption and pollution to emissions (see chart below).

**Overhaul of agricultural markets key to meeting nutritional goals**

**Assessing environmental damages**

**Chart 16: Societal value destruction by area of impact (biodiversity, health) and nature of impact (direct, indirect)**



Source: Kepler Cheuvreux (we define "Societal value" as the benefits and costs from companies' activities on society, including damage to ecosystems' services (natural capital), such as timber, fibre, pollination, water regulation, climate regulation, recreation, mental health, and others, according to the NCC; we calculate this by assigning a monetary value to these damages/costs)

The overuse of resources and the release of pollution put pressure on the environment and may lead to both qualitative and quantitative changes. This can affect the health of human beings and ecosystems. Agriculture causes the most "societal loss" on average, followed by utilities, food and beverage processing and forestry, paper, and packaging.

Most of the environmental impact in the supply chain happens at the agricultural stage. This mainly affects water, land use, and pollution, as our modelling exercise shows. According to the FAO and Trucost, farming is responsible for a USD3trn per year loss of societal value, when taking into account resource overuse (land, water) and emissions (greenhouse gases, air, land and water pollution).

***The agricultural sector causes the most "societal loss" on average***

## Policy response: the nanny state

We think that the UN's Decade of Action on Nutrition (2016-25) and SDG roadmap are a testament to the increasing momentum for better nutrition policy around the globe. These initiatives are a response to a host of worrisome trends (rising obesity, lingering prevalence of hunger and undernutrition in myriad forms).

Encouragingly, governments have stepped up curbs on problematic ingredients (the foremost being sugar) through a range of measures, including nutritional information on food labels (e.g. new US labelling scheme), along with a combination of fiscal policies (sugar taxes, including the UK and Ireland next year), a ban on ads for sugary food, ever-stricter health claim approvals, and more pressure to reformulate. While sugar-sweetened beverages (SSB) are arguably the most exposed, such measures affect a growing number of food categories.

Moreover, we also see a more structural, albeit less obvious, trend that includes environmental criteria in food policy frameworks, such as food waste (spearheaded by France).

### Nutrition high on the international agenda

Where are governments heading to help reverse these adverse trends?

#### Background: policies failures so far

While signs of improvement in child obesity have been reported in countries that have lagged so far, no country has managed to curb the obesity pandemic, which has fostered a sense of the failure of nutritional policies. In fact, past efforts to reorient diets proved largely insufficient, raising the question of the policies' effectiveness at fighting malnutrition. Consequently, a flurry of policy initiatives to thwart these adverse trends has emerged since the start of the decade, which aim to decrease rising widespread malnutrition pressure on government budgets.

#### Global - UN Decade of Action on Nutrition: 2025 on the radar screen

The backbone of the international response is embodied in the WHO's action plan as part of the earmarked 2016-25 Decade of Action (resolution signed in 2016).

*Key issues: sugar tax, tightening marketing, labelling and advertising - new topics, e.g. food waste*

*No country has managed to curb the obesity pandemic, with governments building up pressure to make regulation stricter*

*Two sets of WHO 2025 targets to move up a gear*

Chart 17: UN Policy Agenda milestones on nutrition



Source: WHO

The roadmap is structured around two complementary pillars based on previously formulated targets, with a view to galvanise action in light of insufficient progress (no targets were on track)<sup>3</sup> and failure to meet previous international commitments (such as the 2020 “Global Nutrition for Growth Compact” which had businesses’ backing<sup>4</sup>).

**Closer look at the two pillars of the WHO’s agenda**

These two streams defined by the UN generally distinguish the most vulnerable populations from disease-specific factors: 1) women and children (including childhood obesity, breast milk substitutes); and 2) non-communicable (mostly chronic) diseases. The second focus on non-communicable disease is the key catalyst for further tax actions on obesity, starting with sodas.

**Table 12: 2025 UN nutrition goals**

Targets	Date	Population	Latest update
Six global targets for improving maternal, infant and young child nutrition	2012	Women and children	The latest focus in the context is on childhood obesity. Breastfeeding is falling, for example, based on certain estimates (39% prevalence of exclusive breastfeeding versus 50% targeted), which raises concerns and drives greater scrutiny of breast milk substitutes as part of the tighter monitoring, enforcement and legislation related to the International Code of Marketing of Breastmilk Substitutes (formula marketing).
Diet-related Non-communicable disease (NCD)	2013	Whole population	Specific references to diabetes, obesity, and lowering salt/sodium consumption (the 2020-25 roadmap replaced the 2013-20 roadmap). High sodium intakes are associated with higher blood pressure and hypertension (National Research Council, 2015).

Source: IPES-Food, Global Alliance for the Future of Food, UN

Note that they therefore do not cover micronutrient deficiencies, e.g. the lack of minerals or vitamins, nor any explicit attempt to measure dietary quality.

**1) Women and children (including childhood obesity, breast milk substitute pressure)**

**2) Noncommunicable diseases**

<sup>3</sup> Global data suggests in terms of reported indicators (stunting, exclusive breastfeeding, wasting) that a lot of countries are headed towards meeting targets, except anaemia, obesity and overweight, which have risen since 2010 (low birth weight is not reported). This is largely blamed on insufficient funding, from both local governments and donors, as well as poor policy design (the vast majority do not apply the SMART concept, i.e. Specific, Measurable, Achievable, Relevant, Time bound, IFPRI). Furthermore, countries’ reporting is largely inadequate, based on the WHO’s Tracking tool, while relevant analysis would demand a deeper dive into local and regional (subnational) dynamics within countries.

<sup>4</sup> The Nutrition for Growth Commitments aimed at “Preventing at least 20m children from being stunted and saving at least 1.7m lives by 2020”, with supporters including for example Britannia, GlaxoSmithKline, DSM.

Table 13: WHO targets

#	Year	Scope	Institution	Name	Dead-line	Topic	Target	Relevant SDG target	Baseline	Baseline prevalence (%)	Update	Current [AARR] annual average rate of reduction	Required AARR	On/off course
1	2012	Global	WHO	WHO 2025 Global Nutrition Targets. Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition (World Health Assembly Resolution 65.6)	2025	Stunting (short height for age)	40% reduction in the number of children under five who are stunted	2.2	2012	25.1	22.9	2.3	4	Off
2						Anaemia (mostly caused by iron deficiency)	50% reduction of anaemia in women of reproductive age		2011	30.3	32.8	-2	5.2	Off
3						Low birth weight	30% reduction in low birth weight		2008-12			n.a.		n.a.
4						Overweight	No increase in childhood obesity		2012		Negative trend			Off
5						Exclusive breastfeeding	Increase the rate of exclusive breastfeeding in the first six months to at least 50%		2008-12		Mixed trends (slight increase or decline)			Off
6						Wasting (low weight for length/height)	Reduce and maintain childhood wasting to less than 5%	2.2	2012		Positive trend			Off
1	2013		WHO	WHO Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013-20	2030	Diabetes	Halt the rise in diabetes		2014		Negative trend			Off
2						Obesity	Halt the rise in obesity		2014		Negative trend			Off
3						Population intake	A 30% reduction in mean population intake of salt/sodium 10% relative reduction in prevalence of insufficient physical activity 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases							Off

Source: WHO, UN, Kepler Cheuvreux

## The SDG vision: integrated nutrition

The UN Sustainable Development Goals or SDGs (UN 2030 agenda encompassing all sustainability goals<sup>5</sup>) reiterate the 2025 WHO vision (under the SDG 2 targets for stunting, wasting, and overweight), and is, more crucially, in our view, likely to propel countries' accountability and help look at the links between environmental and social objectives due to its holistic nature and general momentum<sup>6</sup>.

### Spotlight on SDG 2: Ending malnutrition

We see especially the *End all forms of malnutrition by 2030* (SDG 2) as the equivalent of the 2°C target (developed in the context of globally agreed climate change mitigation commitments<sup>7</sup>) of nutrition, for it is meant to encapsulate all actions under one overarching objective. From another perspective, it can also be analysed as the mere official acknowledgement or translation into a target of the "Right to Food" as defined among UN Human Rights.

In this respect, we think the SDG 2.1 and 2.2 are to a large extent the most relevant for food and beverages companies when focusing on their portfolio health impact, while target 2.2 is more related to their sustainable sourcing policies (sustainable agriculture footprint).

***The UN's Sustainable Development Goals as a driving force for accountability and holistic thinking***

***SDG 2 seems the most directly relevant for nutrition and healthy food for consumer goods companies***

<sup>5</sup> The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. These 17 goals build on the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The UN SDGs came into effect in January 2016 (source: UNDP). [Link to the full list](#). The UN Millennium Development Goals was signed in 2000 and set 2015 as a deadline for a range of mostly poverty-related goals, including access to basic needs.

<sup>6</sup> The SDGs involved the private sector in consultation about the objective and financing and there is a host of initiatives underway focused on bolstering its contribution, including some institutional investor-driven ones

<sup>7</sup> The UN objective is to curb "the increase in the global average temperature to well below 2° C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5° C".

**Table 14: SDG 2 (Nutrition as a direct goal)**

SDG	Description	Outcomes/ Means	Main theme
Goal 2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Outcomes	
Target 2.1	End hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round	Outcomes	Increasing access to affordable and nutritious food; Food fortification and vitamin supplementation programmes to needy populations
Target 2.2	End all forms of malnutrition	Outcomes	
Target 2.3	Double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment	Outcomes	Sustainable agriculture
Target 2.4	Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality	Outcomes	
Target 2.5	By 2020 maintain genetic diversity of seeds, cultivated plants, farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilisation of genetic resources and associated traditional knowledge as internationally agreed	Outcomes	Genetic/Crop diversity
2.a	Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular in least developed countries	Means	System
2.b.	Correct and prevent trade restrictions and distortions in world agricultural markets including by the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round	Means	
2.c.	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives, and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility	Means	

Source: UN, Kepler Cheuvreux

### SDG 2 in the broader context: Nutrition impact on other goals

It is common to express the links between the SDGs and the extent to which one underpins the others. As oft-repeated, we believe food is a particularly fruitful place to start, considering its ability to influence both environmental (26% of humanity’s ecological footprint) and social issues, especially the SDG 3 (“Ensure healthy lives and promote wellbeing for all at all ages”) target 3.4 (“By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing”), as well as the goals on gender (5), poverty (7), climate change (13) or forest and land (15).

In fact, the SDG agenda places a greater emphasis on nutrition and food security, whose key dimensions (availability, access, utilisation, stability<sup>8</sup>) are reflected, than in the previous roadmap (Millenium Development Goals agenda).

In our view, this urges us to take a holistic view of the issue, which means in practice covering both social and environmental issues across the supply chain when looking

<sup>8</sup> According to the FAO, there are four main dimensions of food security: physical availability of food (“supply side”), Economic and physical access to food, Food utilisation (the way the body makes the most of various nutrients in the food), and Stability of the other three dimensions over time (adequate access to food on a periodic basis).

**Food at the crossroad of sustainability challenges**

**SDGs 2 and 3 are particularly interlinked, and SDG 2.2 is explicitly and directly linked to the WHO roadmap (the stunting and wasting of children)**

at companies - e.g. how not to overlook the impact on local production patterns of the export-driven economic system that has led local farmers to shift to sugar, corn and soybeans. In other words, this prompts us to examine how companies can be assessed through the general “do not harm”, trade-off or “net impact” principle, that progress on one SDG ideally does not jeopardise another or at least that tensions are balanced and mitigated when feasible.

The following table sets out the main challenges we see for companies in relation to advancing both nutrition and food security in parallel with the other relevant SDGs.

***The challenge for companies is to advance both nutrition and food security in parallel with the other relevant SDGs***

**Table 15: Nutrition as an enabler for related goals**

Main theme	Subtheme	SDG		Companies challenges	Quantified outcomes
Good health and wellbeing	Women and children	3.2	By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	Encouraging exclusive breastfeeding; Early-years nutrition education for mothers; Responsible marketing of Breast Milk Substitutes	Global obesity in 2030 falls from a projected 41% of the population to Japanese levels (5%) implying, over 3bn fewer obese people; reduction in child mortality, 45% of which is attributable to poor nutrition
	Noncommunicable diseases (NCDs)	3.4	By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and wellbeing	Product reformulation, dietary switch, low-income food markets, Regulating marketing and sale of obesogenic foods	Reduced malnutrition impacting over 800m people that are hungry
Gender equality	Women	5	Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	Encouraging exclusive breastfeeding; Early years' nutrition education for mothers	
No Poverty and Inequality	Inclusive Business	1 and 10.2	By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Increasing access to affordable and nutritious food; Food fortification and vitamin supplementation programmes to needy populations	Potential to double incomes of 1.5bn smallholder farmers; ensure food security
Clean water and sanitation	Access to water	6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Improving water performance in the value chain (efficiency, quality)	
		6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity		Agricultural water consumption falling by 15%
Responsible consumption and production	Food waste	12.3	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	Reduce food waste in the value chain	Halving of consumer food waste; Plastic waste reduced in the oceans; Reduction of food wasted in the supply chain;
		12.4	By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment		
Climate Change	Climate Change	13.2	Integrate climate change measures into national policies, strategies and planning	Leveraging agriculture's role as both a cause of climate change, through the emissions it produces, and a victim, as changes in temperature and rainfall impact crop growth and agricultural productivity; dietary switch, cattle intensification, forest ecosystem services	Reduction in the 24% of GHG emissions that come directly from food production (c. 15% livestock-linked); potential to mitigate total emissions by up to 10% by 2030 through improved forestry management
Life below water	Fisheries	14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by the biological characteristics of fish stocks within biologically sustainable levels	Sustainable fish supply	Phase out illegal fishing and overfishing
Life on land	Deforestation and Land degradation	15.3	By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Sustainable use of arable land; limiting agriculture-related pollution and emissions	Zero further degradation of cropland

Source: UN, McKinsey Global Institute; FAO; WHO; Ellen MacArthur Foundation; The Lancet, Business and Sustainable Development Commission, Kepler Cheuvreux



## **Toughening government action**

More importantly, these high-level goals are increasingly embedded in governments' objectives and concrete policies, as they are expected to set a 2025-30 national nutrition roadmap accordingly. For example:

- The EU committed to stopping the increase in overweight and obesity in children and young people (0-18 years) by 2020 (in the context of the EU Action Plan on Childhood Obesity 2014-20 which is complemented by the European Food and Nutrition Action Plan 2015-20).
- In emerging markets, a number of countries have paved the way with somewhat successful actions (Brazil<sup>9</sup>, Ghana, Peru).

## **Regions and countries crackdown on junk food**

### **From soft to hard measures against obesity**

In the undernutrition context, food fortification support is one easy way to address micronutrient deficiencies. This can, for instance, take the form of vitamins added to mass-market products to combat night-blindness and anaemia.

However, there are bigger challenges. In the countries most affected by obesity, governments are toughening regulations in a shift from self-regulation and soft measures (e.g. awareness-raising campaigns, mild support to voluntary pledges), which have proven to be largely meagre, towards more stringent and mandatory measures.

Typical approaches seek to prompt product reformulations (the choice of ingredients and proportions of ingredients to reduce fat, sugar and salt in processed foods) or decrease food portion sizes. Both sets of measures are seen as particularly effective when it comes to tackling obesity<sup>10</sup>.

### **Holistic interventions: all guns blazing**

Although food policies remain fragmented (e.g. there is no such a thing as an EU food policy), we also see a slow shift in government policy frameworks towards systemic thinking, with increased use of a comprehensive set of tools, including taxation, or banning child-focused food advertising (e.g. for sugar, mandating food labelling to guide consumer choices via traffic light labelling on all packaged foods), and areas previously overlooked, such as food waste, being increasingly taken into account,

**WHO goals embedded in government objectives and policies (e.g. EU, emerging markets)**

**Governments are tightening their grip to effectively drive companies' reformulations or lower portion sizes...**

**...while seeking to be more comprehensive**

<sup>9</sup> Since 2010, Brazil is, for instance, one of the few countries with the "right to food" enshrined in its constitution (Source: IFPRI).

<sup>10</sup> The McKinsey Global Institute's early findings drawn from the UK suggested the most effective interventions (impact on Disability-Adjusted Life Year, DALY, which quantifies the Burden of Disease from mortality and morbidity; source: WHO) are deemed to be portion control and changing food product formulas, followed by restrictions of high calorie food and drink. The two main indicators used were: estimated impact across full population (thousand DALYs saved) and estimated average cost per DALY (US dollar per DALY saved).

Table 16: Nutrition policy tracker

Type	Topic	Region Name		Enforce- ment	Scope	Status	Comments, including companies impact
Marketing and food labelling	Product nutritional information	EU	Regulation (EU) No. 1169/2011 on the provision of food information to consumers	Dec-16	Disclosure of nutritional information (energy, protein, fat, saturates, carbohydrates, sugars, and salt) and a statement regarding the origin of fresh meat on all packaged food products. More details on monounsaturated fats, fibre and/or vitamins and minerals can voluntarily be provided, but must also conform to standards. Further information on the ingredients, origin of food, allergens and additives present must be listed as per requirements. Front-of-pack labelling remains voluntary.	In place	<b>Big impact.</b> Functional claims and advertising hampered e.g. Danone's Actimel (refusal to grant health claims on yogurt products) or Glanbia's Sport Nutrition (blocked health claims related to caffeine and endurance). Drive towards "naturalness" in products. Still topical (e.g. concerns over current use of fruits on packaging).
Marketing and food labelling	Nutrition and health claims	EU	Regulation (EC) No 1924/2006 on nutrition and health claims	Nov-12	The European Food Safety Authority (established by Regulation (EC) No. 178/2002) carries out scientific assessment of health claims. Aims to ensure that claims are truthful and not misleading	In place	
Marketing and food labelling	Organic food labelling	EU	Regulation (EC) No. 834/2007	2007-09	Rules and guidelines which define the appropriate labelling of organic foods e.g. Minimum threshold of 95% of organic ingredients of agricultural origin.	In place	<b>Support to the organic food sector</b>
Marketing and food labelling	Product environmental footprint labelling	EU	Single Market for Green Products. Regulation (EU) 66/2010 (EU Ecolabel)	2013-16	Proposal of the Product Environmental Footprint (PEF) as a common way of measuring environmental performance throughout the lifecycle.	Under development	Limited impact. Consultation on the pilot terminated on September 2016. Official and mandatory Life Cycle Inventory (LCI) datasets needed for any Environmental Footprint compliance study are being created. Some countries e.g. France consider several options for the PEF
Marketing and food labelling	Digital advertising to children	EU	Audiovisual Media Services Directive (2010/13/EU)	2010	All audiovisual media, both traditional TV broadcasts and on-demand services. The currently proposed modifications encourage the adoption of self- and co-regulation for the existing rules seeking to protect the most vulnerable (alcohol advertising, fatty food, minors, etc.).	Under development	Advertising hampered
Marketing and food labelling	Children advertising	UK	Rule of the Committee of Advertising Practice (sister organisation of the self-regulatory organisation named Advertising Standards Authority)	Jul-17	The Committee of Advertising Practice in the UK announced new rules banning the advertising of high fat, salt or sugar food and drink products in children's media. Adverts that directly promote these products cannot appear in children's media or in media where children make up 25% of the audience.	In place	Advertising hampered
Guidelines on food composition, fiscal measures	Children calorie intake reduction	UK	Publications of Public Health England (PHE) plans to consider the evidence, set guidelines and closely monitor progress on calorie reduction.	Aug-17	Broadening of the sugar reduction programme to calorie reduction likely among ready meals, pizzas, burgers, savoury snacks and sandwiches (guidelines and possible other actions).	Under development	Public Health England (PHE, agency of the Department of Health) will publish the evidence in early 2018. Post-Brexit context raises uncertainties. More cumbersome to deal with calories than sugar only. This could have a meaningful impact considering the sugar tax experience.
Marketing and food labelling	Children advertising	UK	Committee on Advertising Practice rules non-TV advertising (adverts for products with high fat, salt or sugar content)	Jul-17	Announcement of curbs on non-broadcast media (online, in print and in the cinema)	In place	Advertising hampered

Continued on next page

Type	Topic	Region Name	Enforce- ment	Scope	Status	Comments, including companies impact
Marketing and food labelling	Product nutritional information	US	Food and Drug Administration new labelling requirements	Jul-18	Most packaged food. Specifically, the new label must display calorie amounts in a larger type size and declare both the amounts of total sugars and added sugars, in grams. First, nutrient content will be provided per serving of product, and second, the serving will be revised and amended appropriately, to be more representative of actual eating habits	In place Added sugar content on nutrition labels a novelty. Trump administration has reportedly delayed Nutrition Facts Updates (delayed the compliance date for the updated Nutrition Facts Label). The label was set to go into effect in July 2018 for large companies, and in July 2019 for smaller companies that make up 95% of the companies affected. First country to implement such a requirement for added sugar content on nutrition labels

Source: EC, Euractiv, Euromonitor, Public Health England, Kepler Cheuvreux (related topics voluntarily excluded from this table include but are not limited to the CAP, climate change, food safety, pollution, food waste, malnutrition funding, healthcare, breast milk substitutes, GMOs, business incentives, research on neglected nutritious commodities, transport and retail of nutritious foods)

## Key trends in nutritional guidelines: how to eat well

### 1) Reformulations (salt, sugar)

Food-based dietary guidelines based on the WHO recommendations have been a driving force for **product reformulation**, mainly in developed markets

While many guidelines do not set specific recommended levels of food intake, there has been **growing sophistication and specificity of guidelines**, for example, sub-food categories, objectives for salt, sugar (e.g. in the UK) or age groups (Public Health England's, PHE, technical guidelines on children sugar consumption reduction). Those can have a material impact on both sugar-sweetened beverages (e.g. Coca-Cola EP investing over GBP10m in reformulation and marketing for Coca-Cola Zero Sugar to circumvent the tax), and indulgence products, such as chocolate (e.g. Barry Callebaut's R&D UK team are currently working on about 100 sugar reduction projects).

While those have centred on salt and increasingly sugar, there is mounting pressure to establish guidelines for saturated fats. Yet there are still some arguments about the evidence suggesting an association between an important intake of saturated fats (typically found in meat and dairy) and negative health impacts (source: IPES-Food). This may create confusion in customers' minds and prove a challenge for dairy companies, in our view, especially in a context where conflicts of interest arise. This was, for example, suspected to be the case when the US Department of Agriculture (USDA) placed an undue emphasis on dairy uptake as a source of calcium in its recommendations.

Meanwhile, there remains a large consensus that trans fatty acids (TFAs, generally present in manufactured cooking oils) are harmful, which has prompted a string of governments to legislate against them. Partially hydrogenated oils are set to be fully prohibited in the US in 2018 (FDA).

### 2) Still, a limited impact if not picked up by other influencers

There is, however, evidence of a gap between these guidelines and customers' practices (e.g. excessive sugar intake versus insufficient fruit and vegetable consumption), with customers arguably placing more trust in nutritionist, or specialised websites than governments (e.g. via guidelines or nutrition education campaigns).

At the same time, history has shown that health evidence backed up by intense campaigning can significantly impact customers' behaviours and displace demand. A good example was seen in America following the announcement of a correlation between heart disease and saturated fats. This caused demand for butter to collapse and demand for margarine to rise, until news about the adverse health effects of margarine started to emerge.

***Growing sophistication and specificity of guidelines amid push for reformulation (salt, sugar levels)***

***Lingering evidence of a gap between these guidelines and customers practices***

**Table 17: Dietary guidelines momentum**

Nutrient/ topic	WHO	Example	Status	Estimated momentum
Fats	Less than 30% of total energy intake, with a shift in fat consumption away from saturated fats (e.g. found in fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard) to unsaturated fats (e.g. found in fish, avocado, nuts, sunflower, canola and olive oils), and towards the elimination of industrial trans fats (found in processed food, fast food, snack food, fried food, frozen pizzas, pies, cookies, margarines and spreads)	US: Consume less than 10% of calories per day from saturated fats		+
Fruits and vegetables	At least 400g (five portions) of fruits and vegetables a day. Potatoes, sweet potatoes, cassava and other starchy roots are not classified as fruits or vegetables.	Nearly all Food-based dietary guidelines (FBDGs) stress the need to increase consumption and most countries see the need for a diverse diet		=
Meat	Not specified quantitatively		Less than 25% of FBDGs recommend reducing or moderating meat intake (although no details are provided on the kind of meat)	+
Salt	Fewer than 5 grams per day, and use iodised salt (versus e.g. c. 8-12 grams per day in the EU)	US: less than 2,300mg per day of sodium; UK: 2017 reduction goal for a number of products (from the current average of 8g a day to 6g for adults)	Nearly all FBDGs (>75% of all FBDGs sugar)	++
Sugar	<5-10% of total energy intake from free sugars (25-50g for a healthy person). Excluding sugars in fresh fruits and vegetables, and sugars naturally present in milk	US: About 12 teaspoons. France: No more than 100g per day excluding lactose and galactose. UK: 10% of total energy intake from free sugars. Portion guidelines for specific product categories as part of the sugar reduction programme		+++
Ultra-processed foods	Not specified quantitatively	Brazil recommends avoiding "ultra-processed" foods high in fats, sugars and salt	Few countries	+
Environmental concerns	Not specified	Brazil, Germany, Sweden and Qatar include sustainability criteria in their dietary guidelines	Few countries	+

Source: WHO (N.B. the UN provides specific guidance on diet quantity and quality for vulnerable groups and also in relation to environmental impacts)

## Nutritional labels regulations pile up

More than ten years after the launch of the GDA (Guideline Daily Amount<sup>11</sup>) in Europe, there is still no consistent methodology in place to inform customers about various products' nutritional features (simplified nutrient-specific text and/or symbols on the front of pre-packaged foods).

### The rise of the traffic light system

Both compulsory and voluntary labelling schemes are becoming more popular, with colour coding and single interpretive logos in particular on the rise (the UK since 2013, Ecuador since 2014) among food labelling schemes in stores, supported by early evidence of their effects on consumer behaviour. These have been complemented by a mandatory display of calorie counts on restaurant menus (e.g. in

**Efforts to make labels easier to understand (colour-coded "traffic light" systems) gather pace**

<sup>11</sup> GDAs are guidelines for healthy adults and children regarding the approximate amount of calories and other main nutrients - proteins, carbohydrates, sugars, fats, saturates (saturated fat), fibre and salt. The GDA informs consumers about the percentages of recommended daily nutritional intake of a product, varying across gender and sometimes age group (source: BCFN).

the United States as of May 2017, in several Australian states since 2016, and in Ontario, Canada, as of 2017).

**Table 18: Front-of-pack (FOP) labelling scheme**

Front-of-pack (FOP) labelling scheme (store)	In place	Planned/in favour
Warning labels	Chile (introduced in 2016), Peru, Finland (salt)	Indonesia, Canada, Brazil, Colombia
Colour coding	UK (FOP “traffic light” labelling has been introduced based on a colour scheme – green, amber and red – according to the nutrient content of a product in relation to the recommended daily intake), South Korea, Ecuador, Iran, Sri Lanka (sugar), Mauritius (sugar)	Brazil, South Africa, Portugal, Turkey, Portugal, France (NutriScore label – a 5-colour scale that summarises the healthiness of a product), Colombia, Poland, Belgium, the UAE, India
Single interpretative logo	Norway, Denmark, Sweden, Finland (“keyhole logo” helps consumers to choose products that are lower in sugar, fats and salt, and higher in whole grains), Mexico	
No interpretative label, only monochrome GDAs		US

Source: Evolved Nutrition Label Initiative, EC (another distinction of food labelling options: guideline daily amount or GDA, traffic lights, health stars and badges, and activity-equivalent calorie labelling); Source: EIU

### A shift towards international labels?

Recently, France started to follow in the footsteps of the UK by launching its own (voluntary) traffic light system (“Nutri-Score”), while the US took steps to introduce a more comprehensive scheme, including a more explicit display for the percentage of “added sugars”. Broader EU talks are currently underway to overcome the limitations of the UK model (e.g. general lack of understanding of the link between the colours and the numbers provided on the pack), including a focus on portion size. We also understand that several companies (e.g. Unilever) support the WHO’s ambition to implement one simple consistent global standard.

### A bumpy road

Nonetheless, there have been fierce debates about the consistency and effectiveness of such labels, and their replicability internationally (e.g. trade concerns).

**Drive towards standardisation of portion sizes on nutrition labels in the EU and US taking a stricter approach to sugar content**

**Table 19: Focus on selected labelling regulations**

Country	Launch date	Description
France	April 2017	Launch of the official French “Nutri-label” using a simplified rating aggregating holistically food health impacts, which notably helps debunk some myths (e.g. cassoulet is good for health). The principle was enshrined in Art.L.3232-8 of law n° 2016-41 (January 2016) to overhaul the health system. This law mainly affects Casino and Carrefour (of the 60 supermarkets in total), and we understand it is voluntary. It has shown encouraging signs of improvement in nutrient intakes and overall health. Fleury Michon and Danone are set to sign the charter of commitments soon. European authorities will give their assessment by end-2017.
UK	June 2013	The nutrient food labelling model provides a single score for any given food product, based on calculating the number of points for “negative” ingredients (energy, sat fat, total sugar, sodium), which can be offset by points for “positive” nutrients (fruit, vegetables and nuts, non-starch polysaccharides or NSP, dietary fibre or American Association of Analytical Chemists or AOAC fibre, protein). Points are allocated on the basis of the nutritional content in 100g of a food or drink. It is currently being reviewed, along with the food labelling scheme (e.g. this might include clearer visual labelling, such as teaspoons of sugar, to show consumers the sugar content in packaged food and drinks). A group of retailers and manufacturers voluntarily embraced it several years ago in the UK. Coca Cola, Mars, Mondelez, Nestle, PepsiCo and Unilever agreed in 2017 to roll this out to their European portfolios
US	July 2018	The US FDA issued a regulation that will likely delay its new nutrition facts labels (clear display of calorie and sugar content) until May 2021 versus the original deadline of July 2018. This includes, for instance, a line for sugar, due to industry pressure. Nonetheless, a number of brands have already started using such labels. Canada is exploring the option via a public consultation.

Source: Respective governments websites, Newszires, Kepler Cheuvreux

### Food claims: authorities keeping up the pressure

Another lever and topical theme is the tightening of legislation governing food claims (the European Food Safety Agency is stricter than the US in this respect), which can result in legal actions. For instance, probiotic products and energy drinks face challenges. In the EU, the European parliament voted to block health claims related to caffeine and endurance in July 2016, which underscores the lingering debate about sports nutrition.

**Strict legislation covering food claims e.g. probiotic, plant-based milk (Glanbia, Danone)**

**Table 20: Food claims legal action**

Country	Issue	Company affected	Recent examples
EU	Sports Nutrition	Glanbia	The European parliament voted in July 2016 to block health claims related to caffeine and endurance
EU	Dairy (milk alternative)	TofuTown	A German vegetarian food manufacturer selling products called “plant cheese” and Soyatoo “tofu butter”, was told by the European Court of Justice to change its labelling or face potential legal action.
US	Use of the word “natural”	Multiple	Lawsuits have centred on the use of the word “natural” on the labels of products that, in some cases, contained artificial or genetically modified ingredients

Source: Multiple newswires. Note the EU is maintaining a list of approved claims in a dedicated database

The food authorities’ decision to give the green light, in terms of both product approval and health claims can indeed be a significant catalyst.

For example, Unilever’s Becel Pro-active brand has an FDA and EU-approved health claim for positive heart health effect – lower cholesterol. This is not easy to obtain (e.g. this proved a challenge for Danone’s blockbuster brand Activia, which did not get this stamp from the EFSA because there is no actual proof that the products have positive health effects). This likely prompted Danone to take a more holistic approach, rather than rely on functional claims (which can sometimes lead these products to be perceived as “Frankenfoods”).

Conversely, Unilever’s Rama-Blueband brand (50-50 split: including margarine spreads and cooking fats as well as cream alternatives and cheese spreads) is not able to use this health claim, although it communicates on the health benefits of “good fats” based on WHO recommendations (Omega-3, Omega-6 and polyunsaturates in margarine).

**Authorities support for science-based health claims can be a game-changer**

**Table 21: Product approval and health claims validated by authorities**

Product	Company	Health impact	Status	Date
Enzyme	DSM	Relieve symptoms of gluten sensitivity	Approved by the EFSA	August 2017
Becel Pro-active (e.g. calorie-reduced margarine with plant sterols, milk drinks or yogurt)	Unilever	Disease risk reduction/plant sterols can help reduce cholesterol	Approved by the FDA and EFSA	April 2012

Source: Unilever, DSM, Kepler Cheuvreux

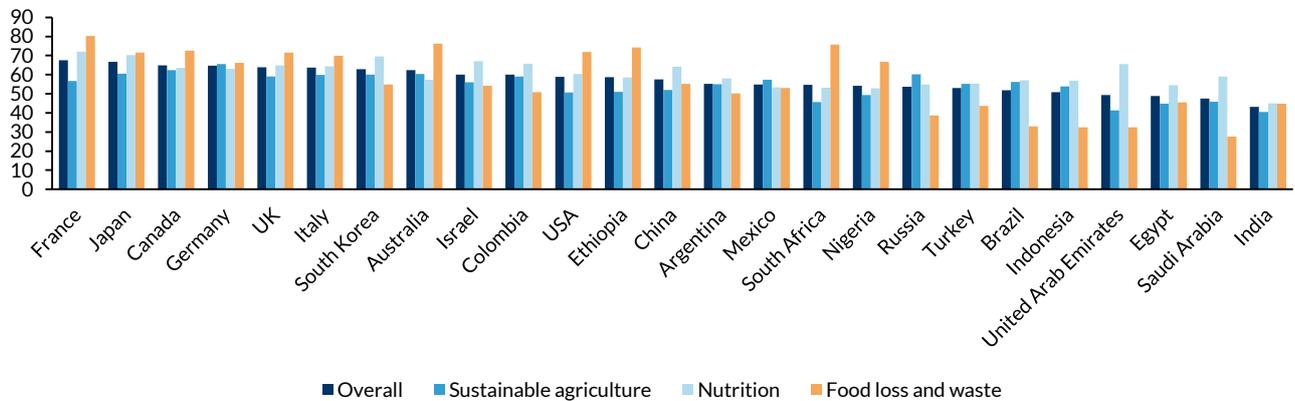
This is a hot topic in the EU since companies have expressed concerns about the need for further actions to enable a level playing field for health claims, which led food industry representatives to file an open letter in May 2017 that urged the creation of a nutrient profiles (classification of products according to their nutritional composition) as part of the EU health claims framework ([link](#)).

### Country policies: leaders and laggards

If we take a look at particular countries actions overall, France<sup>12</sup> stands out in terms of the comprehensiveness of its policies, and in terms of its fight against food waste and in favour of nutrition, based on an external assessment of the sustainability of various countries' food systems (mixing broad policy and performance indicators, such as GHG emissions linked to agriculture or the proportion of overweight and obese children). Japan and South Korea are also nutrition leaders, while Mexico, South Africa, Nigeria and India are among the laggards, suffering from a combination of undernourishment and obesity/overweight (source: The Food Sustainability Index).

**France stands out from the pack on the back of its comprehensive food policy (including nutritional profile)**

Chart 18: Country food sustainability rankings



Source: EIU The Food Sustainability Index (FSI), ranks countries according to their food system sustainability, based on 58 indicators that measure the sustainability of food systems across three pillars: food loss and waste; sustainable agriculture; and nutritional challenges)

### Sugar is public enemy number one

It is also very apparent that sugar is at the forefront of these efforts, as it has been targeted by new taxes and marketing restrictions (e.g. the UK), as well as more stringent labelling requirements (e.g. the US) and bolder industry pledges. For instance, EU soft drinks companies committed to lowering added sugar in overall market volumes by 10% by 2020 on average compared to 2015 levels via a range of measures (smaller packaging sizes, formulations, new products with reduced sugar, promoting drinks with lower or no sugar).

### Sugar-sweetened beverages: key targets

Considering their role in obesity (c. 25-30% of daily sugar intake from soft drinks and juice), sugar-sweetened beverages (SSB) specifically have thus become a focus for fiscal intervention and are increasingly seen as low-hanging fruit. Explicitly

**Sugar as a focal point for nutrition-related tax developments**

**Focus on sugar sweetened beverages**

<sup>12</sup>The French government is currently carrying out a wide-ranging consultation that involves industry representatives and civil society members to discuss the future of the food industry around two pillars: 1) distribution of added value (including pricing); and 2) healthy, affordable and sustainable food. The latter phase is due to start in November 2017.

encouraged by the WHO in the context of the fight against chronic disease<sup>13</sup>, this is supported by increasing evidence of tangible results, with two countries under particular scrutiny: Mexico and the UK.

### **Early evidence is encouraging**

Although from governments' perspective the impact on revenues collected was mixed, as some were lower than expected (the UK) and others higher (Mexico), there are signs of a promising impact on companies' portfolios and sales:

- The planned roll-out of a sugar tax next year (2018) has driven reformulation in the UK, following pioneering steps in Hungary.
- Reduced, albeit debated, sales in Mexico and across Europe<sup>14</sup>

### **Main stumbling block: consumer substitution**

In some governments' opinion, such benefits seem to outweigh limitations (it does not solve all problems and it is a regressive form of taxation). More importantly, studies have shown that price increases for SSBs result in increased demand mainly for milk, diet soft drinks as well as tea and coffee. Currently, there is therefore no conclusive health data for the countries that have or are set to have SSB taxes, as they are still in the early stages.

### **One of many tools worth trying**

A growing consensus seems to be that such taxes can play a supportive role in a broader policy overhaul. In the UK, for example, these measures were accompanied by a comprehensive "sugar reduction programme" that also involved the private sector and aimed to cut sugar in key foods by 20% from 2015 levels (sales weighted average, calculated by weighting the amount of sugar in individual products by their total sales volumes)<sup>15</sup>.

### **Relentless rise of sugar taxes**

There seems to be a worldwide shift towards such plans – not just in the developed, but also in emerging markets. Plans are underway in Ireland, Spain, Estonia, Colombia, Indonesia, Saudi Arabia, Thailand, India and the Philippines. Plus, Mexico is contemplating an increase, while more US states have decided to follow suit. This said, projects have been abandoned elsewhere, e.g. the Swedish Public Health Agency examined the case and recommended not introducing a sugar tax.

**Encouraging but mixed results**

**No clear correlation between health data and SSB taxes for now**

**The growing consensus is that it plays a supportive role in a broader policy overhaul**

**Shift to emerging markets as well**

<sup>13</sup> The WHO wrote in May 2015 that there is "reasonable and increasing evidence that appropriately designed taxes on sugarsweetened beverages would result in proportional reductions in consumption, especially if aimed at raising the retail price by 20% or more." ([link](#))

<sup>14</sup> A recent supportive systemic study concluded that « multi-component and price interventions appeared consistently powerful in improving healthy eating » ([link](#))

<sup>15</sup> Guidelines have been published across the top nine categories of food that provide the majority of sugar in the diets of children up to the age of 18 years (e.g. portion control appears as the most effective way to reduce the sugar content in chocolate bars and sweets). PHE will publish two detailed assessments due in March 2018 and March 2020. This follows a salt reduction programme, which lowered the average Briton's salt intake by 15% in six years (the 2017 aim was to lower consumption from c. 8g per day to 6g per day per adult)

**Table 22: Soft drink taxes**

Country/region	Start date	Tax coverage	Tax type	SSB tax details
<b>Taxes in place</b>				
Barbados	2015	SSBs	Volumetric	10% value added tax
Belgium	2016	Soft drinks (including artificially sweetened)	Volumetric	EUR0.03/litre (AUD0.04/litre)
Berkeley, California	2014	SSBs	Volumetric	USD0.01/fl. oz. (AUD0.44/litre)
Chile	2015	SSBs	Value added	18% value added tax on SSBs with sugar content above 6.25g/100 ml (10% tax on SSBs with lower sugar content)
Dominica	2014	SSBs	Ad valorem	10% value added tax
Fiji	2015	SSBs	Volumetric	AUD0.03/litre
Finland	2011	Soft drinks and energy drinks	Volumetric	EUR0.22/litre (AUD0.31/litre) on soft drinks with more than 0.5% sugar
France	2012	SSBs	Sugar content	EUR0.075/litre (AUD0.11/litre)
French Polynesia	2002	SSBs and flavoured milk	Value added	CFP40/litre (AUD0.48/litre) domestic; CFP 60/litre (AUD0.71/litre) imported
Hungary	2011	SSBs and artificially sweetened beverages	Volumetric	Soft drinks: HUF7/litre (AUD0.03/litre) (sugar content greater than 8/100ml); selected energy drinks: HUF250/litre (AUD1.16/litre)
Mauritius	2013	SSBs	Volumetric	MUR3/100 grams of sugar (AUD0.11/100 grams) contained within SSBs
Mexico	2014	SSBs	Volumetric	MXN1/litre (AUD0.07/litre)
Nauru	2007	SSBs	Volumetric	30% value added tax
Samoa	1984	SSBs	Volumetric	WST0.4/litre (AUD0.21/litre)
<b>Proposed taxes</b>				
Boulder, Colorado	2017	SSBs	Volumetric	USD0.02/fl. oz. (AUD0.88/litre)
Cook County, Illinois	2017	SSBs	Volumetric	USD0.01/fl. oz. (AUD0.44/litre)
Ireland	2018	SSBs	Tiered volumetric	In line with United Kingdom
Philadelphia, Pennsylvania	2017	SSBs and artificially sweetened beverages	Volumetric	USD0.015/fl. oz. (AUD0.66/litre)
Portugal	2017	Soft drinks	Tiered volumetric	EUR0.0822/litre (AUD0.12/litre) on SSBs with sugar content less than 8g/100 ml; EUR0.1646/litre (AUD0.23/litre) on SSBs with sugar content above 8g/100 ml
San Francisco Bay Area, California	2017-18	SSBs	Volumetric	USD0.01/fl. oz. (AUD0.44/litre)
South Africa	2017	SSBs	TBC	TBC (Treasury recommends a sugar content tax of ZAR2.29/100 grams of sugar (AUD0.21/100 grams) contained within SSBs)
United Kingdom	2018	SSBs	Tiered volumetric	GBP0.18/litre (AUD0.30/litre) on SSBs with total sugar content above 5g/100mL; GBP0.24/litre (AUD0.40/litre) SSBs total sugar content above 8g/100 ml

Note: AUD1 equals c. USD0.78 as of 12 October 2017; Source: Grattan Institute 2016

**Table 23: SSB tax options**

Option	Example	Advantages	Disadvantages
Specific excise on sugar within SSB ("sugar content tax")	EUR0.40/100 grams of sugar in SSBs	Each gram of sugar is taxed consistently, encourages product reformulation, consumers can shift to less sugary SSBs, deters bulk buying	Potentially more complex than a volumetric excise tax, eroded by inflation
Specific excise on SSB volume, tiered rates ("tiered volumetric tax")	EUR0.20/litre on SSBs with sugar content <8grams/100ml; EUR0.40/litre on SSBs with sugar content >8grams/litre	Encourages product reformulation to reduce sugar content to below the threshold, deters bulk buying	More complex than a single-standard volumetric rate, eroded by inflation, sugar content not taxed consistently
Specific excise on SSB volume ("volumetric tax")	EUR0.30/litre tax on SSBs	Simple to administer, deters bulk buying	Eroded by inflation, more tax paid per gram of sugar on low-sugar drinks
Value added excise tax	20% tax on the retail value of SSBs	Keeps pace with inflation, simple to administer	Encourages bulk buying and substitution via cheaper drinks, unpredictable revenues, undermined by price cuts

Source: Kepler Cheuvreux

From a market impact perspective, this is not a zero-sum game for industry players. There have been some market winners in recent years as a result of sugar concerns: no/low-calorie soft drinks and water.

Finally, we also see threats from a possible expansion of such taxes to other products like baked goods (although food’s sugar contribution is less meaningful), along with potential litigations claims (analogy between the tobacco sector and sugar industry, for instance, which was carried out by Schrodgers; [link](#)).

### What is the point of a “greener” food system?

Leaving aside the healthy food debate, the second movement we see has to do with tougher legislation aimed at cutting environmental damage from food systems.

#### The case for linking environmental issues to food

The UNEP’s 2010 ground breaking report, *Assessing the Environmental Impacts of Consumption and Production*, called for a shift away from animal products and fish to mitigate climate change. More recently, academic findings have estimated that plant-based diets could lead a reduction in global mortality of 6-10%, while GHG emissions from the food sector could be cut by 29-70% by 2050 versus a business-as-usual trajectory.

#### Do healthy food policies take into account sustainability?

Mounting evidence regarding sustainability benefits (GHG, land and water use) linked to healthy diets has fuelled calls for greater policy consistency between environmental and nutritional concerns (health paired with sustainability criteria).

Brazil, Qatar, Germany and Sweden have paved the way towards including environmental considerations in dietary guidelines. That said, only Sweden has laid out specific details (FAO). In the EU, the European Public Health Association (EUPHA) is pushing for the creation of a statutory Sustainable Nutrition Task Force to cover the broader impacts of food.

In practice, we understand that it could stimulate discussion about the inclusion of products’ environmental impacts on front-of-pack labelling. That said, we think this is unlikely to move quickly, given the complexity of the topic (e.g. should the carbon footprint be based on the nutritional value or quantity) and the lack of consensus regarding nutritional information.

**Mounting evidence of sustainability benefits (GHG, land use, water use) linked to healthy diets**

**Environmental considerations increasingly included in countries’ dietary guidelines**

**Table 24: Three main diet recommendations factoring in environmental considerations**

1	Increase in the consumption of more plant-based diets, including more vegetables, pulses, fruits, and whole-grain cereals.
2	Decreasing the consumption of animal-origin foods (i.e. red meat and processed meat) in particular when not from sustainable sources (e.g. overexploited fish species)
3	Avoiding foods and beverages that contain trans fats, or with a high content of saturated fats, added sugar or salt.

Source: EUPHA

Against the backdrop of more systemic thinking, we think it is worth highlighting the idea of a “Common Food Policy”, which is gathering pace in the EU, and a report is set to be released in autumn 2018.

## Companies' transition: fortifying actions

Consumers' greater focus on healthy food and nutrition is having a noticeable impact across the consumer goods space, particularly in the wealthiest/premium segments. Companies are speeding up their portfolio diversification and positioning themselves to seize these opportunities, chiefly through: 1) all-encompassing product reformulations (targeting sugar) and tweaks in portion size (Danone, Kellogg's, Nestlé, Unilever, Wessanen); and 2) M&A in buoyant health and wellness markets (USD1trn in 2017E), such as "free from", "fortified/functional", "plant-based" or "organic", with especially strong momentum among trendy small brands.

In our coverage, Nestlé arguably best illustrates these efforts to transform (strong R&D, M&A ambitions), while Marine Harvest is a beneficiary of the shift away from meat (appealing feed conversion ratio<sup>16</sup> but exposure to broader environmental and social concerns linked to salmon farming<sup>17</sup>). In beverages, Coca-Cola EP is clearly affected by the UK sugar tax, but overall the impact is limited.

Within ingredients, we expect the traditional flavour and fragrance (F&F) e.g. Givaudan, and chemical names, e.g. DSM, Evonik, to further expand into nutrition.

Alongside food safety, labelling is also ever more scrutinised, which opens up markets for companies that provide solutions across the value chain (Testing, Inspection, and Certification or TIC, e.g. Eurofins, processing equipment e.g. GEA, healthcare e.g. Biomérieux).

Aside from pharma (insulin, diabetes for Novo Nordisk, Sanofi, and Cellnovo), the impact of evolving diets on other sectors further downstream (food retailers, catering) is more on the fringe, but also growing. Last but not least, we flag several neglected plays in the wellness and healthy lifestyles (sport) cluster: Technogym, XXL, Accel Group.

### Dismantling the status quo

*What does the accelerated demand for healthier diets and lifestyles mean to companies' P&L?*

#### Healthy foodstuffs are winning market share

We believe that food seen as healthy will continue to win market share against more processed and unhealthy products. Consumers currently see organic, natural, sustainable (certification and otherwise), locally produced, free from (fat, sugar, preservatives, gluten, lactose, etc.) products as healthy compared with industrially produced food and drinks. Consumers increasingly see a healthy diet (and lifestyle) as a way to maintain good health and prevent illness. Concerned about rising levels

<sup>16</sup> Measure of the efficiency with which an animal converts feed into tissue, usually expressed in terms of kg of feed per kg of output (e.g. live weight, eggs or protein). Source: FAO

<sup>17</sup> [Link to our ESG Thematic & Impact Investing Report "Blue Economy Screener: A deep-dive into the Ocean"; 31 March 2017](#) that addresses both the pros and challenges of aquaculture

*Key issues: food & beverage portfolio transformation, ingredients, food safety, diabetes and sports*

*Investment view of Head of European Consumer Research Jon Cox: products perceived as healthy will continue to win market share*

of obesity and associated health problems, governments are also looking to reduce sugar and fat consumption through taxation and other means, which is also likely to put pressure on companies operating in this area.

### Changing tastes

Consumers are shunning traditional consumer staples amid different trends in the sector. Against the backdrop of government attempts to tackle rising obesity, consumers are increasingly aware of the relationship between diet and health, with traditional packaged food and drinks being viewed as unhealthy. Natural, fresh or organic products are seen as healthier than overly processed foods, which probably contain preservatives and have sat on shelves for weeks.

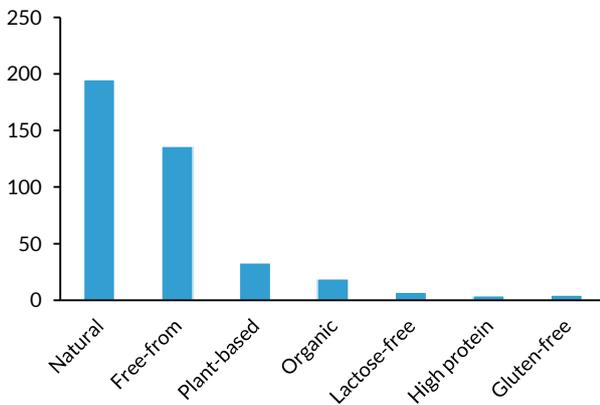
*“America’s packaged food giants are losing the battle for retailer’s shelf space ... grocery stores are choosing to give better play to fresh food, prepared hot meals and items from local upstarts more in favour with increasingly health-conscious consumers,” The Wall Street Journal, 1 May 2017.*

### Being relevant to millennials<sup>18</sup>

Large companies have to adapt to changing tastes: consumers want clean recipes, natural ingredients, and locally produced products that are authentic. Consumers are also looking to express themselves through their food choices, and to be able to directly engage with the brands they choose through social media. Social trust and customer interactions have become increasingly important for food companies.

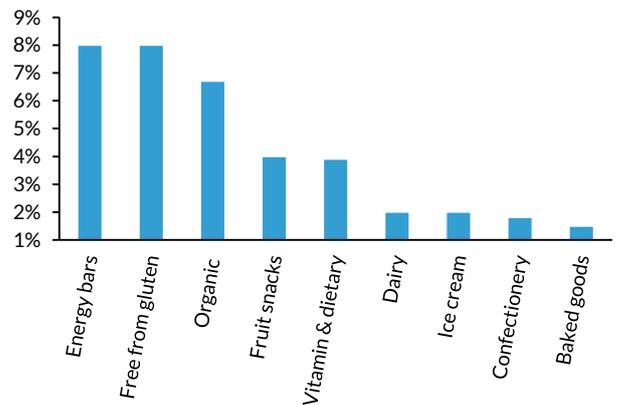
**Need to be authentic and exciting for millennials**

Chart 19: Market size CHFbn 2016



Source:Euromonitor, Nestlé, Kepler Cheuvreux

Chart 20: Category value growth 2011-16 CAGR



Source: Euromonitor, Kepler Cheuvreux

<sup>18</sup> The term millennials generally refers to the generation of people born between the early 1980s and 1990s (also known as Generation Y, because it comes after Generation X – those people between the early 1960s and the 1980s (source: Livescience). See ESG Analyst Martie Fromaget’s in-depth report on the theme (“Generation disruption”, 24 April 2017; [link](#))

Chart 21: Chocolate covered banana chips



Source: Bare Snacks, Kepler Cheuvreux

Chart 22: Protein entry bar



Source: Amazing Grass, Kepler Cheuvreux

Table 25: Willingness to pay more for healthy food

Demographic	Share
Generation Z (under 20)	31%
Millennials (21-34)	29%
Generation X (35-49)	26%
Baby boomers (50-64)	23%
Silent generation (65+)	15%

Source: Nielsen, Kepler Cheuvreux

**Health, environment, taste, quality and ethics and animal welfare as trendy sustainability concepts**

The tables below list how this drive for “Sustainable food” interacts with broader trends.

**Table 26: Demand and supply trends at a glance**

Trend	Main health impact
<b>Demand</b>	
From a general healthy focus (low-fat, low-sugar, low salt/sodium, low calories but protein-rich foods) to broader health, naturality & transparency and wellness considerations (high in fibre, more natural than functional, artisanal, local or fresh, "authentic" or small, organic, gluten-free, seasonal eating, clean labels with no artificial/simple ingredients or vegetal/plant-based (e.g. fewer sweeteners but taste) or GMOs, minimally processed, vegetarians or flexitarians meaning less meat and alternative proteins to meat, micronutrient fortified, fewer antibiotics and chemical pesticides, lighter and thinner, better animal welfare). Personalisation somewhat epitomises this move.	Positive
<u>See table below for links between these factors</u>	
Rising and more sophisticated demand for traceability, transparency, activism and company culture (trusted brands)	Positive
Convenience and on-the-go consumption (although at the same time there is an increase in cooking and eating at home) affecting channel (proximity), snacking, easy cooking demand.	Mixed
Use of online versus traditional retail (e.g. direct-to-(e-)consumer sales, and sharing e.g. online reviews and influential bloggers) affecting price/value comparison, growth of discounters.	Mixed
Changes in consumer tastes (e.g. less milk) and appetite for discovery (trying new food), shopping and engagement (more connected and knowledgeable, use of social medias e.g. recipes websites, meal plates pictures).	Positive
Demographics including millennials (more willing to pay a premium for healthy food), baby boomers (healthy ageing, malnutrition, dysphagia).	Positive
Evolving disease burden e.g. gastrointestinal issues (irritable bowel syndrome, inflammatory bowel disease, dysphagia, constipation, etc.), brain health (Alzheimer's, epilepsy, depression, cognitive health), and obesity (diabetes).	Negative
Exclusive breastfeeding is declining.	Negative
Less customers loyalty	Neutral
<b>Supply</b>	
Processed vegetables have become much more affordable, while prices for raw vegetables have risen.	Negative
Prepared and processed foods are more accessible than ever before and in larger portion sizes.	Negative
Smaller portion sizes, better labelling.	Positive
More fast food and substantial amounts of sugar-sweetened beverages.	Negative
Rise in private labels.	Neutral
More meat.	Negative
More fish.	Mixed

Source: Kepler Cheuvreux

**Table 27: Taxonomy of categories: estimated market size, momentum and links with health and nutrition/green and ethical concepts**

Category/trend	Market		Market links with:		
	Size	Momentum	Health and Nutrition	Green	Ethical
Allergies/food intolerance	Low	Medium	High	Very low	Very low
Alternative proteins to meat	Medium	High	Low	Medium	Medium
"Authentic"/artisanal/craft/small	Medium	Medium	Low	Low	Low
Animal welfare	Very low	Medium	Medium	Low	High
"Better for you"	Medium	Medium	Medium	Low	Low
Convenience	Medium	Medium	Very low	Very low	Very low
Discovery/novel food experiences	Low	Medium	Very low	Very low	Low
Dietary switch	Low		Low	High	Medium
Flexitarian	Low	High	Low	Medium	
Vegan	Very low	Low	Low	High	Medium
Vegetarian	Very low	Low	Low	High	Medium
Ethnic	Very low	Low	Very low	Very low	
Engaged	Low	Low	Low	High	High
Fair trade	Low	Low	Low	Low	High
"Feel good" products/services	Medium	Medium	Medium	Low	Low
Fortified/functional	Medium	Medium	High	Very low	Very low
Free from	Medium	Medium	Medium	Medium	Medium
Gluten-free	Low	Medium	Medium	Very low	Very low
GMOs-free	Low	Low	Low	Medium	Medium
Lactose-free	Low	Low	Medium	Low	Low
Meat-free	Low	Low	Low	Medium	Medium
Fresh/seasonal	Medium	Low	Medium	Medium	Very low
Inclusive/social business	Low	Low	Medium	Medium	High
Local/regional/proximity	Medium	Low	Low	Low	Medium
Minimally processed	Low	Low	Medium	Low	Low
Natural	High	Medium		High	Low
Naturally healthy	Medium	Low	High	Medium	Low
Clean labels	Medium	Medium	Medium	Medium	Medium
No artificial flavours/natural ingredients	Medium	Medium	Low	Medium	Low
Organic	Medium	Medium		High	
Reformulated	High	Medium	High	Low	Low
Personalised	Very low	Medium	Low	Low	Low
Plant-based	Medium	High	Low	Medium	Medium
Portion control/packaged size	Medium	Medium	Medium	Low	Low
Transparent	Low	Medium	Medium	Medium	Medium

Source: Kepler Cheuvreux (Dark orange: High; Light orange=Medium; Light blue= Low). Including numerous assumptions, and largely drawing on market data otherwise referenced in this report

## A complex landscape

As reflected in these tables, this does not mean there are no conflicting trends and that:

1. "One size fits all", as we observe a rather evolving landscape with, for instance, millennials and baby boomers driving distinct trends, such as a willingness to pay a premium for healthy food, while the same applies to geography or price points. Different customer groups have various levels of appetite for healthy categories: from zero interest to moderate (still the biggest group) and high (those totally committed).
2. That "sustainable food" or "green food" is always aligned with "healthy food" e.g. there is no evidence that organic foods are healthier per se, although interestingly, healthy tops the list of reasons for choosing organic food, ahead of taste, environmental and animal considerations.
3. That the business interests systematically coincide: food producers are typically directly rewarded for health, convenience and experience, but tend to be less so for sustainability and transparency (source: Rabobank).

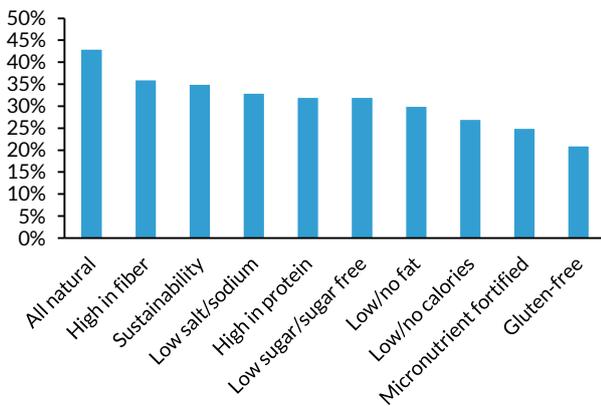
**Food producers are typically directly rewarded for health, convenience and experience, less for sustainability and transparency**

4. Companies' responsibilities span their product portfolio along with marketing and sourcing practices. This does not imply that other factors (genetics, sedentary lifestyles etc.) should be overlooked. Food products obviously play a role as a part of the whole diet.

**Health and nutrition core to the most attractive market segments**

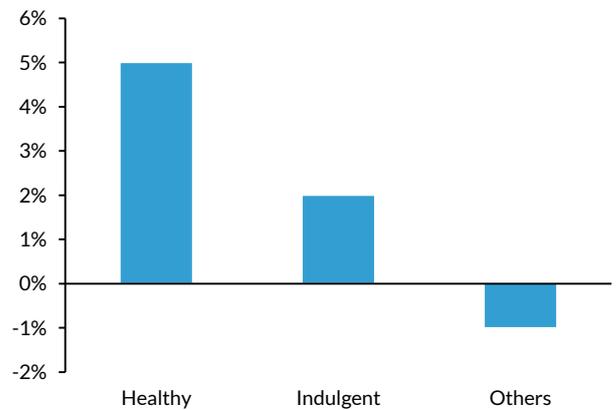
Amid an otherwise sluggish food and beverages market, "health and wellness" market (more than USD1trn in 2017E, or approximately a quarter of the total) categories are experiencing particularly strong momentum, in part impelled by their ability to ratchet up market share and command premiums and higher margins.

**Chart 23: What consumers want in foodstuffs**



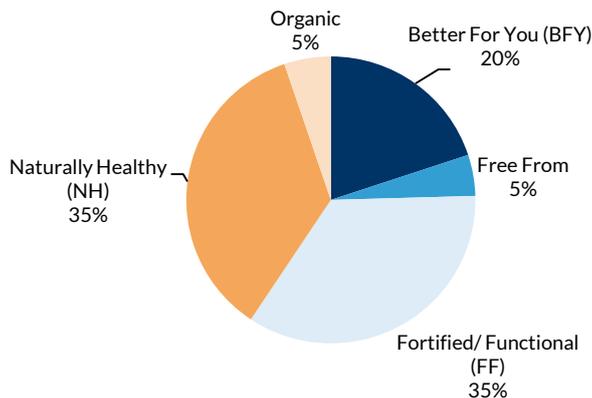
Source: Nielsen survey, Kepler Cheuvreux

**Chart 24: Sales growth 2012-15 by food type**



Source: Nielsen, Kepler Cheuvreux

**Chart 25: Health and wellness market breakdown**



Source: Euromonitor (All market size data are expressed in constant terms (excluding inflation) for the forecast period (2016-21), using fixed 2016 exchange rates), Kepler Cheuvreux

**Health and wellness (USD1trn in 2017E) outperforms conventional ("free from", organic, etc.)**

This contrasts with the modest growth seen for some longstanding categories exposed to nutrition concerns (e.g. sugar, bakery, and confectionery) and the food market as a whole. According to Global Nielsen, global average sales in healthy categories, in fact, rose by 5% in 2012-15, compared to 2% for unhealthy categories, and -1% for the other segments. Globally, the wealthiest market segments

(measured by income) have, in fact, already experienced a decline in processed and ultra-processed food.

**Table 28: Market sizes**

Scope	Value	Growth rate	Year	Region	Source	Forecasts	Year
Food	EUR3.3trn	2% CAGR 2008-15	2015	Global	ARYZTA, Euromonitor, Gira, Kantor, LEK, Nielsen, Technomic.	n.a.	n.a.
Packaged food	USD2trn	n.a.	2016	Global	Euromonitor	n.a.	n.a.
Low-income food	USD155-265bn	n.a.	2016	Global	Business and Sustainable Development Commission	n.a.	n.a.
Business opportunities in the implementation of the SDGs related to food	n.a.	n.a.	n.a.	Global	Business and Sustainable Development Commission	USD2.3trn	2030
<b>Traditional categories</b>							
Bakery	EUR212bn	1% CAGR 2008-15	Global	n.a.	n.a.	n.a.	n.a.
Dairy	EUR403bn	1.9% CAGR 2011-16	Global		Euromonitor	n.a.	n.a.
Speciality Bakery	EUR37bn	4.2% CAGR 2008-15	Global	n.a.	n.a.	n.a.	n.a.
Sweeteners	USD70bn		2014	Global	Euromonitor	n.a.	n.a.
Art. Sweeteners	USD3bn	2% CAGR 2017-22 <sup>E*</sup>	2014	Global	Euromonitor	n.a.	n.a.
Corn (i.a. HFCS)	USD7bn	0% CAGR 2017-22 <sup>E*</sup>	2014	Global	Euromonitor	n.a.	n.a.
Stevia	USD0.2bn	15% CAGR 2017-22 <sup>E*</sup>	2014	Global	Euromonitor	n.a.	n.a.
Sugar	USD60bn	1.1% CAGR 2013-17 <sup>E</sup>	2014	Global	Euromonitor	n.a.	n.a.
<b>"Healthy" and "sustainable"</b>							
Health and wellness	USD1trn	n.a.	2017E	Global	Euromonitor (cited by Glanbia)	n.a.	n.a.
Fortified foods (artificially)	USD165bn	n.a.	2017E	n.a.	Euromonitor	n.a.	n.a.
Fair trade	USD7.3bn	n.a.	2016	Global	Wessanen	n.a.	n.a.
Free-from category	USD32bn	6.8% in 2016	2016	Global	Euromonitor	n.a.	n.a.
Gluten-free	USD3.5bn	10% CAGR 2017-20E	2016	Global	Euromonitor	USD4.7bn	2020
Nutraceuticals	USD180bn	9% CAGR 2016-21E (estimated)	2016 (estimated)	Global	Transparency Market Research	USD280bn	2021
Organic	EUR30.4bn	8% CAGR 2017-20 <sup>E</sup>	2016	Europe	Organic Monitor 2016	EUR38.7bn	2020
Plant-based food and beverage	USD16bn	12% CAGR 2007-17E	2016	Global	Euromonitor	n.a.	n.a.
Vegetables	EUR103bn	n.a.	2015	North America	FFT	n.a.	n.a.
Vegetables	EUR69bn	n.a.	2015	Western Europe	FFT	n.a.	n.a.
Fresh fruit and vegetables	EUR85bn	n.a.	2015	Europe	Nielsen	n.a.	n.a.

Source: Kepler Cheuvreux

## Local brands gaining ground

Consumers are more discerning and disenchanted with the globalisation process. As a result, they are increasingly shunning big international brands in favour of local and smaller brands. Indeed, consumers are willing to pay more for local products. In addition, consumers want greater transparency amid more interest in where products come from and sustainability issues. Products certified as sustainably sourced are growing faster than non-certified products. Consumers want a choice regarding GMO foods.

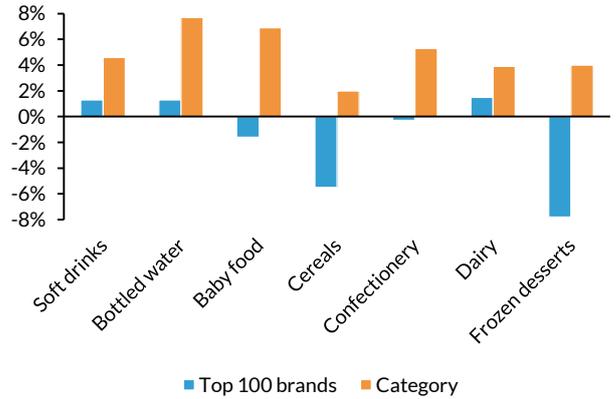
**Local produce is seen as more natural and fresher**

**Chart 26: US food and beverage sales growth**



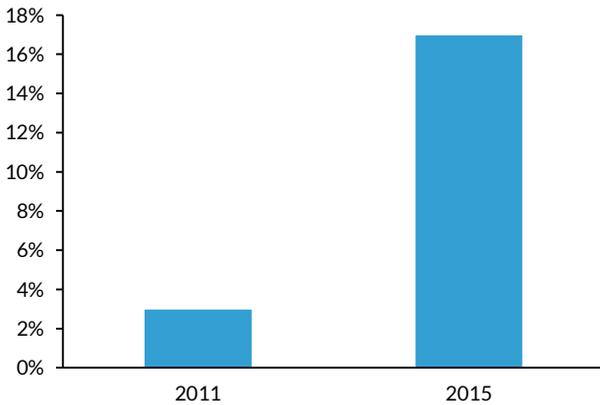
Source: Nielsen, Kepler Cheuvreux

**Chart 27: Category growth 2016 – small brands gain**



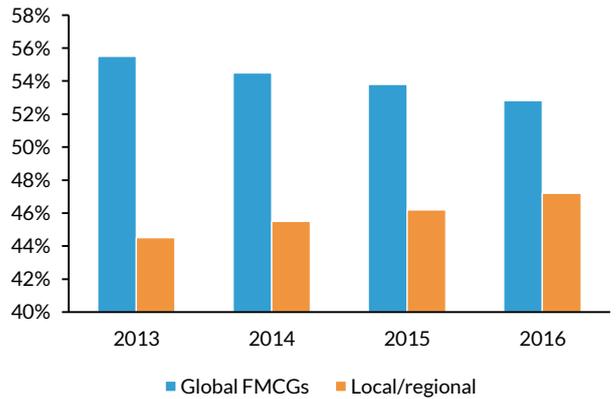
Source: Euromonitor, Kepler Cheuvreux

**Chart 28: Non-GMO F&B launches share of total**



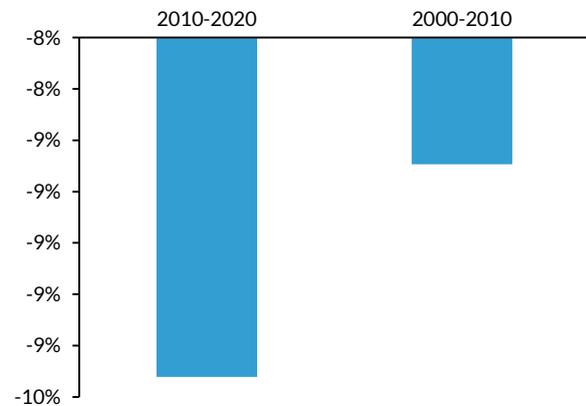
Source: Nielsen, Kepler Cheuvreux

**Chart 29: Market share global FMCGs vs. regional/locals**



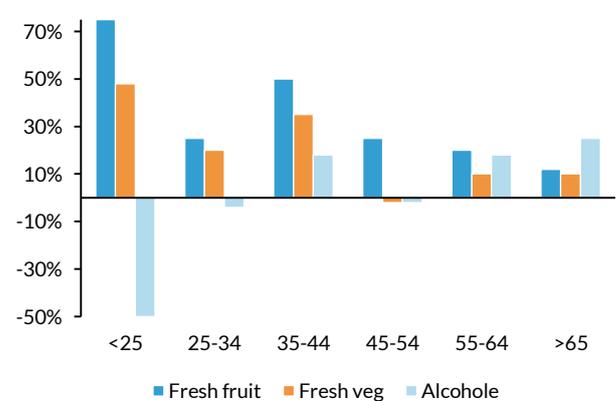
Source: Kantar Worldpanel, Kepler Cheuvreux

**Chart 30: US per capita packaged food consumption decline**



Source: Euromonitor, Kepler Cheuvreux

**Chart 31: US spending change 2000-15 by age group**



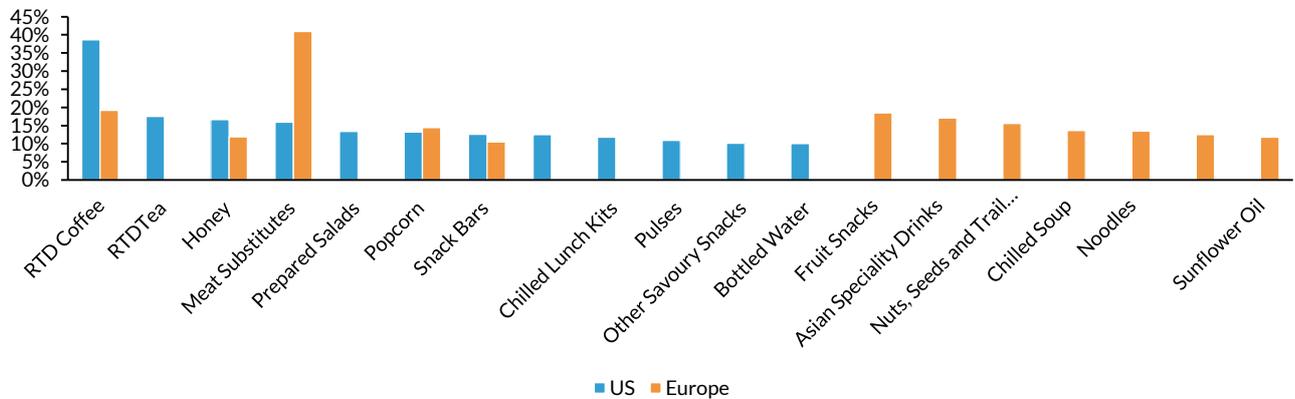
Source: Consumer Expenditure Survey, Economist, Kepler Cheuvreux

### Hot segments: latest trends

The growing appetite for health and wellness categories is also manifest when looking at specific subcategories, with meat substitutes, popcorns and snack bars (perceived as healthy) gathering pace in both Europe and the US. Alternative proteins are, for instance, going mainstream to cater to flexitarians (e.g. already a quarter of the American population according to Nutrition Business Journal Food Tribes Report in Q1 2015), propped up by Nestlé (which recently acquired a company exposed to the space, Sweet Earth), Kellogg (not covered), Agrolimen (not covered) or Tyson (not covered).

**Specific subcategory trends confirm the shift**

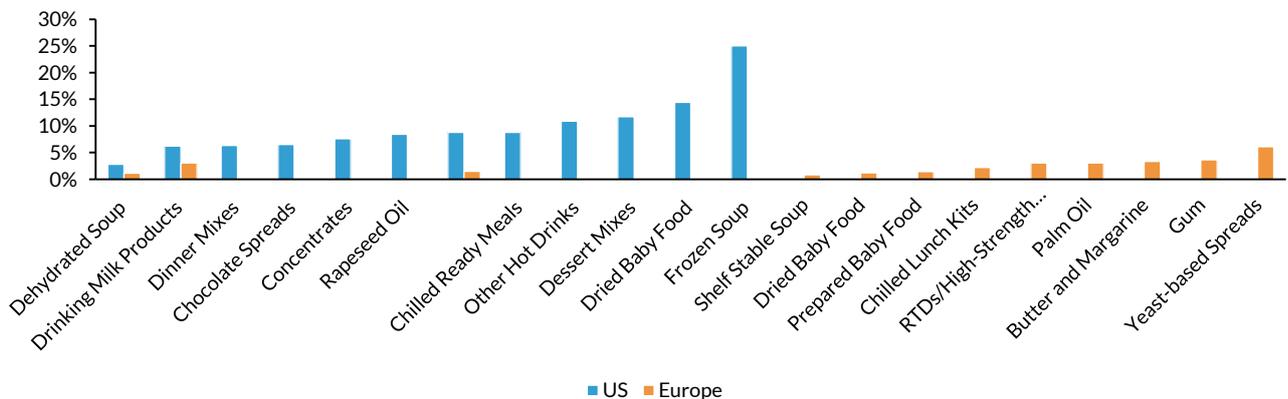
Chart 32: Growth 2014-16



Source: Euromonitor, Rabobank

Conversely, categories associated with poor diets such as dehydrated or frozen soups are on a downward trajectory.

Chart 33: Decline 2014-16



Source: Euromonitor, Rabobank

### Margin focus as growth stalls

In this environment, where sales are under pressure, large Fast-moving consumer goods (FMCGs) are increasingly focusing on earnings growth through margin expansion. Taking the lead from the 3G business model seen in the brewery sector (an alcohol category where growth has stalled amid a shift to spirits and wine, which are regarded as less fattening), food companies have unveiled margin targets. However, most companies believe this is only a short-term solution and are looking at ways to kick-start growth.

**Table 29: Food companies and margin targets**

Company	Margin target
Danone	16% by 2020
Nestlé	17.5-18.5% by 2020
Unilever	20% by 2020
General Mills	20% by 2019
Hershey	22-23% by 2019
Kellogg's	18% by 2018
Mondelez	17-18% by 2018

Source: Kepler Cheuvreux

*Investment view of  
Head of European  
Consumer Research  
Jon Cox*

*Focus has shifted to  
introduction of  
margin targets to  
drive earnings*

### Empire(s) strike back

#### Don't write them off yet

Big FMCGs are fighting back. Companies are repositioning their portfolios to include clean labels, commit to reductions in sugar content, phase out GMO produce, and introduce organic and fresh food that is more in line with consumer tastes. Big companies are buying smaller competitors to take advantage of the trend towards local brands. There is also an increased focus on e-commerce and digital media communication, with a variety of business models being developed.

*Efforts being made  
to reposition  
portfolios*

**Chart 34: Nescafé Gold Organic**



Source: Nestlé, Kepler Cheuvreux

**Chart 35: Happyfamily (Danone) organic baby food**



Source: Happyfamily, Kepler Cheuvreux

**Chart 36: Goose, Elysian craft beer six packs (ABI)**


Source: Goose, Elysian, Kepler Cheuvreux

**Chart 37: California (Nestlé) gluten-free pizza**


Source: California, Kepler Cheuvreux

### Industry initiatives and pledges reflect the range of approaches

Fearful of regulation, big producers are trying to keep ahead of potential regulatory encroachment with a number of joint “healthy food” initiatives, whose focus varies significantly (more or less specific in their targets and across issues, e.g. reformulation, labelling).

For instance:

- The EU Platform on Diet, Physical Activity and Health monitors companies’ commitment to smaller portions, the introduction of no or low-calorie drinks and the reduction in sugar content.
- In chocolate, Mars, Nestlé, Ferrero and Lindt, among others, have committed to ensuring half of their individually wrapped products in North America will contain 200 calories or less by 2020.

Among these collaborations, relative success stories include the UK’s salt reduction programme and the US Healthy Weight Commitment Foundation’s calorie reduction focus, suggesting that the incremental, targeted and tightly tracked nature of initiatives count among factors of progress.

However, regarding the UK example, it remains unclear to us whether companies are fully on course to reach both the respective salt and sugar reduction targets (salt: by the end of the year<sup>19</sup>; sugar: interim August targets for the nine categories: *chocolate, sweets, yogurts, cereals, biscuits, cakes, puddings, spreads and ice cream*), which underscores the importance of increased transparency and third-party monitoring.

**Success stories include UK’s salt reduction programme and the US Healthy Weight Commitment Foundation’s calorie reduction focus**

<sup>19</sup> There are reports of persisting challenges, as suggested by research conducted by the NGO Consensus Action on Salt and Health (Cash) pointing towards a lack of compliance ([link](#))

**Table 30: Industry initiatives (pledges and organisations – illustrative – not exhaustive)**

Initiative	Companies	Focus	Launch year	Scope	Commitments	Update
n.a.	Coca-Cola, PepsiCo and Nestlé, Yeo Hiap Seng, F&N Foods, Dairy Industries and Pokka	Product reformulation	August 2017	Singapore	Cap the sugar content of their sweetened drinks at 12% by 2020	First of its kind in Asia
EU platform for action on diet, physical activity and health	Coca-Cola, Mars, Mondelez, Nestlé, PepsiCo and Unilever	Nutritional labels	March 2017	EU	Development of a colour-coded nutrition label on their products' packages in the EU.	The undersigning companies have launched a taskforce which is looking into integrating portion sizes in the existing colour-coded R.I scheme as applied in the UK and Ireland. Focus on overcoming limitations of current colour coding
	Britvic, Coca-Cola, Danone waters, Nestlé waters, PepsiCo, Red Bull, Refresco, Suntory Beverage and Food Europe	Product reformulation	February 2017	EU	Reduce by 10% the average content of added sugar per 100ml (2015-20), following a 12% reduction in 2010-15	Monitoring hinges on Globaldata (a data provider). This commitment will be tabled formally to the EU platform, which is driven by the European Commission and supported by NGOs, civil society and industry representatives.
Balance Calories Initiative	Coca-Cola, PepsiCo and Dr Pepper Snapple Group	Broad	2014	US	Reduce the number of sugary drink calories that Americans consume by 25% by 2025. Increase access to smaller portion sizes, water and no/ lower calorie products; provide calorie counts and promote calorie awareness; launch national consumer awareness and engagement programme – Mixify	n.a.
Children's Food and Beverage Advertising Initiative	Campbell, Coca-Cola, Danone, Ferrero, General Mills, Hershey's, Kellogg Canada, Kraft, Mars, McDonald's, Mondelez, Nestlé, Parmalat, PepsiCo, Post, Unilever, Weston Bakeries	Advertising	2014	Canada	In advertising primarily directed at children under age 12 ("child-directed advertising"), they will feature only foods that meet CFBAI's uniform nutrition criteria, or not direct food and beverage advertising at them	In October 2014, the participants adopted uniform category-specific nutrition criteria to replace the individual company-specific nutrition criteria that had previously been used
PHRD Food Pledges Public Health Responsibility Deal	Example of pledges: Mars UK, Unilever, Nestlé for health at work; Tesco for physical activity	Broad	2011	UK	The documentation of collective pledges (e.g. health at work, physical activity, food: maximum per serving salt targets, calorie reduction, front-of-pack nutrition labelling), sharing of best practices (publication of tools such as on calorie reduction)	Terminated
Partnership for a Healthier America	Aquafina, Bright Horizons, Brita, Dannon, Johnson & Johnson, KPMG, Novo Nordisk, Ocean Spray, Sodexo, Walmart (2016 summit sponsors)	Advertising	2010	US	Coalition of businesses, health advocates, and obesity experts dedicated to reversing childhood obesity (backed by Michelle Obama)	Conduct marketing and advertising activities to encourage children to enjoy and consume vegetables, including a consumer marketing campaign (USD2m spending) that speaks directly to kids. Birds Eye dedicated USD3.7m to marketing and advertising efforts to encourage children to enjoy and consume vegetables through the Step Up To The Plate campaign

Continued on next page

Initiative	Companies	Focus	Launch year	Scope	Commitments	Update
Consumers good forum	All consumer goods forum participants	Broad	2010	Global	1) By 2016: make company policies public on nutrition and product formulation; 2) by 2016: implement employee health and wellness programmes; 3) by 2018: industry-wide implementation of consistent product labelling and consumer information to help consumers make informed choices and usages; 4) by 2018: stop marketing communications to children under 12 for food and beverage products that do not fulfil specific nutritional criteria based on scientific evidence and/or applicable national and international dietary guidelines. Deloitte is the third party that will conduct the measurement and reporting for the CGF. The companies are self-reporting.	Survey on established policies and activated programmes, including reformulated products. Small-scale pilots focused on innovative business models related to health and wellness.
Healthy Weight Commitment Foundation	16 of the largest food and beverage companies (including PepsiCo, Nestlé, Coca-Cola)	Product reformulation	2009	US	Help reduce obesity - especially childhood obesity - via a commitment to eliminate 1.5trn calories from the market by 2015	An announcement by the Healthy Weight Commitment Foundation (HWCF) that its member food and beverage companies sold 6.4trn fewer calories in the US in 2012 than in 2007. Their original goal was to cut 1.5trn calories by 2015; they exceeded that goal by 400% and three years ahead of schedule.
International Food and Beverage Alliance	Coca-Cola, Danone, Ferrero, General Mills, Mars, McDonald's, Mondelez, Nestlé, PepsiCo, unilever, Grupo Bimbo, Kellogg	Broad	2008	EU	Improve and innovate products, provide nutrition information, market responsibly to children, promote healthy lifestyles	The 2014 Progress Report lists all companies commitment (no harmonisation)

Source: Companies, Initiatives mentioned

### Our framework: KPIs to map to companies' profiles

In order to embrace this transition, corporates are adopting an increasingly comprehensive approach to embed all relevant features into their business model and portfolio. These include the following key areas<sup>20</sup>: portfolio diversification, marketing, and food safety.

**Three areas to assess companies' profiles and strategies: portfolio, marketing, and food safety**

**Table 31: Company strategies**

#	Approach	Comments
1	Towards a healthier food portfolio	Products nutritional features are probably the most contentious but also researched domain considering the diversity of areas that can be linked to a "healthy food definition" and the patchwork of company approaches and benchmarks
i	Nutritional policy/strategy	Setting nutritional policies, definitions and far-reaching objectives to demonstrate their nutrition credentials
ii	Reformulation and portion control	Increasing positive nutrients and reducing nutrients of concern
iii	Expansion into dedicated health and wellness categories	Acquisition, start-ups, innovation
2	Marketing and advertising	Policies and practices in communication to consumers regarding ingredients and nutritional information beyond legal requirements (including labelling)
3	Food quality and safety	Most difficult to gauge, mostly analysed a posteriori. Detailed certification data are rather scant.

Source: Kepler Cheuvreux

In our view, it is essential to assess the broad set of KPIs used to help gauge whether companies' strategies, commitments and health claims are supported by evidence of practices and healthy and nutrition credentials. We take a look at this in the following sections.

### Fifty shades of health

#### In companies' words: a patchwork of definitions

As much as the question of what constitutes "green", "low-carbon" or "environmentally friendly" is important in the energy transition context (e.g. see our November 2016 [Green Impact screener: Scouting 2 degree opportunities report](#)), we believe the definition of what is "healthy food" matters greatly here, as companies' own nutrition strategies (typically centred on 2020-20), or strategic business objectives and financial reporting increasingly refer to ramping up the categories aligned with their nutrition policy and nutrient definitions and targets. Yet their degree of specificity is still largely heterogeneous.

**A close look at the evidence**

**The question of what is defined as "healthy food" matters a great deal**

<sup>20</sup> We voluntarily left out some other somewhat related topics which are gathering pace but are not as yet core to our investment materiality assessment, including but not limited to: 1) animal welfare (see The Business Benchmark on Farm Animal Welfare 2016 report that ranks companies performance on the topic, as well as the Farm Animal Investment Risk and Return or FAIRR's reports); 2) infant nutrition (big and vibrant market): breast-milk substitutes or BMS marketing (see the Access to Nutrition Index's assessment of companies' compliance with the International Code of Marketing of Breast-Milk Substitutes (The Code), the subsequent World Health Assembly (WHA)) that affects Danone and Nestlé (main SDGs: 3.2 and 3.4); 3) lobbying, scientific integrity and research (the Mexico sugar tax gave a recent case in point of a media battle, while in the EU Corporate Europe Observatory released in July 2016 a report that examines lobbying on sugar; [link](#)); 4) market concentration and antitrust; 5) food workers conditions; and 6) packaging

### When healthy food definitions seek to lure investors

For example, Unilever refers to its “overarching nutrition commitment to double the proportion of our portfolio that meets highest nutritional standards by 2020”.

Companies may even position themselves as entirely aligned with such trends e.g. Nestlé presents itself as “the leading Nutrition, Health and Wellness company” (NHW), which can be challenged by external stakeholders (by our estimates up to approximately a quarter of its revenues have strong direct links with the health theme). It reports on the business case for these categories as per its framework: “growth 1.8x higher than products with below-average NHW, underlying trading operating profit (TOP)...1.5x higher than products with below-average NHW (measured as the percentage of net sales with 60/40 win and nutritional foundation)” with the Nestlé Nutritional Foundation (NF) criteria “based on nutrition science and public health dietary recommendations”.

### A closer look into companies’ claims

Packaged food giants have therefore placed a particular emphasis on proprietary and voluntary so-called “nutritional profiling” systems to gauge whether a product should be included in a healthy diet, leading to broad health definitions. Those range from nutritional improvement over time (Bonduelle) or versus other categories (Mondelez), compliance with nutritional policy (Danone, Nestlé, Unilever, Wessanen), to vaguely defined “trendy concepts” (Ebro foods) and group level all-encompassing definitions (Danone, PepsiCo).

Outlooks remain elusive at best. For example, PepsiCo states that its "everyday Nutrition products are set to outpace the rate of sales growth in the balance of PepsiCo's portfolio".

**Companies’ health definitions increasingly intersect with their guidance and financial reporting (Nestlé)**

**Wide range of self-issued companies definitions and elusive outlook**

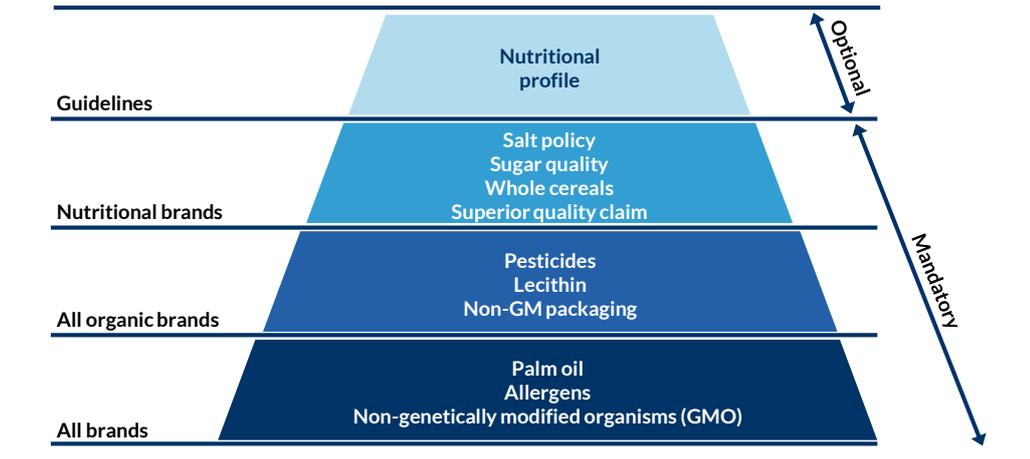
**Table 32: Healthy food portfolio – a spectrum of definitions**

#	Approach	Issuer	Categories coverage potential	Examples of sources or issuers
1	Products defined as being consistent with the company’s nutritional policy (fewer nutrients of concern, more positive nutrients), including reformulation (increasing positive nutrients e.g. protein, fibre, and decreasing nutrients of concern (e.g. sodium, sugar, salt, bad fats)	Company	All portfolio	Danone, Mondelez, General Mills, Nestlé, PepsiCo, Unilever
2	Categories defined as healthy by the company (including but not limited to dietary guidelines)	Company	Specific categories	Danone (water, yogurt and other dairy products, baby milks and foods, milks and powder milks, beverages with no sugar, and all medical nutrition
3	Categories defined as healthy by external classification systems/nutritional profile (overall nutrient assessment)	External	All portfolio	Health Star Rating (HSR) nutrient profiling system (The George Institute for Global Health)
4	Categories perceived as healthy by customers (food intolerance and free-from, organic, plant-based)	Both	Specific categories	Wessanen
5	Portion control	Company	All portfolio	Danone, Mondelez, Hershey
6	Fortified products	Company	Specific categories	Danone, Nestlé
7	"Naturally " healthy i.e. products recommended in high quantity as part of a healthy/balanced diet (e.g. fruits and vegetables related to the “Mediterranean diet”)/products that naturally contain substances that improve health and wellbeing beyond pure caloric value	External	Specific categories	Governments, WHO guidelines, Barilla Center for Food and Nutrition Foundation
		Company	Specific categories	Total produce, Wessanen

Source: Kepler Cheuvreux

Interestingly, as categories are covered by various definitions (e.g. nutritional or organic brand) and criteria (e.g. palm oil, pesticides, nutrients reductions/increase), this can lead to charters on product quality that vary depending on an individual company’s stringency in terms of what is mandatory and what is voluntary.

**Chart 38: Wessanen product quality charter covering nutrition, food safety and sustainability**



Source: Wessanen

**Selected best practices in reporting: who are the heavyweights?**

Overall, the big European companies (Danone, Nestlé, Unilever) tend to be more transparent in their reporting than the big US packaged food companies (e.g. Kraft Heinz). For instance, Danone reports fortified items in relative terms (sales exposure). We also note the disclosure of the maximum levels of nutrients per product group by Unilever, Danone, Mondelez, Nestlé, and dual reporting of sales and volumes for “Alignment with Nutritional policy” (Danone).

While companies claim that these targets are science-based, we note that the underlying documents are not disclosed on the grounds of confidentiality (and would also see potential challenges associated with complying with regulations covering health claims and third-party scrutiny).

**Danone is particularly quantitative in its reporting**

Table 33: Healthy product definition

Company	Name	Type	Description	Unit	2015	2016	Target	Year	Level of disclosure
Bonduelle	Visa Santé	Nutritional improvement over time	Continuous improvement initiative involving the classification of products into "nutrition" groups, according to their nutrient levels: 1) raw products that have undergone minimum processing; 2) lightly cooked vegetables; and 3) prepared and gourmet products. Aims to not make nutrition claims for products categorised as indulgence based on the level of processing.	Share of sales	n.a.	n.a. (99.5% of frozen products)	n.a.	n.a.	Low
Campbell	Healthy products	Undefined	n.a.	Share of sales	29%	28%	n.a.	n.a.	Low
Dairy crest	Lower fat options	Undefined	n.a.	Share of sales	n.a.	33%	n.a.	2016	Low
Danone	Healthy products	In-house health definition	As defined by Danone's Food, Nutrition and Health Charter (qualitative). Type of product (technical considerations and its place in dietary recommendations such as food pyramids, and its intended role in the diet), intended consumer, geographic region, prevailing health factors, including nutrients with maximum limits: calories, sodium or salt, total and/or added sugars, total fat and/or saturated fatty acids; minimum thresholds for relevant "shortfall" nutrients, e.g. calcium; no offset.  In operational terms "healthy product categories" for Danone include dairy with more than 50% milk (codex definition of dairy), water and calorie-free beverages, early life nutrition (except teas, juices, biscuits, rusks), and all medical nutrition. The company also claims that 100% of its sales are "healthy".	Share of volumes sold	88%	88%	n.a.	n.a.	Medium
Danone	Alignment with Nutritional Targets 2020	Compliance with nutritional policy	Detailed levels specified by product category for added sugar, energy, iron, calcium, protein, saturated fat (nutritional targets 2020, 2025 for Africa due to consumer preferences) and product ranges available on the market.	Share of volumes sold	n.a.	67%	100%	2020	Medium
Danone	Products nutrition profile improved	Nutritional improvement over time	Products that have been nutritionally improved over the past three years.	n.a.	29%	26%	n.a.	n.a.	Low
Danone	Fortified products	Fortification	Products that have been fortified with beneficial nutrients such as vitamins and minerals. Essential dairy and plant-based and early life nutrition divisions). Fortification must be justified: by a documented need in terms of nutritional deficiency in the country or consumer target, or if the fortification is mandatory (which is often the case for early-life nutrition products).	Share of volumes sold	51%	50%	n.a.	n.a.	Low
Ebro food	Health categories	Trendy concepts	Ebro defines healthy as any product with a nutrient content claim that may be useful in creating a diet consistent with dietary recommendations (by international organisations). New category of products targeting health, putting new products on the market based on concepts such as ancient grains, gluten-free, quinoa, whole-grain, high-fibre, vitamins, minerals, etc., and claims focusing increasingly on everything to do with organic and natural foods.	Share of sales	n.a.	10.08%	n.a.	n.a.	Low
General Mills	Health metric based on nutritional improvements	Nutritional improvement over time	Reducing nutrients of concern and increasing beneficial nutrients (US retail products).	Share of volumes sold	77%	79%	n.a.	2015	Low

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Company	Name	Type	Description	Unit	2015	2016	Target	Year	Level of disclosure
Mondelez	Better choice	Nutritional improvement versus other categories	Snacks that have an improved nutrition profile compared to existing alternatives in portfolio. The criteria were developed with guidance from a panel of outside nutrition experts. In addition to meeting the criteria, Better Choices must deliver either a beneficial nutritional element (e.g., increase in whole grains) or a specific reduction in a nutrient of concern (e.g. sodium). For example, Belvita, Trident and Barni.	Share of sales	23%	25.5%	25%	2020	Medium
Nestlé	Nestlé Nutrition Profiling System	Compliance with nutritional policy	Products meeting or exceeding Nestlé Nutritional Foundation's profiling criteria (deemed appropriate for consumers as part of a balanced diet). Based on food categories, targeted customers, non-compensatory algorithm and reference amount per serving.	Share of sales	82%	83.7%	n.a.	n.a.	Medium
PepsiCo	Everyday Nutrition	In-house health definition	Provide positive nutrition like grains, fruits, vegetables, protein and hydration.	Share of sales	n.a.	25%	n.a.	n.a.	Low
PepsiCo	Guilt-Free	In-house health definition	"Everyday nutrition" products plus beverages with 70 calories or less from added sugar per 12oz serving, and snacks with low levels of sodium and saturated fat e.g. Baked Lays, Quaker Breakfast Flats, and Life Water.	Share of sales	n.a.	45%	n.a.	n.a.	Low
Unilever	Meeting highest nutritional standards	Compliance with nutritional policy	Based on globally recognised dietary guidelines.	Share of volumes sold	n.a.	35%	60%	2020	Medium
Wessanen	Nutritional brands compliant with nutritional policies	Compliance with nutritional policy	Nutritional policies for own nutritional brands (Bjorg, Zonnatura, Kallø, Allos, Tartex, Evernat, and Isola Bio) address thresholds for salt content on its core categories, and foster less refined sugar and cereals. 54% of own brands revenue (43% of total revenues) covered	Share of portfolio	84%	86%	n.a.	n.a.	Medium

Source: Companies, Kepler Cheuvreux



### Is “Green and Ethical Food” less hard to define than “Healthy Food”?

In addition, we note that “green product categories”, which have responsible supply chains, (e.g. fair trade) or are linked to meaningful societal/ethical concerns (GMOs) or allergies (e.g. gluten-free) tend to be less immature and more often benefit from clearer definitions backed up by dedicated initiatives, policies, and certifications, as seen with Wessanen. Fair trade products make up 56% of its tea, chocolate, and coffee sales, while all of its products are non-GMO. The non-GMO is actually already common although it represents a smaller proportion of the portfolio at other companies (Danone, ABF, Aryzta, and Glanbia).

**Certifications and regulations clearly help boost “Green and Ethical food” credentials**

**Table 34: Wessanen objectives**

Green product	Product	Type	Target	Target	2016
Wessanen	Organic products	Share of sales	2020	80%	74%
	Vegetarian products	Share of sales	2020	Target >95%	96%

Source: Wessanen

### Product reformulation and portion control

Instead of a massive shift to new “better for you” products and categories, companies typically focus on upgrading their portfolios and supporting dietary choices in order to meet more stringent government pressures, especially via product reformulations.

#### Great potential

This is not new. The practice has been widely used over the past several decades (e.g. either substituting an ingredient by an alternative such as sweetener for sugar or just reducing it) but we believe that product reformulation is being taken to the next level. This is no surprise given its ability to drive large-scale health impacts for consumers with unhealthy purchasing habits. This could potentially address the “health inequality” issue, in which “sustainable foods” often command premium prices.

#### The bumpy road towards health

While some companies are relying on isolated reporting of specific ingredients of concern, several provide a more comprehensive picture that help give a sense of the group’s strategy as a whole and create more ambitious initiatives, including Danone, Kellogg, Nestlé (see renovation achievements below), Unilever and Wessanen.

**Two strategies: upgrading the existing (preferred) or buying into the new**

**Product reformulation can achieve impact at scale**

**Some all-encompassing reformulation strategies (Danone, Kellogg, Nestlé, Unilever and Wessanen)**

**Table 35: Companies' commitments to reducing ingredients of concern**

Company	Description
Danone	Danone has reformulated 75% of the products in its three flagship brands, representing a total of USD1bn. Every year it reformulates 30% of its sales by volume. Focus on portfolio "nutripide commitment".
Kellogg	About 140 reformulation projects worldwide linked to nutrition (e.g. zinc, iron) and the elimination of artificial ingredients ("natural" focus). Started collecting data this year. Not a uniform global approach but adapting to customer groups. Works with local universities focused on intake e.g. in LatAm, the US.
Nestlé	The company's 2014-16 reformulation achievements reported on products that do not meet the nutrition foundation criteria for saturated fats, sugars, and sodium. Plans to develop biomedical abilities leading to health-promoting products, personalised nutrition and digital solutions. Goal to "reach millions of children and families with fortified foods and beverages" by 2020.
Unilever	The overarching nutritional commitment is to double the proportion its portfolio that meets the highest nutritional standards by 2020. The company also has a broader target to "help more than 1bn people to take action to improve their health and wellbeing" (including consumer care businesses such as handwashing, safe drinking water, sanitation, and oral health).
Wessanen	Wessanen has launched more than 60 reformulation projects this year for sugar and salt, 25% of which have already been completed (for own nutritional brands). For all other brands, e.g. Alter Eco, the company has agreed to innovation rules. All new products must have sugar levels below the third quartile of the market, i.e. they cannot be sweeter than 75% of products on the market.

Source: Companies

**Table 36: Nestlé's 2014-16 reformulation achievements (products that do not meet the nutrition foundation's criteria)**

Policy	Nutrient Volume [tonnes]	Nutrient Reduction [tonnes]	Nutrient Reduction [%]	# SKUs with Reduction	# SKUs/% Sales in scope of policies
Saturated fats	95,000	6,200	6.5	1,100	11,700/7%
Sugar	493,000	39,000	8.0	1,900	8,500/7%
Sodium	10,500	= 2,700 of salt	10.5	1,100	11,000/5%

Source: Nestlé

### Lessening nutrients of concern

Regarding the reduction of ingredients linked to unhealthy diets (saturated fat, salt, sugar), our key takeaways based on a review of our universe are as follows:

- There is an indication of a **gradual ramp-up in pledges** across the most-targeted nutrients so that customers may gradually adapt to the new formulations. Calories seem to have fewer commitments compared to saturated fat, salt, and sugar.
- These commitments often come **hand in hand with portion control** strategies, for instance from Mondelez, Hershey, PepsiCo, and Unilever.

**Reducing "negative" ingredients often come hand in hand with portion control**

**Table 37: Portion control**

Company	Indicator	Deadline	Target	2016
Mondelez	Expansion of portion control options (200 calories or less)	2020	25%	n.a.
PepsiCo	Share of drinks with fewer than 100 calories from added sugar per 12oz serving	2025	>66%	40%
Unilever	Share of packaged ice cream products to not exceed 250 kilocalories per portion	2015	100%	91%

Source: Companies

- Nevertheless, we find the overall **reporting format and limited transparency** makes it difficult to compare and monitor progress while keeping an eye on the big picture. Key problems include a lack of clarity on the baselines, portfolio mix (the portion compliant with targets), absolute targets (percentage reduction in specific ingredients), a geographical scope that suggests policies are applied selectively to focus on countries with more stringent legislation (e.g. Nestlé in the UK and Ireland), methods (e.g. use of chemicals and alternatives such as replacing artificial ingredients with

**Multiple obstacles, including unclear benchmarks**

natural sweeteners), costs, product categories (bias associated with new products), and temporal biases. Some targets are fairly recent (e.g. Kellogg's salt target was developed in 2016) while others were set earlier and are currently being pursued or updated (e.g. Danone has already achieved material reductions in sugar for yogurts and smoothies).

- While **barriers to progress** include R&D investment, consumer acceptance, and manufacturing and supply chain adaptation, sugar seems to represent a particular challenge (as mentioned by Danone, PepsiCo, Wessanen). This is due to consumer feedback on the impact of sugar substitutes to qualities such as texture, not to mention economic obstacles (notwithstanding the rise in price, sugar is still cheaper than alternative ingredients such as inulin, polyextrose, and oligofructose). The gap between targets for saturated fat also remains fairly wide for certain companies (e.g. Mondelez and PepsiCo).
- The table below focuses on forward-looking pledges. This includes **achievements** reported by companies (e.g. ABF for sugar in its breakfast cereals, PepsiCo for ice cream calories, General Mills for added sugar content in cereals) and also ingredient-specific commitments (e.g. removal of high-fructose corn syrup by big restaurant chains).

The International Food and Beverage Alliance (IFBA) is undertaking a pilot project for a limited number of product categories and markets, in order to assess companies' progress in healthy food practice over the past 10 years.

**Challenges seem to primarily concern sugar**

**Table 38: Targeted decrease in negative nutrients**

Company	Type	Deadline	Target	2016	Baseline
<b>Calories</b>					
Coca-Cola EP	Reduced calories per litre across the portfolio	2020	10%	4.50%	2010
Coca-Cola EP	Offer low-calorie or no-calorie options in every market (50% targeted in the UK by 2020 vs. c. 43% as of 2016)	2020	n.a.	n.a.	n.a.
<b>Salt</b>					
Danone	Products in line with salt target	2020	100%	85%	n.a.
Kellogg	Share of cereals with 150mg or less of sodium per 30-gram serving	2020	85%	88%	n.a.
Kellogg	Share of convenient nutrition snacks with 150 or fewer milligrams of sodium per serving	2020	>85%	n.a.	n.a.
Kellogg	Share of cracker portfolio with 230mg or less of sodium per serving	n.a.	>75%	>75%	n.a.
Mondelez	Sodium reduction	2020	-10%	-5%	
Nestlé	Sodium content reduction in products that do not meet the Nestlé Foundation criteria	2016	-10%	-10.5%	n.a.
PepsiCo	Share of global foods portfolio volume to not exceed 1.3mg of sodium per calorie	2025	>75%	55%	51% (2015)
Unilever	% our Foods portfolio that meet salt levels to enable intakes of 5g per day	2020	75%	61%	n.a.
<b>Saturated fat</b>					
Danone	Products in line with saturated fat target	2020	100%	97%	n.a.
Mondelez	Reduce saturated fat	2020	-10%	-2%	n.a.
Nestlé	Reduce saturated fats in products that do not meet the NF criteria	2016	-10%	-6.5%	n.a.
PepsiCo	Reduce the average amount of saturated fat per serving in key global food brands in key countries	2020	-15%	-3%	n.a.
PepsiCo	Share of its global food portfolio volume which does not exceed 1.1g of saturated fat per 100 calories	2025	>75%	66%	64% (2015)
Unilever	Portion of complete global portfolio of soft vegetable oil spreads will contain no more than 33% fat as saturated fat and at least 67% as good unsaturated fat	2017	90%	79%	n.a.
<b>Sugar</b>					
Danone	Products in line with sugar target (essential dairy and plant-based, early life nutrition products and Aquadrinks)	2020	100%	70%	n.a.
Kellogg	Cereals: portion of cereals that have 10g or less of sugar per 30-gram serving.	2020	90%	90%	n.a.
Kellogg	Snacks: average reduction of sugar per serving, excluding fruit, in convenient nutrition snacks.	2020	-10%	-10%	n.a.
Nestlé	Reduce sugar content in products that do not meet the Nestlé Nutritional Foundation (NF) criteria with respect to sugar	2016	-10%	-8%	n.a.
PepsiCo	Reduce the average amount of added sugars per serving in key global beverage brands in key countries	2020	-25%	+4%	2006
PepsiCo	Share of global beverage portfolio volume with 100 calories or fewer from added sugars per 12oz serving	2025	67%	40%	39% (2015)
Unilever	Reduce the sugar in ready-to-drink teas, powdered ice tea and milk tea products	2020	-25%	-12%	n.a. (tea)

Source: Kepler Cheuvreux, Companies

## Boosting positive nutrients

Historically, the fortification of food staples (milk, flour, bread) has played an important role in combating some widespread deficiency diseases. This has been supported by food ingredient companies such as DSM, while breakfast cereals have become a key supplier of micronutrients in many countries (source: J T Winkler). However, companies' efforts to further boost beneficial ingredients and report on them have been less widespread than for harmful ingredients. Likewise, big brands (Kellogg, PepsiCo, and Nestlé) are paving the way in this respect, including a focus on fibre (whole grains linked to health benefits).

**Big brands (Kellogg, PepsiCo, Nestlé) eye positive nutrients growth**

**Table 39: Increasing beneficial nutrients**

Company	Type	Deadline	Target	2016	Baseline
<b>Broad</b>					
Kellogg	Include one or more beneficial nutrients or ingredients in every snack food in the convenient nutrition category, while 54 breakfast cereals help intake of nutrients of needs presently	2020	n.a.	n.a.	n.a.
PepsiCo	Increase beneficial nutrition – like whole grains, fruits and vegetables, dairy, protein and hydration – by expanding portfolio containing one or more of these ingredients	2025	>26.6%	27%	26.6% (2015)
<b>Micronutrients</b>					
Nestlé	Millions of micronutrient-fortified servings of foods and beverages annually worldwide	2016	200	207	n.a.
<b>Whole grains</b>					
Mondelez	Increase whole grains	2020	25%	26%	2012
Nestlé	Maximise fibre content coming from whole grains	n.a.	n.a.	n.a.	n.a.
<b>Vegetables</b>					
Nestlé	Added portions of vegetables	2020	750m	n.a.	n.a.

Source: Kepler Cheuvreux, Companies

### Inclusive businesses: fringe but progressing

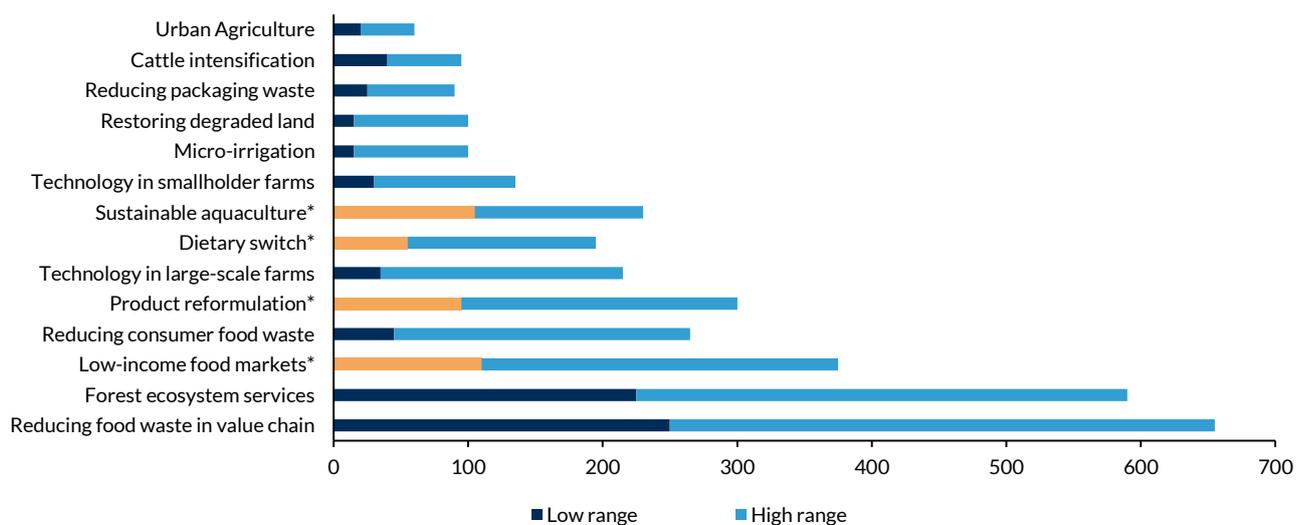
The next question that concerns us is the affordability of these offerings for the consumers who most need them (cornerstone of SDG 2 to “end hunger and malnutrition” and SDG 10 to address inequality and access for the four pillars of food security) against concerns about cost as a roadblock to healthy eating.

### How big is the sustainability-aligned (SDG) opportunity?

If we combine the previous market estimates with the global (2030) sustainability goals, data suggest c. USD365-735bn in opportunities by 2030 linked to sustainable nutrition specifically, including low-income customers (USD155-265bn), responsible aquaculture, product reformulation and dietary changes (source: Business and Sustainable Development Commission).

**USD365-735bn in opportunities by 2030 linked to sustainable nutrition specifically**

**Chart 39: SDG-related business opportunities in the food and agriculture system (\*the most nutrition-related) (USDbn)**



Source: Business and Sustainable development commission, Kepler Cheuvreux

Nevertheless, most industry heavyweights still do not provide a substantial portfolio of healthy options for customers on the bottom rungs of the economic ladder, due to

conflicting business interests, business model and sustainability-related challenges linked to low prices, in our view.

This said, we see potential for certain products, coupled with sizeable indirect benefits (as described in our report: *Inclusive business: the social business of social business is business*; May 2013). Examples include affordable products that have been reformulated, such as Danone's iron rich Blédina Phosphatine (infant cereals), which helps combat anaemia.

Kellogg seems to have adopted a philanthropy-driven approach driven by donations and breakfast programmes, somewhat in contrast to PepsiCo, Unilever (with its longstanding Project Shakti in India) and Nestlé (Popularly Positioned Products e.g. Maggi cubes) which are affordable market-driven programmes. Nestlé's focus on low-income customers has drawn scrutiny to its indulgence products (candies and chocolate).

Danone remains in some ways a case apart in the consumer goods space. The company boasts a clear social focus endorsed by dedicated funds. Recent investments have supported access to safe drinking water (DloHaiti in Haiti and Jibu in Uganda). Nevertheless, the flagship fund, Danone Communities, has been part of the Access, Africa, and India Strategic Business Unit since March 2017.

## **M&A: a shortcut to slimming down**

### **A good appetite for small brands**

Besides product reformulation and portfolio control, M&A can help quickly transform portfolios. According to Rabobank Food and Agri's research, despite the high multiples and likelihood of rising interest rates, the larger players will continue to buy scalable companies that play in trends such as alternative plant-based proteins and fast-growing companies. The US is at the forefront of innovation.

**Three distinct approaches: philanthropy (Kellogg), business lines (PepsiCo, Nestlé), social business (Danone)**

**Small brands are sexy**

**Table 40: Selected acquisitions in health and wellness**

Company	Acquiring	Date	Theme	Country	Price	Description
Amazon	Whole Foods Market	June 2017	Organic and natural retail	US	USD13.7bn	Acquired 471 stores in North America and the UK. Supports Amazon's proximity to the customer, Amazon's Click and Collect/Pick-Up offering (focus on delivering via Amazon Fresh using WFM's stores and distribution network), localised sourcing and private label, amid automation focus (Amazon Go automated monitoring of selected items and checkout).
Campbell	Pacific Foods	July 2017	Organic soup	US	USD700m	Broths and stocks, soups, meals and sides, sauces and purees, non-dairy beverages, and special diets (USD218m of revenues in 2016).
Corbion	TerraVia	September 2017	Algae-based fish feed	US	USD20m	High-value ingredients for food, nutrition, and personal care, with clear health benefits, such as omega-3 for animal nutrition and tailored oils, structured fats and proteins for food and biochemical applications.
Danone	WhiteWave	April 2017	Plant-based	US	USD12.5bn	Soy milk, almond milk, coconut and cashew milk, ice cream and frozen novelty products, plant-based yogurts, and Vega plant-based nutritional products under the Silk and So Delicious brands, dairy products, including Horizon Organic milk, yogurt, cheese, and others. Combined activities with Danone in North America ("DanoneWave").
General Mills	Annie's	September 2014	Natural and organic food	US	USD820m	Meals, snacks, dressings, condiments, and other products, including macaroni and cheese, snack crackers, fruit snacks, and graham crackers.
Givaudan	Vika	July 2017	Natural dairy ingredients	Netherlands	n.a	Dairy ingredients, stocks, vegetable extracts including kiwi extracts and other speciality ingredients (c. EUR64m of sales in 2016).
Glanbia	Amazing grass	February 2017	Plant-based	US	USD181m (total combined)	Organic and non-GMO brands in the plant-based nutrition, "green" and "super food" categories.
Glanbia	Body and fit	February 2017	Performance nutrition	Netherlands		Sports nutrition, food supplements, and dietary products.
McCormick & Company	Reckitt Benckiser's food assets	July 2017	Sauce	UK	USD4.2bn	French's Mustard and Frank's RedHot sauce
Nestlé	Sweet Earth	September 2017	Plant-based	US	n.a.	Vegetarian and vegan food: global flavours and plant-based proteins like seitan (wheat-based), tofu and legumes like lentils, chickpeas and beans. Sweet Earth's best-selling products are its frozen burritos (stuffed with quinoa, beans and other vegetarian ingredients), but it also sells other frozen meals including mushroom ravioli and veggie burgers.
Nestlé	Merrick	July 2015	Natural and organic pet food	US	n.a.	Dog and cat food and treats. The company offers bites, dental chews, natural bones, biscuits, jerky, and sausages for dogs and bistro and ingredient diet for cats.
Reckitt Benckiser	Mead Johnson	February 2017	Children nutrition	US	USD16.6bn	Routine infant formula products as infant's source of nutrition and supplement to breastfeeding under e.g. Enfamil Premium; solutions for feeding tolerance problems including spit-up, fussiness, gas, and lactose intolerance under e.g. Enfamil Gentlease; specialty formula products, such as Nutramigen for cow's milk protein allergies, and Puramino, an amino acid formula for severe cow's milk protein allergies or other food allergies.
Unilever	Pukka Tea	Sept-17	Organic tea	UK	GBP30m	UK-only play at this point, will roll out the brand more widely.
Unilever	Mãe Terra	October 2017	Organic food	Brazil	n.a.	Organic cereals, cookies, snacks and culinary products (EUR8bn market).
Wessanen	Mrs. Crimble	July 2016	Gluten-free bars	UK	EUR17m	Macarons and broad range of other gluten-free products.
Wessanen	Biogran	December 2016	Organic food	Spain	EUR67m	Ambient organic/natural food such as cereals and rice cakes.

Source: Companies, Euromonitor, Kepler Cheuvreux

### Nestlé, a transformation story of its time

Nestlé is in the midst of an expansion into consumer health and nutrition. CEO Mark Schneider said in September 2017 that around 10% of Nestlé’s portfolio would change amid a mix of disposals and acquisitions. According to our Head of European Consumer Jon Cox, aside from small bolt-ons, the most likely targets are Pfizer consumer health (also eyed by Reckitt Benckiser) and Merck's consumer health. On the divestment side, we expect Nestlé to roll its ex-US confectionery (1% of revenues) into a JV with Hershey (not covered). Mondelez (not covered) may buy Nestlé’s US assets. However, separately, company has said portfolio transformation will impact 10% of group revenues.

**Nestlé is in the midst of an expansion into consumer health and nutrition**

**Table 41: Potential acquisitions (beside add-ons)**

Acquirer	Target	Segment	Comments
DSM	n.a.	Nutrition	The company mentioned at its September 2017 investor meeting that it could make two larger acquisitions or several smaller ones. While it did not reveal what its preference is, we guess that a large deal could occur in nutrition.
n.a.	Danone	Dairy	The way Danone can stay independent is to deliver on its targets and ensure a strong multiple that would put off would-be predators. We see any approach as unlikely in the short term, however, following warnings by the French finance minister and controversy surrounding the labour minister and Danone’s former HR director.
n.a.	Corbion	Ingredient	Global leader in lactic acid, derivatives and lactides and a leading player in the US bakery industry in emulsifiers, functional enzyme blends and minerals/limited debt/mid-cap.
n.a.	PureCircle	Alternative sweetener	Global leader in high-growth stevia market with strong patent portfolio/small-cap.
n.a.	Wessanen	Organic	We believe that Wessanen is an attractive acquisition candidate for a larger group aiming to gain market leadership in the evolving European organic food market.
Lindt	Ferrero	Chocolate spreads	May be the best fit for Lindt, which we see cutting targets.
Nestlé	Pfizer	Consumer health	Over-the-counter (OTC) health care (non-prescription medicines, vitamins and nutritional products)
Nestlé	Merck	Consumer health	Food supplements and over-the-counter medications.
Wessanen	n.a.	Organic	Recent confirmation that management is strict on capital allocation, including M&A - it has looked at almost all recent deals in the space, but decided to walk away; nevertheless, the balance sheet holds sufficient room to act when it wants to.

Source: Companies, Kepler Cheuvreux

**Table 42: Past divestment**

Company	Selling	Date	Theme	Country	Price	Description
Unilever	South Africa Spreads	Sep 2017	Spreads	South Africa	c. EUR150m	Sold in order to obtain 100% financial ownership in Unilever SA. Unilever has been working on the disposal of its Spreads unit in H2 2017.

Source: Unilever, Kepler Cheuvreux

**Table 43: Potential divestments**

Seller	Being sold	Date	Theme	Country	Price	Comments
Aryzta	Picard	n.a.	Frozen food	France	n.a.	Aryzta has said it is reviewing its strategic options for French frozen retailer Picard with a view to evaluating investment alternatives for the business.
Nestlé	US confectionery business	n.a.	Confectionery	US	n.a.	We expect a disposal of the US business (sales of USD900m) or for it to potentially be rolled into a joint venture (Nestlé brands KitKat and Rolo are made under licence in the US by Hershey). We note that recently Mondelez was rebuffed by Hershey in relation to a potential takeover, and both companies could be looking to bulk up to avoid predatory takeovers. We assume that the US business could raise around USD2bn. Separately, the company has said the portfolio transformation will impact 10% of group revenues.

Source: Kepler Cheuvreux

Digital is becoming more prevalent too. In Unilever’s case for example, the bolt-on acquisitions are aimed at capturing businesses that have already taken advantage of this channel shift to digital. The biggest advantage they see is creating a platform for one segment which allows access to a market for their other segments – Myanmar is one example. They say they are number one in five categories but now have a platform for other products/segments.

**Playing vibrant niche categories through start-ups**

Furthermore, companies are using their new corporate venture capital arms, such as Hain’s Cultivate Ventures and Kellogg’s Eighteen94 Capital. Aside from direct investments (e.g. Nestlé in Freshly), European companies are beefing up their game too: Danone boasts a new EUR100m+ fund launched in late 2016 to invest in technologically disruptive start-ups, while Wessanen runs a small-scale support program for Organic start-ups in the Benelux.

**Digital platforms**

**Venture capital to counter losing share**

**Table 44: Investments in start-ups (including venture capital)**

Company	Type of investment (VC arm name)	Total size (VC arm)	Name	Geo- graphy	Date	Area	Amount (round total if VC)	Description
Campbell Soup	Venture Capital (Acre Venture Partners)	USD125m	Habit	US	Oct 2016	Personalised nutrition	USD32m	Nutrition-focused personalised food recommendations tailored to an individual's unique DNA, including meal kit delivery service.
Danone	Venture Capital (Danone Manifesto Venture)	USD150m	Yooji	France	Sep 2017	Organic frozen for children	EUR4m	Manufacturer of organic and frozen foods for babies, providing micro-portions of ailments that enable parents to prepare various recipes, such as vegetable puree.
Danone	Venture Capital (Danone Manifesto Venture)		Farmer's Fridge	US	Sep 2017	Organic	USD10m	Maker of vending machines that sell organic salads and snacks
Danone	Venture Capital (Danone Manifesto Venture)		Accel Foods	US	March 2017	Organic and natural	USD35m	Start-up accelerator focused on natural and organic brands. Campbell previously invested in Accel.
Danone	Venture Capital (Danone Manifesto Venture)		Michel & Augustin	France	June 2016	Premium and innovative confectionery	40% capital stake	Producer of a variety of premium products including biscuits, dairy, fresh desserts, and beverages (reported sales of EUR40m in 2015).
General Mills	Venture Capital (301 Inc.)	n.a.	Rhythm Superfoods	US	Jan 2017	Healthy snacks	USD6m	Plant-based snacking, such as kale, beet and broccoli crisps.
Kellogg	Venture capital (Eighteen94 Capital)	>USD100m	Kuli Kuli	US	Jan 2017	Healthy snacks	USD4.25m	Drinks and snacks focused on moringa, a plant protein considered a superfood.
Nestlé	Direct	Direct	Freshly	US	Jun 2017	Ready meals	USD77m	On-demand ready-meal delivery (rotating menu of 30 different dishes, created in consultation with nutritionists, without refined sugars or artificial ingredients).
Nestlé	Direct		Blue Bottle	US	Sep 2017	Coffee	USD500m majority stake (valued at USD700m)	Network of cafes in the US and Japan specialised in single-origin bean coffee. The company also offers its coffee products through wholesale partners. It serves its customers in Australia, Canada, Germany, France, Italy, Japan, and the Netherlands.
Unilever	Direct		Sir Kensington's	US	Apr 20 2017	Non-GMO Seasonings, Dressings and Sauces	USD140m	Maker of non-GMO ketchup and eggless mayo. It sells its products in Whole Foods Market Inc. locations and other retailers.

Source: Kepler Cheuvreux, Companies, Euromonitor, Various newswires

### In-house innovation: no such thing as a free lunch

Aside from disruptive segments such as meal replacement powders (pills providing nutritionally complete lunches) or lab-grown meat, companies have accelerated their innovation efforts, as demonstrated by Nestlé's effort to dramatically lower sugar content amid rising R&D costs (from 1.5% in 2000 to 1.9% in 2016, higher than its peers).

**Does boosting spending pay off?**

**Table 45: Selected innovations**

Company	R&D spending share of sales			Product	Date	Country	Description
	2014	2015	2016				
Danone	1.29%	1.37%	1.52%	Medical nutrition	July 2015	EU	"Souvenaid" reportedly helps mild and early Alzheimer patients maintain their short-term memory and day-to-day capabilities.
Kellogg	1.36%	1.43%	1.40%	Cereal	October 2015	Australia, New Zealand	"Nutri-Grain Edge Oat Clusters" with less sodium and sugar (four star health rating from the Australian government label for overall nutritional profile).
Nestlé	1.78%	1.89%	1.94%	Ice cream (frozen fruit bar)	2016	US	"Outshine". Increase real fruit content by 77% and reduce sugar by 11% in top eight Outshine fruit bars.
				Chocolate bar	March 2017	UK	Kit-Kat with extra milk and extra cocoa, and reduced sugar (small, unquantified).
				Sugar	2016	Group	Hollow crystal: in confectionery (and elsewhere in its portfolio), thanks to its proprietary technology, Nestlé has the ability to develop products with lower sugar (up to 40% less) without sacrificing taste, as it has changed the shape of sugar crystals.
				Children nutrition	n.a.	n.a.	Functional benefits added to product range: e.g. first to launch probiotics in Growing Up Milks: NIDO 1+, 3+, 6+ ages to help strengthen immune system.
PepsiCo	1.08%	1.20%	1.21%	Whole Grains	2015	Group	"Quaker High Fiber Oats Dairy Drink": ground oats blended with milk made possible through SoluOats, PepsiCo's propriety technology that offers a "drinkable" version of oats.

Source: Companies, Kepler Cheuvreux

### Science-enhanced sweetness

Nestlé, among others, is developing a process to alter the structure of sugar (turning it into a hollow sphere), which means less is needed for the same feeling and taste. It believes the process will enable it to cut sugar in chocolate by 40% and is looking to patent the technology with a rollout seen in 2018.

### Transition takes time

However, the transition obviously takes time and can be expensive as products are reformulated. Companies say that consumers are willing to pay for reformulated products provided the taste can be maintained.

### Marketing and advertising: take with a pinch of salt

#### Labelling: increasing front-of-pack labelling

Companies broadly plan to increase the amount of front-of-pack labelling, though predominantly only with qualitative information. European companies appear more advanced in their efforts. Once more, Danone is providing better disclosure than other companies, including information that goes beyond legal requirements. We have not included companies that are too vague in their objectives or merely refer to compliance e.g. General Mills ("compliance with global industry front-of-pack calorie labelling" or Coca-Cola EP "ensure clear nutritional labelling on front-of-pack across all our products"). As for other areas, there is plenty of room for improvement e.g. charity "action on sugar" in the UK recently pointed out the lack of front-of-pack nutrition labelling for certain supposedly healthy categories ([link](#)).

*Input from Head of European Consumer  
Jon Cox: Nestlé's potential breakthrough in sugar*

*Transition takes time but ultimately new trends will cannibalize space*

*Moves towards increasing share of front-of-pack labelling*

**Table 46: Labelling peer comparison**

Company	Name	Type	Deadline	Target	2016	Comments
Danone	Volume of products with on-pack nutritional information	Share of volumes	n.a.	n.a.	99%	Objectives go beyond the legal requests especially for essential dairy and plant-based products and Aquadrinks (early life nutrition and medical nutrition products is already largely mandatory).
Danone	Volume of products with off-pack nutritional information (available online or via the call centre, for example)	Share of volumes	n.a.	n.a.	99%	
Danone	Volume of products that indicate the portion size (products packaged in individual portions and/or with a clear indication of portion size on the packaging)	Share of volumes	n.a.	n.a.	74%	
Danone	Volume of product that have nutritional claims	Share of volumes	n.a.	n.a.	61%	
Hershey	Share of product with a clearly visible icon system on the front of our labels (US-made products)	n.a.	2018	90%	70%	
Mondelez	Front-of-pack calorie labelling globally	Share of portfolio	2016	100%	68% (2015)	
Nestlé	Products featuring Nestlé Nutritional Compass labelling	Share of sales	n.a.	n.a.	96%	
Nestlé	Products with Guideline Daily Amounts (GDA) labelling on front-of-pack	Share of sales	n.a.	n.a.	92%	
Nestlé	Products with specific portion guidance	Share of sales	n.a.	n.a.	51%	
PepsiCo	Compliance with labelling policy (side- and back-of-package)	Share of sales	n.a.	n.a.	88%	Labelling implementation may be delayed due to new regulatory labelling requirements (e.g. US)
PepsiCo	Compliance with labelling policy (front-of-package)	Share of sales	n.a.	n.a.	72%	
Unilever	Inclusion of energy per portion on the front-of-pack plus eight key nutrients and percent of Guideline Daily Amounts (GDA) for five nutrients on the back of pack	2015	100%	92%		99% of products had nutritional information of at least the Big Four (defined as energy, protein, carbohydrate and fat) on-pack or online, while 92% were fully in line with their commitment

Source: Companies, Kepler Cheuvreux

## Advertising to children: a tricky game

Mirroring regulations, broader marketing and advertising strategies have largely revolved around restrictions concerning children, following industry self-regulation (IFBA commitments regarding marketing to children less than 12 years of age). Nonetheless, NGOs and consumer groups can point towards a suspicion of misalignment of practices e.g. according to foodwatch, sugar-heavy Capri-Sun (Coca-Cola EP) is allegedly marketed to children ([link](#)).

**Table 47: Children advertising commitments**

Company	Name
Coca-Cola EP	No advertising in media where the audience is over 35% children under 12 years old.
Coca-Cola EP	No marketing of any products to children under 12 or sales of products in primary schools.
Mondelez	No advertising in any media primarily directed to children under age 12, irrespective of the product's nutritional profile. The policy covers any advertising where 35% or more of the total viewing audience is under the age of 12
Kellogg	No marketing to children under 12 that do not meet Kellogg's Global Nutrient Criteria.
Nestlé	Only advertises choices that are core to a nutritious diet.

Source: Companies

## Food quality and safety: the bread and butter

Supply chain contamination<sup>21</sup> is a meaningful financial risk (e.g. Nestlé's instant noodle withdrawal in 2015 and US frozen food case in 2016, or Danone in relation to

<sup>21</sup> « Contaminated, unsafe, and altered food » is one of the five areas of food health impact based on the IPES-Food taxonomy (others include occupational hazards, environmental contamination, unhealthy dietary patterns and food insecurity)

China’s food supply chain) both directly (revenues and profits) and indirectly (tarnished brand).

That said, the efficacy of preventive measures by consumer goods companies are difficult to assess and wide ranging: audits, farmer training, supply chain transparency including traceability of ingredient, processing methods and farming models (e.g. chemicals use, antimicrobial resistance), and product recalls.

**Certification: low visibility**

The table below lists companies that provide a good level of detail on their certification progress in relation to the industry-based reference (Global Food Safety Initiative). In contrast, ABF does not provide disclosure on any dedicated internal food safety system, in-house or within its supply chain.

**Certification progress in relation to the industry-based reference**

**Table 48: Food safety certified through the Global Food Safety Initiative**

	Target	Deadline 2016		Comments
Aryzta	100%	n.a.	n.a.	In North America, 23 Aryzta bakeries have received certification from the Global Food Safety Initiative with an annual re-audit and recertification by independent third-party auditors. In Europe, all Aryzta bakeries are certified by the IFS and/or BRC standard with many also being certified by AI standards.
Ebro food	No	n.a.	n.a.	Reporting by subsidiaries show wide disparities and that a minority of production is covered by certification.
Hershey	100%	2022	n.a.	"In progress".
Nestlé	100%	n.a.	56%	Tier 1 ingredient suppliers.
Unilever	n.a.	n.a.	n.a.	UL supported the Dutch HACCP organisation to develop the FSSC 22000 certification scheme, which was GFSI benchmarked in 2012. UL has now deployed the FSSC 22000 standard to all food and refreshment manufacturing sites. Many of these sites also carry ISO9001 certification to cover additional quality management sections not yet included within FSSC 22000, which is specifically focused on consumer safety. In addition, some food service customers require their own certification standard to be applied to manufacturing sites e.g. McDonalds. In these cases, Wessanen carries out additional certification requirements.
Wessanen	95%	2020	86%	In some cases where they have very small suppliers as they offer the best organic products in certain categories (for example organic cheese and delicatessen of our Bonneterre brand in France) but do not have the resources to get certified, they commit to actively working with them and audit them to ensure they manage food safety according to the company’s standards.

Source: Companies, Kepler Cheuvreux

**Attractive market segments: TIC, processing equipment, Healthcare**

We note that food safety opens up market opportunities for some industries including healthcare (Biomérieux), capital goods (GEA), and TIC (Eurofins).

1. **TIC:** Food testing and agri-food tests have grown on the back of scandals and new regulations. This has been a boon for **Eurofins**, as 28.7% of its sales are related to food tests. Given their strong presence at the upstream commodity end of the food chain, both SGS and BV have invested in the past few years in growing their presence in this segment, where growth rates are in the high-single-digits. Intertek is also interested, as reflected by its recent acquisition in Italy ([Link to our Head of TIC Sector Aymeric Poulain’s 360 report “Ticking like a clock”](#)).

**Food safety opens up market opportunities (Eurofins, GEA Group, Biomérieux)**

**Table 49: Food safety plays**

Sector	Company	Market (growth)	Activities	Sales exposure	Momentum	Link with Kepler Cheuvreux research
Healthcare	Biomérieux	EUR1.7bn (6%)	Leader in bacteriology (industrial microbiology division)	18.30%	Positive	Maja Pataki; A favourable diagnosis, 24 January 2017 (link)
Capital goods	GEA	n.a.	Use of processing equipment reducing bacteria risk e.g. Appetising Industrial Refrigeration Solutions for Food Processors of Fruits and Vegetables	75%	Positive	Hans-Joachim Heimbuerger; How should GEA realise value from its dairy farming business?, 03 July 2017 (link)
TIC	Eurofins	EUR2-3bn (>5-10%)	No 1 (30.4% market share). Competitors: SGS, BV, Intertek	29%	Although still an attractive and growing niche market, Eurofins is now too big to grow significantly faster than the market itself.	Aymeric Poulain; Taking stock, 21 September 2017 (link)

Source: Kepler Cheuvreux

2. **Capital goods:** GEA (75% of sales in the food and beverages sector).
3. **Healthcare,** e.g. Biomérieux, a leader in bacteriology, whose industrial microbiology division represents 18.3% of 2016E sales should benefit from an increasing awareness of food safety, resulting in healthy 6% growth on average as part of a EUR1.7bn industrial diagnostics market devoted to food ([Link to our Head of Med Tech Devices Maja Pataki's 360 report "A favourable diagnosis"](#)).

**Table 50: Biomérieux Food industry focus**

<b>Food safety</b>	Established through regular detection of pathogenic microorganisms, i.e. viruses, bacteria or fungi that could cause infections. BioMérieux's offering consists of the VIDAS and chromID range of products. Another important procedure to ensure food safety is the identification of the source of product contamination, for which BioMérieux offers the API, VITEK 2 Compact and DiversiLab product ranges.
<b>Food quality</b>	Based on hygiene criteria, (i.e. microorganism count) which serve as quality indicators (a high number could indicate that there are bacteria present) and the detection of microorganisms in beverages. The former is carried out using the TEMPO system and pre-poured media and the latter with CHEMUNEX and BacT/ALERT.

Source: Kepler Cheuvreux

## Impact on other sectors: beverages, retail, ingredients, etc.

### Beverages: Sugar-sweetened beverages (SSB) most at risk

Analyst: Richard Withagen

- **Soda drinks or sugar-sweetened beverages (SSB):** While making an effort to adapt to the sugar tax environment (cutting sugar and growing alternative sweeteners – SSBs with lower or no sugar content already represents c. 30% of Coca-Cola European Partners<sup>22</sup> beverage portfolio – to reduce exposure), the Coca-Cola Company (CCC) has expanded into plant-based beverages through acquisitions and minority stake investments (Suja, Aloe Gloe, AdeS).

[Link to Equity Research Analyst Richard Withagen Q&A's report "How do soda taxes affect CCEP" \(February 2017\) which finds that the negative impact from sugar](#)

<sup>22</sup> CCEP (KO) is CC's biggest bottler in revenue terms. There are various facets to its relationship with KO, including the fact that KO is a shareholder of CCEP, with around an 18% stake. CCEP's biggest shareholder is Cobega, the holding company for the Daurella family, which owns 34% of CCEP's shares. KO is the owner of many of the brands that CCEP bottles and distributes. As a result, CCEP's success will depend on KO's products having a positive brand perception among consumers and customers ([link](#)).

**Limited group impact on Coca-Cola EP of UK sugar tax**

[taxes does exist \(negatives with earnings and volume due to soft drinks prices rise\) but is overall limited](#) as the company is geographically diversified (2% potential impact on operating profit at the group level from the UK sugar tax), and as CCEP will realise substantial synergies in the next few years.

- **Alcohol - beers:** Heineken reports 6% of total 2016 volumes fall into the no or low alcohol category (which have fewer calories than normal beers: 89kJ compared to 176kJ per 100ml) while Carlsberg has said that low/no-alcohol represents c. 5% of their portfolio. Carlsberg argues that these products sell at better margins, but that is not always the case. It really depends on the market. According to our beverages analyst, the low/no-alcohol segment is really a top-line growth driver rather than a driver of higher operating margins. Carlsberg said that low/no-alcohol sales grew 25% in H1 2017.
- **Alcohol - spirits:** We also see health concerns as one of the drivers of moderation seen in developed markets, prompting per capita consumption of alcohol to decline (relevant for Pernod Ricard; [link to our ESG Profile](#); and Diageo; [link to our ESG Profile](#))

**No or low beers category rise**

### Food retailers: to define or not to define

Reformulation pressure, especially for salt and sugar reduction, is also felt by food retailers. This has resulted in qualitative references in their reporting to engagement with suppliers for private brands products (Axfod, notably via price incentives for reformulations, Carrefour, Jeronimo Martins) or “healthy” products definition (Ahold’s are based on dietary guidelines). The latter is not the route favoured by other companies relying on a broader definition that also includes environmental considerations (Carrefour for fast-growing organic products, and local and freshness via the Carrefour Quality lines, which together represent of 2% of group sales).

Furthermore, companies have reported very little on voluntary actions to curb consumers’ purchases of indulgence products (sweets, snacks). One such example, though, is Tesco in the UK, which removed this category of items from the queuing areas by its tills. Regarding customer information, technology offers a tremendous and still untapped potential in Europe amid an e-commerce boom.

**Ahold promotes a “healthy food” definition based on dietary guidelines**

**Table 51: Food retail (selected steps)**

Company	Area	Details
Ahold Delhaize	"Healthy product" definition	Healthy products represent 42% of own-brand sales (45% targeted in 2020). Nutritional standards: a) The US brands follow the Guiding Stars program to determine the nutritional profile of products; b) the European brands and Indonesia follow the Choice programme.
Ahold Delhaize	Marketing	Aim to have front-of-pack (FOP) labelling for own-brand products by 2020 (85% in 2016). Ahold Delhaize has tested the healthier checkout approach at some brands.
Carrefour	"Green product" definition	Carrefour Quality Lines (EUR922m; +3.5% YOY) and organic products, mostly private label (EUR1.1bn; +6.9% YOY). Fruits and vegetables account for c. 20% of total food sales.
Tesco	"Healthy product" definition	Use of nutrient profiling score (developed by academics from UK government), not reported externally. Tesco tracks food and drink purchases based on this scoring method
Tesco	Reformulations	Backward-looking metrics reported (achievements): the removal of over 8,000 tonnes of sugar, fat and salt from over 2,000 products, including breakfast cereals and yogurts since January 2015. Current focus is on implementing the 2020 sugar reduction targets set by Public Health England across key product categories.

Source: Companies

### Catering: Sodexo, Compass one step ahead

Catering companies' food reformulation reporting is too high-level to yield a fruitful comparison, in our view. At the portfolio level, both Compass and Sodexo report indicators such as the percentage of countries and units developing sugar reformulation programmes and "health and wellness" services, respectively.

Their approaches to marketing and education also cover:

- Transparency and education towards customers (e.g. Compass's rollout in the UK and US of apps such as MyFitnessPal, which provide customers caloric and nutritional information for its menus).

Broad objectives supported by anecdotal evidence e.g. guidance and principles, number of dietitians employed, campaigns to reduce sugar in pastries (Sodexo).

### Restaurants: Not clearly on the menu

We see material room for improvement in restaurant's companies reporting on this matter. In our coverage, Vapiano (international fast casual restaurant chain, offering contemporary Italian cuisine) provides qualitative data on its offerings in specific markets (e.g. in Germany, Austria, and Sweden) for vegetarian, vegan, lactose-free, gluten-free low-carb food options.

### Ingredients: competitive landscape

*Analysts: Patrick Roquas, Aymeric Poulain*

Reducing sugar, salt and saturated fat content, artificial colours, adding nutritional value such as proteins, omega 3, vitamins, probiotics, and antioxidants (e.g. green tea), eliminating allergenic agents (e.g. gluten or lactose) and replacing them with soya or almond substitutes are key trends in the consumer space and have been demand drivers for the flavour and fragrance industry. Health and wellness, a CHF340m category for Givaudan, is likely to remain a driver of flavour growth for the foreseeable future. Food ingredient companies with specific exposure to nutrition comprise Corbion, Givaudan, Symrise, DSM, Croda, Kerry, Tate & Lyle and ADM/Wild flavours, IFF and ADM.

**High-level reporting from catering companies (share of countries/units with programmes)**

*Input from sector analysts Patrick Roquas, Aymeric Poulain*

**Natural, health and wellness are key drivers of demand for the flavour and fragrance industry**

**Table 52: Presence/positioning**

	Company	Flavour	Fragrance	Care	Nutrition
Flavour and Fragrance (F&F)	Symrise	X	X	X	X
	Givaudan	X	X	X	
	IFF	X	X		
	Firmenich	X	X	X	
Consumer Chemicals	BASF			X	
	DSM			X	X
	Croda				X
Natural Ingredients	Kerry	X			X
	Tate & Lyle				X
	ADM/Wild flavours	X			X

Source: Kepler Cheuvreux

**Table 53: Market positions within ingredients**

Company	Fragrance	Flavour	Cosmetic ingredients	Consumer health	Nutrition
BASF (Cognis)			XXXX	XXX	
Corbion		XX		XXXX	XX
DSM				XXX	XXXX
Evonik			XXXX	X	
Glanbia					
Givaudan	XXXX	XXXX	XX	XX	XX
Kerry Group		XXX		XXXX	XXXX
PureCircle					
Suedzucker					
Symrise	XXXX	XXXX	XXX	XXX	XXXX
Tate & Lyle				XX	XXX
Other key players					
Firmenich	XXXX				
IFF	XXXX	XXXX	XXX		X
ADM		XXX			XXXX

Source: Kepler Cheuvreux (X= Limited; XXXX= Strong)

**Table 54: Food and health-related ingredients sales exposure**

Company	Health-related activities	Sales exposure (estimates)
BASF	Nutrition and health division (food and feed, flavour and fragrance, pharma). Human nutrition consists of: a) health: high-concentrated omega-3 fatty acids, plant sterols and sterol esters, vitamins, carotenoids (used in dietary supplement applications and various industries such as infant, medical, and functional nutrition; and b) food and beverage: emulsifiers, enzymes, specialty compounds, and filtration aids (stabilisers or colorants). The company is also active in animal nutrition.	3% of 2016 sales
Corbion	Innovative microalgae fermentation (high-value ingredients for food, nutrition, and personal care, with clear health benefits, such as omega-3 for animal nutrition and tailored oils, structured fats and proteins for food and biochemical applications). Other businesses: lactic acid food application (not healthy but natural and benefitting from the clean label revolution in the US). Bakery solutions (emulsifiers, functional enzyme blends and minerals).	0-10% of sales
DSM	Food enzymes, cultures, yeast extracts, savoury flavours, hydrocolloids, and other specialty ingredients for the food and beverage industries; and nutritional products, such as vitamins, feed enzymes, carotenoids, minerals, eubiotics, and nutritional lipids.	30% of sales
Evonik	Consumer health (small): specialty chemicals, principally used in consumer goods for daily needs and in animal nutrition and healthcare products. Includes nutraceutical formulations.	<15% of sales
Glanbia	Ingredient Technologies (IT) further processes the whey and sells the purified product to the baby food, clinical nutrition and sports nutrition industries. Glanbia Nutritionals' Ingredient Technologies (IT) unit is (among) the largest US producers of whey protein concentrate (WPC) products and lactose.	< 13% of sales
Givaudan	Consumer health and nutrition e.g. TasteSolutions Salt (reduced sodium levels), Givaudan's TasteSolutions Sweetness (lower sugar levels), TasteSolutions Mouthfeel (reduced-calorie and reduced fat products)	7% of sales
Kerry	Worldwide leader in taste and nutrition, protein, probiotics, lipids and bases). Leading market positions in functional ingredients.	<78% of sales
K+S	Number one globally in salt production with assets in Europe and the Americas.	<19.9% of sales
PureCircle	Natural ingredients based on high-purity stevia (sweetener for food and beverage products)	100% of sales
Suedzucker	Beneo (functional ingredients on a natural basis for food, feed and pharmaceuticals)	6% of sales
Symrise	Nutrition segment: Diana division (sensorial and nutritional solutions from natural based ingredients) and the business units Food (organoleptic and nutritional functional solutions), Pet Food, Aqua and Prob. The Nova business unit focuses on new activities with high growth potential, such as plant cell culture and aquaculture.	20% of sales
Tate & Lyle	Speciality Food Ingredients (SFI) unit focusing on low-sugar and high-fibre products. Bulk ingredients, especially in North America market, mainly include sweeteners (60% of divisional sales) for food and beverages (such as Sucralose, an artificial zero-calorie sweetener).	40% operating profit excluding central costs

Source: Kepler Cheuvreux

### Ingredients: ongoing consolidation in nutrition

Recent deals in the food ingredients space have tended to be more in flavours and nutrition, including consumer trends like natural, smoke flavours, and active cosmetics. We expect the traditional Flavour and Fragrance (F&F) names to further expand into nutrition and believe there are still many mid-sized companies that might want to exit or strengthen their activities. Meanwhile, Corbion, Naturex,

**We expect the traditional F&F names to further expand into nutrition**

Frutarom and the colours division of Chr. Hansen might emerge as potential mid-sized takeover targets. Among chemicals, BASF, Evonik and DSM could be active over the next few years.

**Table 55: Chemical companies with health food M&A ambitions**

Company	Ambition	Option and limitations
BASF	Stay a global leader in consumer nutrition and health	Company has a EUR1.9bn portfolio representing 3% of total group sales (58% geared to nutrition, 30% to health). Fairly steady moderate declines in sales in recent years largely driven by vitamin prices
DSM	Focus on integration 2015-18	Likely to resume M&A in 2018
Evonik	Integrating two acquisitions	Disposal of non-core business. We expect new M&A, especially in the core segments of nutrition and care and resource efficiency, although it is unlikely before 2018. A company like Corbion would be a good fit

Source: Kepler Cheuvreux

### **Ingredients: nutrition and health Danisco might be up for sale**

While we see limited potential for mega-deals following the merger of DuPont and Dow Chemical, we do not rule out the sale of their nutrition and health activities. Nutrition and health now generate USD4-5bn in sales (16% of group sales) and an EBIT margin of c. 15%, largely related to Danisco, which DuPont acquired in 2011 for USD6.3bn, as well as a soy protein asset (Solae) with c. USD1bn in sales.

These activities are probably a good fit for Kerry or several other ingredient companies. The portfolio is well diversified in probiotics, fibres, cultures, natural sweeteners, antioxidants, emulsifiers and enzymes. In order to carry out an acquisition, Kerry would have to lever up its balance sheet and sell its consumer foods unit.

### **Are ingredients companies more nutrition or natural plays?**

Ingredient companies all predominantly focus on natural ingredients, but the use of synthetic chemicals is not bad per se. In many occasions, the negative effect from chemicals (generally very limited doses are used) is exaggerated and the positive effect is not proven.

[Link to our sector analyst Patrik Roquas' report on food ingredient \("Beauty and brains", 30 June 2017\)](#)

### **Agrochemicals: is there an impact from salt reduction?**

K+S (analyst: Christian Faitz) is the company most exposed to salt in our coverage (they are number one globally in salt production, with 19.5% of total group sales linked to consumer products and the food industry, mostly geared towards the US). The business is on a steady growth path and seems immune to the regulatory crackdown on salt consumption in food since it is mostly exposed to other (non-food) uses, such as road salting.

***Probably a good fit for Kerry or several other ingredient companies***

***K+S (salt) not affected by the clampdown on salt consumption in food***

## Wellness and healthy lifestyles: investing in exercise

*Analysts: Guido Nunes, Marco Baccaglio, Jürgen Kolb, Hans-Marius Lee Ludvigsen*

### **Home and Personal Care (HPC): prevention is better than cure**

Aside from sportswear giant Adidas Group, we would highlight two European SMIDs well placed in two attractive structural growth markets: Technogym (fitness equipment; EUR1.5bn market cap) and Accel Group (bicycle manufacturing, including e-bikes; EUR674.6m market cap). In the retail space, we flag XXL, a leading Nordic sports retailer operating c. 70 big-box and online stores in the Nordics and Austria (NOK11.8bn market cap; [link](#)).

*Input from Sector analysts: Guido Nunes, Marco Baccaglio, Jürgen Kolb*

***Fitness equipment and bicycle manufacturing***

Table 56: Selected HPC plays on the healthy lifestyle and wellness theme

Company	Sector	Analyst	Theme	Market	Sales exposure	Activities description	Outlook and investment case summary
Accell Group <a href="#">(link to our 360 report ; June 2017)</a>	Household durables	Guido Nunes	Bicycle manufacturer	EUR11.5bn (European and North American bicycle markets; +3.4% CAGR over the last decade). Competitors: PonBike, Giant, Trek and Shimano	100%	Accell Group is Europe's largest bicycle manufacturer selling some 1.5m bicycles a year. Accell Group operates around 29 national and international sports brands active in bicycles and bicycle parts and accessories mainly in Europe and North America (97% of revenues). The bicycles are assembled and spray-painted in facilities in the Netherlands, Belgium, Germany, France, Hungary, Turkey and China. Accell Group aims at the upper and middle segment of the market.	Accell has sharply increased revenues over the last few years, although its profits still lag behind. With its refined strategy, we believe it will be able to achieve its target of an 8% EBIT margin. As the cycling industry is set to benefit from structural growth drivers, we expect market revenues to increase further. We also see Accell's margins benefitting from the positive shift towards e-bikes, efficiencies in its supply chain thanks to component cataloguing, and further integration of its P&A activities.
Adidas Group	Textile and apparel	Jürgen Kolb	Sports products	n.a. Competitors: Nike, Reebok	100%	Second-largest global athletic and leisure shoe and apparel supplier with about 93% of group sales stemming from the Adidas brand.	Adidas has been benefitting from strong brand momentum which has led to market share gains in key markets and regions. A key element of this strength was the implementation of its brand leadership strategy based on a matrix organisation with more individual manager responsibility for entire categories. The benefits of this streamlined organisation will continue to be reflected in product launches that are more closely correlated with consumer tastes and market trends combined with closely monitored product lifecycle management. With a 2016-20E sales CAGR of 13%, cost leverage will be the core driver of its EBIT margin increase to 11.2% by 2020E. After the disposals of its golf business and Hockey CCM, the focus is solely on the Adidas and Reebok brands, and it frees up funds to invest in an efficient and up-to-date digital business.
Technogym <a href="#">(link to our 360 report ; July 2016)</a>	Household durables	Marco Baccaglio, CFA	Fitness equipment	EUR7.4bn in 2015, of which EUR4.4bn in the B2B segment and EUR3bn in B2C (c. 4% expected growth). Competitors: Life Fitness, Johnson Health Tech, Precor, Cybex	100%	Technogym is a leading fitness equipment manufacturer founded by Nerio Alessandri in 1983. Focused on R&D (10% of employees), Technogym is positioned as a top-quality player, with enviable brand awareness. Its "wellness concept" (1992) and several breakthrough innovations provide high visibility. In 2008, the Alessandri family (which currently holds a 60% stake) sold a 40% stake to a private equity firm, which exited from Technogym via the IPO in May 2016 (at EUR3.25) and sold its remaining shares at the beginning of 2017 (EUR4.45).	A high-quality business in a very competitive market. Thanks to consistent innovation, Technogym is delivering above-average margins. We believe that coupling the strong brand recognition with investments in distribution; it has significant room to expand in North America and in the consumer segment, offering better top-line momentum in the upcoming years than the industry average alongside double-digit EBIT and EPS growth. Its strategy is mostly based on enhancing distribution and R&D efforts to maintain a lead over peers. Neutral stance in the short term. New product launches in H2 and 2018 are unlikely to affect margins, according to management, implying continued double-digit EBITDA growth in H2.

Source: Kepler Cheuvreux

## Pharma and Healthcare: the last resort

Analyst: David Evans, Arsene Guekam

### The sizeable diabetes market opportunity

The main market linked to malnutrition and obesity is diabetes (particularly relevant for Novo Nordisk and Sanofi in Pharma, and Cellnovo in Biotech/Medtech).

The insulin pump market is worth USD2.4bn a year and is expected to post high single-digit growth in the coming years thanks to a rise in the rates of obesity and diabetes, lifestyle changes, and more convenient treatment devices.

Other segments are on the fringe:

- Weight loss/obesity is a small market at present, with Novo Nordisk effectively just starting to create a meaningful market of around EUR1bn, as no previous prescription drugs have worked particularly effectively. Novo has one drug growing steadily named Saxenda (liraglutide).
- More broadly, cancer is not a real market driver. The causes of cancer are hugely varied and only very slightly linked to nutrition and/or obesity as a minor driver of risk. Prices for cancer drugs are linked to the number of patients suffering from the type of cancer. The fewer patients suffering from a specific type of cancer, the higher the price the companies would charge per patient.
- Roche, among others, does have diabetes diagnostic tests, but this is a small part of Roche's diagnostics unit, and is not performing well due to extreme price pressure in recent years.

### Diabetes: a growing epidemic

Diabetes is a chronic disease caused by a lack of insulin produced by the pancreas Type 1 diabetes (T1D) or by the body being unable to use the insulin it produces Type 2 diabetes (T2D). There is a link between the incidence of diabetes and obesity: as the latter increases, so does the incidence of T2D. According to the IDF, in 2015 nearly 415m people worldwide were estimated to have diabetes, or 9% of adults aged 18 and over. About 75% live in low-to-middle income countries. If this trend continues, by 2040, 642m people will have diabetes (+55% in the period). The vast majority of this increase will be due to T2D.

According to Melmed S., Polonsky SK, et al., as of 2016, more than 400m people were estimated to have diabetes worldwide, of which T1D accounts for between 5% and 10% (Endocrinology).

Insulin is the most common treatment for both types of diabetes. Around 25m diabetes patients use insulin, of which 70% suffer from T2D. The main objective is to mimic the body's natural insulin secretion and avoid hypoglycaemia.

### Pharma valuation impact: Novo and Sanofi

**Novo Nordisk:** Novo Nordisk is the global leader in diabetes care. Modern insulins including new basal insulin Tresiba and GLP-1 analogues (Victoza and pipeline prospect semaglutide) are Novo's core business.

*Input from Sector Analysts David Evans, Arsene Guekam*

***The main market linked to malnutrition and obesity is diabetes***

***Obesity is the primary risk factor for Type 2 diabetes (T2D)***

***Insulin is the most common treatment for both types of diabetes***

***Novo Nordisk: a best-in-class diabetes business but the diabetes epidemic is a tiny part of our thesis***

Its valuation has always included assumptions of much better long-term/terminal growth for two main reasons: 1) diabetes is a demographically fast-growing market; and 2) there are perceived to be significant barriers to entry (brand reputation, extreme manufacturing economies of scale, etc.).

The 'diabetes epidemic' is, however, a tiny part of our thesis. Novo is much more a US-driven pricing and innovation story. In fact, competition and price pressure is already chipping away at Novo's underlying growth in diabetes

In terms of inclusiveness, Novo Nordisk's total sales of human insulin represent 10% of the group's revenue. This segment remains overwhelmingly exposed to low-income customers and countries, as part of the differential pricing policy in the least developing countries. Yet recent market conditions for human insulin have driven a reduction in the number of developing countries covered, as well as a decrease in the number of patients covered by the differential pricing policy. In this context, failure to achieve its 2013 target of treating 40m patients with diabetes care products by 2020 would be understandable.

**Sanofi:** Sanofi's total sales exposure to diabetes was 22% in 2016, but this is expected to decline to 14% by 2020E, as their big-selling, long-acting insulin Lantus has been hurt by new competition and lower prices.

[Link to our Co-Head of Pharma report David Evans \("Health is wealth", 07 July 2016\)](#)

### **Biotech valuation impact: Cellnovo**

Daily insulin injections are the gold standard of T1D treatment. There is significant demand for intuitive and easy-to-use devices that reduce the burden of these daily injections. However, innovation in this area has been slow. While the insulin delivery market is still dominated by tube pumps (tethered to the body), Cellnovo has developed a disruptive patch pump (wirelessly connected) associated with mobile health that improves disease management. Already available in Europe (and soon in the US), Cellnovo is likely to capture 64,000 T1D patients (or EUR184m of sales) by 2023. As a second step, Cellnovo will extend the market by targeting T2D patients treated with insulin. However, as these patients need higher doses, it will need to develop a new generation of insulin pumps with a larger reservoir.

We initiated coverage on 7 September with a Buy rating and a EUR8.0 TP.

[Link to healthcare and biotech/medtech analyst Arsene Guekam's 360 report \("Patch wars: a new hope", 07 September 2017\).](#)

***Cellnovo has developed a disruptive patch pump (wirelessly connected) associated with mobile health that improves disease management***

## Time to green our plate

We identify progressive companies' practices across three key topics primarily linked to the sector's environmental footprint/impact (as opposed to financial risks linked to environmental factors such as increasingly severe weather events): climate change, food waste, and deforestation. Regarding climate change, only a handful of companies are in the vanguard of more ambitious climate mitigation targets aligned with science (Nestlé, Tesco and breweries). While France spearheaded food waste legislation in the food retail sector, we point out that fish, sugar, vegetables companies tend to be more exposed overall. Finally, Nestlé, Unilever and Danone are highlighted for their more comprehensive deforestation policy, whereas data on cocoa-dependent companies (Lindt & Sprüngli, Barry Callebaut) and particularly sensitive and traditionally overlooked commodities (soy, cattle) suggest room for improvement amid some progress.

### Mini-guide to cook an environmentally friendly menu

*What is the state of progress in companies' trajectory to mitigate their adverse environmental impact across the value chain?*

As mentioned previously, environmental considerations are also on the rise and increasingly valued by customers. This is particularly clear when focusing on growth in the natural and organic markets.

The most relevant environment-related risks and opportunities selected here are:

1. Climate change (SDG 13.2)
2. Food waste (SDG 12.3)
3. Deforestation (SDG 15.3)
4. Broader environmental and social issues via product shifts and sustainable sourcing, including water (SDG 6.1)<sup>23</sup>

### The political thrust on climate change starts bearing fruits

#### Animal-based commodities on the frontline

Deemed the "forgotten" sector driving climate change, the agriculture, forestry and other land use (AFOLU) sector has been subjected to growing pressure for its role (25% of total man-based GHG emissions) and international objectives (a maximum increase of two degrees centigrade in global average temperatures, agreed to by world leaders in December 2015 in Paris). Attention has centred around the most sensitive commodities based on their contributions to global emissions (beef by some distance followed by dairy, pork, and poultry) but also those linked to massive environmental and social concerns such as deforestation (soy, palm oil, cocoa, and timber).

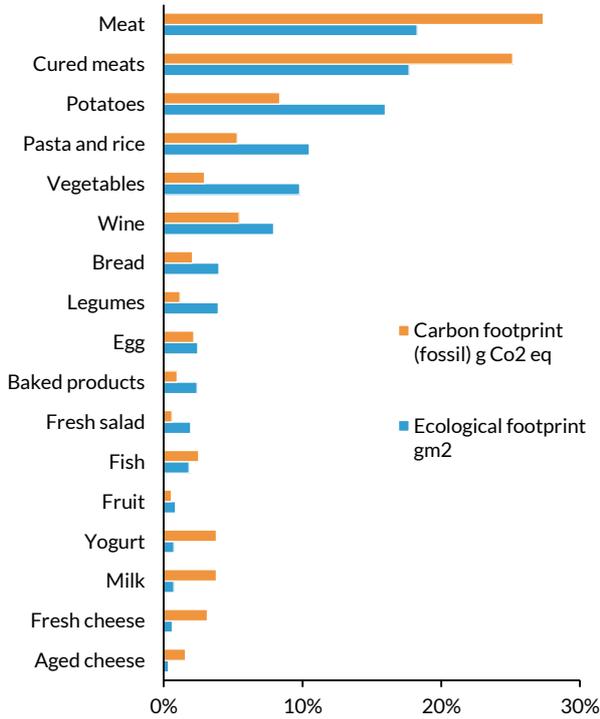
<sup>23</sup> Areas voluntarily not dealt with here comprise fisheries ([Link to our ESG Thematic & Impact Investing Report "Blue Economy Screener: A deep-dive into the Ocean"; 31 March 2017 that addresses both the pros and challenges of aquaculture](#)) and agrochemicals role which attracts a mounting amount of concerns from both a healthy and environmental viewpoint

*Key themes: climate change, food waste, deforestation*

*Our framework for covering environmental issues*

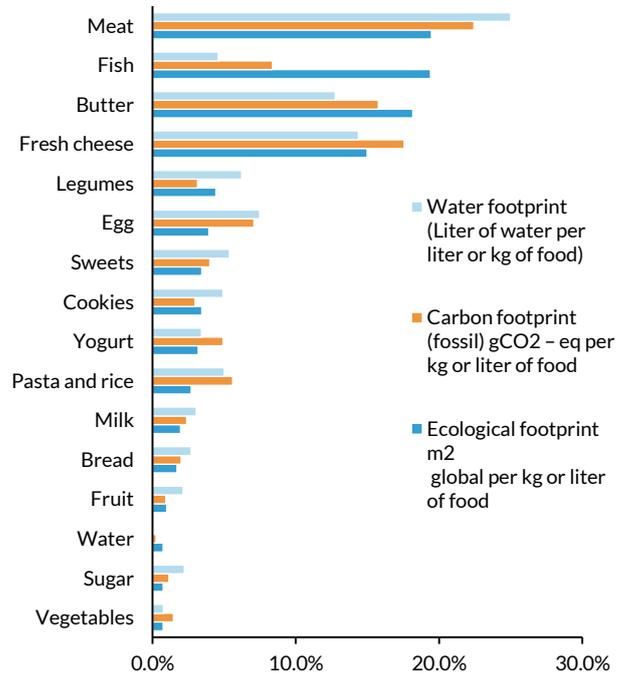
*Beef by some distance followed by dairy, pork, and poultry are key GHG emitters*

Chart 40: Environmental footprint/category (first dataset)



Source: BCFN, Reworking TEH - Ambrosetti Department of Medical Pathophysiology, Sapienza University of Rome and Studio LCE (share of total for each; May 2009 data)

Chart 41: Environmental footprint/category (second dataset)



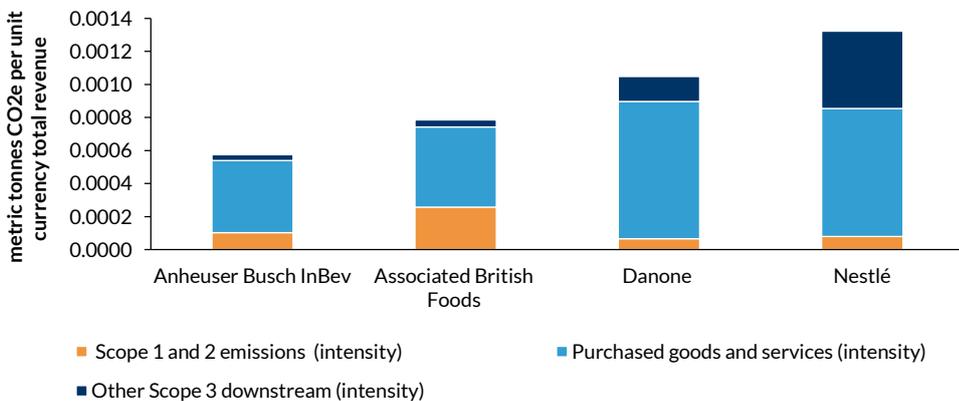
Source BCFN Foundation 2016, LCA database (EcolInvent, LCA food, Water Footprint Network, Ecological Footprint Network), Verified publication (EPD, Climate Declaration) (share of total for each; after cooking)

### Purchased goods are the main culprit

As for other environmental damages, the bulk of food and agriculture’s carbon footprints stem from their indirect impact through purchased commodities, illustrated in the chart below. However, reporting on the so-called Scope 3 emissions for purchased goods and services remains confined to a minority of companies. Only Nestlé, Metro, Barry Callebaut, Wessanen report “Scope 3 for purchased good and services” in our sample (data below for other names are estimated).

**Nestlé, Metro, Barry, Wessanen pioneer Scope 3 reporting...**

Chart 42: Carbon footprint breakdown (2015)



Source: CDP, Kepler Cheuvreux (including estimates)

**Science backing enhances credibility**

Furthermore, in practice, only a handful have set science-based<sup>24</sup> GHG emissions reductions targets encompassing their Scope 3 emissions, and only Nestlé among food conglomerates (approved) and more recently Tesco among food retailers in our coverage. Danone and Unilever have set other goals, but to our knowledge these are not based on science. Danone (zero net carbon by 2020 for Evian and by 2050 for the group), Unilever (halve the environmental footprint from making and using products by 2030).

An online tool called “IMAGE” has been created to encourage more companies to follow this trend. IMAGE uses focuses on GHG emissions from livestock products (beef, dairy, poultry, and pork) from cradle to farm.

**...and Nestlé science-based targets for food**

**Table 57: Science-based targets (food companies)**

Company	Baseline	Deadline	Reduction target	CAGR	Scope
Carlsberg Group	2015	2030	30%	-4.4%	Beer-in-hand value chain (Scope 1, 2 and 3)
	2015	2022	15%	-1.0%	
Diageo Plc	2007	2020	30%	-3.8%	Total supply chain
Nestlé	2014	2020	8%	-0.5%	Scope 3 GHG emissions

Source: SBT

**What a (food) waste!**

According to the FAO (link), about one-third of food was wasted in 2009 globally, with implications for economic costs, food security and the environment.

**Food waste policy momentum**

The European Commission approved on 16 October 2017 guidelines to facilitate food donation in the EU. Although there is no binding target at the EU level (Circular Economy Directive), countries are moving ahead. France spearheaded legislation for the food retail sector, forcing retailers to roll out various measures such as clearer expiration dates on produce, partnerships with charities to donate excess foods, and use of food waste as fuel.

**France spearheaded legislation for the food retail sector**

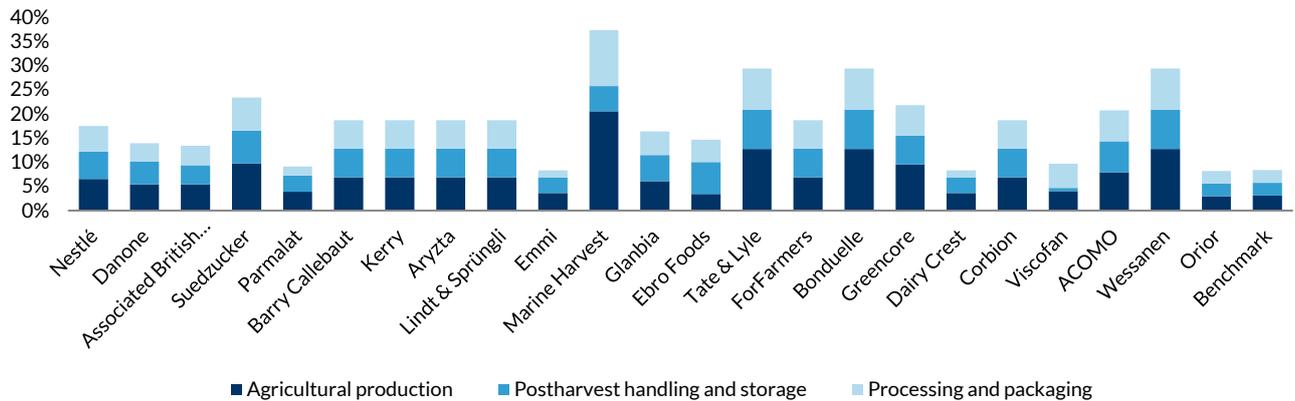
**Waste exposure profile**

Based on FAO data, Julie Raynaud has assessed companies’ exposure to food waste across their value chain, excluding distribution and consumption. Fish (Marine Harvest), sugar (Tate & Lyle), and vegetable (Wessanen, Bonduelle) companies are particularly exposed.

**Input from ESG Analyst Julie Raynaud: Sectors more exposed to food waste (fish, sugar, vegetables)**

<sup>24</sup> Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered “science-based” if they are in line with the level of decarbonisation required to keep global temperature increase below 2 degrees Celsius compared to pre- industrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5). Source: Science Based Targets (founded by CDP, the UN Global Compact (UNGC), the World Resources Institute (WRI) and WWF).

Chart 43: Estimated exposure to food waste in their supply chain and operations (loss rates)



Source: FAO (2011), WRI, Kepler Cheuvreux (agricultural production, post-harvest handling and storage, processing and packaging)

### Companies' strategies: timid in providing numbers

There are some signs that companies are stepping up their efforts, though quantitative targets remain rare. Danone and Wessanen are paving the way.

Table 58: Food waste quantitative commitments

Company	Indicator	Deadline	Targeted reduction	Baseline
Danone	Non-recovered food waste (food waste baseline defined according to Food Loss and Waste Protocol)	2025	50%	2016 (12 kg/tonne product sold)
Wessanen	Physical waste on sold goods	2020	30%	2016 (0.48%)

Source: Kepler Cheuvreux

## Deforestation: integrating landscape into procurement

### Towards zero net deforestation

Below we lay out selected practices for companies with a clear zero net deforestation agenda: that is, a commitment encompassing zero net deforestation and forest degradation, high conservation value (HCV) management, high carbon stock (HCS) management, no peatland conversion, avoidance of land area under conservation, free, prior and informed consent (FPIC), net positive impact, and certification by 2020. Among big food companies, Nestlé, Unilever and Danone can boast comprehensive policies. Nestlé stands out from the pack with its own certification mechanisms due to the limitations of more common mechanisms.

[Link to our ESG Thematic and Impact Investing report the Sustainable Development Goal 15 for more background \("Forest and Land degradation: Integration Landscape into investment", March 2016\).](#)

**Nestlé, Unilever and Danone can boast a comprehensive deforestation policy**

**Table 59: Commodities exposure and state of progress**

Company	Percent of procurement spending (produced and/or consumed)				State of progress			
	Palm Oil	Soy	Cattle Products	Timber	Palm Oil	Soy	Cattle Products	Timber
Danone	1-5% (34k)	<1% (5t + 900t indirectly)	n.a.	6-10% (477t)	100% traceable; 91-99% certified (RSPO Mass Balance, RSPO Segregated), with 100% RSPO Segregated targeted in 2020	6-10% traceable; <10% certified (ProTerra)	n.a.	61-70% traceable; 61-70% certified (100% targeted in 2020)
Nestlé	<1% (420kt)	<1% (475kt)	<1% (193kt - mainly by-products in pet food)	1-5% (1580kt)	41-50% traceable (51-60% certified)	61-70% traceable	11-20% traceable (10-20% certified)	71-80% traceable (51-60% certified)
Unilever plc	21-30% (1.4mt)	1-5% (400kt)	<1% (35kt)	11-20% (1.05m)	71-80% traceable (31-40% certified; 100% physically certified palm oil targeted in 2019)	81-90% traceable (61-70% certified; 100% targeted in 2020)	100% traceable (51-60% certified; 100% targeted in 2020)	51-60% traceable (51-60% certified; 100% targeted in 2020)

Source: Companies, CDP, Kepler Cheuvreux

### Cocoa focus: biodiversity and child labour matters too

Certification is a pillar of chocolate companies’ policies to combat deforestation, as ethical and environmental issues resonate more with consumers. Cocoa, mainly produced in Africa, lends itself well to certification. Partly in reaction to controversies and mounting scrutiny<sup>25</sup>, many chocolate players have launched ESG initiatives and are notably targeting child labour, including Barry Callebaut, Lindt, Nestlé, Hershey, and Mondelez (as shown in the table below created by Julie Raynaud).

While Barry Callebaut’s certification levels (23%) seem broadly in line with the world average (including Organic, Fairtrade, UTZ Certified and Rainforest Alliance standards; [link](#)), Lindt appears to be more advanced, with 57% of total cocoa beans sourced in 2016 “traceable and externally verified” (certifications not specified however).

[Link to our Head of European Consumer Jon Cox report \(“Death by chocolate”, 31 July 2017\).](#)

**Lindt appears to be more advanced, with 57% of total cocoa beans sourced in 2016 “traceable and externally verified” (certifications not specified however)**

<sup>25</sup> The latest being NGO Mighty Earth’s report, which shines a spotlight on the industry’s alleged link to the destruction of national parks in Côte d’Ivoire ([link](#)). Companies might clarify their policies and potential new actions at the Bonn 2017 UN climate change conference (6 - 17 November 2017), including in the context of the joint platform named “CocoaAction”.

**Table 60: Sustainable sourcing policies of selected companies on cocoa and palm oil**

	Region	Certifications	Objectives	Key risks/ opportunities	Mitigation
<b>Cocoa</b>					
Barry	159,000 tonnes of sustainable cocoa sourced in 2014 (67% through their programmes); LatAm, West Africa, Asia	23% certified cacao (UTZ, FairTrade, Organic, Rainforest Alliance)	By 2025, carbon and forest positive, 100% of sustainable ingredients in all products (sourced from certified or verified sources, e.g. Cocoa Horizons, Rainforest Alliance, Organic, FairTrade, etc.)	Reputational, stability of supply and productivity	"Sustainable sourcing" and additional targets, farmers training programmes, Cocoa Horizons Foundation
Lindt	Ghana (for all consumer beans), Indonesia, Latin America (mainly Ecuador), Madagascar and the Caribbean (for fine flavour beans)	In 2016, 100% of supply from Ghana certified and 57% of global supply chains.	100% verification for the entire supply chain by 2020.		Sustainable sourcing, traceability, Farmer Program.
Nestlé	140,933 tonnes sourced through Nestlé's cocoa plan in 2016	34% traceable and responsibly sourced	34% traceable and responsibly sourced by 2016 (achieved), sources 150,000 tonnes of cocoa through plan by 2017 and 230,000 by 2020.		Sustainable sourcing, traceability, Nestlé Cocoa Plan with numerous reporting KPIs, Child Labour Monitoring and Remediation System
Hershey	Primarily Côte d'Ivoire and Ghana	60% certified and sustainable cocoa	100% certified and sustainable cocoa by 2020 (UTZ, Fairtrade and Rainforest Alliance)		Sustainable sourcing, traceability, Farmer Program.
Mondelez	Multiple locations in LatAm, West Africa and Asia.	21% of cocoa sustainably sourced.	All cocoa to be sustainably sourced mainly via Cocoa Life programme (no target date); new plan in December 2016 where Cadbury would not source FairTrade cocoa anymore (in-house plan instead); investing USD400m by 2022 in its Cocoa Life programme (200,000 farmers).		Programmes (Cocoa Life), traceability
<b>Palm oil</b>					
Barry	c. 5% of overall volumes, 1-5% of procurement spent, Colombia, Ecuador, Indonesia, Malaysia	33% RSPO-certified (Mass Balance or Segregated)	100% "sustainably certified" by 2020 and 100% physical certified palm oil by 2022.	Stability of certified supply (IOI suspension from RSPO had an impact on available supply), reputation	Member of RSPO, diversification of suppliers, additional engagement and scoring of suppliers beyond RSPO, additional commitments. Member of RSPO, factored into supplier selection process
Lindt	5,578 tonnes mostly Asia	81-90% according to RSPO segregated/certified since end-2015	100% by 2018.		
Nestlé	420,000 tonnes of palm oil bought in 2016, <1% procurement spend; multiple countries in Asia, Africa and LatAm, used in 6-10% of products.	91.5% traceable to the mill in 2016, 57% responsibly sourced (vs. 60% target for 2016), according to RSPO and their standards (mass balance)	60-70% traceable and sustainable by 2017, no long-term targets		Member of RSPO and other organisations, factored into supplier selection, additional commitments
Hershey	1-5% of procurement spend, used in 41-50% of products	98% traceable to the mill, and 14% to the plantation as of 2016	100% traceable to the plantation by 2020 and certified (Mass Balance)		Member of RSPO, Traceability commitment, zero deforestation, factored into supplier selection
Mondelez	n.a.	100% RSPO by end-2015, 91% of suppliers' policies and principles aligned with Mondelez, 90% traceable to the mill.	100% in both criteria.		Member of RSPO, in-house, No participation in CDP Forest 2017

Source: Companies, Kepler Cheuvreux

### Catering following the trend

Importantly, these commitments also resonate further down the value chain, as exemplified once more (as in the case of healthy food and nutrition) by Compass and Sodexo (Autogrill and Elior provide fewer details).

**Compass and Sodexo somewhat more transparent**

**Table 61: Catering zero deforestation commitments**

	Commitment	Percent of total production/ consumption traceable				Specific commitments and actions			
		Timber	Palm Oil	Cattle Products	Soy	Timber	Palm Oil	Cattle Products	Soy
Compass	Zero deforestation and forest degradation	21-30%	6-10%	41-50%	51-60%	No cut-off date. 21-30% of timber consumption is currently certified	No cut-off date. Partial data and targets e.g. by 2017, aim to achieve 100% RSPO-certified sustainable palm oil for cooking oil and margarine and purchase RSPO PalmTrace (GreenPalm) credits to cover any remaining uncertified palm oil	No cut-off date nor specific details	No cut-off date nor specific details
Sodexo	<b>Certification</b> Zero net deforestation and forest degradation. High Conservation Value (HCV) management. Avoidance of land area under conservation Free, Prior and Informed Consent (FPIC). Legality Certification. Avoidance of IUCN Red List of Threatened Species	81-90%	31-40%	100%	100%	Source 100% certified sustainable or recycled raw materials for its paper vs. 81-90% total production/ consumption currently certified	Source 100% physical certified sustainable palm oil by 2025. As of 2016: CSPO is broken down as follows: RSPO Segregated 11% RSPO Mass Balance 20% RSPO GreenPalm purchased by Sodexo Suppliers 10% RSPO Trace certificates purchased by Sodexo 59%	Local sourcing (82% raised within the country). Targets "sustainable production" by 2025	Project with WWF to establish a complete inventory of indirect soy bean meal consumption. Targets "sustainable production" by 2025

Source: Kepler Cheuvreux, Companies, CDP

### Sustainable sourcing: what else?

Broader commitments to improve the share of commodities sourced according to sustainability criteria include, but are not limited to:

- Support and engagement with farmers via dedicated **commodity-specific programmes** (including focus on climate-smart agriculture or financing). Unilever's tea initiative (Seeds of Prosperity, encouraging tea farmers and their families to eat a more balanced, nutritious diet - Global Alliance for Improved Nutrition (GAIN) and IDH), and Nestlé's digital microfinancing lending to dairy farmers in Pakistan
- **Development of alternative practices** via e.g. pilot farms in all countries where Bonduelle is active (e.g. using drip irrigation, no-till agriculture, capacity probes, crop cover). A step-up in agroecology, agro-forestry, climate-smart agriculture and conservation agriculture is one of the central FAO recommendations to mitigate agriculture's environmental resources use and inputs.

- Comprehensive pledge e.g. the pledge by Dannon (Danone’s US subsidiary) on sustainable agriculture, “neutrality” and transparency: commitment to: 1) **GMO labelling** (US nationwide level by December 2017); and 2) **shift away from GMOs and synthetic ingredients** to more natural options such as sugar and starch for flagship brands in 2017/18.
- **Emphasis on localisation:** Although locally grown products do not always have smaller environmental footprints than competing products, disclosure on where products are sourced from is gaining ground. This is particularly true in certain segments (soy, cashews, avocados, quinoa, and almonds) that have been raising concerns about the environmental and social sustainability of their production processes. The amount of water used to grow almonds in California and the deforestation caused by avocados in Mexico are two examples. Companies like Bonduelle and Wessanen have shown encouraging signs of proactively addressing these concerns. Looking at other challenges for fruits and vegetables, we would welcome more data regarding the seasonality.

**Table 62: Localisation reporting**

<b>Company</b>	<b>Indicator</b>	<b>2016</b>
Bonduelle	Vegetables grown in the country where they are sold	>50%
Wessanen	Almonds, wheat sourced in Europe	100%

Source: Companies, Kepler Cheuvreux

## Sustainable food and lifestyle framework

In this section, we flesh out our proprietary multi-dimensional framework to navigate companies' "sustainable food and lifestyle" credentials, and spot the best positioned stocks.

Our preferred companies overall ("sustainable food" top scores) are Bonduelle (processed vegetables), Total Produce (fresh fruit and vegetables) and Wessanen (organic).

These findings draw upon a thorough assessment of our food universe coupled with new methodological developments, including investor-friendly tools (e.g. product profiling systems, a promising tool promoted by the Access to Nutrition Index, and food and environmental pyramids). We stress where and how they could help fine-tune the assessment of companies' contribution to food and nutrition security.

### Introducing our recipe to screen for a healthy portfolio

*How to classify companies based on the alignment between their sustainability outcomes (health, nutrition and environmental impact) and their investment case?*

#### Mapping the spectrum of investment opportunities

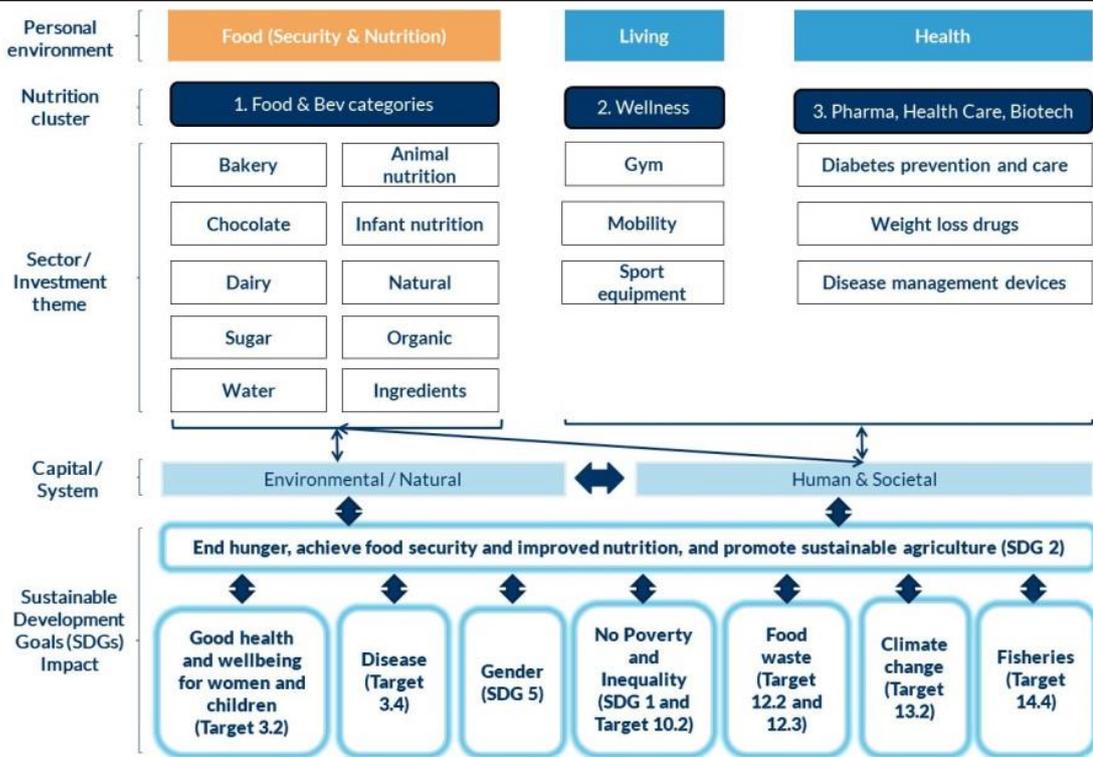
Our broad definition of the "healthy food, nutrition and wellness" universe in relation to food intake (what we eat) and lifestyle (how we live) seeks to reflect the full spectrum of investment risks and opportunities linked to principally:

1. **Food and beverage companies** across the whole value chain (from input companies to food retail and catering).
2. **Wellness (healthy lifestyle and wellbeing):** companies that help reduce obesity and other malnutrition-related diseases through the promotion of behaviours supporting a good physical health (e.g. sports and mobility).
3. **Pharmaceuticals, healthcare and biotech:** companies that help to deal with the adverse health effects of malnutrition, including diabetes.

*Key issues: "healthy" and "green" food definitions and methodologies, opportunities linked to how to eat and live well, consistent integration into investment recommendations*

*Three broad investment clusters linked to the "Healthy Food, Nutrition and Well-Being" theme: 1) Food & Bev; 2) Wellness; and 3) Pharma*

Chart 44: Healthy food, nutrition and wellness framework in relation to the Sustainable Development Goals (SDGs)



Source: Kepler Cheuvreux

### Focusing on the cornerstone: food sector (healthy food and nutrition)

Although all three groups are dealt with, the first group (food security and nutrition) constitutes the backbone of this report, as it is where the financial materiality, particularly for healthy food, and companies’ environmental and social impacts are clustered (much bigger market and footprint for the vast majority of companies under our coverage).

### Defining relevant social impact objectives: progress on healthy diets

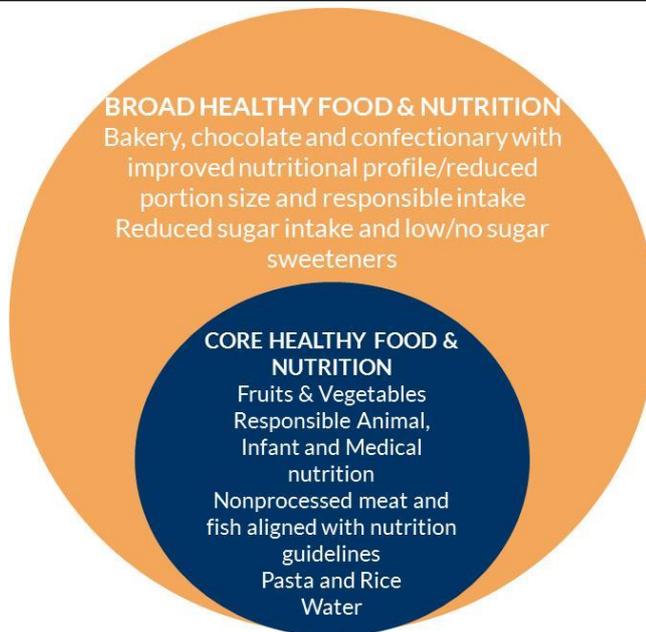
Our first objective is therefore to examine whether food and beverage companies are keeping abreast of nutrition, health and wellness trends; in other words, their impact on “human systems” or health and wellbeing (social capital), particularly in the context of United Nations Sustainable Development Goal 2 (“end hunger, achieve food security and improved nutrition, and promote sustainable agriculture”) and 3 (“good health and wellbeing”).

This impact can be deemed as improving or positive if it helps address over- and undernutrition, and thereby improve food and nutrition security, which based on the FAO definition we describe as contributing to the “availability of, and affordable access to sufficient, safe, nutritious food”. In practice, that covers both the provision of “naturally” healthy food product categories (recommended in high quantities in dietary guidelines such as fruit and vegetables) and improving the nutrition profiles of less healthy categories (e.g. reformulation of sugar-sweetened beverages).

*We place a particular emphasis on food & beverages companies and health (the most significant overall)*

*Our first aim is to assess whether companies help address over- and under-nutrition and thereby improve food and nutrition security (SDG 2 and 3 particularly)*

Chart 45: Core vs. broad healthy food and nutrition universe



Source: Kepler Cheuvreux

### Taking a holistic (net impact) approach reflecting environmental issues

Second, we consider it complementary to also explore companies' environmental footprint<sup>26</sup>, i.e. estimated impact on biodiversity and ecosystems (natural capital), considering their interdependence, for instance in terms of diet quality and food security (how we produce determines what we are able to eat), which largely depends on forest and land ecosystem services: Sustainable Development Goals 6 (water), 12 (food waste), 13 (climate change), 14 (life below water) and 15 (deforestation and land degradation).

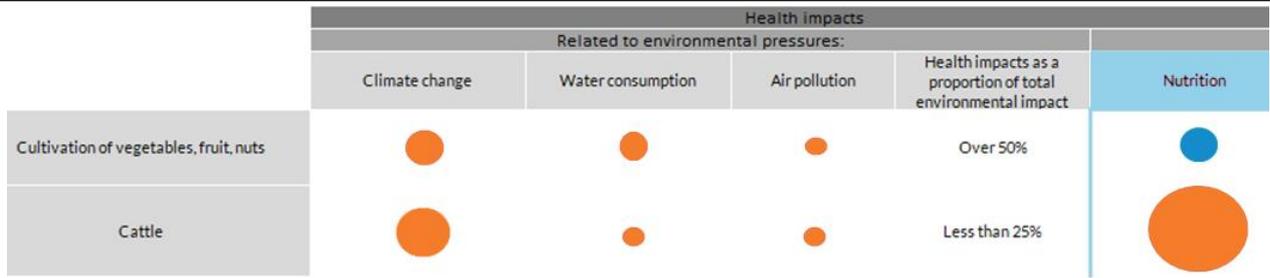
Indeed, Julie Raynaud has shown in her report *Bigger than carbon: a systemic view* that the overuse of resources and emission of pollutants have health impacts, which can be estimated by using academic research and datasets. We aggregate both the "environmentally-related health" impacts with the "nutritional" health impacts to derive a high-level health heat map for meat and vegetable products. It is important to remember that these tables are based on global averages, but that in reality the scale of these impacts is location-specific

The size of the circle in the table below refers to the magnitude of negative health impacts (orange) compared to positive (blue) for cattle on the one hand, and fruits and vegetables on the other hand, across a range of environmental topics and nutrition, separately.

<sup>26</sup> In the environmental accounting realm, net impact is defined as: "the aggregated sum of environmental effects caused by an aspect of business over a period of time" (source: Sustain Value). The Dutch government, for instance, has a programme involving the food sector to build "approaches which balance both the positive and negative effects of food consumption" (source: Dutch Ministry of Economic Affairs, True Price and Wageningen Economic Research).

**"Healthy" food and  
"green" food go hand  
in hand**

Chart 46: Relative health impact of food items based on nutrition and environmental pressure criteria



Source: Kepler Cheuvreux (Julie Raynaud's report "Natural Capital Compass; Bigger than carbon: a systemic view"), based on Springmann et al (2016)

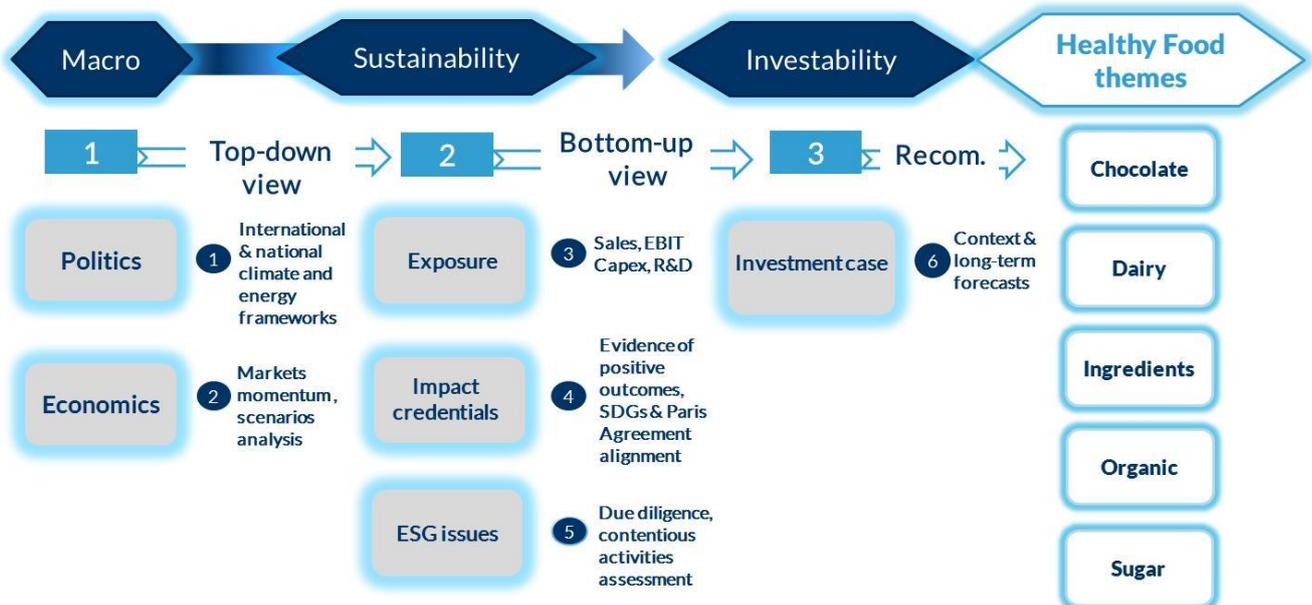
### Six steps to scan companies and produce actionable investment ideas

Third, our ultimate goal is to look into how these social and environmental factors positively or negatively affect companies' financials and our investment case, or, in other words, whether companies that contribute positively to a more sustainable food intake (healthier and more environmentally friendly) constitute actionable investment ideas. We take the following six steps to reach that conclusion:

1. **Macro** evidence of activities being aligned with healthy food and nutrition, as well as relevant linked sustainability goals, especially climate change and resource efficiency: **policy momentum**.
2. **Economics**, including the business case for healthy and sustainable food categories.
3. Companies' level of **business exposure** to these areas: products or services (sales, EBITDA), and operations (e.g. procurement). Coupled with an assessment of their **sustainability trajectories** (e.g. investments, strategy, practices to lower the negative drivers of malnutrition and propel drivers of positive nutrition).

*What's the impact of sustainability factors on financials and our investment case and is there a premium for "sustainable" food plays?*

Chart 47: Healthy food and nutrition screener



Source: Kepler Cheuvreux

4. Company-level data showing **evidence of (net) positive environmental and social outcomes**, whenever possible, based on third-party assessments.
5. Broader ESG issues that may affect their profile (e.g. corporate governance, restructuring)
6. **Links with our investment case**: the extent to which these environmental and social criteria affect the business and financial context, metrics and outlook, including their importance as part of value drivers and our equity analyst recommendations (see notably the section “Investment outlook and conclusions”).

### Mulling a methodology to assess (score) companies’ profiles

While we see numerous hindrances to creating a pure and perfect aggregate indicator that assesses companies’ actual health and environmental impact, we still believe it is useful to group them into categories, partly for aggregation and harmonisation purposes, according to a simplified and partly subjective classification.

Our approach to position companies across the health and wellness spectrum on the one hand, and environmental spectrum on the other, is based on four scores. Two (“healthy food exposure” and “green food exposure”) provide a proxy for reviewing their social and environmental impact profile (contribution to sustainability progress or the Sustainable Development Goals), while two others aim to determine the importance (positive or negative) of sustainability considerations in the investment case context.

**Four scores (two sustainability or SDG-related; two shareholder value-related)**

**Table 63: Healthy food and green food scores**

	Scale	Variable/Capital impacted	Main Sustainable Development Goals (SDGs)/Targets	Comments	Drivers and benchmarks used
<b>Healthy food exposure score</b>	From 1=very low to 5=very high	Human system/social capital	2.1 and 2.2 (hunger, food security, nutrition, sustainable agriculture) and 3.2 and 3.4 (healthy lives and wellbeing)	Company's healthy products impact on the human system (positive nutrition outcomes)	Increasing access to affordable and nutritious food based on products’ nutritional quality, estimated health outcomes (energy density and nutrient wealth, reduced individual ingredients in processed foods that contribute to weight gain, such as sugar or saturated fat). Based on nutritional recommendations (food-based dietary guidelines). Food fortification and vitamin supplementation programmes to needy populations
<b>Healthy food's investment case importance score</b>	From 1=very low to 5=very high	Company's financials		Healthy food impact on the investment case	New or expanding markets, higher sales, margins, heightened customer relationship and brand recognition linked to healthy food and nutrition. Associated with the incorporation of the healthy food and nutrition theme into the long-term strategy (R&D, M&A, marketing and distribution)
<b>Green food exposure score</b>	From 1=very low to 5=very high	Agriculture and food system/natural capital	3.1 and 6.4 (water), 12.3 (food waste), 13.2 (climate change)	Company's products impact on the agriculture and food system	Increasing access to products which minimise negative environmental outcomes. Carbon, water, ecological footprints and relevant broader sustainability issues, such as biodiversity
<b>Green food's investment case importance score</b>	From 1=very low to 5=very high	Company's financials		Green (environmentally friendly) food impact on the investment case	New or expanding markets, heightened customer relationship and brand recognition. New or expanding markets, higher sales, margins, heightened customer relationship and brand recognition linked to healthy food and nutrition. Linked to the incorporation of the green (environmentally friendly) food and nutrition theme into the long-term strategy (R&D, M&A, marketing and distribution)

Source: Kepler Cheuvreux

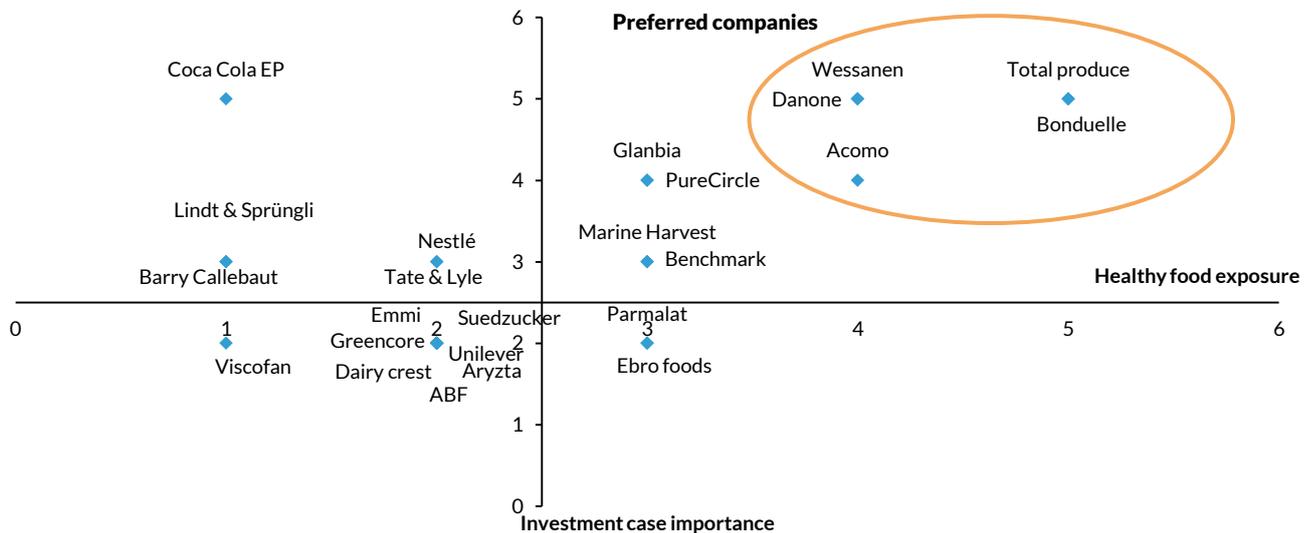
### Picking potential winners and losers

For instance, using a scale from 1 (very weak positive contribution or negative contribution) to 5 (very strong positive contribution) to the transition towards a healthier and more nutritious diet (horizontal axis below), we would broadly rate pure fruit and vegetable companies (e.g. Bonduelle, Total Produce) with a 5 and pure chocolate and meat-related companies with 1.

In our view, rice and pasta names deserve a 3, while dairy and plant-based companies with a portfolio skewed towards nutrition ambitions (e.g. Danone) deserve a 4. We think overall that the financial significance (investment case importance, vertical axis) or upside of healthy food plays is higher than the downside for food companies with significant exposure to products that run against healthy food trends (chocolate, sugar, sugar sweetener beverages).

**Acomo, Wessanen, Danone, Total Produce and Bonduelle stand out for their healthy portfolio...**

**Chart 48: Healthy food exposure vs. investment case importance scores**

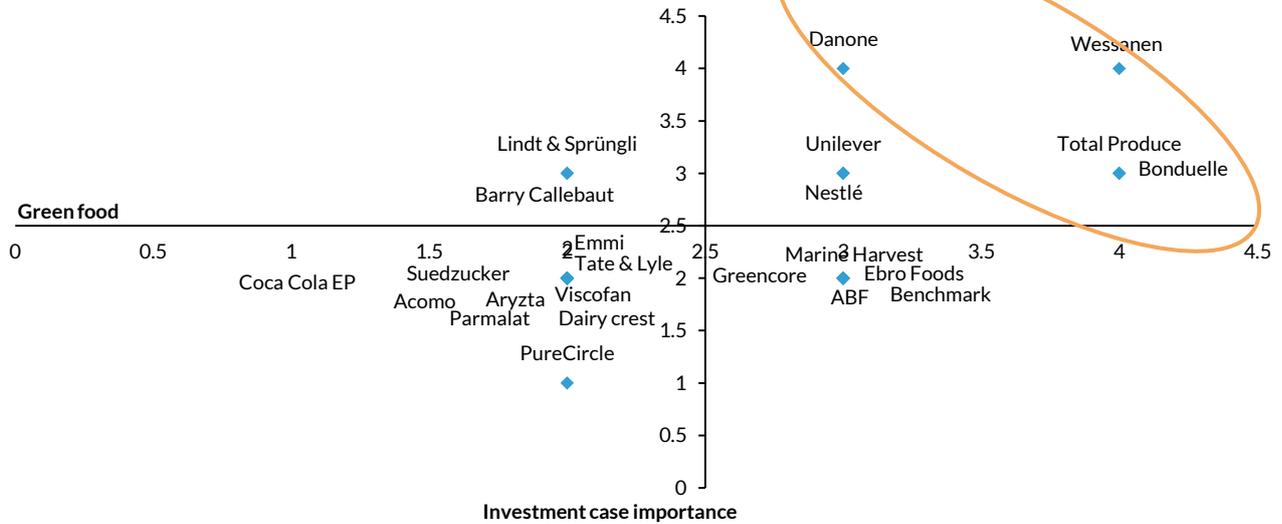


Source: Kepler Cheuvreux

Applying the same approach with “green food” (food with relatively low environmental externalities), we highlight the good positioning of vegetables, fruit, and organic food plays, while, compared to the previous (healthy food) assessment, we have removed companies such as Acomo (trading of spices, tropical fruit, nuts and edible seeds account for c. 80% of group EBIT), which lack environmental impact and sustainability policy credentials on the back of limited disclosure.

**...and are also broadly deemed more environmentally friendly**

Chart 49: Green food exposure vs. investment case importance scores



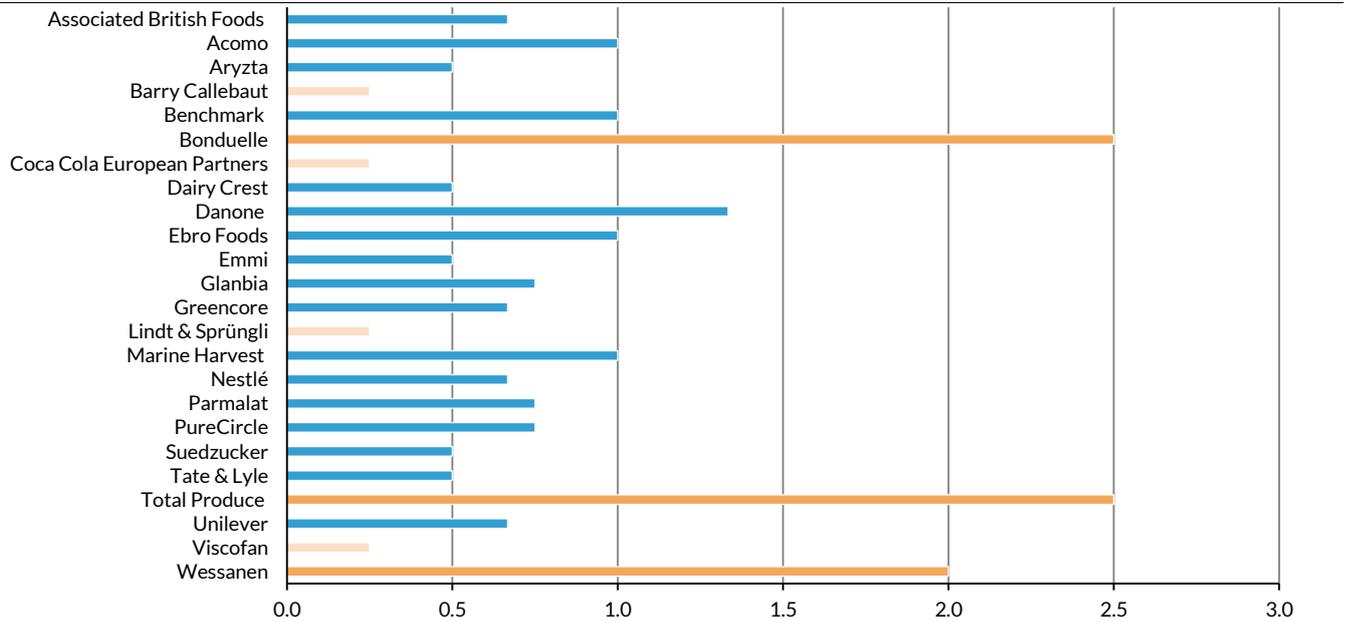
Source: Kepler Cheuvreux

**“Sustainable” food champions: mingling environmental and social KPIs**

Finally, we derive a “sustainable food” exposure score that we define as the estimated positive contribution to a healthier food balanced by the negative environmental impact. This is calculated by dividing companies’ “healthy food exposure” score by their “brown food” score (opposite of “green food”, a benchmark for companies’ negative environmental footprint). **Bonduelle, Total Produce and Wessanen** emerge at the top, while we identify Barry Callebaut, Lindt and Sprüngli, and Coca-Cola European Partners as structurally challenged due to both healthy food and environmental considerations. In the interest of transparency, we outline the main justifications and assumptions for scores in the table at the bottom.

**“Sustainable food” top scorers: we prefer Bonduelle, Total Produce and Wessanen**

Chart 50: Sustainable food ratio (“healthy food” exposure/“brown” or “environmentally intensive” food exposure)



Source: Kepler Cheuvreux

**Table 64: Summary of conclusions (exposure, investment case importance)**

Theme (SDGs contribution)	Value chain level	Our assessment					
		Exposure/contribution (criteria/benchmarks reviewed)	Selected picks	Policy and Strategy (criteria/benchmarks reviewed)	Selected picks	Investment case/Financial impact importance (rating)	Selected picks
1. Healthy food (2 and 3)	Product	Portfolio's alignment with dietary guidelines, nutrient profiling system, offering to low-income customers	<b>Positive:</b> Acomo, Bonduelle, Danone, PureCircle, Total produce, Wessanen; <b>Challenged:</b> Associated British Foods, Barry Callebaut, Coca-Cola European Partners, Dairy Crest, Emmi, Greencore, Lindt & Sprüngli, Nestlé, Unilever, Suedzucker, Viscofan	Portfolio management, product reformulation, portion control, M&A, innovation, responsible marketing and advertising, food quality and safety	Danone, Nestlé, Wessanen	High	<b>Positive:</b> Acomo, Bonduelle, Danone, PureCircle, Total Produce, Wessanen; <b>Challenged:</b> Barry Callebaut, Lindt & Sprüngli, Coca-Cola EP, Viscofan, Suedzucker
2. Green food (2, 6, 12, 13, 14, 15)	Supply chain, Operation and Product	Portfolio's environmental footprint (water, carbon, food waste, ecological, biodiversity)	<b>Positive:</b> Bonduelle, Total produce, Wessanen; <b>Challenged:</b> Dairy crest, Danone, Emmi, Glanbia, Viscofan (indirect), Suedzucker, Tate & Lyle	Carbon reduction science-based targets encompassing the scope 3, food waste, water, forests and land use reduction commitments and progress	Danone, Nestlé, Wessanen	Low	<b>Positive:</b> Bonduelle, Danone, Total produce, Wessanen

Source: Kepler Cheuvreux

Table 65: Healthy food scores (exposure and investment case importance)

Company	Exposure	Comments	Investment case importance	Investment Comments
<b>Diversified Food</b>				
Associated British Foods	2	Most food in unhealthy categories	2	Primark, and not sugar, is key for ABF's case. Changes in market preferences and regulations still mean slower growth forecast in unhealthy food categories (most of food in sluggish growth categories). Meanwhile, on the positive side, enzymes, organic proteins that act as chemical catalysts, are growing particularly fast
Danone	4	Mostly contribute positively, positive nutritional policy momentum, affordable programmes; lingering concerns over dairy	5	Expansion plan in attractive categories illustrated by Whitewave's acquisition while infant nutrition and dairy units are the two dominant growth drivers, followed by water and medical nutrition
Ebro Foods	3	Rice and pasta aligned with nutritional recommendations	2	Lack of reporting on new products suggest tiny exposure (gluten free, ancient grains, 150 calories)
Greencore	2	On the go/convenience categories conflicting with healthy diets. Lack of evidence including targets with regards to health and nutrition, e.g. salt, fat targets mentioned but not quantified. Negative momentum (M&A)	2	Frozen breakfast sandwiches and meal kits for kids continuing their growth path at a mid-to-high single-digit rate. Although there are currently no reasons to expect the trend to turn, there are some concerns on long-term prospects. The nutritional profile of the group's products appears to be running against the general consumer trends towards healthier foods.
Nestlé	2	Ambivalent but positive momentum (reformulation, innovation, M&A)	3	Portfolio change and M&A to buy into faster-growing and higher-margin businesses. Infant nutrition and bottled water among core segments
Unilever	2	Tiny exposure to products with manifest health benefits, more of an improvement for other categories (ice cream, soup, sauces, noodles) - supportive policy	2	Nutrition/Food not a core driver for the stock as a whole (more health)
Viscofan	1	Not a direct influence (the casing is less than 1% of the product) - processed meat classified as carcinogenic however and low in nutrition guidelines	2	Indirect impact should products using casing decline e.g. pork sausages, chicken sausages, turkey sausages, and chocolate sausages
Wessanen	4	No evidence that organic is healthier per se. But clear exposure to positive categories in terms of nutrition recommendations e.g. veggie meals, and improving nutrition policy	5	Healthy food considerations the mainstay of fast growing organic food demand. Food allergies e.g. lactose, gluten, are key and fast growing markets
<b>Cocoa</b>				
Barry Callebaut	1	Chocolate broadly associated with poor diet and health challenges and struggling to reinvent itself as healthy. "Healthier lines with limited associated reporting	3	Positive short term: overall set to benefit from falling cocoa prices and "healthy" trends through higher volumes. Negative long-term
Lindt & Sprüngli	1	Chocolate broadly associated with poor diet and health challenges and struggling to reinvent itself as healthy	3	Focus on low-calories/sugar and high-cocoa content products to cope with "healthy trends" is in our view not likely to be sufficient to maintain top-line growth (market has gone from 2-3% growth to negative, and is expected to remain flat over the mid-term at 1%). Overall, its premium offering has proven to be resistant but not immune to structural pressures

Continued on next page

Company	Exposure	Comments	Investment case importance	Comments
<b>Fruits &amp; Vegetables</b>				
Bonduelle	5	Vegetable pure player. Evidence at the macro level of vegetables benefits. Limited yet supportive data on nutrition credentials for Bonduelle e.g. canned green beans contain as much vitamin C as fresh green beans purchased and cooked 4 days after harvesting. Nutritional policy. We would welcome more quantitative data	5	Core market driven by healthy food demand
Total Produce	5	Evidence overly supportive of fruits and vegetables nutrition benefits, in line with international dietary guidelines (at least 400g (5 portions) of fruits and vegetables a day according to the WHO)	5	Not rated. We note challenging margins and market outlook, with the US momentum driven by organic and convenience rise contrasting with European feeble pace of growth, and modest though growing organic and convenience focus.
<b>Sweeteners</b>				
PureCircle	3	Stevia's nutritional benefits appear manifest based on available data e.g. zero calories. Yet transparency regarding health impact credentials could be improved	4	Well placed to benefit from the buoyant natural no-calorie sweetener market. Stevia is a buoyant USD200-250m market (a five-year volume CAGR of 25%), with favourable- growth prospects
Suedzucker	2	Heavily exposed to caloric sweeteners. Biofuels and functional food ingredients' growth prospects are rather limited	2	The main driver is sugar prices. Growth prospects rather weak for "healthier" businesses. Beneo margin estimated to be above the Special Products' average given the added value nature of this business, possibly at 14-15% (at par with Kerry Group). Special products: a low growth business, mostly in mature markets. Beneo should be the highest growth segment in Special Products, but likely to be fairly low at 2-3%
Tate & Lyle	2	Specialty food (40% of sales and 64% of EBITA ingredients), focuses on low-sugar and high-fibre products	3	Negative: Bulk Ingredients majority of sales (c. 60%) from corn sweeteners, such as HFCS, glucose corn syrups, crystalline fructose and dextrose – highly dependent on the declining US carbonated soft drink market (>75% bulk sweeteners consumed by the beverage industry). Positive: Specialty food (focus on low-sugar and high-fibre products), new products (e.g. natural sugar with reduced calories). Net impact of healthy food trends rather positive. But utilisation matters: healthy products produced in the same plants as the high-fructose corn syrup means a negative pressure on volumes in bulk to have a negative margin effect on speciality too
<b>Fisheries</b>				
Benchmark	3	Benefits of fish include high omega-3, fatsprotein and amino acid content, and low saturated fats	3	Fish market structural growth driven by health considerations (seen as healthier than meat)
Marine Harvest	3	Benefits of salmon include high omega-3, fatsprotein and amino acid content, and low saturated fats	3	Salmon market structural growth driven by health considerations (seen as healthier than meat)
<b>Bakery</b>				
Aryzta	2	Bread products rather seen as unhealthy although recommended in fairly high quantity in the Mediterranean diet (provision of complex carbohydrates (starch))	2	Low negative to no market impact. Bakery also trying to leverage trends such as higher protein, natural grains, organic etc. Tasty gluten-free bread seen as a potential breakthrough
Nuts and seeds Acomo	4	Dried fruits, nuts and tea, all favoured as part of a balanced diet but lack of reporting	4	Growing demand for healthy & packaged food a clear positive (healthy snacks)

Continued on next page

Company	Exposure	Comments	Investment case importance	Comments
<b>Dairy</b>				
Dairy Crest	2	Lower fat options for products whose consumption is recommended to be kept low	2	An increase of negative signals concerning the effect of lactose in dairy products may lead to more consumers switching to dairy-free products
Emmi	2	Dairy products whose consumption is recommended to be kept low	2	Potential customer switch to dairy free products
Glanbia	3	Ambivalent. Products for which the benefits are more apparent include whey powder for lactose allergy. Health claims challenges and concerns associated with Sports nutrition	4	Some positive drivers but various levels of impacts and sales exposure. More than 75% of EBIT is generated in businesses with links with the health theme. Overall, long-term growth rate of 2.5%, which is slightly above the 2% we would normally use for FMCGs in order to reflect the growth potential of the category. A large expansion in cheese production could lift earnings power by another 10% beyond 2018E
<b>Animal nutrition</b>				
Benchmark	4	Benefits of fish include high omega-3, fatsprotein and amino acid content, and low saturated fats	3	Fish market structural growth driven by health considerations (seen as healthier (low saturated fats, rich in omega 3) than meat
ForFarmers	2	Overwhelmingly exposed to meat consumption. Can play a positive role in terms of animal health (e.g. products to reduce piglet mortality and stress levels)	2	Feed producers play an important role in translating healthy food-related new laws (e.g. EU ban of the use of antibiotics as a non-medicinal growth promoter into new solutions and controlling costs, hence triggering a new wave of innovation which in our view favours more complex players such as ForFarmers
<b>Beverages (Sodas)</b>				
Coca Cola European Partners	1	Portfolio skewed towards sugar heavy drinks. Positive momentum for low calories products lined	5	Health is a bigger issue in a small number of other markets (egg UK, Germany, Netherlands). All in all, we also think the negative impact from sugar taxes is limited, especially as CCEP will realise substantial synergies in the next few years

Source: Kepler Cheuvreux

Table 66: Green food scores (exposure and investment case importance)

Company	Exposure	Comments	Investment case importance	Comments
<b>Diversified Food</b>				
Associated British Foods	3	Overall, ABF's policies, processes and transparency could be enhanced to reflect the latest developments and best practices	2	Tiny organic food exposure
Danone	3	Broadly ticks the main boxes in terms of policy (carbon neutrality, zero deforestation, transparency, food waste), crucial considering dairy environmental footprint. Global B Corp plan supportive.	4	Environmental credentials central to the company's value proposition towards customers (e.g. Dannon US Pledge)
Ebro Foods	3	Local programmes but limited disclosure. Limited environmental footprint	2	Lack of disclosure
Greencore	3	Limited transparency e.g. no breakdown of RSPO between various categories (e.g. segregated, mass balance), and no indication of certification requirements in the US for "high risk commodities"	2	Lack of disclosure nor evidence this is material for these categories (besides "freshness")
Nestlé	3	Dedicated guidelines go beyond broad references, best-in-class control of supply chain, science based carbon reduction commitment, deforestation	3	Gathering pace in customers mind but still far from being core
Unilever	3	Strong credentials in terms of policy, commitments; categories not linked with strong negative footprints	3	Broad sustainability strategy helps enhance brand and reputation
Viscofan	2	Paves the way to the sector shift from natural to artificial (collagen) casings, which reduces the use of animal products	2	No clear strategy but no evidence of negative business impact
Wessanen	4	Categories exposure (vegetarian) and organic, certification focus suggest a rather low/improving footprint	3	Key driver to vegetarian demand.
<b>Cocoa</b>				
Barry Callebaut	2	Cocoa linked to deforestation, child labour, biodiversity loss. 23% of certified cocoa, 100% of "sustainable ingredients" targeted by 2025	3	Positive: cost premiums for "sustainable" chocolate can be passed on and may enhance profitability, thanks to its cost-plus strategy
Lindt & Sprüngli	2	Cocoa linked to deforestation, child labour, biodiversity loss. 57% of cocoa "verified". Supportive strategy and targets on sustainable sourcing (100% verification by 2020).	3	Positive: cost premiums of "sustainable" chocolate can be passed on and enhance profitability, while helping maintain a "premium" brand's reputation amid customers' concerns
<b>Fruits &amp; Vegetables</b>				
Bonduelle	4	Evidence backing vegetables environmental footprint. Small-scale programmes and innovation focused on alternative farming methods (we would welcome more quantitative data)	3	Assumed part of the market demand driven by environmental considerations
Total Produce	4	Small organic presence. While it is likely that Total Produce environmental and Social impact is lower than its peer due to its policies and focus, we have no data to make any definite claims	3	Not rated. Good momentum in North-American consumption (c. USD60bn market, +1.5%) driven by organic food consumption and convenience (5% of the company's sales)
<b>Sweeteners</b>				
PureCircle	2	Its stevia carbon footprint is 60% lower than other stevia sweeteners, 55% lower than beet sugar, 79% lower than high fructose corn syrup and 29% lower than sugar can based on its commissioned LCA study. Good traceability policies	1	No indication it plays an important role
Suedzucker	2	While Suedzucker's production has little exposure to deforestation issues, it still has an impact in terms of water consumption and pollution.	2	No indication it plays an important role
Tate & Lyle	2	Water the main environmental issue in terms of its production (due to weather patterns). We also note its exposure (and potentially growing) to GMOs.	2	No indication it plays an important role
<b>Fisheries</b>				
Benchmark	3	Benefits in terms of environmental footprint (water, carbon) compared to other protein sources to be balanced with wider industry challenges such as biosecurity, local pollution, potentially high food waste	2	Attractive play on solutions for sustainability and food efficiency (e.g. vaccines reducing antibiotics use)
Marine Harvest	3	Benefits in terms of environmental footprint (water, carbon) compared to other protein sources to be balanced with wider industry challenges such as biosecurity, local pollution, potentially high food waste	2	Environmental benefits not central but improving in some respects, including outlook for alternative to fish meal (algae, single cell proteins, insects)
<b>Bakery</b>				
Aryzta	2	Low footprint and limited policy	2	No indication it plays an important role

Continued on next page

Company	Exposure	Comments	Investment case importance	Comments
<b>Nuts and seeds</b>				
Acomo	2	Limited reporting. Lack of evidence around eco-friendliness amid mounting scrutiny over environmental and social issues (e.g. water use for almond)	2	No indication it plays for now an important role
<b>Dairy</b>				
Dairy Crest	2	Concerning dairy environmental footprint. No Science based target	2	Lack of disclosure
Emmi	2	Concerning dairy environmental footprint. No Science based target	2	Lack of disclosure
Glanbia	2	Glanbia exhibits high standards of quality control, integrating sustainability areas in its milk supply chain management, although consolidated environmental and social data across the group would be welcome	2	No indication it plays an important role
Parmalat	2	Concerning dairy environmental footprint. No Science based target	2	Lack of disclosure
<b>Animal nutrition</b>				
Benchmark	3	Benefits in terms of environmental footprint (water, carbon) compared to other protein sources to be balanced with wider industry challenges such as biosecurity, local pollution	2	We see Benchmark as an attractive play on solutions for sustainability and food efficiency (aquaculture).
ForFarmers	2	Raw materials used in animal feed, such as corn, have a very large environmental footprint, in particular in its use of water and application of fertilisers and pesticides	2	Its measures focusing on improving the use of residual products and feed efficiency tie in well with its strategy to become the trusted farm advisor and its focus on TotalFeed, as well as capitalising on new legislation.
<b>Beverages (Sodas)</b>				
Coca Cola European Partners	2	Efforts focused on water footprint	2	No indication it plays an important role

Source: Kepler Cheuvreux

## What is next: methodological developments at a glance

Although underpinned by an in-depth assessment of companies' portfolios, policies, strategies, and available evidence of health benefits, our ranking has several significant limitations due to data gaps and assumptions made.

Below, we flesh out the methodological considerations that we have built on to develop our proprietary assessment as well as external projects that we think highlight the wide range of challenges being faced and, more importantly, help move the needle in terms of an investor-friendly assessment of the social and environmental impact of food companies.

### Healthy and sustainable food products assessment: new tools

The Holy Grail is an objective and science-based assessment of companies' products "health/wellbeing" profile, and potential "net health impact" (health impact via products' use balanced by their health impact via environmental externalities). While it doesn't exist (yet?), we see clear efforts to work towards these goals and signs of progress.

Our work draws upon several ongoing methodological developments undertaken by various stakeholders that provide a quantitative assessment of the health and/or environmental footprints of companies' portfolios.

We outline four of them that illustrate a range of objectives and approaches:

1. The **Access to Nutrition (ATN) Index** (portfolio product profile, health only).
2. **Hudson Institute**, leveraging data from the Nutrition Coordination Centre (University of Minnesota) focused on the business case for lower-calorie options.
3. The **Barilla Center for Food and Nutrition Foundation** (health and environment).
4. **Sycomore AM/Quantis** environmental contribution (health and environment).

*Progress towards more objective, investor-friendly and robust external assessment of companies' health/wellbeing impact profile*

*A range of objectives illustrated by four approaches*

**Table 67: Methodological developments (spectrum of approaches)**

Source	Companies focus	Health and/or Environment	Business case	Assessment	Score	Findings
Access to Nutrition (ATN) Foundation	Yes	Health only	No	The "healthiness" of companies' portfolios based on the Health Star Rating (HSR) nutrient profiling system (negative nutrients score is combined with positive nutrients score to arrive at a final score converted to a scoring from 0.5 to 5.0)	1 to 5	The data enabled essentially to highlight the two extremes: the positive exposure to healthy food products of dairy companies, and conversely negative for confectionery.
Hudson Institute/ Nutrition Coordination Centre	Yes	Health only	Yes	Financial impact of better-for-you products and lower-calorie products/menus (sales, margins, operating profit) based on health and product portfolio assessments	No (but quantitative assessment based on business metrics)	outperformance of lower-calorie options for consumer packaged goods, restaurant chains, super markets
Barilla Center for Food and Nutrition Foundation	No (but tested by us)	Both, separately or together	No (but tested by us)	Two pyramids for food categories, menus based on the recommended intake and environmental footprint (carbon, water, ecological footprints). We used those to map companies based on their sales breakdown.	No (us: 0 to 5 for each variable separately)	Fruit and vegetables score well for both the recommended intake and the environment, sugar poorly for intake but moderate for environment, dairy in between for both
Sycomore AM, I Care & Consult and Quantis	Yes	Both, together		Net Environmental Contribution (to the energy and ecological transition) metric. Minimisation of three negative impacts (climate, water and biodiversity) per unit of nutrient (proteins, lipids and carbohydrates)	-100 to 100%	Companies providing red meat from intensive cattle farming (e.g. JBS) have a score close to -100%, while companies providing vegetables (e.g. Bonduelle) and organic vegetal food (e.g. Wessanen) have a score between +50% and +100%.

Source: Kepler Cheuvreux

### First approach: nutritional profiles

More than 100 nutrient profiling models have been developed around the world over the last few years for a variety of purposes. Two were selected by the Access to Nutrition (ATN) Index (ATNI) to use in its product profile exercises, which assess companies' nutritional quality. The "Health Star Rating", or HSR, provides one rating, from 0.5 to 5 stars, based on products' nutritional quality to inform customers' purchasing decisions. The WHO EURO model screens products for marketing purposes (WHO Euro).

**Background: support customers information and marketing**

**Table 68: Main nutritional profiles**

Name	Organisation	Country/Region	Date	Description	Scoring method	Positive nutrients	Negative nutrients
Health Star Rating (HSR) nutrient profiling system	The George Institute for Global Health	Australia	2014	This system analyses the level of several positive nutrients (e.g. fruits and vegetables and fibre) and several negative nutrients (e.g. salt and fats) in products and generates a rating for each product from 0.5 stars (the lowest rating, indicating a product has low nutritional quality) to five stars (the highest rating, indicating that a product has a high nutritional quality).	Negative nutrients score is combined with positive nutrients score to arrive at a final score converted to a Health Star Rating from 0.5 to 5.0.	Protein, fibre, fruit, vegetable, nut and legume content (FVNL) Calcium	Energy, saturated fat, total sugars, sodium
WHO EURO	WHO Organisation's European Regional Office	Europe	2015	Nutrient profiling method built to policies to restrict food marketing to children. The model operates by first requiring foods to be allocated to one of 20 categories. Products are then checked against category-specific compositional thresholds for nutrients and other food components. A product must not exceed on a per 100g/mL basis any of the relevant thresholds for that product category if marketing is to be permitted. Results under this model are simply expressed on a binary basis i.e. marketing permitted or marketing not permitted. Although originally developed in Europe, the model is being adapted for other WHO Regions.	Products must not exceed category-specific thresholds per 100g/mL to be permitted to market to children	n.a.	Total fat, saturated fat, total sugars, added sugars, artificial sweeteners, trans fat, sodium

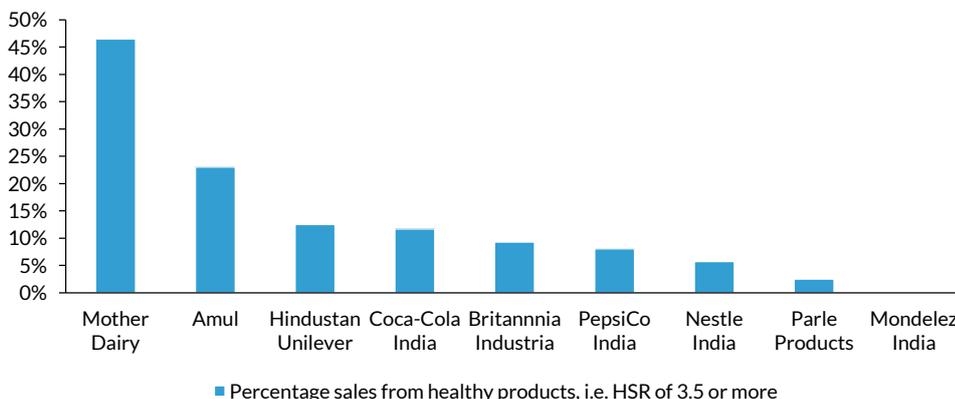
Source: ATNI

### Investor-focused initiatives: the Access to Nutrition (ATN) Index

While nutrient profiling systems have been developed for a wide range of purposes, we see a clear trend towards their better use to inform customers and investors. We highlight specifically the Health Star Rating (HSR) nutrient profiling system that has been used in the context of the latest “Access to Nutrition” country index focused on India ([link](#)). This research provided hard data for the first time about the healthiness (or otherwise) of companies’ product portfolios. Not only does it confirm the two obvious extremes, i.e. a broadly positive (healthy) portfolio of dairy companies, and conversely, the low nutritional quality of a confectionery portfolio, it also enables deeper insight into the portfolios of companies along the spectrum.

**Nutrition profiling systems used in corporate rankings for investors (dairy companies favoured)**

**Chart 51: Percentage sales from healthy products (India ATNI)**



Source: ATNI

Moreover, the forthcoming 2018 Global Access to Nutrition Index will pilot a global product profile that assesses the "healthiness" of the portfolios of 22 index companies in nine countries using these same two nutrient profiling models. If this pilot is successful, it will become an integral part of future indexes, tracking the nutritional quality (healthiness) of these companies' portfolios over time, helping investors to determine the exposure of companies to the healthy eating trend and demonstrating whether they are delivering on commitments to improve the formulation of their products.

**The forthcoming 2018 Global Access to Nutrition Index will pilot a global product profile that assesses the "healthiness" of the portfolios of the 22 index companies in nine countries**

**Table 69: Research applications of Nutrient profiling systems**

Name	Original scoring system	Research application	Findings
Health Star Rating (HSR) nutrient profiling system	Depending on which category the product falls into, it is converted to a Health Star Rating from 0.5 to 5.0 stars that can be displayed in a logo on the front of the pack	Front-of-pack nutrition labelling. Use in the ATNI India and 2018: Weighting the HSR for each product category by the sales of that category, and re-basing that score on a scale of one to 10, generates the overall Product Profile score. A score of 10 indicates that all of a company's sales derive from the healthiest possible products; a score of one indicates that a company's revenues are generated from selling only the least healthy products	Favours dairy companies and downgrades chocolate, SSB. India: Mother Dairy, Hindusta Unilever and Amul sell the largest proportion of healthy products among the companies assessed. PepsiCo India and Mondelez India rank lowest on the product profile study in eighth and ninth place, respectively, indicating that their product portfolios are least healthy according to the product profile, which assessed the nutritional quality of companies' sales.
WHO EURO	Depending on the product category, marketing to children is either never permitted (e.g. for confectionery), or only permitted if the product does not exceed specified thresholds of negative nutrients per 100g/mL	Regulation of marketing to children	n.a.

Source: xxx

**Nutrient profile system: key findings**

*In this section we include the input from the Access to Nutrition Index, which sets out the key findings of the methodology to assess the nutrient profile of companies' portfolios.*

The Australian Health Star Rating nutrient profiling system was used to determine how healthy each product was. Products are rated between 0.5 stars (least healthy) to 5 stars (most healthy). Products that achieve between 3.5 and 5 stars are considered "healthy" in this study. The cutoff point of 3.5 or above ( $\geq 3.5$  HSR) is based on work commissioned by the New South Wales Ministry of Health in Australia, examining the alignment of HSR with existing school food service provision standards and the Australian 2013 Dietary Guidelines. That study found that "healthy" core foods with a HSR of  $\geq 3.5$  can be confidently promoted in public settings as healthier choices. Sweet biscuits and spreads are, for instance, rated below 1; drinking milk products from 2 to 3; yogurt and sour milk 3 to 3.5; frozen fruit and vegetables 5.

The ATN Index also generates companies' overall product profile score, which is derived by weighting the average Health Star Rating (HSR) generated by the George Institute for each product category multiplied by their sales in 2015 in those categories in India, using data from Euromonitor. These scores (which are also on a

**Access to Nutrition Index input**

**The Australian Health Star Rating (HSR) nutrient profiling system was used to determine how healthy each product was**

scale of 0.5 to 5) are then translated into scores on a scale of 1 to 10 to align with the corporate profile scoring scale for easier interpretation.

One key finding was that there were discrepancies between companies' figures for the percentage of their portfolios that met their own healthy standard and the figures generated by the Health Star Rating. This appears to be because HSR is more stringent and therefore rates some products lower than the nutrient profiling systems used by the companies reviewed.

Link to the India report:

<https://www.accesstonutrition.org/sites/in16.atnindex.org/files/resources/atni-india-spotlight-index-2016-1.pdf>

### Second approach: linking low-calorie products with the business case

The Hudson Institute (a US think tank) has conducted a series of research projects that explored the business impact (sales, margins and operating profit) of better-for-you products and low-calorie options sold by consumer packaged goods companies, supermarkets and restaurant chains in the US. The classification of low-calorie criteria (guidelines) built upon, among other things (e.g. Nielsen ScanTrack and IRI sales data), the expertise of the University of Minnesota Nutrition Coordinating Center (NCC). When comparing the growth of these categories with high-calorie products, data suggested an outperformance.

**Health Star Rating (HSR) is more stringent than companies' definitions**

**Higher-calorie products outperform lower-calorie products**

**Table 70: Hudson institute research findings overview**

Author	Year	Period	Focus	Title	Findings
Hudson institute	October 2011	2006 and 2011	Consumer packaged goods (CPG) companies	Better-For-You Foods: It's Just Good Business	15 leading CPG companies that grew their lower-calorie/BFY foods and beverages enjoyed superior sales growth, operating profits and operating profit growth. Criteria for Better-For-You categories were developed by Hudson Institute with the assistance of The Nielsen Company.
Hudson institute	February 2013	2006 and 2011	Restaurant chains	Lower Calorie Foods: It's Just Good Business	Restaurant chains that grew their lower calorie menu servings enjoyed greater same-store sales, traffic and total servings gains
Hudson institute	May 2013	2006 and 2011	Healthy Weight Commitment Foundation member companies	Lower Calorie Foods and Beverages Drive Healthy Weight Commitment Foundation Companies' Sales Growth, Interim Report	Lower-calorie products drove 82% of the sales growth among the HWCF member companies, over four times the rate of higher-calorie products
Hudson institute	2015	2008-13	Supermarkets	The Better-for-you Business Case: How Is the Supermarket Sector Shaping Up?	Lower-calorie growing more than higher-calorie, but more slowly than for CPG and restaurant chains

Source: Hudson institute

In our view, this market-based approach can be complemented by data providers such as Euromonitor, which have a wide range of classifications for all products with health and wellness considerations (addressed in the macro section of this report), and to a certain extent company-specific data (e.g. Nestlé's reported performance of businesses with a nutrition, health and wellness dimension).

**Third approach: proprietary review based on nutritional guidelines**

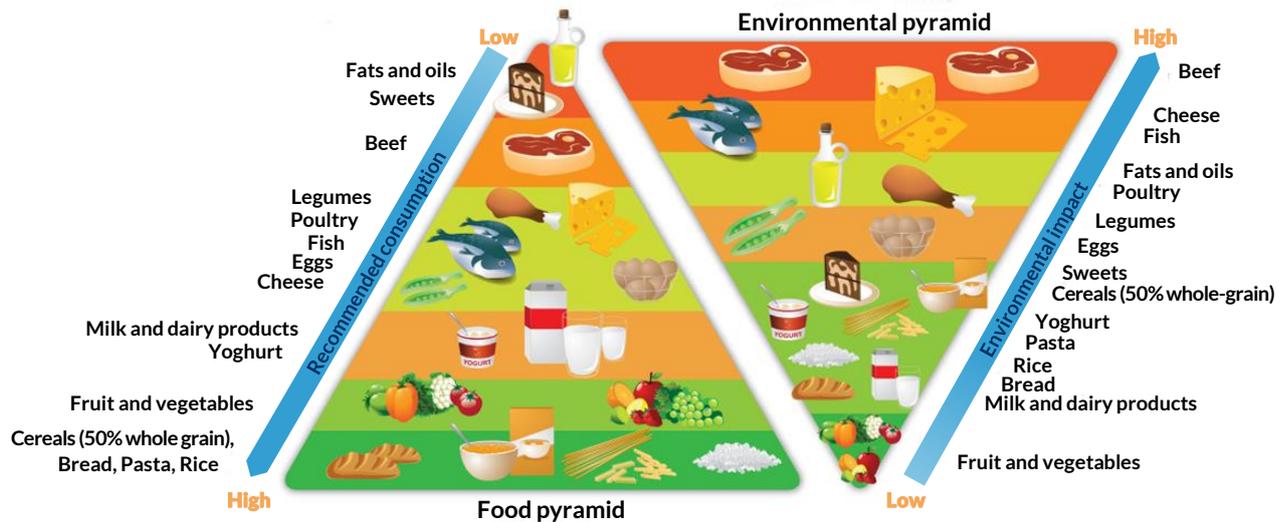
We also see an alternative approach as potentially useful as a first screener of companies’ portfolios based on publicly available data: mapping companies’ portfolios against dietary guidelines and product categories’ carbon footprint.

The Barilla Center for Food and Nutrition (BCFN) usefully provides a database on a range of food ingredients and categories for both:

1. The **recommended intake** (so-called “food pyramid”) for a balanced diet (recommendations to follow the Mediterranean model (whole grains, fruits and vegetables, lean proteins and legumes, extra virgin olive oil)).
2. The **environmental footprint** (so-called “environmental pyramid”) built on three main areas of impact (carbon, water and ecological, which is basically defined as the area of land required), and which draws on a meta-analysis of lifecycle studies that have been done. The box and tables below provide more details.

**Crossing environmental footprints and dietary guidelines (Barilla Center for Food and Nutrition): “Healthy People, Healthy Planet”**

**Chart 52: Barilla Center for Food and Nutrition Food and Environment pyramids**



Source: Barilla Center for Food and Nutrition

**Dietary guidelines:** “The key message conveyed by the Double Pyramid is the relationship between the environmental impact of food production and consumption, and its nutritional aspects. In particular, a diet which follows the recommendations of nutritionists can be sustainable from a social (“Good for You”), environmental and economical viewpoint.” “The general principle of the Barilla approach is a support to the Mediterranean diet<sup>27</sup> .”

<sup>27</sup> The traditional Mediterranean diet is a nutritional model that is characterised by its great variety of foods and its strong nutritional balance: it consists of a high intake of vegetables, legumes, fruit and dried fruit, olive oil, and cereals (50% of which are whole grain), a moderate intake of fish and dairy products, and a low intake of red meat, white meat, and sweets (source: Barilla)

The BCFN has crossed environmental and nutritional data on specific menus (e.g. vegan, vegetarian, and “sustainable”, meat-based). “The sustainable (or BCFN) menu includes both meat and fish, with a preference for white meat, and provides a balanced consumption of vegetable or animal proteins.”

**Tentative assessment of Kepler Cheuvreux’s food universe**

Although this database was neither designed for nor tested on companies’ portfolios, it is widely referenced by those that are favoured by this approach in their reporting (e.g. Wessanen, Total produce). We have carried out a tentative assessment on Kepler Cheuvreux food universe based on companies’ sales exposure (percentage) to the following food categories: bread & rolls, biscuits, cookies, crackers, dairy, butter & spreadable fats, cheese, milk, dairy products, fruit, fish & seafood, meat, pasta, rice & noodles, sugar, and vegetables.

**Table 71: Barilla Center for Food and Nutrition Double Pyramid indicators**

Indicators	Unit	Description
<b>Food pyramid</b>		
Nutritional guidelines	In grams per serving	Recommended consumption in grams per serving, which can be traced back to the “Mediterranean diet”
<b>Environmental pyramid</b>		
Carbon footprint	CO2eq	This identifies the greenhouse gas emissions responsible for climate change and is measured as mass of carbon dioxide equivalent
	gCO2 – eq per kg or litre of food	
Water footprint	m3	This quantifies water consumption and how the resource is utilised, and is measured in volume, litres or cubic metres, of water
	Litre of water per litre or kg of food	
Ecological footprint	Global ha	This calculates the area of biologically productive land required to provide the resources and absorb the emissions associated with a production system, and is measured in square metres or global hectares i.e. land occupation and not transformation
Environmental pyramid	m2	The Environmental Pyramid is constructed using the Ecological Footprint alone, selected for its ease of communication associated with the unit of measure used m2 global per kg or litre of food

Sources: LCA database (Ecolinvent, LCA food, Water Footprint Network, Ecological Footprint Network), Verified publication (EPD, Climate Declaration).

Source: Kepler Cheuvreux

After normalising these data (on a scale from 0 to 5), we derive two rough scores by product category:

- Food pyramid score (“healthy food exposure score”).
- Environmental footprint or “green food” score (using a proprietary weighting of the three types of environmental impact).

**Our proprietary environmental weighting framework**

Imagine you had to choose between two food items: one has higher water consumption; the other has a higher carbon footprint. Water consumption is measured in cubic metres of water per tonne of product. Carbon is measured in tonnes per tonne of product. What is the best way to compare apples and oranges?

In her “*Bigger than carbon: a systemic view report*” ([link](#)), Julie Raynaud suggests a proprietary weighting system between environmental themes expressed in different metrics in order to derive a single score for each product, activity or company.

**Input from ESG analyst Julie Raynaud: How to compare apples and oranges?**

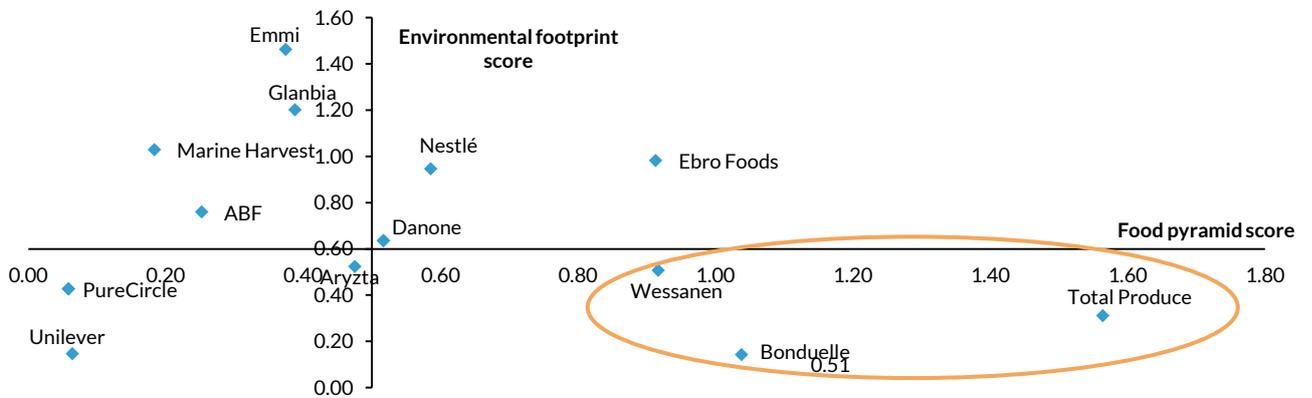
The weighting is based on the actual impacts that the consumption of water or the emission of carbon had on the environment, and ultimately society, building on peer-reviewed scientific and academic research. Framing “impact” as societal value creation or loss is useful to compare environmental performance across multiple themes and measurement units in a systematic and context-based way.

On average, a tonne of carbon costs EUR41 to society, through increased weather-related damages, premature mortality, increased morbidity, changes in agricultural production patterns and the like. Water consumption costs EURO.6 per cubic metre, through negative biodiversity impacts, increased malnutrition and water-borne disease. Land occupation (or ecological footprint in our framework) costs EUR2,500 per hectare through the loss of benefits that natural land provides to society, for example carbon sequestration and air quality filtering. Of course, these are global averages and hide significant regional and local differences.

In our framework, we weight the carbon, water and ecological footprint of food items as per the societal costs above, in order to derive an aggregated impact-based score that takes into account all the aspects derived above.

We then sales-weighted companies’ portfolios (revenues share by category) to yield company scores (see the chart below).

**Chart 53: KECH food and environmental pyramid scores**



Source: Kepler Cheuvreux

**A moving target: Important limitations**

We underscore at least three types of limitations related to this methodology that could be refined in future assessments. Many of these also apply to our “sustainable food score” presented before and could lead to significant changes in the order. Our general message is to reassert that there is no “one size fits all” approach and continuously evolving evidence.

**Data need to be contextualised**

**Table 72: Methodological obstacles to using the Environmental and Food pyramids data to assess companies**

#	Topic	Description
<b>1</b>	<b>Uncertainty in the estimates of sales exposure to categories and attribution</b>	
	Commodities environmental footprint missing data	Missing data: sugar, water for ecological footprint and fish for water footprint are assumptions based on external sources (e.g. All About Feed for water)
	Choice of commodities/food categories	Water as a product category has been removed as we lacked data on the ecological and water footprints and it would have strongly affected the results (e.g. it would have boosted Danone and Nestlé)
	Choice of attribution approach for some commodities	Pasta and rice: we used an average of the two categories separated to group them (as lacked detail on the sales breakdown for the company most exposed in our coverage); dairy: we used the average of milk and yogurt. We use "yogurt's" footprint as a proxy for the "other dairy products" category mapped for our universe
	Companies reporting format	Companies' reporting lines may make it easier to link them to certain product categories, while they are in fact heterogeneous. Moreover, our choice of food categories here is not exhaustive
	Temporality	This is based on past or current data (2016 <sup>E</sup> sales, including many estimates) and ignores the ever evolving nature of this topic, including companies' exposure (the momentum for companies is tackled in various sections of this report)
	Categories overlaps	For companies whose categories exposure data did not fully overlap with BCFN's data, we assumed that the share of the portfolio covered is representative of the whole portfolio
<b>2</b>	<b>Nature of data collected</b>	
	Type of indicator	We focus on the theoretical outputs <sup>28</sup> as a proxy of potential outcomes based on sales exposure, not the outcomes and impact per se (a thorough net impact analysis would cover also e.g. 1) distinct targeted population groups, on the customer-side, e.g. with a specific lifestyle or dietary practice, and e.g. on the supply-side e.g. impact of raw material shifts, or how the food is grown; 2) all types of health impacts from the food systems: occupational hazards, environmental contamination, contaminated, unsafe and altered food, unhealthy dietary patterns, and food insecurity).
	Message	We do not aim to "demonise" product categories and acknowledge that certain products are purchased for their taste, not health or wellness, that multiple factors need to be considered to review the range of health risks and benefits, and that context obviously matters (food security includes four elements: availability, access, utilisation, and stability)
	Geography	No geographical criterion is used. Africa and Asia bear the greatest share of malnutrition in all its forms, which raises for example the question if a KitKat bar sold by Nestlé in a wealthy urban area in Europe worth the same as one sold in an impoverished neighbourhood in developing countries.
	Variations in the data sourced	The original data points on environmental data vary (we have used here post-cooking estimates)
	Policy and strategy	We do not rate the robustness of companies efforts here (which we looks at in various sections of this report)
	Evidence	There remains much debate about the health and environmental impacts of categories reviewed here. Dairy is a case in point (lack of consensus on the role of saturated fats)
	Nutrition and environmental impact	There are continuous arguments about the calculation of the functional unit (FU) of foods in the context of lifecycle (field to fork) assessments
	Sample	Our scores are normalised based on our sample, not absolute figures. Small private sector companies are not addressed
	Weighting	We have aggregated carbon, water, and ecological footprint data based on a specific weighting method which is a global average and a modelling subjected to uncertainties (particularly strong for biodiversity)
<b>3</b>	<b>Those intrinsic to the guidelines recommendations</b>	
	Coverage	There are stumbling blocks to build a comparison of diets across socioeconomic groups, ages, geographies, time and cultures (a pilot project – the FAO/WHO Global Individual Food consumption data tool aims to bridge that gap). As the affordability of nutritious food is of paramount importance, some studies have, for instance, criticised the varying effect of the Mediterranean diet based on the customer group ( <a href="#">link</a> )
	Diets bias	There are a great deal of possible diets not emphasised here. Some agricultural commodities (e.g. maize) and diets are better known, as they are more studied than others (e.g. supportive evidence that Mediterranean diet helps mitigate cardiovascular disease).
	Health and "junk" food definitions	Product profile assessment based on multiple nutritional parameters can yield finer results

Source: Kepler Cheuvreux, PRé Consultants

<sup>28</sup> Outputs are direct products of an organisation's activities (e.g. clients provided with services, goods produced, training delivered). Outcome: the ultimate changes in a system, intended or unintended, that result from an organisation's decisions; for example, the contamination of a river, workforce retention or an improvement in the standard of living of employees. Impact: the proportion of the total observed outcome that can be attributed to a company's activity above and beyond what would have happened anyway. Source: PRI

### Fourth approach: the “Net Environmental Contribution Metric”

Other sources of environmental metrics include Ademe and Quantis, which provide a publicly available carbon-focused database on food ingredients and menus. This has been used to build a methodology named the “Net Environmental Contribution Metric” developed by Sycomore AM together with I Care & Consult and Quantis in order to evaluate the environmental impact of a company, portfolio or index. In this approach food companies are evaluated based on the minimisation of three negative impacts (climate, water and biodiversity) per unit of nutrient (proteins, lipids and carbohydrates).

**Developments to fine-tune the assessment of the functional unit to overcome limitations of calories use and reflect nutritional parameters**

**Table 73: BCFN vs. other available sources (Ademe, Quantis)**

	Food	Number of ingredients covered	Environmental	Sources
The Barilla Center for Food and Nutrition Double Pyramid	Grams per serving, weekly and daily wellness quantities per ingredient	21	Carbon footprint, water footprint, ecological footprint	LCA database (EcoInvent, LCA food, Water Footprint Network, Global Footprint Network), EPD, Climate Declaration™
Ademe, Quantis	Ingredients, dishes and meals/menus	139	Carbon footprint	Base carbon, Ecoinvent, Quantis, WFLDB 3.0

Source: BCFN, Ademe, Quantis, Kepler Cheuvreux

### A look at the future

Companies themselves are aware of the demand for better reporting on both environmental and social aspects. Although this seems to be at a very early stage, work is also underway in the context of the company-led FReSH (Food Reform for Sustainability and Health program) project (link), which includes the ambition to develop “guidelines on healthy and sustainable diets taking into account social and environmental considerations”.

**Corporates to beef up their reporting**

## Investment outlook and conclusions

We believe that food that is perceived as healthy will continue to win market share against products seen as overly processed and industrialised, which is likely to be compounded by government efforts to reduce fat and sugar consumption through taxes and other initiatives. In this context, we prefer companies that already have healthier portfolios such as Danone and Marine Harvest, or provide replacements for unhealthier products such as PureCircle. Medium term, we would not bet against other large FMCGs that are making efforts to switch their portfolios towards healthier products.

### Deflation pressures

*How to play the healthy food theme?*

#### Big impact on growth

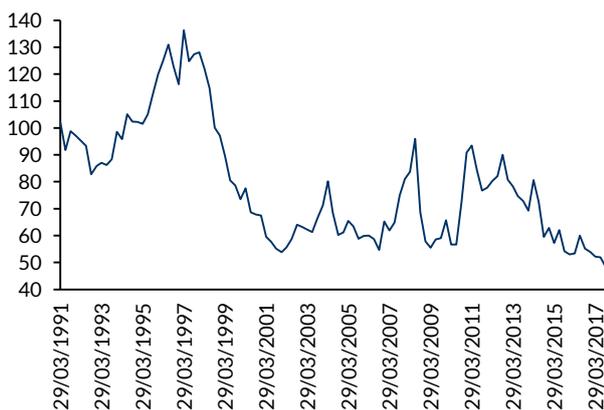
While the focus is on fast-changing consumer trends and the impact on larger industrialised players that are seen as having an unhealthy portfolio, an environment of deflation is probably the single biggest issue weighing on the consumer staples space. If the overall market were growing faster, the loss of market share would not be such a cause for concern. Using Nestlé as a proxy for the space, in the five years to 2012, it grew 6.4% organically, split equally between price and volume. In the five years through to 2017, average growth is expected to be less than 4%, with the price component more than halving. With the world expected to move into a more inflationary environment, pricing should pick up.

**Key issues: healthy food outperformance, Economic context, stock picking**

*Input from Jon Cox, Head of European Consumer Research*

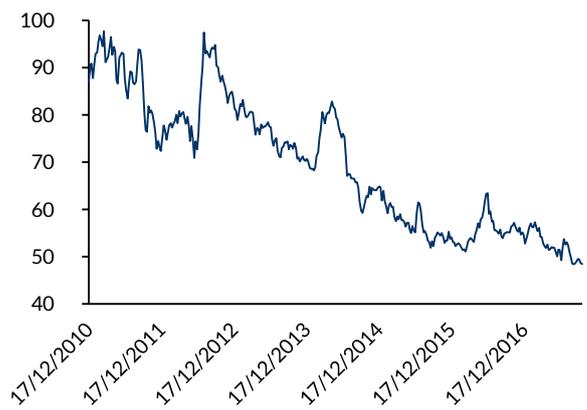
**If the market were growing faster, there would be less concern**

Chart 54: Agricultural commodities since 1991



Source: Bloomberg, Kepler Cheuvreux

Chart 55: Agricultural commodities since 2011



Source: Bloomberg, Kepler Cheuvreux

### Valuation

#### Record multiples

The overall market, along with much of the consumer space, is trading at close to all-time high multiples and typically over one standard deviation above the average of the last decade. The exception is food retail, which has been undergoing profound

**Market and sector multiples above historical average**

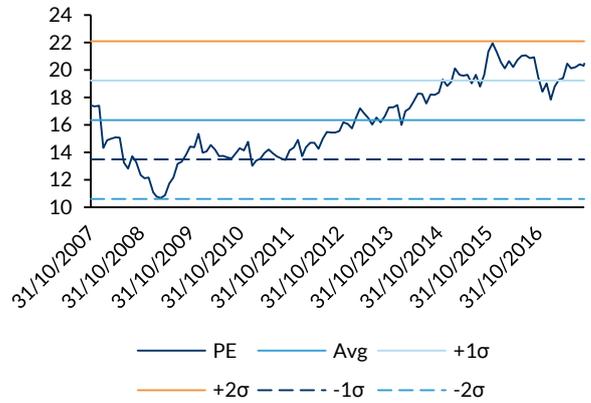
structural change in the last couple of years amid the entry of discounters and as its suppliers seek to reduce dependence on them.

**Chart 56: Stoxx 600 (SXXP) 12-month forward P/E**



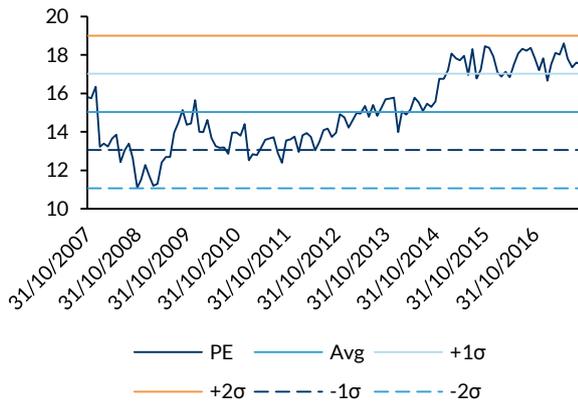
Source: Bloomberg, Kepler Cheuvreux

**Chart 57: Stoxx food and beverage (SX3P) 12-mo forward P/E**



Source: Bloomberg, Kepler Cheuvreux

**Chart 58: Stoxx HPC (SXQP) 12-month forward P/E**



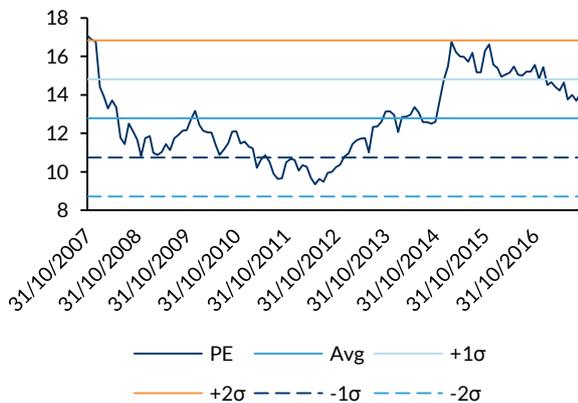
Source: Bloomberg, Kepler Cheuvreux

**Chart 59: Bloomberg 500 food 12-month forward P/E**



Source: Bloomberg, Kepler Cheuvreux

**Chart 60: Bloomberg 500 food retail 12-month forward P/E**



Source: Bloomberg, Kepler Cheuvreux

**Chart 61: Bloomberg 500 beverages 12-month forward P/E**



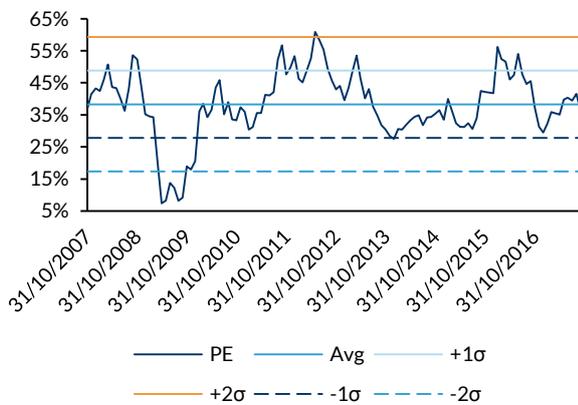
Source: Bloomberg, Kepler Cheuvreux

**Relatively attractive**

However, relative to the market, food and beverages (SX3P) are trading in line with the decade-long average premium to the eurostoxx 600 (SXXP), while home and personal care (SXQP) is trading one standard deviation below its average premium. Food (Bloomberg 500 food) is trading in line with its historical average premium, beverages (Bloomberg 500 beverages) trades one standard deviation above. Food retail (Bloomberg 500 food retail) trades one standard deviation below the average of the last decade on a P/E basis and actually two standard deviations below on an EV/EBITDA basis, again probably reflecting the structural challenges it is facing.

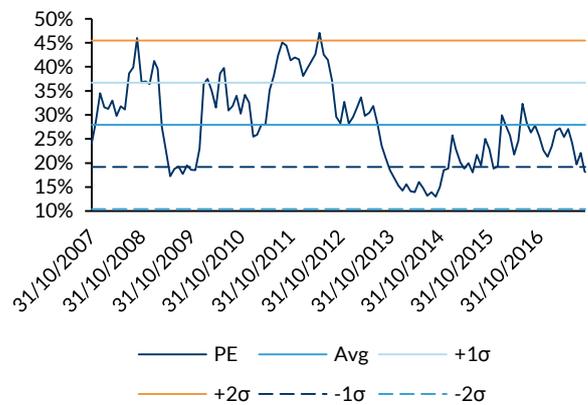
**Relative to the market, consumer staples are not miles away from the long-term average premium**

**Chart 62: SX3P premium vs. SXXP 12-month forward P/E**



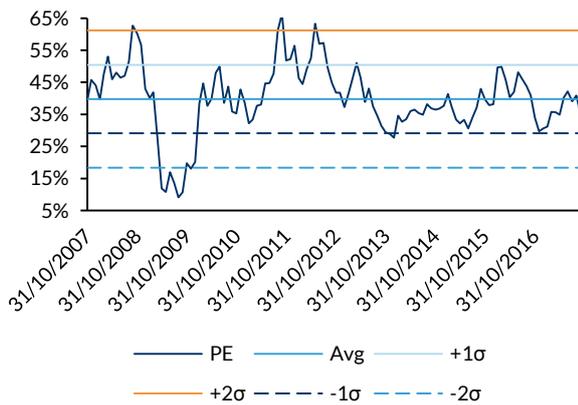
Source: Bloomberg, Kepler Cheuvreux

**Chart 63: SXQP premium vs. SXXP 12-month forward P/E**



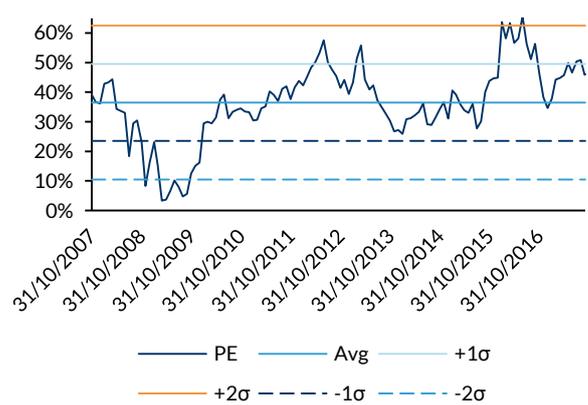
Source: Bloomberg, Kepler Cheuvreux

**Chart 64: Food premium vs. SXXP 12-month forward P/E**



Source: Bloomberg, Kepler Cheuvreux

**Chart 65: Beverages premium vs. SXXP 12-month forward P/E**



Source: Bloomberg, Kepler Cheuvreux

**Top picks in staples**

Our strategy team is underweight consumer staples, assuming the market will continue to rally. However, we could be coming to the end of the bull market amid expectations that interest rates will now start to rise. In this environment, while there could be pressure on so-called bond proxies, we tend to believe that low-beta consumer staples will outperform a market suffering from multiple compression and

weakness. In addition, with commodities expected to rise in the future, estimates might actually start to rise on expectations of a return of pricing-led growth.

In our European consumer staples most preferred list we have ABI, Corbion, Danone, Marine Harvest, Pernod and Unilever. Within the food segment (preferred picks Corbion, Danone and Marine Harvest), there is clearly a trend towards healthier products: Corbion is involved in the production of bio-plastics, which we expect to gain ground with consumers concerned about the impact of oil-based plastics; Danone has the healthiest portfolio in large-cap diversified staples, we believe, and should see growth accelerate; while Marine Harvest, as the world's biggest salmon producer, clearly benefits from the trend away from animal meat.

## Thematic profiles

We provide our detailed findings on two segments undergoing a transformation on the back of customer pressure (chocolate, sugar) and two other subsectors that are conversely propelled by this trend: organic, and fruit and vegetables.

- Chocolate
- Fruit and vegetables
- Organic
- Sugar

## Chocolate

**Table 74: Chocolate sector snapshot**

1	Key research	"Death by chocolate" (analyst: Jon Cox; July 2017 ; <a href="#">link</a> )
2	Universe	Lindt (5% market share), Barry Callebaut, Nestlé (8% of sales, 10% market share), Mars (not covered, 14% market share), Mondelez (13% market share; not covered), Ferrero (not listed, 9% market share), Hershey (not covered, 7% market share)
3	Policy momentum	So far, governments have allowed self-regulation by the confectionery industry, but potential legislation and taxes would hurt. We think if industry fails to move to small portion sizes, better labelling and start voluntarily reducing sugar content, then those countries that have introduced the drinks tax are likely to be first movers on chocolate. The UK government has classified confectionery as one of nine categories contributing to excess sugar intake. It has prodded chocolate makers into voluntary actions with the threat of taxes.
4	Market outlook	We assume long-term category growth of 1% by value. The market is structurally challenged due to a trend towards healthier snacking as a result of public sector concerns about obesity, which is only likely to intensify. We think weakness is likely to be compounded by category deflation due to falling cocoa prices and shifts in distribution (online). As an indulgence, it is difficult for chocolate to reinvent itself as healthy (as seen via the general failure to exploit cocoa's healthy characteristics) while online dampens its immediate consumption/impulse characteristics. Emerging markets, touted as a panacea, are unlikely ever to become as important as the developed world.
5	Health profile	(+) Cocoa has high levels of natural chemical compounds, collectively known as polyphenols, which have antioxidant properties. Flavonoids are the most common type of polyphenols. In cocoa, the most common flavonoids are flavanols and related compounds (epicatechin, catechin and procyanidin). Consumption is seen linked to protection against heart disease, cancer and other diseases associated with molecular degeneration (ageing). Research has indicated 50g of dark (70%) chocolate has the same quantity of flavonoids as a 200ml glass of red wine. In Europe, the European Food Safety Authority has validated flavanol health claims. Barry Callebaut was granted a health claim on cocoa powder and dark chocolate products that cocoa flavanols support human blood circulation. In the US, the Food and Drug Administration has not endorsed any health claims linked to cocoa flavanols.  (-) Chocolate typically contains plenty of sugar and fat (a typical chocolate bar is around half sugar and a quarter fat).
6	Environmental profile	Concerns over deforestation, ecosystem services damages (relatively small at the global level but significant locally), child labour. The NGO Mighty Earth recently identified material issues related to the destruction of national parks in West Africa.  Certification supportive: Trueprice has studied the difference between the environmental and societal damage created by "sustainable" and "conventional" cocoa in Côte d'Ivoire. While it may vary depending on the certification and the sourcing country, we note that certified cocoa has a 16% lower external cost than conventional cocoa, with 60% of this change attributed to increased productivity and 30% due to better social conditions (lower rates of child labour and occupational accidents).
7	Innovation	Smaller portion sizes, better labelling; science-enhanced sweetness; sugar-free; stealthy healthy (new products, with healthier ingredients). Chocolate as medicine: Barry Callebaut's Acticoa process maintains 50% of the flavanols compared with 9% in normal chocolate processing. Yet Flavanols do not seem to work and the focus now is on supplements.
8	Companies P&L Impact	Top-line growth slowdown (market has gone from 2-3% growth to negative, and mid-term we expect flat to 1%). Most innovative products with heightened health considerations seem to still have a low materiality but could mean faster-than-average growth for the top line and a better margin, given the lower reliance on commodity costs. Yet chocolate is an indulgence category, and while there is faster growth in healthier alternatives, it remains a very small part of the overall market growth in dark chocolate (as part of premiumisation), which benefits from the perception it is healthier. But people do not seem to want to be told it is healthier explicitly - which probably blurs line between indulgence/health.
9	Investment conclusions	Barry Callebaut: (+) should benefit in the short term from outsourcing by chocolate majors amid their focus on margins and a pick-up in volumes as chocolate prices are cut.  (-) While we expect its premium offering to be more resistant to structural pressure, it will not be immune. We suspect it will abandon its 6-8% organic sales growth goal within two years.  Lindt: (-) We are more cautious (needs to cut targets, rich valuation).  (=) Nestlé seen as exiting the category

Source: Kepler Cheuvreux

## Sugar

**Table 75: Sugar sector snapshot**

1	Key research	"Not that sweet on added sugars" (June 2017; analyst: Anton Brink ; <a href="#">link</a> )
2	Universe	PureCircle (pure-play in the high-purity Stevia market), DSM (working for a substitute on sugar (stevia)); Tate & Lyle (Low exposure to caloric sweeteners); Suedzucker (High exposure to caloric sweeteners); Associated British Foods (20% of 2017E profit) ; Coca-Cola EP
3	Policy momentum	Governments are increasingly intervening to reduce added sugar intake. Following a focus on sugar-sweetened beverages (SSB), there is a threat of a potential shift of sugar tax to confectionery, baked goods (breakfast cereals, biscuits, cakes, pastries) and dairy goods (ice cream, yogurts, flavoured milks, desserts) if self-regulation fails.
4	Market outlook	Growth in the consumption of caloric sweeteners has weakened significantly in recent years while no/low-calorie beverages (20% market share in the EU28 in 2015) grew. Sugar consumption growth has declined to 1% levels while high-fructose corn syrup (HFCS) consumption (more than 50% of HFCS is used to sweeten beverages) is even in structural decline. We expect this trend to accentuate in the near future. Nielsen research indicates that 53% of global consumers are, however, trying to avoid artificial sweeteners (e.g. Aspartame, Acesulfame K, and Sucralose) amid health concerns, which has limited the category's growth to just 3.5% annually. The global sweetener market accounts for around USD70bn in sales versus c. USD200-250m for the B2B stevia (a non-caloric sweetener derived from the naturally occurring stevia leaf - well placed) market, which is thus small but growing fast (a five-year volume CAGR of 25%). While external data confirm that the stevia market will continue to grow strongly, with value levels north of 8.5% YOY, we see four main drivers to stevia uptake going forward: 1) changes in consumer tastes and preferences, government taxes; 2) the opening of new markets (especially India); 3) a rising number of stevia-containing product launches; and 4) rising consumer familiarity with stevia (e.g. bitterness challenge associated with the basic ingredients, i.e. Reb A.). The high-purity stevia industry, however, faces two hurdles that keep it from achieving enough growth to severely impact other sweeteners' market share. First, the sweetener does not have bulking properties, which decreases its applicability for products like bread and cookies. Second, stevia currently lacks the ability to sweeten mass market products in a cost-competitive manner without the addition of other sweeteners. Currently, the economically viable Reb A cannot be used as the only sweetener in the formulation of a zero-calorie beverage, as it has a somewhat bitter aftertaste; and Reb-M, a stevia molecule, which is able to act as the sole sweetener, is currently too expensive, as there is considerably less quantity of Reb-M on the stevia leaf.
5	Health profile	Evidence of adverse effects of excessive sugar intake reflected in WHO recommendations. Growing concerns over sweeteners such as fructose, glucose, or sucrose, whose undue consumption has been linked to dyslipidaemia, insulin resistance and increased visceral adiposity in healthy and in hyperinsulinaemic insulin-resistant subjects (source: EFSA). Soft drinks and juices are the largest contributors accounting for more than 30% of daily sugar intake. However, not all sugar is consumed through soft drinks.  Regarding artificial sweeteners, there is no scientific evidence of harmful health effects on humans from normal use of artificial sweeteners. Regarding natural sweetener, the acceptance of stevia had not been even because of carcinogenic fears. While it has been used in Japan for decades (and in South America for ages), the EU only accepted its use from 2011 and the US since 2008 for some forms of it in food additives. More recently, it has received approval in India and Brazil. We would welcome more quantified evidence from PureCircle regarding health impact credentials, taking into consideration varying product characteristics (from reduced to no sugar intake), and a clarification on the company's responsible marketing and intellectual property policies.
6	Environmental profile	Impact on biodiversity of sugar refining via land occupation and water consumption. Climate warming might enable longer sugar beet harvest periods with positive economic effects. On the other hand, more extreme climate patterns such as the increasing probability of heat, droughts and floods could trigger an adverse economic effect. Note that wet corn milling is very water intensive. As regards Stevia, according to analysis commissioned by PureCircle, its carbon footprint is better than beer sugar, high fructose corn syrup and sugar cane.
7	Innovation	Sugar is not easy to remove while keeping texture, mouthfeel and taste. Nestlé's plan to develop a process to alter the structure of sugar (turning it into a hollow sphere) is one example of attempts to overcome this hurdle.
8	Companies P&L Impact	Negative effects for the mid-term prospects of companies exposed to caloric sweeteners. Positive for no/low-calorie beverages and for 'natural' stevia ingredient suppliers.
9	Investment conclusions	Limited impact for Coca-Cola EP due to mitigating factors (alternatives, geographical diversification, synergies). We estimate that around 30% of CCEP group volumes fall in the no and low-calorie segment, up from around 26% in 2008.  PureCircle is best positioned to meet consumer demand.  Suedzucker is the worst-positioned stock, as the company is heavily exposed to caloric sweeteners and has limited exposure to emerging markets

Source: Kepler Cheuvreux

## Organic

**Table 76: Organic sector snapshot**

1	Key research	<i>Gorgeous organics</i> (2 December 2016; analyst: Karel Zoete, <a href="#">link</a> )
2	Universe	Wessanen (74% of sales); big companies are ramping up in this segment (e.g. Associated British Foods, Danone, Nestlé, Carrefour) but overall these activities remain small. Whitewave (Alpro) has a limited overlap with Wessanen (EUR50m of sales in similar categories, organic share unknown).
3	Policy momentum	Stable and supportive regulation in Europe, including labelling for organic food. Furthermore, regulatory trends also tend to bolster the growth of organic food, with a number of countries setting quantitative targets (e.g. 20% share of organic food products in collective canteens in France since 2012 - which could rise to up to 40% following a recent law proposal). The nutritional logo/labelling currently under consideration is not focused on organic foods.
4	Market outlook	The European organic food market was worth EUR30bn in 2016 (source: Organic Monitor 2016). Organic food in key markets has been growing by 6-8% a year, which is three times the EU food industry average, fostered by the consumer-driven perception of increased healthfulness and lower environmental impacts and compounded by the rise in health-food shops and supermarkets along with the increasing volume of organic foods sold by supermarkets. Switzerland, Denmark, Sweden, Austria, Luxemburg and Germany are at the vanguard of the organic food movement (share of food market higher than 5%; source: FiNL Organic World Report 2017; Parthenon-EY analysis, Wessanen).
5	Health profile	Organic foods are not healthier per se. Despite the belief among some consumers who buy organic food that this it is healthier, there is little scientific evidence to support this. Since the products are sold at a double-digit price premium compared to conventional foods, this poses a threat. For example, a study by the University of Stanford showed that there is no fundamental difference in the nutrient and vitamin content of organic and conventional products. The factors that do play a role are weather and the degree of ripeness of fresh produce. Meanwhile, toxicology data does suggest that excessive long-term exposure to chemicals has a negative impact (organic food is free from chemicals). A large study carried out in France called "Nutrinet" suggests that the consumption of organic food is inversely correlated with the occurrence of metabolic syndrome but it is hard to isolate all the contributing factors. Meanwhile, we also note that the global rise of food allergies will fuel further opportunities for gluten-free, and lactose-intolerance friendly products.
6	Environmental profile	Unlike conventional food, organic food offers the following advantages: as it is chemical free it contributes to improved soil conditions and biodiversity, it requires less energy, and contains more antioxidants and vitamins. From the farmers' point of view, the cost of production is higher for organic than for conventional foods (no fertiliser costs, but higher labour input). From the customers' standpoint, increasing affordability is a challenge too as organic food still commands a premium compared with conventional food, and food producers are mainly targeting the high end of the market. We note some calls for a tightening organic food label in the EU, to broaden the scope to other areas than the environment, such as workers' rights, and protect the market integrity and quality.
7	Innovation	On sugar and salt, Wessanen has launched more than 60 renovation projects this year of which 25% have already been completed (related to its own nutritional brands). For all other brands (e.g. Alter Eco), the company has agreed to innovation rules. All new products must have sugar level below the third quartile of the market. In other words, they cannot be sweeter than 75% of products on the market.
8	Companies P&L Impact	Positive revenue and margin impact
9	Investment conclusions	Appealing fundamentals but expensive stock (Wessanen)

Source: Kepler Cheuvreux

## Fruits and Vegetables

**Table 77: Fruits and Vegetables sector snapshot**

1	Key research	No particular report
2	Universe	Bonduelle (world no. 1 in processed vegetables, negligible exposure to ultra-processed foods). Total Produce (no. 1 player in the European fresh produce market, market share of c. 5%). Other large players: Greenyard (Belgium), Cobana Fruchtring (Germany), Bama (Norway), Groupe Pomona (France), Fyffes (Ireland) and The Greenery (Netherlands)
3	Policy momentum	EU support for fresh produce consumption by children is one example of a favourable policy (free school fruit scheme extension). Past policy headwinds for fresh produce have included the EU sanctions on Russia in 2014, whose ban on the importation of fresh produce from the EU negatively affected supply. Going forward, the company predicts a limited impact from Brexit.
4	Market outlook	The European fresh fruit and vegetables industry with an estimated market size of c. EUR60-65bn is highly fragmented. Overall growth in fresh F&V consumption in Europe is rather low (+0.75%) while North American consumption is speeding up (+1.5%) (Source: Euromonitor).
5	Health profile	Fruits are a key source of water, vitamins, minerals, fibre, and simple carbohydrates (sugars). High fruit and vegetable intake has been inversely linked to the occurrence of myocardial infarction and stroke (National Research Council, 2015; source: IPES-Food). The widely recognised source of nutritional data is the McCance and Widdowson's study "The Composition of Foods Integrated Dataset (CoFID)" which is overly supportive of fruits' and vegetables' nutritional benefits, in line with (widely disregarded by customers) international dietary guidelines (at least 400g of fruits and vegetables a day according to the WHO). While there is evidence that the location does not significantly affect the nutritional profile of individual fruits or vegetables, there are still some questions about the relative nutritional attributes of organic versus conventionally produced fruits and vegetables and fresh produce versus frozen produce. Several studies also focused on canned vegetables (evidence of vitamin preservation although there are significant differences depending on the type of vegetable and vitamin).
6	Environmental profile	Fruits and vegetables at the bottom of the environmental footprint pyramid for carbon emissions, water, the ecological footprint
7	Innovation	Digital: Total Produce focuses on the digital segment at the point of sales. Bonduelle: new products promote the nutritional aspects naturally found in vegetables on the packaging. The focus is on salt reduction for frozen and canned foods. Alternative agriculture models are currently in the pilot phase.
8	Companies P&L impact	Total Produce: defensive profile (private label business, focus on developed economies) with a "growth" edge (acquisitions, and increasing exposure to North America).
9	Investment conclusions	Total Produce is not covered by Kepler Cheuvreux.

Source: Kepler Cheuvreux

## Other segments: Animal feed, bakery, dairy, fish, and water

**Table 78: Sectors snapshots (universe, market, sustainability-related drivers)**

	Universe (sales exposure, focus)	Market	Health and sustainability profile: drivers
Animal nutrition	Feed: ABF (8%, feed), Forfarmers (incl. solutions); Feed additives: BASF, DSM (<30%), Evonik (<15%); Petcare; Nestlé (13%);	Animal feed: USD500bn. Animal nutrition: USD10bn (amino acids 53%, vitamins 18%, carotenoids 3%, enzymes 7%, eubiotics 7%, minerals and chelates 12%)	Livestock sector (at a crossroads): (-) long-term growth prospects but concerns about sustainability and supply chain integrity amid intensive farm techniques and resource depletion, development of antimicrobial resistance in animals. The decline in the environmental impact of raising animals for food is still not occurring fast enough to offset growth in the amount of animal products being produced. Ecological feed remains a niche. Pet food: (+) many of the same drivers of human nutrition are prevalent.
Bakery and cereals	Aryzta (100%, e.g. savoury, bread rolls, sweet baked goods), ABF (10% of sales e.g. branded grocery), Wessanen (21% of sales e.g. value-added grains in bread, bread replacers), Nestlé (small)	Bakery: EUR212bn (1% CAGR 2008–15). Speciality bakery: EUR37bn (4.2% CAGR 2008–15)	(=) Bread is not seen as very unhealthy. It is recommended in fairly high quantities in the Mediterranean diet (due to the provision of complex carbohydrates (starch)). The bakery sector is also trying to leverage trends such as higher protein, natural grains, and organic. Tasty gluten-free bread is seen as a potential breakthrough.
Dairy	Barry Callebaut (c. 8%), Danone (79%; Essential Dairy and Plant-based, 25% market share), Dairy Crest (c. 75%), Emmi (>95%), Glanbia (>95%), Lindt & Sprüngli (c. 4%), Nestlé (c. 30%)Wessanen (number-two player in dairy alternatives in Europe, at a significant distance behind WhiteWave Foods), Reckit (infant formula), Parmalat (>95%; cheese, milk), Unilever (c. 13%)	Back to YOY growth. Value breakdown: milk (29%), cheese (27%) and yogurt and fermented Milk (19%).	(+) Rise of the protein-rich diet; 1,000-day awareness (early life nutrition); industry sustainability agenda improving (dairy sustainability framework); seen as healthy in many cultures (provision of water, calcium, proteins, saturated fats, simple carbohydrates (sugars), vitamin A and B, pantothenic acid); health and wellness segment potential; low-fat dairy products and eggs are the most affordable source of protein (=) Conflicting demand from emerging markets and developing markets. Persisting scientific arguments regarding the role of dairy and saturated fat in contributing to health risks, such as cardiovascular disease (CVD) and diabetes (source: IPES-Food). (-) Threatened by dairy replacements, especially plant-based food and drinks, which are perceived as healthier amid mounting health concerns (e.g. contaminants in the milk, in a context of excessive consumption, inappropriate health claims, potential increase in negative signals about the effect of lactose in dairy products). Overall, there are fewer claims about the consumption of dairy products to improve health. Related water, carbon, and animal welfare issues compound these concerns.
Farmed fish	Marine Harvest (100%, Atlantic salmon producer), Benchmark (100%, focused on upstream: genetics, health and nutrition), Corbion (small, algae)	Est. 3% a year (vs. 1.5% for world fish production)	(+) Protein, saturated fats, omega 3; superior feed conversion ratios and carbon footprint compared to meat; improvement in the salmon farming fish meal (e.g. algae focus) (-) biosecurity issues, antibiotics use, local pollution.
Water	Danone (20%; 24% market share), Unilever (small with purifiers; < 1%), Nestlé (8%), Coca-Cola European Partners (7% of volumes)	Fastest-growing non-alcoholic beverage category: USD147bn (est. 6% growth a year over the next few years)	(+) Strong healthy benefits (e.g. regulate blood pressure). Water is expected to continue to gain ground against carbonated soft drinks as consumers become more conscious of the added sugar in soft drinks; premiumisation; persistent lack of public supply; (-) plastic pollution, local impact, false claims (e.g. Nestlé's Poland Spring Water fraud allegations).

Source: Kepler Cheuvreux

## Company parts

### Top picks across the health and wellness spectrum

We outline our findings on our top picks on the theme, including three pure plays (PureCircle, Total Produce, not rated, Wessanen) across fast-developing health-related segments and two transformation stories (Danone from a company culture and geographical expansion standpoint, and Nestlé from a portfolio revamp perspective).

### Our framework

Our criteria are as follows:

1. Investment case summary
2. Valuation
3. Catalysts
4. Healthy food and nutrition profile
  - i. Positive exposure (share of sales)
  - ii. Unhealthy food-related exposure (share of sales)
  - iii. Strategy and outlook
  - iv. Innovation and digital
  - v. Environmental and social outcomes

### ESG Healthy Food Profiles

- Danone
- Nestlé
- PureCircle
- Total Produce
- Wessanen

**Company summary**

Danone has a portfolio focused on health and nutrition with strong positions in chilled dairy, waters and nutrition, categories expected to grow strongly over coming years. Under a new management team it is overhauling its corporate culture and aiming for a 16% operating margin and 4-5% organic sales growth by 2020 and EPS growth, deleveraging and ROIC improvements in the intervening years. If consistently delivered we see a re-rating. If not, it could potentially be taken over.

**Management**

Emmanuel Faber, CEO  
Cecile Cabanis, CFO  
Gustavo Valle, dairy division

**Key shareholders**

Freefloat 100.0%

**Market data**

Bloomberg	BN FP
Reuters	DANO.PA
Market cap (EUR)	44.7bn
Free float (%)	100.0
No. of shares outstanding (m)	632
3m avg. daily vol ('000)	217.0
YTD abs. performance	17.4%
52-week high (EUR)	70.70
52-week low (EUR)	57.99

**Strengths**

- Fantastic portfolio with strong positions in growth categories
- Strong position in fast growing China infant formula market
- Ability to leverage scale in milk sourcing
- Strong cash flow generation, typically negative working capital

**Opportunities**

- Integration of WhiteWave
- Flavoured water business expansion
- Grow medical nutrition business globally
- Africa is the continent for the future

**Weaknesses**

- Series of mishaps in key business has hurt credibility
- Europe dairy business remains soft
- Overly exposed to movements in key input milk
- Exposure to weak emerging market currencies

**Threats**

- Supply chain contamination can devastate brand
- Broad sector de-rating from record high as rates rise
- More competition, particularly in dairy, infant nutrition
- Russia/China state meddling/regulation changes

**Investment case summary (analyst: Jon Cox, jcox@keplercheuvreux.com)**

- Combined, Danone's categories are probably the most attractive among diversified food companies in terms of their growth characteristics and close association with health.
- We believe there is a real transformation unfolding at the company under the new management team (since 2015), which we think could exploit the portfolio to deliver best-in-class growth as well as a sustained improvement in earnings, cash flow generation and ROIC. Given it is in the middle of a turnaround, it looks undervalued compared to the space.

**Valuation**

- We have a Buy rating on the stock, given the vast potential of its portfolio and the company's growth reacceleration and margin expansion plan. At our DCF and multiples derived EUR80 TP, the stock would trade at at 20x P/E and 13.5x EV/EBITDA 2018E.

**Catalysts**

- Danone's Q3 organic sales growth of 4.7% beat consensus expectations of 2.8%.

**Healthy food & nutrition profile: Into adulthood**

- **Positive exposure (>47-80% of sales):** Its portfolio is focused on health and nutrition with strong positions in the chilled dairy, waters and nutrition categories which are set to grow strongly in the coming years (fresh dairy, water, medical and early-life nutrition, plant-based, organic).

- **Unhealthy food-related exposure (<20% of sales):** Coffee creamers, desserts.

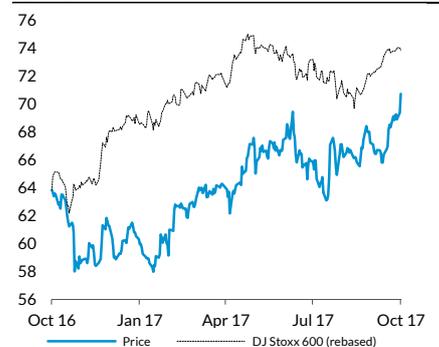
- **Strategy and outlook (strong):** The company is transforming, illustrated by the USD12.5bn acquisition and ongoing integration of Whitewave (a rapidly growing US food company specialising in organics and plant-based products). Danone's infant nutrition and dairy units are the two dominant growth drivers, followed by water and medical nutrition.

- **Innovation and digital (strong):** R&D is clearly tilted towards enhancing the company's health profile e.g. via the Health for Life Capital innovation fund (EUR100m focus on start-ups e.g. innovative therapeutic solutions). Danone Nutricia Research (EUR333m annual budget) focuses on special nutritional needs, and the assessment of the impact of diet on health.

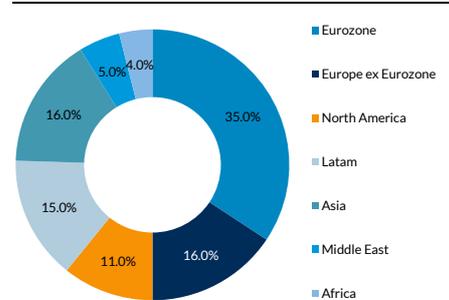
- **Environmental and social outcomes:** The group has an all-encompassing nutritional policy (e.g. disclosure of nutrients' maximum levels per product group, 75% of the portfolio reformulated among three flagship brands). The 2020 sugar reduction target appears to be a particular challenge. Affordable programmes (e.g. fortified infant cereals) through Danone communities are now integrated into the core business. However, health claims challenges and health concerns about the dairy industry remain e.g. due to contaminants in the milk, or in the context of excessive consumption. Animal welfare is also a complex area that is addressed through a dedicated programme (e.g. Dannon US Pledge including also non-GMO, natural focus). Climate-neutral objectives are not science-based. The US branch's B Corp certification is a positive.

Equity Analyst 360 Report (24 November 2015; [link](#))

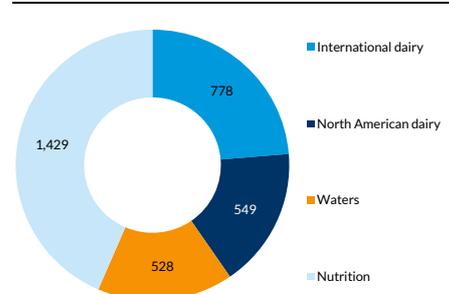
**1 year performance**



**Sales breakdown 2016**



**Profit breakdown 2016**



**Company summary**

Nestlé is the world's biggest packaged food and drinks company with a typically dominant position in all of its main categories such as coffee, water, shelf stable dairy, infant nutrition, cooking aids, pet care and confectionery. It is shifting its focus toward health, nutrition and wellness (likely to be accelerated under a new CEO) and sees opportunities in out of home, premiumisation and convenience channels.

**Management**

Mark Schneider, CEO  
Francois-Xavier Roger, CFO

**Key shareholders**

Freefloat 100.0%

**Market data**

Bloomberg	NESN.VX
Reuters	NESN.S
Market cap (CHF)	261.1bn
Free float (%)	100.0
No. of shares outstanding (m)	3112
3m avg. daily vol ('000)	712.8
YTD abs. performance	14.9%
52-week high (CHF)	85.65
52-week low (CHF)	67.30

**Strengths**

- World's biggest food producer
- Geographical, category diversification
- Long term execution of business model
- Clear strategic direction

**Opportunities**

- Leveraging scale for more efficiencies
- Expansion into natural, organic trends in consumer
- Development of premium in categories
- Ultimately evolving into pharma-food hybrid?

**Weaknesses**

- Potentially misses consumer trends given size
- Guilty of arrogance on some occasions
- Takes long term to react to problems
- Overly patient with underperformers

**Threats**

- New innovative starts ups, distribution models
- Increased competition in key categories, coffee, nutrition
- Any supply chain contamination issue can kill brands, categories
- Long term big food doing a big tobacco settlement?

**Investment case summary (analyst: Jon Cox, jcox@keplercheuvreux.com)**

Nestlé's earnings, cash flow generation, and ROIC are likely to improve, as: 1) organic sales accelerate amid better pricing and improved trading conditions supported by innovation; 2) margins expand thanks to deeper cost-saving programmes; and 3) cash flow is set to rise, underpinned by a tighter grip on working capital, while capex will be constrained, all boosting ROIC. We believe the market will give new CEO Mark Schneider the benefit of the doubt regarding early transformation efforts, particularly if the L'Oreal stake is sold and attractive assets are found in health and nutrition.

**Valuation**

On 27 September 2017 we made some nip-and-tuck adjustments to our model (bringing forward CHF20bn in buybacks, the new margin goal, and restructuring charges), which leaves our underlying EPS broadly unchanged. Buy. Our TP is DCF and multiples-derived.

**Catalysts**

- Q3 sales, due on 19 October, are expected to accelerate.
- US confectionary business disposal may come during the last part of 2017.
- Potential acquisitions in consumer health (Pfizer, Merck).

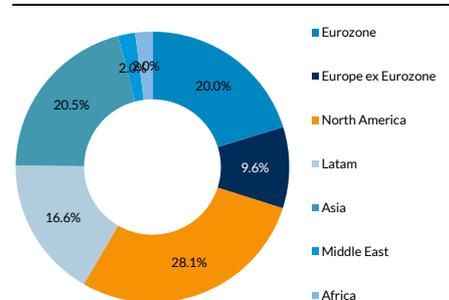
**Healthy food & nutrition profile: At an inflection point**

- Positive exposure (>c. 25% of sales):** Water (8%), healthy science (4%) and baby food (12% of total sales). New products with greater health considerations across other lines e.g. vegan milk drinks, whole-grain cereal (Nesfit), low-fat yogurts with reduced sugar (Molico), and fortified infant cereals, remain small (est. c. <5% of its revenues) but vibrant.
- Unhealthy foods-related exposure (c. 26% of sales):** Ice cream, prepared dishes, confectionery (US arm to be sold amid portfolio reshuffle affecting c. 10% of the portfolio).
- Strategy and outlook (strong):** Comprehensive nutrition strategy involving M&A and policy revamp (product reformulation, access to healthy foods, marketing), which coincides with a structural shift to higher margins and rapidly growing products (e.g. >20% operating margins for infant nutrition). Supported by a myriad of initiatives in popular trends such as organic, gluten-free, low-sugar and high-protein. Infant nutrition and bottled water reiterated as future high-growth sectors in the latest capital market day, alongside coffee and pet care. Likely significant targets: Abbot's nutrition division, Danone's medical nutrition business, the clinical business of Fresenius's unit, Kabi.
- Innovation and Digital (Strong):** Innovation rates at their highest (almost a third of products less than three years old, or renovated), and this trend is likely to be bolstered further by the additional resources from cost savings. Presence of an R&D Council for Sustainability and Nutrition. New institute to combine nutritional and biomedical research. Higher share of digital media as a percentage of media spend than the FMCG average. Rising R&D spending (c. 2% of sales). Ex. of innovation: voice-activated family nutritionist.
- Environmental and social outcomes:** Ambivalent, but progress towards achieving an array of self-defined targets such as lowering sugar content, salt levels, and saturated fat, increasing positive nutrients. Science-based carbon reduction targets are a positive. [ESG Profile \(March 2017, link\)](#) and [Equity Analyst 360 Report \(January 2017, link\)](#).

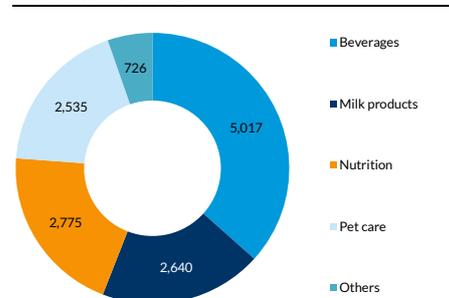
**1 year performance**



**Sales breakdown 2016**



**Profit breakdown 2016**



**Company summary**

PureCircle is the world's leading producer of natural ingredients based on high-purity stevia, with an est. 60-70% market share in the B2B market. In fiscal 2016, PureCircle generated sales of almost USD140m and an adj. EBITDA of USD28m.

**Management**

Magomet Malsagov, CEO  
Rakesh Sinha, CFO  
Paul-Selway Swift, Chairman

**Key shareholders**

Wang Tak Compalny Ltd 26.2%  
OLAM Wilmar Investment Holdings Ltd 17.6%  
Magomet Malsagov 8.7%

**Market data**

Bloomberg	PURE LN
Reuters	PURE.L
Market cap (GBP)	819.4m
Free float (%)	44.0
No. of shares outstanding (m)	175
3m avg. daily vol ('000)	101.6
YTD abs. performance	87.2%
52-week high ()	510.50p
52-week low ()	195.50p

**Strengths**

- First-mover
- Integrated supply chain enabling innovation
- Largest purification capacity
- Extensive product portfolio

**Opportunities**

- Delivering to a high-growth market
- New regulatory approvals in large & sweet markets India and Brazil
- Stevia basic ingredients' price competitiveness with other sweeteners
- Using stevia as a sole sweetener for F&B products

**Weaknesses**

- Dependency on input cost stevia leaves
- Concentration risk to Chinese stevia leaf harvests
- High leverage in fiscal 2017
- Concentration risk to key clients

**Threats**

- End-consumer demand for stevia fails to occur
- Pressure from new competitors
- Crop failures in China
- Concentration risk to single purification plant

**Investment case summary (analyst: Anton Brink, [abrink@keplercheuvreux.com](mailto:abrink@keplercheuvreux.com))**

- PureCircle, a "natural" stevia ingredient supplier, is our Most Preferred Stock in the sweeteners sector, as it is well placed to benefit from increased health concerns related to the excessive use of sugar, which are hurting caloric sweeteners' prospects.
- The strong five-year historical volume growth of the stevia industry (a 25% CAGR), coupled with ever-rising consumer demand and recent new large market openings (India and Brazil), leads us to think that the industry is set for strong double-digit growth.
- The company has high operational leverage with the ability to triple current sales volumes without additional expansion capex. It has an evolving commercial portfolio that includes world-leading F&B companies. Around 60-70% its market share is in the B2B high-purity stevia market.

**Valuation**

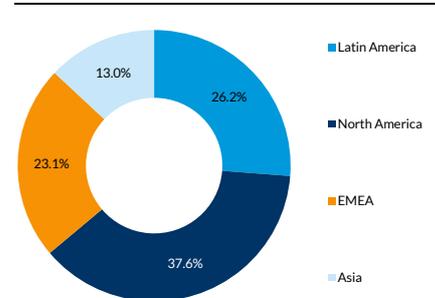
- On the back of an outstanding +90% YTD performance, we downgraded our rating on PureCircle from Buy to Reduce (TP 390p) on 3 October 2017. We believe the market is underestimating the lingering effects of the US CBP matter and operating margin pressure following a more volume-based approach. Our blend of a DCF and growth valuation multiples indicates there is 17.9% downside.

**Healthy food & nutrition profile: Meeting needs for natural no-calorie sweetener alternatives**

- **Positive exposure (100% of sales):** PureCircle sources, refines and markets stevia rebaudiana plant extracts for ingredient use in the food and especially (75% of sales) beverage (F&B) industries. The company's extensive product portfolio provides F&B application teams with a flexible toolkit for the formulation of products with a naturally moderate number of calories.
- **Strategy and outlook (Strong):** The company has placed an emphasis on value-added ingredients, driving up margins. Instead of commoditised low-purity extracts of Reb A, the group now offers a matrix-specific formulation approach for working with stevia, named Stevia 3.0.
- **Innovation and digital (Strong):** PureCircle controls its whole supply chain, enabling it to be a frontrunner in stevia innovation. Most recent innovations are its Matrix solutions, which are category-specific solutions focused on dairy, tea and beverage products that allow for considerable calorie reductions. Together with its operational leverage, this is likely to lead to a strong boost to gross margins in the coming years.
- **Environmental and social outcomes:** While stevia's nutritional benefits are manifest e.g. zero calories, there are concerns about the impact on historical producing countries such as Paraguay and Brazil. We would welcome more quantified evidence from PureCircle regarding its health impact credentials, taking into consideration varying product characteristics (from reduced to no sugar intake), and clarification of the company's responsible marketing and intellectual property policies.

[ESG Profile on PureCircle \(link\)](#) and [analyst's 360 report \(June 2017; link\)](#)

**1 year performance**

**Sales breakdown 2016**


**Company summary**

Total Produce (**Not rated**) is one of the world's largest fresh produce providers to retailers and foodservice with over EUR4bn in revenues (2017E). The Group currently operates out of 26 countries and is the European market leader (75-80% sales) and an increasingly prominent force in North-America (20-25% sales). A key part of Total Produce's growth strategy is growth by acquisition, displayed by continuous M&A activity.

**Management**

Rory Byrne, CEO  
 Frank Davis, CFO  
 Carl McCann, Chairman

**Key shareholders**

Invesco 14.7%  
 Troy 11.3%  
 Blackrock 10.7%

**Market data (as of 22/09/2017)**

Bloomberg	TOTID
Reuters	T70.I
Market cap (EUR)	727.7m
Free float (%)	85.0
No. of shares outstanding (m)	322
3m avg. daily vol ('000)	0.6
YTD abs. performance	15.0%
52-week high (EUR)	2.26
52-week low (EUR)	1.60

**Strengths**

- Proven track record in M&A
- Strong balance sheet
- Excellent working capital management & high asset turnover
- A diversified produce portfolio

**Opportunities**

- Expanding towards organic and fresh-cut
- Increasing exposure to higher-growth regions
- Adding value to products or services
- Vertical and/or horizontal integration

**Weaknesses**

- Thin margins
- Large exposure to low volume growth whole fresh markets
- Dependence on M&A success
- Dependence on key management personnel

**Threats**

- Fruit and vegetables deflation
- Oversupply in the industry
- Currency fluctuations
- Concentration of customers

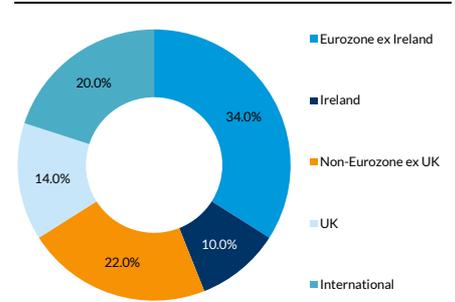
**Healthy Food & Nutrition Profile: Champion in fresh fruits and vegetable production distribution**

- **Positive exposure (100% of sales):** Pure player in the fresh food segment (#2 player in the c. EUR85bn European market), mostly fruits (63% of sales), followed by vegetables (37%). Diversified portfolio (stone/soft fruit, banana, citrus, apples and pears among the main fruits while tomatoes (cooking context), salads, potatoes are among the main vegetables). The majority of clients consists of wholesale (45%) and 55% retail.
- **Strategy and Outlook (Strong):** The group has always concentrated on whole fresh fruit and vegetables. In recent years however, it has made a conscious effort to develop expertise in the added value and convenience of the RTE (Ready To Eat) and RTH (Ready to Heat) categories (e.g. JV with Vizet for a high-grade salad facility in Sweden). Although Total Produce is highly diversified in whole fresh and has a sizeable market share in organics in some countries, the organic and convenience categories' impact on group sales is fairly limited (c. 5% sales). Future growth will be through M&A activity.
- **Innovation and Digital (Medium):** the company's digital emphasis at the point of sale has led to the introduction of Quick Response (QR) codes to packaging linking to short videos which can be accessed on smartphones as well as NFC tags to point of sale. No quantitative data are reported regarding their current rollout. Total Produce is also seeking to leverage a series of online platforms to foster its engagement with customers.
- **Environmental and Social Outcomes:** Studies overly supportive of fruits' and vegetables' nutritional benefits, in line with (widely disregarded) international dietary guidelines (at least 400g of fruits and vegetables a day according to the WHO). Some arguments about the relative nutritional attributes of organic vs conventionally produced fruits and vegetables and fresh produce vs frozen produce. We would welcome more details on the company's nutrition policy, including any approach to determining and improving the nutritional quality of products and the portfolio, and assessed positive social outcomes. Likewise on the environmental front (lack of results-oriented" data to monitor progress).

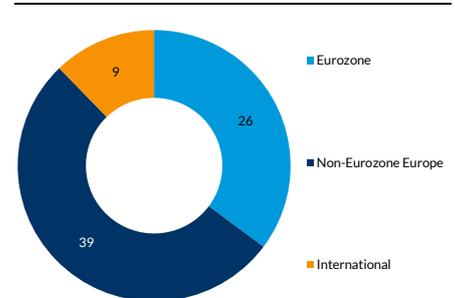
**1 year performance**



**Sales breakdown 2016**



**Profit breakdown 2016**



**Company summary**

Wessanen is focussing on food that is good for people and for the planet. In most cases, foods which benefit our own health are also better for the planet, and vice versa. Wessanen has therefore defined its mission as 'Healthier food, healthier people, healthier planet'. The company is the market leader in the European branded organic foods market and has a strong position in France, the UK, Germany, Italy and the Netherlands.

**Management**

Christophe Barnouin, CEO  
 Ronald Merckx, CFO

**Key shareholders**

Delta Partners 18.3%  
 Mr. Jobson (PM Delta Partners) 8.0%  
 Fidelity 2.9%

**Market data**

Bloomberg	WES NA
Reuters	BSWSc.AS
Market cap (EUR)	1.2bn
Free float (%)	73.0
No. of shares outstanding (m)	76
3m avg. daily vol ('000)	3.6
YTD abs. performance	16.4%
52-week high (EUR)	16.32
52-week low (EUR)	10.48

**Strengths**

- Market leader in Europe organic foods industry
- Heritage brands in the category, with good brand equity
- Largest organic dairy alternative platform in Europe
- Proven M&A capability, adding to growth and returns

**Opportunities**

- Introduce new Wessanen brands in Italy HFS stores
- Grow Dairy Alternatives business in Germany and Netherlands
- Increase efficiency of the owned production plants
- Add-on acquisitions in current and new EU markets

**Weaknesses**

- Nearly 60% exposure to France
- Position in Germany is small and limited exposure to supermarkets
- Low profit margins for branded foods players
- Marketing budget too limited for certain brands

**Threats**

- Increasing competition from large FMCG's
- Private label winning market share in supermarket channel
- Slowing growth organic food products, increasing COGS
- High priced organic foods products vulnerable in case of recession

**Investment case summary (analyst: Karel Zoete; kzoete@keplercheuvreux.com)**

- The European organic food market is booming, and growth has accelerated to about 10% over 2015-16. Wessanen is Europe's largest pure play branded organic foods company and the only EU listed name. Based on best-in-class organic sales growth, M&A benefits, and margin expansion, we expect an EBIT CAGR of 18% over 2016-19.
- We do not see Wessanen being hurt in the near future by increased competition, due to: 1) high barriers to entry in the organic business; and 2) a different positioning to small producers (often active in one country) and big retailers (focussing on private labels).

**Valuation**

Although the fundamentals of the investment case are appealing, we have a Hold rating on the shares based on the demanding valuation. Our EUR14.0 target price is based on a combination of a DCF (3.0% LT growth, 7.0% WACC, 8.0% COE and a 10% long-term margin) and a multiples-based approach. We use a forward (2018) target multiple of 15x EV/EBITDA and a 25x P/E ratio for our multiples-based approach.

**Catalysts**

M&A: the balance sheet holds sufficient room to act when it wants to. We also believe that Wessanen itself is an attractive candidate for an acquisition by a larger group.

**Healthy food & nutrition profile: Pure-play organic food champion well placed to keep the lead**

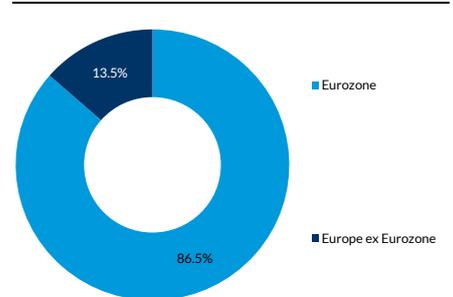
- Positive exposure (89% of sales):** Dairy alternatives, bread replacers, breakfast cereals, hot drinks, veggie meals. Healthy food constitutes the mainstay of fast-growing organic food demand, although not healthy per se. Sales %: Organic: (74%), Vegetarian (96%). Allergies (lactose intolerance, gluten-free) offering via dairy, and Mrs Crimble's, Bjorg.
- Unhealthy foods-related exposure (11% of sales):** Sweet in between e.g. Mrs Crimble's (UK) e.g. coconut rings, macarons; Alter eco (France) e.g. organic chocolate.
- Strategy and Outlook (Strong):** Asset-light, fully focused on core market niches (organic, fair trade, positive nutrition, plant-based food), geographical rollout.
- Innovation and Digital (Strong):** Quite good at introducing in-house innovations (e.g. almond milk in the dairy alternative category), which are supportive for margins. Small-scale support programme for organic start-ups in the Benelux with Triodos.
- Environmental and Social Outcomes:** Sound nutrition policy for own nutritional brands address thresholds for salt content in its core categories and foster less refined sugar and cereals (43% of total revenues covered). On sugar and salt, Wessanen has launched a programme of more than 60 renovation projects this year, of which 25% have already been completed (own nutritional brands). Acknowledgment of issues with sweet product sugar levels, which is set to become part of KPIs. For all other brands, e.g. Alter Eco, the company has agreed innovation rules (new products not to be sweeter than 75% of products on the market). Local and seasonal sourcing, transparency ambition, B Corp and key product certification (fair trade, organic) are all other supportive factors.

[ESG Profile \(March 2017, link\)](#) and [Equity Analyst 360 report \(December 2016, link\)](#)

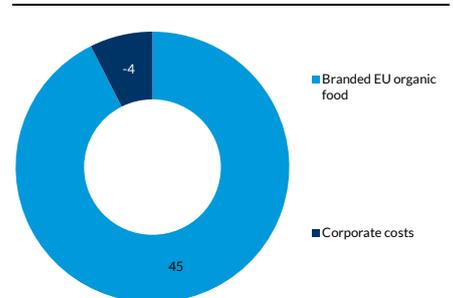
**1 year performance**



**Sales breakdown 2016**



**Profit breakdown 2016**



# Engagement themes and criteria

Table 79: Engagement themes, criteria and selected practices

Theme	SDGs	Value chain level	Area assessed	KPIs e.g.	Selected reporting practices
<b>1. Investment case context</b>					
Strategic business context	2.1, 2.2 (end hunger, malnutrition); 3.2 (women and children), 3.4 (non-communicable disease)	Product	Product exposure	Sales, EBIT, margin linked to product categories	Nestlé (performance of businesses with respect to nutrition, health, and wellness issues (sales, growth, profit, marketing spend, growth index))
			Strategic outlook	Company share by region and sector Pricing (premium vs. affordable) Global vs. local brands Incorporation into the long-term strategy Portfolio management M&A Innovation, including new product developments (in-house or venture capital)	
			Marketing and distribution strategy	Online strategy	
<b>2. Healthy food focus</b>					
Healthy food portfolio	2.1, 2.2 (end hunger, malnutrition); 3.2 (women and children), 3.4 (non-communicable disease)	Product	Nutritional policy/Strategy/Governance	Setting nutritional policies, definitions and far reaching objectives to demonstrate their nutrition credentials	Danone, Mondelez, General Mills, Nestlé, PepsiCo, Unilever
			Product exposure	Sales, EBIT, margins, and R&D linked to product categories defined as coherent with the company's nutritional policy and health definitions, external classification system, perceived as healthy by customers, "naturally" healthy, or classified as promoting health and nutrition attributes (clear definitions, transparency on the methodology used, scope, and linkages with WHO, governments scientific recommendations)	
			Reformulation and portion control	Target and progress on nutrients of concern reduction and positive nutrients addition Share of sales/volume of consumer products, by product category, that are lowered in calories, saturated fat, trans fats, sodium and added sugars Accumulated tonnes of negative nutrients removed/positive nutrients added; average reduction of nutrients by product category Products in line with nutrient level target	Danone, Kellogg, Nestlé, Unilever and Wessanen
			Portion control	Share of products to not exceed a threshold e.g. kilocalories per portion	
	10.2 (inclusive business)	Products	Fortification/ inclusive business	Products that were fortified items and exposure to low-income customers	Mondelez, PepsiCo, Unilever Danone, Nestlé, Unilever
			Industry advocacy Targeted healthy food access programmes (Inclusive business - accessibility and affordability)	Participation in the main initiatives targeting nutrition improvements Number of servings of food to people in need	
				Number of beneficiaries	

Continued on next page

Theme	SDGs	Value chain level	Area assessed	KPIs e.g.	Selected reporting practices
<b>2. Healthy food focus (continued)</b>					
Marketing and advertising	2.1, 2.2 (end hunger, malnutrition); 3.2 (women and children), 3.4 (non-communicable disease)	Operations	Policies and practices on communication to consumers about ingredients and nutritional information beyond legal requirements (including labelling)	Volume of products with on-pack nutritional information (and details on those e.g. nutrients and % Guideline Daily Amounts (GDA)). Details on the scope, methodology	Danone, Nestlé
				Share of products with a clearly visible icon system on the front of labels Volume of products with off-pack nutritional information (available online or via the call centre, for example) Volume of products that indicate the portion size (products packaged in individual portions and/or with a clear indication of portion size on the packaging) Volume of products with nutritional claims	
			Advertising	Responsible Marketing Policy No advertising in any media primarily directed at children under age 12, irrespective of the product's nutritional profile. Our policy covers any advertising where 35 percent or more of the total viewing audience is under the age of 12	Coca-Cola EP
Food quality and safety	2.1, 2.2 (end hunger, malnutrition); 3.2 (women and children), 3.4 (non-communicable disease)	Operations and supply chain	Policies and practices on food safety	Percentage of production volumes manufactured in sites certified by an independent third-party according to internationally recognised food safety management system standards	Hershey, Nestlé, Wessanen
				Policies and practices on antibiotic, anti-inflammatory, hormone, and/or growth promotion treatments	
<b>3. Green food focus</b>					
Climate change		Supply chain	Product exposure	Portfolio's environmental footprint	Nestlé
	13.2 (climate change)	Supply chain	Raw materials exposure Carbon reduction science-based targets encompassing the scope 3	Share of procurement spent Commitment and roadmap	
	12.3 (food waste) 6.1, 6.4 (water)		Food waste reduction Water reduction	Physical waste as a ratio of total volumes sold Water withdrawal, water intensity, standards, audits	Danone, Wessanen
	15.3 (deforestation and land degradation)	Forests and land use reduction	Responsible sourcing policy (commitments, process, granular data)	Percentage of purchased volumes that is verified as being in accordance with credible, internationally recognised responsible production standards, broken down by standard Engagement programmes with farmers (number of beneficiaries) Responsible agriculture policy (e.g. chemicals, waste)	Bonduelle Wessanen
		Broader sustainability focus	Share of sales linked to fair trade, local, organic, vegetarian, non-GMOs, natural ingredients ("free from"/"clean" labels)		

Source: Kepler Cheuvreux, ATNI, SASB, WBCSD

# Valuation table

**Table 80: Kepler Cheuvreux «sustainable food & lifestyle» universe – recommendations and performance**

Company	Ticker	Sector	Country	Cap local	Currency local	Analyst	Rating	Target local	Price local	Up/downside	Performance (%)	1 month	YTD
<b>Core Food universe</b>													
<b>Diversified Food</b>													
Associated British Foods	ABF LN	Food	United Kingdom	24,722	British Pounds/Pence	Jon Cox	Buy	3,300	3,333	-1%	14	23	
Danone	BN FP	Food	France	38,801	Euro	Jon Cox	Buy	80	71	13%	14	16	
Ebro Foods	EBRO SM	Food	Spain	3,017	Euro	Inigo Egusquiza	Hold	20	21	-1%	10	13	
Greencore	GNC LN	Food	Ireland	1,149	British Pounds/Pence	Karel Zoete	Buy	290	191	52%	10	17	
Nestlé	NESN VX	Food	Switzerland	228,565	Swiss francs	Jon Cox	Buy	93	84	11%	14	17	
Unilever	UNA NA	Personal care	Netherlands	113,105	Euro	Karel Zoete	Buy	56	52	8%	15	16	
Viscofan	VIS SM	Food	Spain	2,305	Euro	Inigo Egusquiza	Reduce	46	51	-11%	11	15	
Wessanen	WES NA	Food	Netherlands	766	Euro	Karel Zoete	Hold	14	15	-10%	20	25	
<b>Chocolate</b>													
Barry Callebaut	BARN SW	Food	Switzerland	6,195	Swiss francs	Jon Cox	Buy	1,500	1,510	-1%	16	20	
Lindt & Sprüngli	LISN VX	Food	Switzerland	14,890	Swiss francs	Jon Cox	Reduce	55,000	68,060	-19%	20	26	
<b>Fruits &amp; Vegetables</b>													
Bonduelle	BON FP	Food	France	760	Euro	Baptiste de Leudeville	Hold	38	40	-6%	8	12	
Total Produce	TOT ID	Food	Ireland	743 (as of 11/10/2017)	Euro	not covered	not covered						
<b>Sweeteners</b>													
PureCircle	PURE LN	Food	United Kingdom	995	British Pounds/Pence	Anton Brink	Reduce	390	468	-17%	38	47	
Suedzucker	SZU GR	Food	Germany	3,023	Euro	Richard Withagen	Reduce	17	17	-2%	9	19	
Tate & Lyle	TATE LN	Food	United Kingdom	2,664	British Pounds/Pence	Anton Brink	Reduce	690	646	7%	9	18	
<b>Fisheries</b>													
Benchmark	BMK LN	Food	United Kingdom	323	British Pounds/Pence	Patrick Roquas	Buy	68	45	53%	30	na	
Marine Harvest	MHG NO	Food	Norway	6,581	Norwegian Krone	Fredrik Ivarsson	Buy	185	163	14%	9	7	
<b>Bakery</b>													
Aryzta	ARYN VX	Food	Switzerland	3,576	Swiss francs	Jon Cox	Buy	40	31	30%	10	10	
<b>Nuts and seeds</b>													
Acom	ACOMO NA	Food	Netherlands	539	Euro	Patrick Roquas	Reduce	23	25	-6%	13	13	
<b>Dairy</b>													
Dairy Crest	DCG LN	Food	United Kingdom	800	British Pounds/Pence	Karel Zoete	Reduce	560	608	-8%	13	17	
Emmi	EMMN SW	Food	Switzerland	3,054	Swiss francs	Jon Cox	Reduce	575	640	-10%	13	17	
Glanbia	GLB ID	Food	Ireland	4,961	Euro	Karel Zoete	Buy	21	17	24%	13	16	
Parmalat	PLT IM	Food	Italy	4,447	Euro	Daniele Ridolfi	Hold	3	3	-8%	12	21	
<b>Beverages</b>													
Coca Cola European Partners	CCE NA	Beverages	Netherlands	16,329	Euro	Richard Withagen	Buy	42	36	18%	11	16	

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Company	Ticker	Sector	Country	Cap local	Currency local	Analyst	Rating	Target local	Price local	Up/downside	Performance (%)	1 month	YTD
<b>Broad Food universe</b>													
<b>Ingredients</b>													
BASF	BAS GR	Chemicals	Germany	65,171	Euro	Christian Faitz, CFA	Buy	108	89	21%	9	14	
Corbion	CRBN NA	Food	Netherlands	1,260	Euro	Patrick Roquas	Buy	34	28	22%	11	11	
DSM	DSM NA	Chemicals	Netherlands	9,414	Euro	Martin Roediger, CEFA	Buy	74	72	3%	11	15	
Evonik	EVK GR	Chemicals	Germany	12,933	Euro	Martin Roediger, CEFA	Hold	31	31	1%	9	12	
Givaudan	GIVN VX	Chemicals	Switzerland	17,555	Swiss francs	Patrick Roquas	Hold	2,002	2,156	-7%	19	24	
Kerry	KYG ID	Food	Ireland	13,225	Euro	Patrick Roquas	Hold	82	83	-1%	18	21	
Symrise	SY1 GR	Chemicals	Germany	7,780	Euro	Patrick Roquas	Reduce	57	65	-12%	16	23	
<b>TIC</b>													
Eurofins	ERF FP	Support services	France	5,972	Euro	Aymeric Poulain	Reduce	400	541	-26%	21	21	
<b>Capital goods</b>													
GEA Group	G1A GR	Capital goods	Germany	8,024	Euro	Hans-Joachim Heimbuerger	Buy	45	40	12%	13	17	
<b>Wellness</b>													
<b>Home &amp; personal care</b>													
Accell Group	ACCEL NA	Household durables	Netherlands	517	Euro	Guido Nunes	Buy	32	26	25%	12	10	
Adidas Group	ADS GR	Textile & apparel	Germany	25,011	Euro	Jürgen Kolb	Buy	220	191	15%	16	17	
Technogym	TGYM IM	Household durables	Italy	812	Euro	Marco Baccaglio, CFA	Hold	7	7	-3%	13	12	
XXL ASA	XXL NO	General retail	Norway	13,760	Norwegian Krone	Hans-Marius Ludvigsen	Buy	110	86	28%	17	22	
<b>Pharmaceuticals &amp; Health Care</b>													
Biomérieux	BIM FP	Medtech & services	France	4,682	Euro	Maja Pataki	Buy	73	71	4%	17	17	
Cellnovo	CLNV FP	Pharma & biotech	France	89	Euro	Arsene Guekam	Buy	7	4	75%	na	na	
Novo Nordisk	NOVOB DC	Pharma & biotech	Denmark	820,924	Danish Krone	David Evans	Hold	256	311	-18%	14	17	
Sanofi	SAN FP	Pharma & biotech	France	92,567	Euro	David Evans	Buy	90	84	7%	10	10	

Source: Kepler Cheuvreux

## Glossary

**Agroecology:** Based on applying ecological concepts and principles to optimise interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system.

**Anaemia:** anaemia is defined as haemoglobin (Hb) levels <12.0 g/dL in women and <13.0 g/dL in men. In one-third of all patients affected, anaemia is due to nutritional deficiency, including iron, folate, or vitamin B12 deficiency.

**Better for you (BFY):** Items where the amount of a substance considered to be less healthy has been actively reduced, removed or substituted during production. In turn, this forms part of the product's positioning/marketing, such as low-fat or low-sugar versions of "standard" products. Products that are naturally free from, for example, fat, salt or sugar, are excluded.

**Bio-fortification:** Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals (including trace elements) in a food, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.

**Body mass index:** Measure of body fat based on height and weight that applies to adult men and women.

**Carbohydrate:** Carbohydrates are present in food in the form of starch, sugar and fibre. A carbohydrate is a molecule containing carbon, oxygen and hydrogen, and can be either simple or complex.

**Claims:** A "claim" refers to any message or representation, that is not mandatory under community or national legislation, including pictorial, graphic or symbolic representation, in any form, which states, suggests or implies that a food has particular characteristics. Nutrition claims are statements like 'low fat', 'high-fibre', while health claims make the link between a food constituent and health, like "vitamin D is needed for the normal growth and development of bone in children".

**Clean labels:** A macro trend for minimal and recognisable ingredients (simple and short ingredients list and minimally processed). The category may cover GM-free (genetically modified) foods, organic, or removed ingredients such as additives, sweeteners, colours, flavours, chemicals and artificial preservatives.

**Diabetes:** A chronic condition that arises when the body either cannot produce enough insulin or cannot use it. An insulin deficiency is sometimes associated with glucagon excess. Diabetes is diagnosed by measuring raised glucose levels in the blood.

The pancreas helps regulate blood sugar levels (glycaemia). This organ produces two hormones that have opposite effects: insulin is released when there is too much glucose in the bloodstream (hyperglycaemia), and glucagon is released when it falls too low. The most important role of insulin is to carry glucose from the bloodstream to the body's cells, where it is used as energy or stored for future use.

The lack or ineffectiveness of insulin allows glucose to accumulate in the blood. Over time, these heightened glucose levels can damage many tissues in the body, causing disabling and life-threatening health complications. There are two main types of diabetes:

- **Type 1 Diabetes (T1D).** T1D patients have an insulin deficiency due to the destruction of  $\beta$ -cells in the pancreas (autoimmune disease). This form of diabetes is usually diagnosed in children and young adults. According to the American Diabetes Association (ADA), approximately 5% of people affected have Type 1 diabetes.
- **Type 2 Diabetes (T2D):** T2D is characterised by some degree of insulin resistance and insulin deficiency. This is the most common form of diabetes. In adults, this type of diabetes accounts for 90-95% of all diagnosed cases. Hyperglycaemia can sometimes be detected during pregnancy. According to the World Health Organisation (WHO), hyperglycaemia in pregnancy is less common and is known as gestational diabetes.

**Disability-Adjusted Life Year (DALY):** One DALY can be thought of as one lost year of "healthy" life. The sum of these DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. DALYs for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for people living with the health condition or its consequences.

**Energy expenditure:** Amount of energy (or calories) that a person needs to carry out a physical function such as breathing, circulating blood, digesting food, or physical movement.

**Energy intake (calories):** Number of calories ingested.

**Epidemiological transition:** Changes in overall population disease burden associated with the increase in economic prosperity – with a shift from a predominance of infection and diseases related to undernutrition to rising rates of NCDs.

**Flexitarian:** Less meat and alternative proteins to meat (plant-based alternatives).

**Food-based dietary guidelines:** Food-based dietary guidelines (also referred to as dietary guidelines) are short, science-based, positive messages on healthy eating and lifestyles aimed at preventing all forms of malnutrition and keeping people well-nourished and healthy. They embody national nutrition recommendations and express the principles of nutrition education in terms of food.

**Food loss:** "Decrease in quantity or quality of food" reflected in nutritional value, economic value or food safety of all food produced for human consumption but not eaten by humans. Measurement of food loss is a key component of any reduction intervention.

**Food insecurity:** A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an

active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution or inadequate use of food at the household level. Food insecurity, poor conditions of health and sanitation and inappropriate care and feeding practices are the major causes of poor nutritional status. Food insecurity may be chronic, seasonal or transitory.

**Food security:** A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Based on this definition, four food security dimensions can be identified: food availability, economic and physical access to food, food utilisation (ability of the human body to ingest and metabolise food through adequate diet, clean water, good sanitation and health care to reach a state of nutritional wellbeing where all physiological needs are met) and stability over time.

**Food waste:** Food waste is part of food loss and refers to discarding or alternative (non-food) use of safe and nutritious food for human consumption all along food supply chains (FAO, 2014). Measurement of food waste is a key component of any reduction intervention.

**Free from:** Products that are specifically produced and positioned for consumers who suffer from a specific food intolerance/allergy, e.g. lactose intolerance, gluten intolerance/coeliac disease or diabetes.

**Fodder crops:** Crops that are cultivated primarily for animal feed. By extension, natural grasslands and pastures are included whether they are cultivated or not.

**Food environment:** Collective physical, economic, policy, and sociocultural surroundings, opportunities, and conditions that influence people's food and beverage choices and nutritional status (Food Foundation, 2016).

**Fortified/functional (FF):** Products to which ingredients with purported health benefits have been added, and that have a specific physiological function and/or are enhanced to the point where the level of added ingredients would not normally be found. To merit inclusion, the product must have been actively fortified/ enhanced during production. As such, inherently healthy products, such as 100% fruit/vegetable juice, are only included if additional functional ingredients have been added. The term "nutraceutical" is being commonly used as substitute for functional food although there are debates about the differences (as are between fortified and functional).

**Free from:** Commonly products that are specifically produced and positioned for consumers who suffer from a specific food intolerance/allergy, e.g. lactose intolerance, gluten intolerance/coeliac disease or diabetes.

**Fresh-cut produce:** Any fresh fruit or vegetable or any combination thereof that has been physically altered from its original form, but remains in a fresh state. Regardless of the type of commodity, it has been trimmed, peeled, washed and cut into a 100% usable product that is subsequently bagged or pre-packaged to offer

consumers high nutrition, convenience and value while still maintaining a high level of freshness.

**Healthy diets:** Generally considered to include a diversity of nutrient-rich foods, such as vegetables, fruits, whole grains, pulses (beans, legumes, nuts and seeds), with (for non-vegetarians or vegans) modest amounts of meat and dairy and unsaturated vegetable oils (GLOPAN, 2016). Conversely, unhealthy dietary patterns are characterized by foods high in added sugars, sodium, saturated fat, and trans fat; and low in fruits, vegetables, pulses, whole grains, and nuts.

**Human wellbeing:** The OECD framework for measuring individual wellbeing includes eleven different dimensions that are important for wellbeing today, grouped under the two broad headings: material conditions (income and wealth, jobs and earnings, housing), and quality of life (health status, work-life balance, education and skills, social connections, civic engagement and governance, environmental quality, personal security, and subjective wellbeing).

**Malnutrition:** Deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients. The term malnutrition covers two broad groups of conditions. One is "undernutrition"—which comprises stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or other insufficiencies (a lack of important vitamins and minerals: iron, folic acid, vitamin A, zinc, iodine below healthy thresholds). The other is overweight (high weight for height), obesity (carrying excess body fat with a body index superior to 30 for an adult) and diet-related non-communicable diseases (such as heart disease, stroke, diabetes and cancer).

**Natural food:** The description of "natural" is a very much self-governed practice; there is no conclusive and scientific definition for the term "natural". The lack of a clear definition is causing confusion and undermining the credibility of "natural" claims.

**Naturally healthy (NH):** Products that naturally contain a substance that improves health and wellbeing beyond the product's pure calorific value, e.g. olive oil, honey, soy-based foods and beverages, green tea, 100% fruit/ vegetable juice and naturally high-fibre food (e.g. bread, breakfast cereals, pasta). While many of these products are marketed on a health basis, this need not necessarily be the case.

**Non-communicable disease:** A medical condition or disease that is not caused by infectious agents (non-infectious or non-transmissible). Non-communicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors. The main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes

**Nutraceuticals:** Nutraceuticals is a broad umbrella term that is used to describe any product derived from food sources with extra health benefits in addition to the basic nutritional value found in foods. The definition of nutraceuticals and related products generally depends on the source. They can be classified on the basis of

their natural sources, pharmacological conditions, as well as chemical constitution of the products. Most often they are grouped in the following categories: dietary supplements, functional food, medicinal food, and pharmaceuticals.

**Nutrient:** Carbohydrates, proteins, and fats supply 90% of the dry weight of the diet and 100% of its energy. All three provide energy (measured in calories), but the amount of energy in 1 gram (1/28<sup>th</sup> of an ounce) differs: with four calories in a gram of carbohydrate or protein, and nine calories in a gram of fat. These nutrients also differ in how quickly they supply energy. Carbohydrates are the quickest, and fats are the slowest to supply energy. Carbohydrates, proteins, and fats are digested in the intestine, where they are broken down into their basic units: carbohydrates into sugars, proteins into amino acids, fats into fatty acids and glycerol. The body uses these basic units to build substances it needs for growth, maintenance, and activity (including other carbohydrates, proteins, and fats).

**Nutrition transition:** A shift in dietary patterns, consumption and energy expenditure associated with economic development over time, often in the context of globalisation and urbanisation. This change is associated with a shift from a predominance of undernutrition in populations to higher rates of overweight, obesity and NCDs.

**Organic:** Products that are certified organic by an approved body, such as the Soil Association in the UK or the US Department of Agriculture in the US. Organic production is based on a system of farming that maintains and replenishes soil fertility without the use of toxic and persistent pesticides and fertilisers. It can also be called “biological” or “ecological”. The organic aspect must form part of the product’s positioning/marketing to be included in this category.

**Reformulation:** Changing the composition of food (often a reduction of fat, sugar, and calorie content and/or an increase in protein, fibre, and micronutrients).

**Right to food:** The human right to adequate food implies that food should be available and accessible to people in a quantity and of a quality sufficient to satisfy their nutritional needs, free from harmful substances, and acceptable to their culture.

**Pulses:** Annual leguminous crops yielding from one to 12 grains or seeds of variable size, shape and colour within a pod. They are used for both food and feed.

**SKUs:** In the field of inventory management, a stock-keeping unit or SKU refers to a specific item stored in a specific location.

**Sugar-sweetened beverages (SSBs):** non-alcoholic, water-based beverages with added sugar. This definition includes soft drinks, flavoured mineral waters, fruit juices/drinks, energy drinks, flavoured waters and iced teas.

**Sugar:** The term “sugar” is used as shorthand for the “free sugars” definition set out by the Scientific Advisory Committee on Nutrition (SACN). This includes all sugars that are added to foods plus those that are naturally present in fruit juices, syrups and honey. It does not include the sugars that are naturally present in intact fruit and vegetables or milk and dairy products.

**Ultra-processed food:** Industrial formulations which, besides salt, sugar, oils, and fats, include substances not used in culinary preparations, in particular additives used to imitate sensorial qualities of minimally processed foods and their culinary preparations (Steele et al., 2016). Often consumed in large portion sizes, and by nature high in fats, sugar, and salt, ultra-processed foods have been associated with obesity, chronic diseases, and other markers of poor health (Ludwig, 2011; Monteiro et al., 2012; Moodie et al., 2013; Moreira et al., 2015; Stuckler et al., 2012).

**Undernourishment:** A state, lasting for at least one year, of inability to acquire enough food, defined as a level of food intake insufficient to meet dietary energy requirements. For the purposes of this report, hunger was defined as being synonymous with chronic undernourishment.

**Undernutrition:** This is the outcome of undernourishment, and/or poor absorption and/or poor biological use of nutrients consumed as a result of repeated infectious disease. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (wasted) and/or deficient in vitamins and minerals (micronutrient malnutrition).

Undernutrition takes three different forms:

- **Wasting:** Moderate and severe wasting is defined by UNICEF as being below minus two standard deviations from the median weight for a specific reference height population.
- **Stunting:** Moderate and severe stunting is defined by UNICEF as being below minus two standard deviations from median height for age of reference population.
- **Hidden hunger:** Deficiencies of micronutrients (i.e., essential vitamins and minerals).

The first two forms result from a lack of energy (calories), protein and micronutrients. But a large number of people who eat sufficient calories do not obtain sufficient micronutrients – leading to the third form of undernutrition – sometimes referred to as “hidden hunger”.

**Vegan:** Consume food and drink only from plant sources.

**Vegetarian:** Do not consume meat, fish or poultry but may eat eggs/dairy.

Sources: Access To Nutrition foundation, BCFN, British Nutrition Foundation, Euromonitor, Cappellini MD, Motta I., European Commission, Fitday, FAO, Global Alliance for the Future of Food, Grattan Institute, IDF, IPES-Food, Merck, Mordo Intelligence, News-medical, NIH, TEEB, Transparencymarketresearch, UK Government, UN, WHO

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