INVESTOR BRIEFING
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Ultra-processed foods: A new frontier for investors in food businesses?

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WITH THANKS TO OUR FUNDER

Impact on Urban Health

Contents

EXECUTIVE SUMMARY

- Ultra-processed foods (UPF) are foods that have undergone industrial processing and formulation using manufacturing processes that aren't replicable with homemade food - often involving the addition of preservatives, additives and other artificial ingredients.
- In the UK, 56% of calories consumed are from UPF foods. This is higher than most other European countries.
- High consumption of UPFs is consistently associated with an increased risk of a number of negative health outcomes, although the mechanism(s) driving this association are not yet fully understood.
- There is currently mixed evidence on the environmental impact of UPFs, although research to date suggests that higher intakes of UPFs are associated with higher carbon, water and ecological footprints.
- UPFs are a contested area of debate for policy-making with different understandings of the concept and its implications for policymakers and food systems.
- Regardless of the ongoing debate around the utility of ultra-processing as a food categorisation system, UPFs have seized the public's attention in way few other food categorisation systems or descriptors have.
- The focus on UPFs has highlighted the significant absence of business and government policies and strategies for promoting and better supporting access to minimally processed whole foods where the greatest dietary inequalities are seen.

PART ONE – UPFs explained

What are Ultra-processed foods and why is there growing concern about their role in diets?

Ultra-processed foods (UPF) are foods that have undergone industrial processing and formulation using manufacturing processes that aren't replicable with homemade food - often involving the addition of preservatives, additives and other artificial ingredients. These foods are often designed for convenience, long shelf-life, hyper-palatability and affordability; but they tend to be energy-dense and high in salt, sugar, fat and additives while often lacking in fibre and micronutrients and displacing whole foods from diets.

Categorising foods by the level of processing they've gone through, as opposed to their nutrient profile, is a paradigm shift for public health nutrition and a concept that has rapidly gained traction among researchers and the media in recent years.

A large and growing global evidence base consistently demonstrates that high levels of UPF consumption are associated with a range of negative health outcomes, including overweight and obesity and all-cause mortality (Lane et al., 2024).

The precise mechanisms that are responsible for these outcomes are not yet clear, making it difficult to recommend effective policy and industry solutions to mitigate the negative impacts of UPFs on health. For example, if the addition of emulsifiers and additives are found to play a key role in driving the negative health outcomes associated with UPFs, then reformulation would help to reduce any risk. If processing in and of itself and the subsequent impact on the food matrix is driving the negative outcomes associated with UPFs, then a more fundamental shift towards whole foods is required.

There is also a growing evidence base on the environmental impact of UPFs, with some studies (mostly from Brazil) finding that UPFs have up to 30-50% higher greenhouse gas emissions (GHGEs) than home-made equivalents, and account for 36-45% of total diet-related biodiversity loss (Anastasiou et al., 2022). Currently, the evidence base is mixed, with other studies suggesting that UPFs may reduce food waste and associated GHGEs due to their extended shelf life (The Food Foundation, 2023a; Table Debates, 2022; Anastasiou et al., 2022). In addition, meat and dairy products are a significant driver of global GHGEs despite many such foods being minimally processed, which therefore potentially undermines arguments that minimally processed foods have a lower environmental impact. Plant based dairy and meat alternatives, while significantly better for the environment in terms of both GHGEs and water use compared to meat and dairy products, would mostly be classified as UPFs (The Food Foundation, 2024a).

Regardless of the questions that remain around the mechanisms driving the negative health impacts of diets high in UPFs and the environmental impacts of UPFs, ultra-processing as a concept is now firmly embedded in public consciousness and therefore warrants attention as a risk for food businesses, policymakers and investors. This is a particularly challenging area for businesses and their investors to contend with given that UPFs are also highly profitable.

This briefing therefore aims to outline the UK context in terms of UPF consumption and policymaking, highlight the contested areas of debate around UPFs, explore corporate exposure to UPFs, and includes a list of engagement questions to guide investors in food businesses whose portfolios are exposed to UPFs.

Navigating UPFs as a contested area for regulatory action

UPFs are a contested area of debate for food policy-making with different understandings of the concept and its implications for policymakers and food systems (Table, 2024). For many, UPFs are symptomatic of extensive corporate capture of the food system, with global interest in limiting their availability presenting a golden opportunity to push forward restrictive action on unhealthy commercial foods and the aggressive marketing of these foods - in the process helping to curb the monopolisation of the food chain by a handful of large businesses and readdress power imbalances in the food system while tackling the commercial drivers of obesity and diet-related disease.

For others, it is a broad and imprecise concept that overlooks the long-standing body of evidence linking high intakes of negative nutrients (such as saturated fat and sugar) to poor health outcomes, risks stigmatising low-income groups and those with disabilities who may be reliant on packaged, convenient and affordable UPF foods, and presents unrealistic 'anti-capitalist' solutions for change that focus on cooking from scratch and ignore the need for convenience in a time-poor society.

These tensions are further complicated by endemic conflicts of interest in the field. Many nutrition scientists, researchers and nutrition charities receive funding from, or are employed by, the food industry, which has the potential to introduce bias into official scientific reviews, committee hearings, and industry-funded academic literature on the subject (Van Tulleken, 2024; Millstone & Lang, 2023). For example, a 2018 review of studies that criticised the NOVA UPF categorisation system found that the authors overwhelmingly (89%) had connections to the UPF industry (Mialon et al., 2018). And a review of conflicts of interest in UK food regulation found that nine of the 15 members of the Government's Scientific Advisory Committee on Nutrition (SACN) have received funding from UPF companies at points in their careers (Millstone & Lang, 2023).

At the same time, some of the most prominent critics of UPFs and UPF companies have individual conflicts of interest given their own publications and media appearances on the topic and in some cases, personal commercial interests.

This can make it hard to navigate and interpret the findings and commentary around UPFs objectively.

Categorisation systems for understanding ultra-processing: NOVA

A 2023 review by the UK's Scientific Advisory Committee on Nutrition (SACN) identified eight classification systems for understanding ultra-processing of foods. However, the most widely recognised and used classification system by far is the NOVA classification (ATNI, 2024). The NOVA system was developed in 2009 by Brazilian researcher Professor Carlos Monteiro and colleagues as a research tool, and classes foods into the following four groups: unprocessed or minimally processed food; processed culinary ingredients; processed foods; and ultra-processed foods (Guardian, 2024; FAO, 2019). In this briefing, ultra-processed foods or UPFs are used to describe industrially formulated and highly processed foods containing additives that would for the most part sit within NOVA category 4.

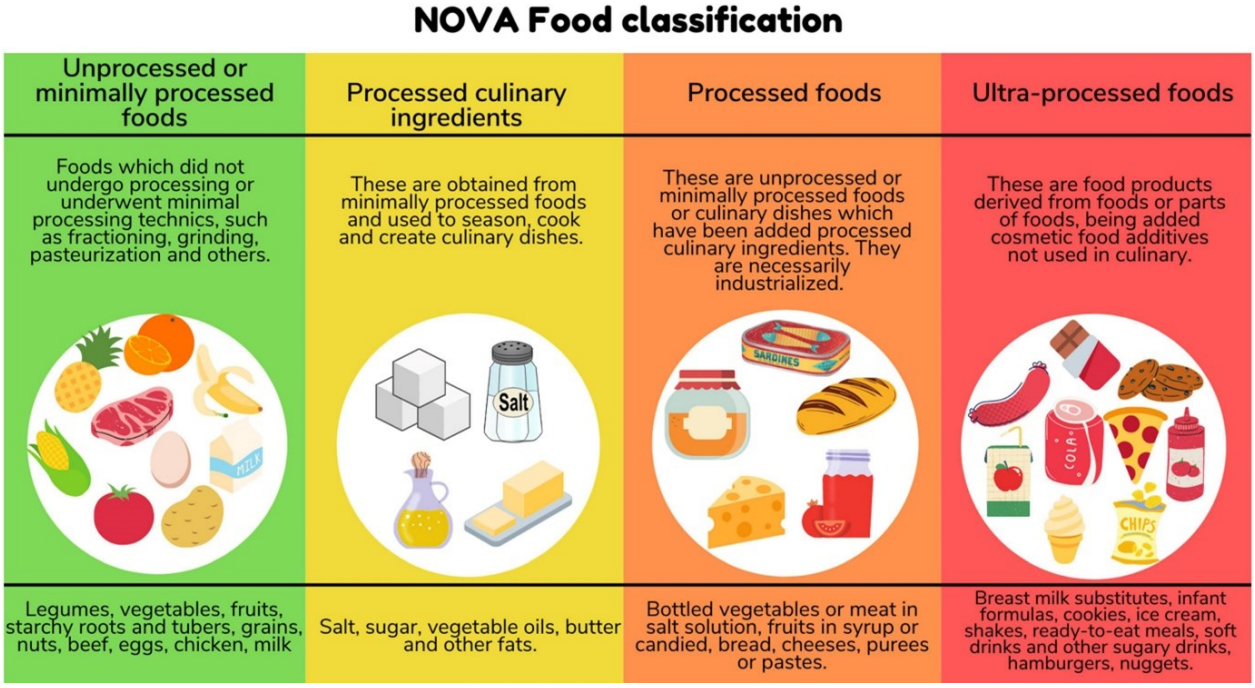

Figure 1: The NOVA classification system (Bonaccio et al., 2023)

The UK context

In the UK, 56% of the calories we eat are from ultra-processed foods (Broken Plate 2023; Madruga, 2023). Another study found that the proportion of calories eaten for school lunches (whether prepared by school or at home) that was ultra-processed was 73% in primary schools and 78% in secondary schools (Parnham et al., 2022). Even among children aged approximately 21 months, a recent study estimated UPFs accounted for 47% of calories (Conway et al., 2024). Furthermore, UPF intake in the UK appears to be higher than in many other countries (Vandevijvere et al., 2024).

Figure 2: the UK consumption of UPFs compared to other countries (Source: The Broken Plate 2023a, The Food Foundation

The health impact of UPFs

The rise in consumption of UPFs has raised concerns around their impact on overall diet quality in addition to the impact of UPFs on health more generally. UPFs are thought to displace more nutrient dense foods such as fruit and veg from diets, and although their exact impact on health is not yet fully understood, a large and growing evidence base consistently demonstrates that high levels of UPF consumption are associated with a range of negative health outcomes, including:

- Type 2 diabetes
- Hypertension
- Cardiovascular disease
- Depression
- Cancer
- Stroke
- All-cause mortality (Lane et al, 2024; The Food Foundation, 2023a)

The environmental impact of UPFs

Research is currently limited on the environmental impact of UPFs, particularly in high income countries. UPFs are associated with higher water and carbon footprints, with up to 30-50% higher GHGEs than homemade equivalents (Table, 2022). Environmental impacts are thought to be driven by the production methods involved in the manufacture of UPFs, which are dependent on the mass production of cheap commodities and intensive agricultural practices for commodity crops such as maize, wheat, corn and soy, and industrial livestock systems, which are justifiably criticised for their impact on land use, biodiversity, soil quality and displacement of more traditionally produced foods (Leite et

al., 2022; Soil Association, 2022; Anastasiou et al., 2022). UPF production is also associated with pollution from the use of pesticides, artificial fertilisers, as well as packaging production and waste with resultant negative impacts on nature and biodiversity (Leite et al, 2022).

However, crops that are grown for use in minimally processed foods as opposed to UPFs do not automatically have lower environmental impacts. The most significant food system contributor to GHGEs are the raw materials and land use practices involved in food production, rather than emissions produced at the processing stage. Beef will therefore always be associated with larger GHGEs than a plant-based burger, whether the beef has been processed or not. Stages in the food supply chain such as transport, refrigeration, and packaging all have high associated GHGEs and will be used (especially in high income countries with long cold chains) for getting both UPFs and minimally processed perishable foods onto supermarket shelves. There are also suggestions that UPFs may reduce food waste due to their extended shelf lives which would positively impact GHGEs (Table, 2022).

One limitation of the NOVA system is that it does not take into consideration sustainability objectives. There is therefore sometimes a conflict between the level of processing and environmental profile of some UPFs. For instance, the majority of plant-based meat (and dairy) alternatives are defined as UPFs using the NOVA classification system, despite their significantly lower environmental impacts compared to meat and dairy foods (The Food Foundation, 2024a).

The rise and rise of UPFs

The proportion of UPFs in our diets has rapidly increased over the past few decades, driven by:

- The 'nutrition transition'. This is the shift in dietary patterns that typically occurs as populations develop economically. It is often used to describe the transition of countries from culturally traditional diets to more 'Western-style' diets high in salt, sugar and fat.
- UPF manufacturers' use of design, pricing and marketing practices that are intended to significantly increase the availability, promotion and therefore sales of their products (ATNi, 2024).
- The economic and political emancipation of women in higher income countries has led to a greater proportion of women in the workforce. This has impacted on household time scarcity leading to an increased need for convenient and accessible foods and meals (Magalhães et al., 2021). Any suggestions that cooking from scratch is therefore an antidote and solution to the rise of UPFs must therefore take into account the fact that women are still very often responsible for a majority of household chores and take gender equity into consideration.

UPFs have seized the public's attention in a way few other food categorisation systems or descriptors have. According to the Food Standards Agency's Consumer Insights Tracker 77% of British adults are concerned about the prevalence of ultra-processing or the over-processing of food. UPFs consistently appear in the top three consumer food concerns as tracked by the FSA. And a recent survey of 10,000 adults in 17 European countries found that the majority (65%) of European consumers believe that ultra-processed foods are unhealthy and will cause health issues later in life. 40% of those surveyed reported not trusting that ultra-processed foods are regulated well enough by authorities to ensure these foods are safe and healthy in the long term. While it is not fully clear how the public conceptualises and understands UPFs, with many perhaps understanding the term as a catch-all for 'junk food' that conflates both UPF and HFSS definitions, it has certainly become a widely used and recognised descriptor.

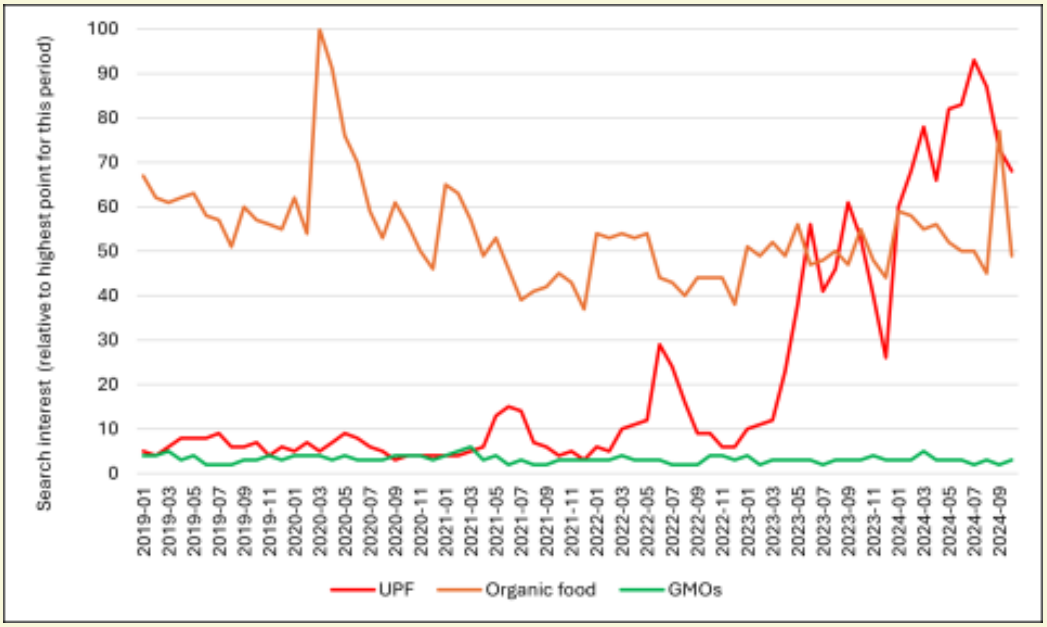

Figure 3: Public interest in UPFs has increased rapidly over the past few years (ACSS, 2024). This figure shows the UK Google searches for term UPF, organic food and GMO for the period between January 2019-September 2024

PART TWO – Understanding the policy landscape

The current UK food policy landscape

Current UK regulatory and policy frameworks for restricting the availability of unhealthy foods are based around the Government's Nutrient Profiling Model (NPM), and the Multiple Traffic Light Labelling system, neither of which take the level of processing a food goes through into account. Using a NPM means that foods are classed as either High in Fat, Salt and Sugar (HFSS) or non-HFSS, based on the balance of positive and negative nutrients contained in a product. The UK's voluntary Front-of-Pack labelling system assigns red, amber or green colours to nutrient values based on pre-determined thresholds, which equate to high, medium and low proportions respectively for specific nutrients (sugar, salt, saturated fat, fat).

Given it was designed as a research tool, NOVA has not been applied to UK legislation or formally recognised by UK regulatory authorities as a tool for analysing and evaluating a product's healthiness (Campden BRI, 2024). Measures to restrict unhealthy foods such as advertising restrictions, HFSS location and promotion restrictions, the industry levy on soft drinks, and voluntary reformulation programmes – which are all in place or forthcoming in the UK – are based on the UK government's 2004/5 NPM.

The UK government's dietary advice (the Eatwell Guide) does not currently include any specific advice on processed or ultra-processed foods apart from recommending limiting the consumption of processed meat (NHS, 2024). However, the Eatwell Guide is predominantly comprised of less processed or whole foods. Discretionary foods high in salt, fat and sugar (such as crips and biscuits, which are likely to be UPF) are pictured off the main plate visual alongside a recommendation that these foods are 'not needed in our diet, so should be eaten less often and in smaller amounts' (NHS, 2022).

Currently, public health nutrition policies in the UK do not consider processing and additives to evaluate the healthiness of a product. However, recent years have seen governmental bodies and parliamentary committees starting to explore the evidence for the impact of UPFs on public health:

1. SACN advises the Office for Health Improvement and Disparities (OHID) on nutrition and other related health matters (Gov.uk, 2024). In July 2023 SACN released a statement noting that the *'observed associations between higher consumption of (ultra-) processed foods and adverse health outcomes are concerning'* but emphasised the uncertainties in the quality of the evidence reviewed. However, concerns were subsequently raised about potential conflicts of interest within SACN's committee and ties with industry (Borland, 2024; Guardian, 2023).

2. The House of Lords' Food, Diet and Obesity Committee's 2024 report 'Recipe for health: a plan to fix our broken food system.' This recommended that the UK government commission further research independent of industry into the links between UPFs and poor diet and health, as *"causal links between other properties of UPFs and poor health outcomes have not thus far been clearly demonstrated and the existence of such links remains scientifically uncertain"*. The Committee noted that there is a significant overlap between UPFs and HFSS foods, and that many UPFs are therefore already captured in current regulation, recommending that the government implement further regulation of HFSS products as many are also UPFs. The committee recommended that the government implement the 2018 Nutrient Profiling Model and regularly review this to reflect any emerging scientific evidence on the potential harms of UPF (House of Lords Food, Diet and Obesity Committee, 2024).

3. A Science Advice Note summarising two expert roundtables the government convened in November 2023 looking at UPFs (Government Office for Science, 2024) acknowledged a wide range of plausible biological mechanisms for UPFs' negative health impacts (including impacts on appetite, microbiome composition and the impact of processing) but noted concerns over the quality of available data and the need for well-designed research. Roundtable discussion also suggested that establishing sub-categories of UPF foods with different nutritional characteristics and health effects may be helpful in informing future policy.

The overlap between UPFs and foods high in fat, salt and sugar (HFSS)

It is important to note that there is a notable overlap between foods that are high in salt, sugar and saturated fat and those that are ultra-processed. **It is estimated that the overlap between HFSS and UPF foods in the UK is around 56% (figure 4)** (Kesaite, et al., 2024). This means that policies focused on HFSS reduction also target between one third and just over a half of UPFs. Commonly consumed foods that are UPF but not HFSS (and so would not currently be included in any HFSS-focused policies) include low calorie soft drinks and manufactured breads. Strengthening current HFSS policies by including non-nutritive sweeteners in the definition of HFSS would increase the proportion of UPF foods captured by HFSS regulation to just over two-thirds, and could encourage so-called 'de-formulation', where ingredients and additives commonly used in UPFs - such as non-nutritive sweeteners - are removed from products.

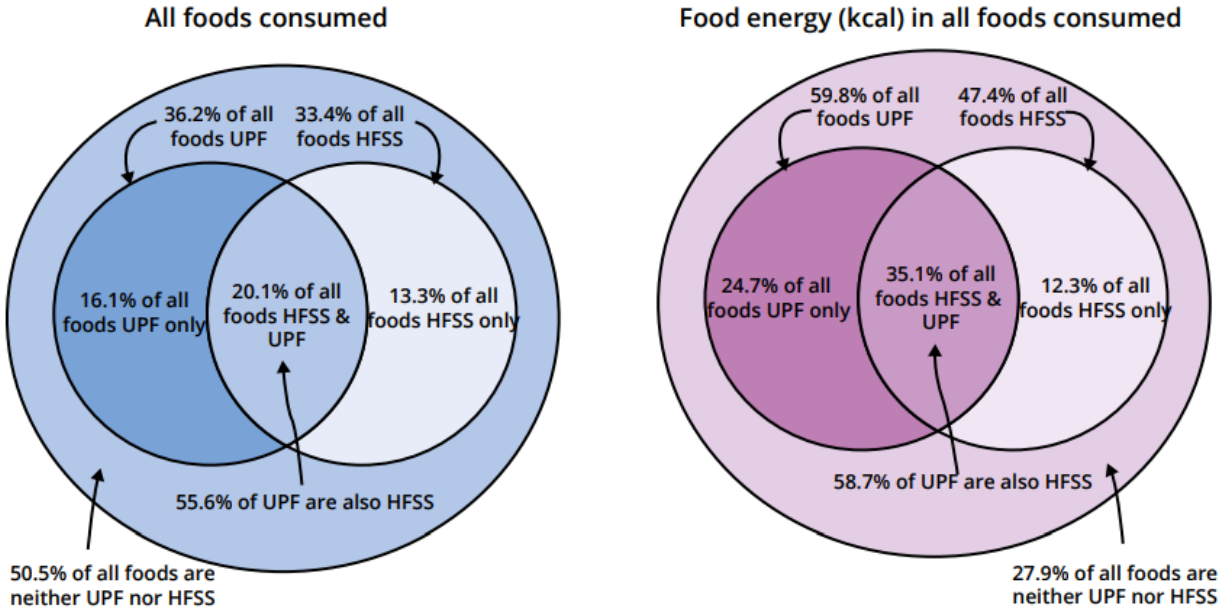

Figure 4: overlap between UPFs and foods high in salt, sugar and fat (HFSS) (Kesaite et al., 2024)

Incorporating non-nutritive sweeteners into existing NPMs and definitions of unhealthy foods is emerging as one way through which it may be possible to identify foods that are both HFSS and UPF. A recent study focusing on different approaches to support US policymakers to identify both HFSS and UPF foods found that starting with HFSS criteria and adding in certain elements that characterise UPFs (colours and flavours) provided a method with 100% agreement between the identification of UPFs and HFSS products.

In the UK, a recent study assessing the overlap between front of pack labelling (FOPL) and UPFs found that UPFs were more likely to have an unhealthier overall front of pack score with more red traffic lights and fewer green traffic lights than minimally processed foods.

Key areas for policymakers looking to restrict consumption of UPFs based on the current regulatory environment therefore ought to explore both policies which incentivise a shift towards more whole foods, as well as exploring where existing policy design can be enhanced.

Recent regulatory action on food additives

Glycerol. In 2023 the Food Standards Agency issued new guidance on the use of glycerol in slush-ice drinks, advising that they should not be sold to children four years of age and under given the risk of glycerol intoxication at very high levels of intake (FSA, 2023).

Aspartame and artificial sweeteners. In 2023 a World Health Organization review categorised the widely used sweetener aspartame as possibly carcinogenic (WHO, 2023a) and published guidelines advising against the use of artificial sweeteners to control weight. The guidelines were based on a review which identified potential undesirable effects from long-term use of artificial sweeteners, such as an increased risk of type 2 diabetes, cardiovascular diseases, and mortality (WHO, 2023b).

UPFs in policies beyond the UK

The term "ultra-processed" is beginning to feature in the national dietary guidelines or nutrient profiling models of several countries, notably **Belgium, Brazil, Ecuador, Israel, Maldives, Peru, and Uruguay**, as well as in the nutrient profile model of the Pan American Health Organization (PAHO). In each of these cases, the consumption of UPFs is discouraged and the importance of diets rich in unprocessed and minimally processed alternatives which are low in fat, salt, and/or sugar content are promoted.

Those countries already restricting UPF foods are doing so for the most part by building on existing HFSS frameworks.

Colombia has implemented health taxes on ultra-processed foods and sugary beverages, using an HFSS model. These taxes target foods and sugary beverages containing excessive added sugars, salt, and fats but are framed as part of action to restrict UPFs. The tax will gradually increase from 10% in 2023 to 20% by 2025. Additionally, ultra-processed beverages with high sugar content exceeding 6g per 100 ml are subject to similar taxation, phased in between November 2023 and 2025.

Many countries use front of pack nutrition labelling, in the form of traffic lights, nutri-score, health star rating and octagonal warning labels focused on the calorie, fat, salt and sugar content of foods. A few countries, such as Mexico, Colombia, and Argentina have taken labelling a step further to reflect wider concerns about UPFs and, alongside recognising the fat, sugar and salt content, have introduced additional warning labels targeting specific ingredients such as sweeteners.

Mexico and Argentina have introduced policies whereby products bearing warning labels, including for artificial sweeteners, must display them in television and online advertising, while also prohibiting such products from making nutritional claims or receiving endorsements from health professionals. Furthermore, in **Argentina**, legislation restricts any commercial tactics targeting children and adolescents on products carrying warning labels.

In **Brazil** legislation mandates restrictions regarding the inclusion of UPF products in the School Meals Programme, including the proportion of expenditure of school food budgets on UPFs (a maximum of 20% of funds) and the frequency UPFs can be served. Moreover, laws protect students and families from commercial marketing in schools, covering all communication, promotions, sales and donations. Similarly, Argentina has prohibited the offering, marketing, advertising, promotion, or sponsorship of products with warning labels in educational institutions.

These emerging international policies focus on opportunities to strengthen and enhance existing HFSS regulation through an increased focus on HFSS foods which also contain additives.

Areas where further research is needed to better understand the potential role of policy for minimising the risks of high UPF consumption

Although there is a consistent and growing body of evidence linking high consumption of UPFs to negative health outcomes, there are a number of areas where further research is required in order to better understand where policy can play a role in reducing high levels of UPF consumption. For example:

- **Intervention studies to understand causal mechanisms.** The evidence base is to date largely observational with the notable exception of the widely cited randomised control trial (RCT) by Kevin Hall and colleagues, and a recent RCT from Japan with very similar findings. This means that it is hard to prove a definitive causal link between UPFs and negative health outcomes. This is because observational studies can never entirely account for other factors that might be driving the observed results such as other unhealthy lifestyle habits that those eating large amounts of UPF foods may have in common - for example smoking.

- **Better dietary data capture methodologies**. The dietary data used in most UPF studies is based on dietary collection methods which are unlikely to have been designed or validated for assessing the level of processing foods have gone through. This makes it hard to accurately identify UPFs from national consumption/food datasets. In the UK, the National Diet and Nutrition Survey (NDNS) is the main database that contains information on diet, but it does not currently capture information on whether foods are home-made or not; a key criterion for UPF categorisation (SACN, 2023; O'Connor et al., 2024)

- **Disaggregating UPF categories to support with policy prioritisation.** The majority of the evidence does not disaggregate between different types of UPF food groups. Recent studies that have started to disaggregate different types of UPF food groups have found that sugar/artificially sweetened drinks and processed meat products (like sausages) have the strongest association with poor health outcomes – specifically cardiovascular disease (Cordova, 2023; Mendoza, et al., 2024) The same negative association is not seen as strongly for UPF cereals or plant-based foods, although total consumption of UPF foods overall is still positively associated with negative health outcomes.

- **More evidence is needed on the role played by additives and emulsifiers,** the presence of which are a key defining feature of UPFs. There are a vast number of different types of additives, sweeteners and emulsifiers used by the food industry, with more than 300 substances authorised for use as food additives in the EU (EFSA, 2024). While risk assessments and safety reviews are undertaken for these by the European Food Safety Authority to determine safe levels of consumption, it is likely that many people are consuming multiple types of additives and emulsifiers in combination, the so-called 'cocktail effect.' The impact of this on health in the long-term is not yet well understood (Chazelas et al., 2021).

The questions that remain around the mechanisms driving the negative impact of UPFs are a particular concern regarding the translation of the current evidence base into public nutrition guidance (Robinson & Johnstone, 2024).

However, while there are legitimate arguments that better quality evidence linking UPFs to negative health outcomes is needed to prove the strength of the association and determine the exact mechanisms driving the observed effects, nutrition science is notoriously hard to undertake. All nutrition studies will have flaws to some degree. The sheer complexity of different foods eaten in infinite combinations over long periods of time makes it hard to execute nutrition studies to the same standards as, for example, pharmaceutical interventions. While the gold standard for scientific evidence are findings from RCTs, these are expensive and time consuming to run. It is worth noting that the evidence base used to legislate and restrict tobacco relied mostly on observational studies (Samet, 2016).

As such, some argue that the precautionary principle should be used to justify policy to regulate UPFs. The precautionary principle is an approach to risk management that argues that there is a social responsibility to protect the public from exposure to such harm, when scientific investigation has found a plausible risk. This has precedent in the EU where the precautionary principle is used to guide food safety.

PART THREE – Guidance for investors navigating through the UPF debate

The financialisation of UPF companies

Many food companies' and investors' portfolios are extremely exposed to UPFs and investors and policymakers are increasingly turning their attention to the matter. UPFs are big business – and hugely profitable business at that.

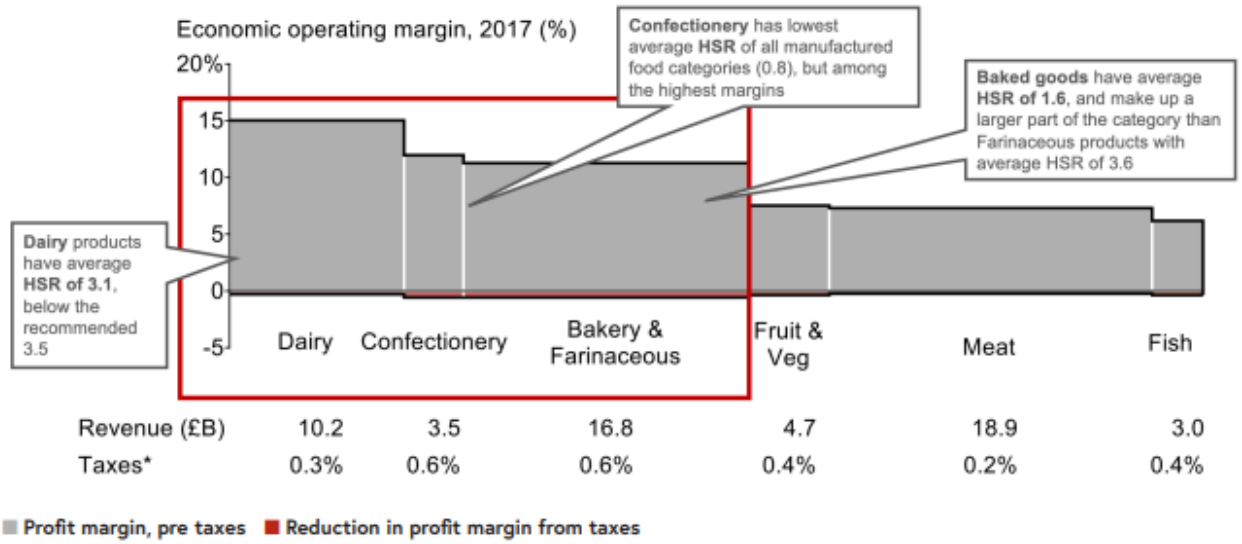

Figure 5: processed products are more profitable relative to less-processed ones (NFS, 2021). HSR refers to Health Star Rating, a nutrient profiling model.

Since the 1980s UPF manufacturers have been rewarding their shareholders with increasing annual dividend payments. Between 1962 and 2021, US$1.5 trillion of shareholder capital has been distributed by the UPF manufacturing sector, compared with US$0.4 trillion distributed by the food service sector. In 2021 alone, UPF manufacturers distributed US$58 billion to shareholders. To compare this with other sectors, between 2019-2021 UPF manufacturers distributed 10.4% of their revenue to their shareholders, whereas for the agricultural input sector this was 6.4%; for the food production, processing and commodity trading sector this was 1.4%; and for the food retailing sector this was 2.0% (Wood et al., 2023).

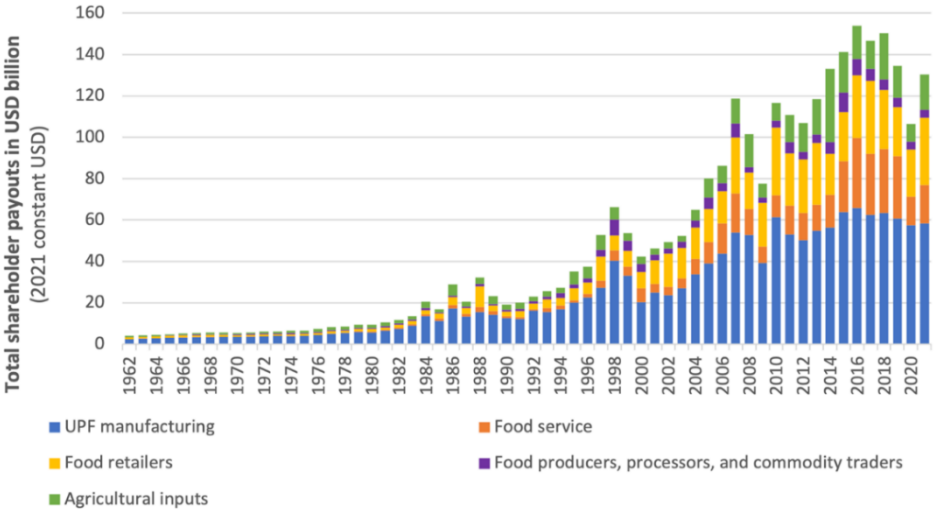

Figure 6: 1962-2021 Shareholder payouts by five U.S. food and agricultural sectors in absolute terms (the payouts relative to total revenue follows a similar pattern) (Wood et al., 2023).

Moreover, there is evidence to suggest UPF manufacturers engage extensively in lobbying to advance their commercial goals and maximise profit from products and practices that may harm the public. A study of US lobbying using the OpenSecrets database revealed how, between 1998 and 2020, ultra-processed food (UPF) manufacturers spent US$1.15 billion on lobbying. This was more than any other industry — the second highest was gambling (US$817 million), followed by tobacco (US$755 million) and alcohol (US$541 million) (Chung et al., 2024).

Emerging concerns

The “shareholder primacy” norm holds that a corporation’s main purpose should be to reward its shareholders. Maximising short-term returns remains the goal of many investors. However, recent years have seen a rise in more ethically and sustainably focused investors and funds with increasing awareness of the commercial risks created by long term harms to public health and the environment (The Food Foundation, 2023b). Yet to date, more responsible investors have had limited influence and impact on food business portfolios.

In contrast however, many investors unconcerned with longer term sustainability vote against resolutions asking for corporate action on sustainability issues (Wood et al., 2023). It is likely that many large investors currently take a similar stance for public health. For example, a recent resolution coordinated by ShareAction at Nestlé’s AGM in 2024 aiming to move the company away from over-reliance on products high in fat, sugar and salt and towards healthier options gained just 12% of shareholder support (Grocer, 2024). Nonetheless, there has been rising interest among investors in health as an investment risk given growing regulation around the world. The Nestlé resolution could be a sign of more pressure - in the form of increasing numbers of health-related shareholder resolutions - to come.

While an increased focus by investors on the long-term material risks high levels of UPF consumption pose to companies and society is urgently needed, it can be difficult to navigate through this area given endemic conflicts of interest. The following section is intended to support investors looking to reduce their portfolio exposure to UPFs and avoid any unintended consequences.

Watch-outs for investors when assessing arguments in favour of restricting UPFs

Companies’ exposure to UPFs is likely to be even greater when they take foods and drinks produced for specific medical or nutritional needs or preferences into account. This is problematic given the essential role many UPF medical products and feeds play in clinical settings, and for those families reliant on first infant formula which cannot be home-made and is a UPF. However, up until the age of six months, first infant formula is a baby’s sole source of nutrition and hydration for those families reliant on formula. Although complementary foods can be introduced from six months of age, first infant formula for those families dependant on formula is required up until the age of one, when cow’s milk can be introduced. In the UK, Nestlé and Danone together control 85% of the baby formula market (Financial Times, 2023).

Plant-based alternatives to meat and dairy is a category where there are notable trade-offs to be considered between the environmental benefits of such foods, the potential investment opportunities, and the negative health impact of UPFs. The vast majority of plant-based meat and dairy alternatives come with significantly reduced greenhouse gas emissions (GHGEs) and water footprints compared to meat and dairy (The Food Foundation, 2024a; The Food Foundation, 2022). But a number of plant-based alternatives are UPF, particularly those 'new generation' alternatives that aim to directly mimic meat or dairy, such as Beyond Meat, Quorn and Oatley. Meat and dairy, the largest food group contributors to climate change, are not typically classed as UPFs.

There is currently only limited evidence looking at the health outcomes of plant-based alternatives, although a recent study that was one of the first to look at the health risks associated with different types of UPF food categories, found a trend towards a positive health impact for intake of ultra-processed plant-based alternatives (Cordova et al., 2023). This was in contrast to overall intake of UPF foods and animal-based UPF foods which both significantly increased the risk of negative health outcomes.

The cost of non-processed equivalents to UPF foods is also problematic in a UK context where 11.7% of households reported experiencing food insecurity as of July 2024 (The Food Foundation, 2024b). The cost of non-industrially produced foods within the bread and cereal category is particularly contentious given that the Government's guidelines for a healthy diet (the Eatwell Guide) recommend that meals are based around starchy carbohydrate foods, such as bread, rice, or pasta, which should make up just over a third of the food we eat. Yet, for example, while the average price of an 800g loaf of wholemeal sliced bread from Tesco is 75p, the cost of a (non-UPF) sourdough bloomer loaf is over double the price at £2.00 (as of November 2024). The frequently cited RCT by Kevin Hall and colleagues found that the weekly cost of preparing the unprocessed meals in the study was 43% higher than the ultra-processed meals (Hall et al., 2019).

Watch-outs for investors when assessing arguments against restricting UPFs

There are some concerns that nuance is being used to undermine arguments for acting on UPFs. For example, misleading arguments are sometimes used which:

1. ***Conflate processing with ultra-processing.*** NOVA category 4 is distinct from NOVA Category 3 (Astrup et al., 2022). Yet defendants of UPFs frequently conflate processing with ultra-processing. It is true that food processing can play a very helpful role in supporting public health objectives, for example through the fortification of foods and ingredients to increase micronutrient content (SACN, 2023), to support food safety objectives for example through pasteurisation, by extending shelf life to reduce food waste, and by providing affordable nutrition e.g. tinned fruit (BNF, 2024). However, ultra-processed foods are distinct from processed foods, and while they may share some of the benefits of processing, they are industrially formulated (using processes and ingredients that cannot be replicated in a household kitchen[1]) rather than processed and associated with a number of negative health outcomes.

2. ***Focus on those individual foods that are UPF but also nutritious.*** Foods such as baked beans, hummus and wholegrain breads and cereals are often caught in the crossfire of UPF debates. While it is true that there are several staple foods that can play an important role in a nutritious diet and yet are also UPFs, the NOVA categorisation system is intended to analyse diets in the round rather than individual foods (House of Lords Food, Diet and Obesity Committee, 2024).

3. ***Suggest that restricting UPFs is elitist and would disproportionately impact on lower income households.*** While there are certainly major issues with the affordability of minimally processed foods such as fruit and veg and some non-UPF equivalents to staples such as bread, in the UK there is currently only mixed evidence to suggest that lower income groups eat notably larger proportions of UPF foods in their diets than higher income groups do. While there does appear to be a positive relationship between low education and income and UPF intake (Colombet et al., 2022), not all studies find a strong relationship (Dicken et al., 2023; Madruga et al., 2023) and consumption of UPFs is high across all socio-economic groups. By far the largest dietary inequalities between high- and low-income households are seen with unprocessed, healthy foods such as fruit and veg, fibre, and oily fish (The Food Foundation, 2023a).

[1] For example, using processes such as hydrogenation, hydroxylation, extrusion and moulding, and/or with the addition of additives and emulsifiers.

Summary

While the debate around UPFs seems unlikely to disappear anytime soon, what the concept of ultra-processing has highlighted very clearly is the almost complete absence of clear government and business policy and strategy for promoting and supporting the role of healthy, minimally processed whole foods in diets. Investors, policymakers, and businesses must remain clear sighted in terms of the overall objectives for acting to improve our food system – exploring both wider regulatory frameworks to rebalance diets and food environments away from a reliance on ultra-processed, unhealthy foods, while also prioritising steps that support the appeal, access and affordability of minimally processed foods. Whatever system is used to define and categorise the healthiness of food, the priority for governments must be to ensure that everyone, regardless of income, can access and afford a healthy, nutritious, and sustainable diet.

Engagement questions for investors

The following engagement questions are intended to provide some suggestions as to the types of questions that could be asked by investors in their stewardship and engagement with food and beverage companies exposed to UPFs.

GOVERNANCE AND RISK MANAGEMENT

- Does your company's strategy include a clear, comprehensive nutrition strategy that includes responsibility and oversight at overall board-level (ATNi, 2020)?
- Is executive remuneration linked to delivery of the nutrition strategy and associated targets? (ATNi, 2020).
- To what extent is your company exposed to the risks associated with UPFs?
- Do you know what the overlap in your portfolio is between HFSS and UPF foods?
- How are you managing any potential risks associated with UPFs, such as regulatory and reputational risks, as well as risks associated with changing consumer preferences (ATNI, 2024)?
- To what extent are you monitoring the use of food additives, emulsifiers and non-nutritive sweeteners in your products?
- Do you commit to the principles and practices set out in the Responsible Lobbying Framework: legitimacy, transparency, consistency, accountability and opportunity (ATNi, 2020)?
- What data collection practices do you have in place to collate good quality data relating to the level of processing your products are subject to?

HEALTH DIMENSIONS

- Do you have a proportional target for increasing sales of healthier products and disclose data on the proportion of sales coming from healthier products?
- Do you have a strategy to improve the affordability and accessibility of less processed healthy and sustainable products such as fruit and veg?
- Are health claims being made on any UPF and HFSS products?
- What percentage of your marketing spend goes on the promotion of less processed healthier ranges?
- Have you set and publicised reformulation targets?

- Do your reformulation efforts and NPD processes aim to involve minimal processing of products?

- Are meat and dairy alternatives fortified with key micronutrients of concern, particularly where the equivalent animal product is a major contributor to population intakes e.g. vitamin B12 in meat, iodine in dairy products?

SUSTAINABILITY DIMENSIONS

- Do you have an environmental life cycle assessment for your key ingredients and products?
- Are palm oil and soya sourced sustainably using certified schemes where used?

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