

Food and Beverage Finance 2024

Key Trends Shaping Opportunities in the Food and Beverage Sector



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Introduction

Coinciding with the third annual Food and Beverage Finance Summit, University College Cork, AIB, Goodbody, A&L Goodbody, and KPMG have combined to produce; Key Trends Shaping Opportunities in the Food and Beverage Sector.

The report sets out the macroeconomic environment within which Food and Beverage (F&B) companies are operating in 2024. Against this backdrop, six key trends have been identified;

1. Sustainable food security
2. Affordable environmental sustainability
3. Sustainable food and beverage supply chains
4. Legal and regulatory developments
5. Generative artificial intelligence
6. Health and wellness

Alongside these key trends the outlook for merger and acquisition activity in the F&B sector in 2024 is presented. A number of emerging investment opportunities are identified, including (1) the alternative protein market, in particular precision fermentation; (2) investment opportunities associated with gut health and the microbiome are discussed and (3) opportunities in sustainable packaging and better for you beverages.

This publication forms part of the Food and Beverage Finance annual conferences that are designed to stimulate debate by stakeholders across the industry. The sponsors and authors of this report welcome contributions and insights as we plan the next phase of development for this strategically important gathering each May in University College Cork.



Economic uncertainty presents challenges for the Food and Beverage sector

The 2024 economic outlook paints a mixed picture. Constrained growth across the leading economies, stubbornly high inflation, and a slowness to ease the tightened monetary policy cycle means industries are facing challenging operating environments. The F&B sector, is no different and its relationship with these macro-economic factors is complex. For many years, the developed world has generally had a stable supply of cheap high-quality food. Recently, the status quo has been challenged. Brexit, war, labour shortages, supply chain disruption, regulation, and climate change mean that the complex interlinkage will continue into the future, but it will be more volatile than stable.

Here some of the key macro-economic trends and the impact for the F&B sector are examined.

Labour availability and cost

The current global labour trend is marked by shortages and increased costs. This has a ripple effect, slowing food production and distribution, and ultimately increasing the price of food. An example is the recent minimum wage increase in California for fast food workers. This was an important step towards better living standards for workers, but the corollary is higher food prices. Fast food prices across chains in California are increasing. At a time of higher inflation this disproportionately affects cohorts from socially disadvantaged backgrounds which is a key trend globally in the industry.

Commodity prices and inflation

The FAO Food Price Index (FFPI) for April 2024 stood at 119.1 points. To put this into perspective, the FFPI averaged 125.7 points in 2021, which was a 28.1% increase over 2020. Therefore, the current FFPI of 119.1 points is lower than the average for 2021, but it is still relatively high compared to historical standards. This is driven by various macro-economic factors. In addition, climate is having more of an affect on prices. The poor cocoa harvest in Ghana and Ivory Coast has caused cocoa prices to spike and coffee has experienced a similar fate with futures of coffee spiking due to heatwaves affecting major producers in South-East Asia. While we await general inflation to subside due to continuing government interest rate intervention, events like climate keep food prices elevated.

Policy and regulation

Europe leads the way when it comes to regulation of food where labelling, nitrate levels, flavour use, unfair trade practices all have been legislated for over the last number of years. The introduction of the Corporate Sustainability Reporting Directive across the EU is having a transformative effect. While regulation means well, it can impact food yield and cost. In terms of price, not every government is explicitly regulating food prices, but because the cost of food is one of the clear ways the population sees inflation impacting their wallets, governments are intervening because they want the price of food kept flat or even reduced. Recently in Canada, the Prime Minister summoned CEOs of the five largest retailers and gave them a deadline to

reduce the price of food, warning they would be subject to heavier regulation if they didn't comply. Similar conversations are happening in various jurisdictions around the world, putting real pressure on the margins and cashflow.

Geopolitics

Geopolitical instability and particularly war has a profound impact on consumers and producers alike. The impact of Brexit on food availability in the UK and the impact of the war in Ukraine on grain prices is well documented. The simple diversion of shipping from the Strait of Hormuz to around the Horn of Africa adds days to supply chains and cost increases for consumers. These events are becoming more frequent making outlooks more unpredictable.

Disruption and technological advancement

The pace of technological advancement is a significant challenge but also an enormous opportunity. Recent disruption started with e-commerce and delivery. Now, the use of Artificial intelligence ("AI"), precision agriculture, biotechnology and blockchain has the potential to unlock enormous efficiencies across the entire sector. AI and weight suppressing medications are key emerging disruptors. AI can significantly impact the value chain right from crop yield monitoring to customer experience. Weight loss drugs, such as Wegovy and Ozempic are not widely available, but the pipeline of new alternatives, including orally ingested drugs, may alter consumer eating habits and food preferences, leading to a decrease in the consumption of high-calorie snacks and fast food. This disruption is a prominent agenda item for the boards considering their product offerings and strategies.

Optimism and opportunity

Despite the challenging macro environment, we are beginning to see an easing of inflationary pressures due to the tight monetary policies pursued by central banks around the world. As inflation calms, monetary policy and interest rates will fall. This will drive a renewed consumer demand which will stimulate economic growth.

The F&B sector is well versed in managing economic cycles and has always been resilient and adaptable. It has consistently demonstrated its ability to evolve through challenges and changes over the years. During this period, there is huge opportunity for the Irish F&B sector.

Already, Ireland is leading the way in sustainability. The acquisition profile of our companies is strategic and niche, for example in sectors like food preservation. The integration between food and energy companies is becoming more pronounced, with solar farms emerging alongside food plants and ongoing trials for bio-methane production – this is to solve the emissions problem.

Moreover, our universities are spearheading cutting-edge research and fostering strong industry collaborations. While the landscape presents its challenges, it also offers great opportunities. As always, the future holds promise and potential for those ready to adapt.

Key Trends affecting the Food and Beverage Sector in 2024

The European F&B sector is a global powerhouse with a combined market capitalisation (including food retail) of over €1tn, demonstrating its substantial economic presence. With over €33bn earmarked for capital expenditures in 2024 alone, investment will be a key driver of the future of the industry as it looks to fuel advancements in technology, sustainability, and product development.

Primary listing	Name	Market Cap (€bn)	Share Price (€)	P/E	EV/ EBITDA
Zurich	Nestle	244.99	104.84	18.25	14.50
London	Unilever	122.10	45.75	17.82	12.33
Brussels	Anheuser-Busch InBev	112.03	60.59	18.23	9.37
London	Diageo	70.68	34.47	17.89	13.65
Amsterdam	Heineken	51.59	94.70	18.73	10.15
Paris	Danone	39.38	61.54	16.59	10.74
Zurich	Givaudan	37.70	3906.44	35.53	24.83
Paris	Pernod Ricard	36.12	156.00	17.78	13.74
Amsterdam	DSM-Firmenich	27.36	94.50	39.74	15.69
Amsterdam	Koninklijke Ahold Delhaize	26.51	25.79	11.08	5.72
Zurich	Lindt & Spruengli	25.66	12022.28	37.62	22.55
London	Tesco	24.46	3.28	11.84	6.73
London	Associated British Foods	23.39	26.42	14.22	8.02
Copenhagen	Carlsberg	17.61	126.24	17.00	9.95
Frankfurt	Symrise	14.16	97.32	30.67	16.44
Dublin	Kerry Group	13.95	81.32	17.29	12.40
Lisbon	Jeronimo Martins	12.45	22.04	16.13	6.61
Milan	Davide Campari-Milan	11.62	9.64	28.06	17.28
London	Coca-Cola HBC	11.13	26.25	14.14	7.93

Europe serves as a hub for innovation in the global F&B sector, setting trends in consumer preferences, sustainability practices, and culinary excellence. With a rich heritage of diverse cuisines and a strong emphasis on quality and authenticity, European F&B companies influence global tastes and standards. Furthermore, the European F&B industry leads the charge in adopting sustainable practices, driving initiatives to reduce carbon footprint, minimize food waste, and promote ethical sourcing. These efforts not only address environmental concerns but also cater to the growing demand from consumers for eco-friendly and socially responsible products.

Sustainability, “meeting the needs of the current generation without compromising the ability of the next generation to meet

theirs”, continues to be the underlying theme impacting major developments and investment decisions in the F&B sector in 2024.

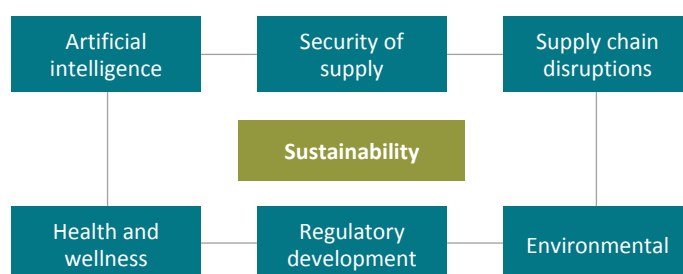
For some, a sustainable food system is only concerned with minimising the negative impact of food production on the environment. But sustainability is much broader than just the environment. When it comes to food, security of supply at an affordable price is a priority. The 2022-2024 period saw significant F&B price inflation making food security a live issue, as millions around the world slipped into famine and starvation conditions while many in the developed world became at risk of food poverty. The key challenge facing F&B companies in 2024 is to provide nutritious tasty food, that has a low environmental impact and to deliver it at a low price. This publication considers some of the key sustainability trends affecting F&B companies in 2024. These trends offer both opportunities for future investment and threats that need to be managed and mitigated.

Geopolitical unrest is an unrelenting feature of 2024 and its impact of the sustainability of the global food system has been evident. The war in the Ukraine and the situation in the Middle East have resulted in food price spikes. This publication considers the impact of geopolitical unrest and associated market developments on global **food security** and the disruptions caused to F&B **supply chains**.

Throughout 2024, **environmental sustainability** continued to dominate the strategies of F&B companies as they grapple to reduce their carbon footprint, and that of their suppliers. This publication considers the increased focus on environmental sustainability which is somewhat precipitated by **regulatory** and legislative developments.

In addition to a focus on environmental sustainability, consumers continue to focus on their **health and wellness** in 2024. In particular, the developments in obesity medication and the potential impact on F&B companies is discussed as is the apparent blacklisting of ultra-processed foods.

The challenges for F&B companies of doing business in such a volatile, uncertain, complex and ambiguous environment may be somewhat alleviated by the exploitation of new technology. **Generative artificial intelligence** can assist F&B companies, here the potential for GenAI to assist in improving on and reporting sustainability credentials, minimising the impact of and risk associated with geopolitical unrest and contributing to the development of healthier and wellness enhancing foods is outlined.

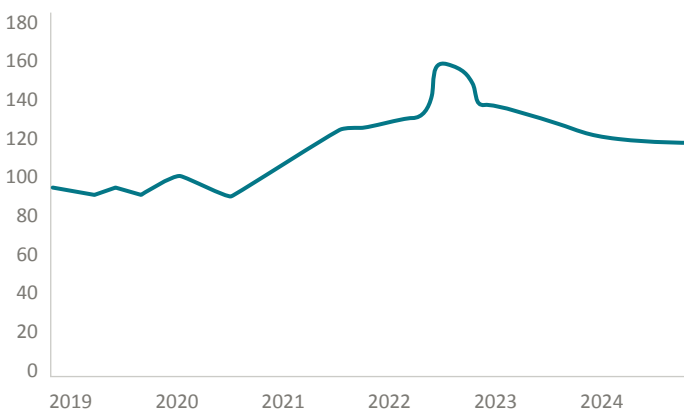


1 Sustainable food security

Food security, defined by the World Bank as “all people, at all times, having physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”, is emerging as a concern not just in developing countries but also across developed economies, as a greater number of individuals fall into risk of food poverty. Delivering safe, nutritious food to consumers at an affordable price will be a key challenge for food businesses in 2024 and beyond.

Against the backdrop of geopolitical unrest and an inflationary environment, global food prices increased by almost 30% from January 2021 to mid-2023. As commodity prices began to fall, the sluggish transmission of price reductions across food supply chains through to the final consumer became a major issue of public and political discourse in 2023 with some commentators attributing the lagged response to complex supply chains while others speculated that some industry agents engaged in “price gouging”. Such was the concern regarding high food prices, that some governments in the EU, such as Croatia and Hungary, intervened in food markets by using legislation to limit food price increases, while governments in France and Ireland issued stark warnings to food industry executives regarding high prices. Furthermore, consumer groups and state attorneys across a number of US states engaged in price gouging litigation against major food retailers.

FAO Food Price Index | 2014 - 2021 = 100



Source: Food and Agricultural Organisation, United Nations (2024)

Geopolitical unrest was a major contributor to the recent food price spike and as we look ahead to 2024 and beyond, this threat still looms large on the horizon. The invasion of the Ukraine by Russia led to an almost 60% increase in energy prices, a quadrupling of fertiliser prices and a 70% increase in cereal prices, affecting affordable access to food across the world. As food production costs increased, food exports from Europe did not decline, but they did rapidly increase in price, moving affordable food beyond the reach of many. The prolonged war in the Ukraine continues to impact availability and price of commodities and continues to disrupt supply chains.

The ongoing conflict in Israel and Palestine is impacting food supply into Palestine and famine is now imminent in Northern Gaza. Furthermore, Israel is a major global exporter of fruit and vegetables, and if trade is compromised this will contribute further to global food market volatility. Ethically minded consumers have also been influenced by geopolitical developments and 2024 saw consumers boycotting goods and brands associated with certain countries such as Russia and Israel. Ongoing conflicts also threaten the safety and efficiency of global supply chains, to be addressed a later section of this report.

In a developing country context, geopolitical unrest and the affordability of food is a matter of life or death. Despite significant progress in tackling hunger in recent years, the proportion of undernourished people globally has reduced from 23% to 13% since 2000, the number at risk of starvation has sadly started to increase once again 2023. The World Food Programme estimate that the number of people facing acute levels of food insecurity has doubled since 2020.

In a developed country context, the recent food price spikes have shown us that consumers will resist food price increases. As the proportion of disposable income that is spent on food decreases across all developed economies, consumers have become accustomed to paying low prices for food. This will continue to put pressure on F&B companies to increase efficiencies and deliver food at the lowest price possible.

“Consumers will resist food price increasing”

From a F&B manufacturer or retailers’ perspective, 2023 was another challenging year as operators had to contend with the dual effect of inflation on both consumer demand and their own profitability. In addition, the material interest rate increases pushed through by central banks to combat these inflationary pressures has seen equity valuations erode as investors reallocate funds towards more attractive yielding assets (e.g. bonds).

While operators adopted a strong internal focus on cost efficiencies and range/promotional management, the scale of the cost increases meant that most also had to push through significant price increases in 2023 and into 2024. At the macro level, this clearly impacted demand, however the consumer has proven far more resilient than anticipated, albeit with some pockets of weakness notably in China and Southeast Asia.

As a result, the overall F&B sector has been able to navigate this challenging period though there has been winners and losers. The most obvious effect of the cost-of-living crisis was a shift in

consumers' focus toward value across both hospitality and retail channels. Within retail, private label and the discounters were the key winners particularly in the first half of 2023. In hospitality, while volumes were still down 10% on pre-COVID levels, there was also a shift towards value. This was evident across venue types with more affordable gastro pubs, or quick service restaurants like McDonalds, winning at the expense of full dining restaurants, and in terms of products consumed with likes of beers and wines outperforming more expensive spirits and cocktails.

Consequently, after two years of concentrating on navigating and managing the inflationary cost backdrop, there has been a clear shift in stated focus from both F&B brand owners and retailers to drive volume growth in the year ahead. That will likely mean a ramp-up in promotion activity (with headline price cuts unlikely) as well as a step-up in innovation and new product launches to entice consumers back in store. The early indications from Q1 2024 reported trading across the F&B sector suggest that volumes overall remain somewhat muted (particularly in North America) but with building confidence for the balance of the year.

“An unprecedented number of voters will go to the polls”

Globally, an unprecedented number of voters, almost 50% of the world's population, will go to the polls in 2024, with elections taking place in the US, India, the EU and Russia to mention just a few. Many of the popular candidates have nationalist and protectionist leanings which may encumber international trade and add to the cost of doing business internationally. The rise of food nationalism and geopolitical unrest more generally, is a concern for major multinational corporations and may force some companies to consider bringing their supply chains home, creating disruption risks and pushing up costs. As such, the outlook for the F&B sector remains uncertain. Encouragingly, however, while there are still some cost pressures, particularly labour and commodities such as coffee and cocoa, there has been a material easing in inflation across the broader input cost buckets including energy, packaging and food.

2 Affordable environmental sustainability

Environmental sustainability continues to be a major trend dominating discussions at board rooms in the F&B sector. Environmental sustainability presents a challenge in so far as companies need to minimise their negative impact on the environment, but it also presents an opportunity as companies can cash in on the growing green market.

Food production and the environment are inextricably linked. The food system, when operated responsibly, delivers many important eco-system services and public goods, including the preservation of habitats and biodiversity, the protection of soil health and waterways and the provision of carbon sinks. However, the global food system, and especially the industrialised food system, can also negatively impact on the environment. In terms of climate change, it is well known that primary agriculture accounts for almost 94% of ammonia emissions and 11% of greenhouse gas emissions across the EU, the figure is over 30% for Ireland. The UN Environmental Programme has identified the global food system as being the primary driver of biodiversity loss with agriculture alone being the identified threat to 24,000 of the 28,000 (86%) species at risk of extinction. The OECD has found that primary agriculture is responsible for 70% of global freshwater withdrawals, and the use of pesticides and fertiliser remains a major source of water pollution.

A shift to a more sustainable global food system is urgently required and is reflected in the growing “green market” for F&B products. The UN Environmental Programme suggests three interdependent actions: changing global dietary patterns, protecting and setting aside land for nature, and farming in a more nature-friendly and biodiversity-supporting way. This presents opportunities for F&B companies to develop new products with lower carbon and water footprints and to develop supply chains that reward the protection of nature.

“A shift to a more sustainable global food system is urgently required”

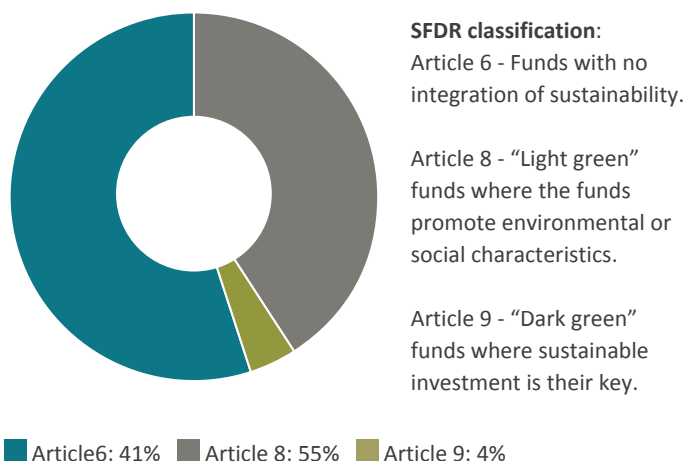
Policy levers, regulatory changes, consumer sentiment and capital market developments are all powering the change to a more sustainable food system. From a regulatory perspective, the introduction of the Corporate Sustainability Reporting Directive (CSRD) requires companies to report on the impact of corporate activities on the environment and society and requires the audit (assurance) of reported information. CSRD (more on this later)

should facilitate a more cohesive approach across companies to tackle the global environmental challenges we face today.

Developments on capital markets, and the focus on green finance, will play an important role in funding sustainable solutions. For the F&B sector, a move towards and significant investment in a more sustainable food system will be key for the industry to play its role in addressing and alleviating the current pressures. Investors, particularly in Europe, are playing a growing role in encouraging and incentivising companies to drive the ESG agenda. Importantly, companies that can demonstrate an ability to deliver a positive and sustainable impact to their respective industries will benefit from greater access to debt and equity capital, and at increasingly competitive costs.

Within equity markets, while there has been some pushback to ESG investing, particularly in the US, the flow of capital into sustainable funds has remained positive. According to Morningstar, during Q1 2024, Europe, the largest market for sustainable funds, saw a net inflow of US\$10.9bn, albeit down from the peak inflow levels seen in Q1 2021 (c.US\$150bn). Globally, sustainable funds netted \$900m inflows in the quarter (US -\$8.8bn). Overall, during Q1 2024, the total global sustainable fund assets delivered 1.8% growth in the quarter. This now results in specifically ESG orientated funds now accounting for 60% of the European fund market (as per the chart below).

ESG funds accounting for c60% of the European fund market



Source: Morningstar

Within the debt markets, global issuance of ‘impact’ bonds or green, social, sustainability and sustainability-linked bonds, have also remained elevated. During 2023, the issuance of these bonds total \$939bn up 3% yoy though marginally below the \$1.1tn issued in 2021. The biggest step up was seen in green bond sales from corporate and government which jumped to \$575bn.

Capital Markets and debt funding developments under the guise of the EU Commission’s Renewed Sustainable Finance Strategy is seeing increasing collaboration and coordination between the European Banking Authority (EBA), European Supervisory Authorities (ESAs), European Central Bank (ECB) and the European Systemic Risk Board (ESRB) with significant engagement and expectations being placed on EU banks across Europe related to climate risk. Various thematic reviews and climate risk stress testing requirements along with guidance issuing from various EBA reports, including the January 2024 EBA report on banking finance to misaligned industries and customers from a climate perspective, is starting to influence where banks deploy debt funding, the type of loans agreements they will consider and requirements for customers to be aligned to a climate pathway towards Net Zero. Increasingly, risk appetite for businesses that are not climate aligned will reduce and the capital banks require to support lending to misaligned companies is expected to increase making such lending activity prohibitively expensive for customers. Equally, business that are climate aligned can expect to benefit from more competitive offerings.

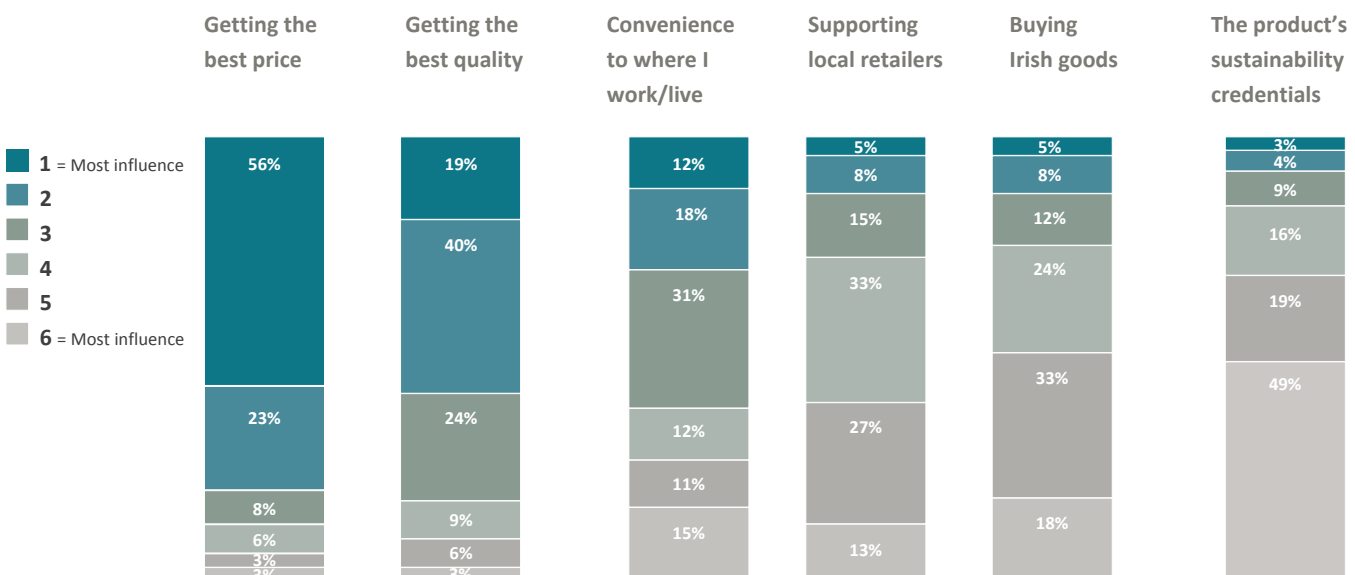
From a consumer perspective there is growing interest in more sustainable consumption. The 2024 KPMG Retail Tracker conducted in conjunction with Red C surveyed 45,000 consumers and found that Irish consumers are keen to see brands being more vocal and proactive about sustainability, this is particularly true for younger age cohorts. The survey reveals that 59% of consumers agree that brands should share more information about their sustainability efforts and should take responsibility for reversing environmental damage. However, the results also show that price remains the main driver of choice for Irish shoppers, with 56% of respondents identifying price as the most important influencer on their choice and only 3% of shoppers identifying sustainability credentials as the primary influence on product choice.

Only 30% of consumers in the KPMG survey indicated that they are willing to pay a higher price for sustainably produced products while almost two-thirds of consumers agreed that brands should offer incentives or discounts to customers for choosing eco-friendly or circular economy products.

“Only 30% of consumers are willing to pay more for sustainably produced products”

This Irish data is mirrored in global trends also as food price increases in 2023/24 met with backlash from shoppers and politicians alike across Europe, the US and beyond. According to the Mc Kinsey State of Grocery Europe 2024 report, the share of consumers who want to buy products that are more sustainable decreased by one percentage point in 2024 on the back of food price inflation in 2023. While consumers may want F&B products with enhanced environmental sustainability credentials, their willingness to pay for the additional costs associated with more sustainable production is questionable. A key challenge for the F&B sector is to deliver more sustainable products at the same or lower prices.

Ranking factors of importance when choosing where to shop



Source: KPMG Retail Tracker: Spring 2024

3 Sustainable food and beverage supply chains

The global food supply chain is long and complex, designed to operate efficiently in a just-in-time manner to bring low-cost food to a vast and varied market. During COVID however, it became apparent that a single point of failure in the chain, a delay in transportation or a labour shortage could ripple and multiply throughout the supply chain globally. Although we are now four years since the start of COVID, geopolitical unrest such as the ongoing war in Ukraine and disruption in the Middle East/Red Sea continues to impact global supply chain flows affecting availability of commodities, routing of trade, lead times and the cost of transport.

- **Red Sea/Suez Canal:** As an example, recent Houthi rebel attacks based out of Yemen, but connected to tensions between Israel and Iran, have disrupted shipping through the Red Sea/Suez Canal. Between 12-15% of global trade transits through the Red Sea and it is a major channel for the transport of agricultural fertilisers, grains and oil from the Persian Gulf to Europe and North Africa. Companies are now re-routing trade around the southern tip of Africa to avoid the risk of attack. According to JP Morgan, the re-routing of ships around Africa's Cape of Good Hope equates to a 30% increase in transit times – this implies an approximate 9% reduction in effective global container shipping capacity and a consequent increase in costs.
- **Panama Canal:** On the other side of the world, extreme weather events are also disrupting supply chains. In April 2024, a severe drought impacted the Panama Canal, one of the world's busiest trade passages connecting the Atlantic Ocean to the Pacific, forcing limits on daily crossings adding further delays and costs to supply chains. Almost 3% of global maritime trade volumes transit through the Panama Canal and it is a particularly important channel for the transport of US agri-food exports. Over 26% of soybean exports from the US and 17% of corn are transported via the Panama Canal, much of which is destined for Asia. Delays and increased costs will likely drive up the global price of these commodities.

Apart from geopolitical unrest and extreme weather events, F&B companies will continue to be challenged with global logistics throughout 2024 as ocean freight providers have not kept up with demand. Even if a sufficient number of ships can be secured to satisfy demand, sourcing crews to operate those ships also remains a challenge.

Increasing importance of ESG criteria: The ESG agenda and the increasing prevalence of more informed/ethically minded consumers is forcing F&B companies to re-evaluate their supply chains. Agriculture and food have been identified as sectors with a high risk of violation of the human rights of workers in the supply chain (e.g. child labour for cocoa). New reporting

requirements, to be discussed later in this publication, will necessitate F&B companies to have greater oversight of their entire supply chains. Furthermore, with many companies engaged in the measurement and management of Scope 2 and Scope 3 carbon emissions, far more detail on the operations of suppliers across the chain is needed. Many F&B companies are investing in supply chain technology to assist them with gathering, verifying and tracking this information.

From the equity market perspective, most public F&B companies have well established carbon reduction plans in place with strong progress being made on addressing their own internal or operational Scope 1 and Scope 2 emissions. However, progress on addressing Scope 3 emissions has been more challenging but remains critical to achieving net zero targets given they represent the majority of emissions for most F&B players.

“Progress on scope 3 emissions has been challenging”

What is clear, however, is that ESG and Sustainability have become a central pillar and integral part of every operator's supply chain planning. As such, we expect customers (whether that is a dairy farmer, a food processor or a grocery retailer) to incrementally gravitate towards, and look to partner with, suppliers which have strong ESG strategies and carbon emission reduction plans.

Risk management/mitigation and cost implications: As a result of greater risks and greater reporting requirements, many F&B companies have begun to adapt by right sizing their supply chains, reducing the number of players in the chain, and increasing transparency. For many F&B companies the lion's share of their emissions (up to 90%) comes from upstream activities such as farming, packaging, and primary processing, and as such many companies are engaging much more closely with their primary suppliers. Given the global nature of supply chains, the uncertainty caused by these disruptions can have a profound impact on F&B market dynamics – the most obvious is in terms of costs and product availability.

Some are engaging in “near-shoring” supply chains (i.e. locating manufacturing nearer the target market) in an effort to minimise risk and transport distance for economic and environmental reasons. The near shoring of F&B manufacturing brings advantages in terms of: i) reduced food miles; ii) greater control over food safety and quality; iii) greater supply chain resilience; and iv) protection from geopolitical risk. However, the availability

and cost of labour and other manufacturing inputs will continue to be a barrier to a major re-shaping of supply chains.

“F&B companies are changing their approach to inventory planning”

Companies are also changing their approach to inventory planning. During the COVID period global supply chain constraints meant operators, particularly those with sufficient balance sheet/financing capacity, moved from a just-in-time inventory stocking model to a just-in-case one. This enabled them to circumvent the supply chain constraint challenges and meet the surge in demand as markets reopened post COVID. Consequently, bigger operators were the clear outperformers through COVID and in the

immediate aftermath of the reopening. This ramp up of inventory levels was also very supportive to their suppliers with a significant ‘restocking’ benefit flowing through in 2021.

However, as those constraints eased and as interest rates rose in more recent periods, these operators, particularly in the US where this phenomenon was especially evident, moved inventory levels back towards pre-COVID levels. As such, while consumer demand through the past year has been resilient despite inflationary headwinds, there has been significant drags for some suppliers as this destocking headwind ran its course.

4 Legal and Regulatory Developments

There have been a number of legislative and regulatory changes in 2023/24, both domestically and at EU level, which will impact the way organisations, both in the F&B sector and beyond, do business and complete transactions. In addition, greater reporting obligations, as described here, will require certain F&B companies to gather, verify and report more information on their own activities and those of other companies in their supply chains over the next number of years. These regulatory developments will lead to an increased costs of doing business and likely greater investment in data systems, technology and potentially artificial intelligence, as discussed elsewhere in this publication. The overview provided here by A&L Goodbody focusses on ESG and sustainability, competition law and antitrust and foreign direct investment.

ESG

While there is a significant amount of legislation coming down the track on a diverse range of environmental, social and governance issues, this section of the Report focuses on key legislative updates on sustainability reporting, sustainability due diligence and environmental claims. Other legislative proposals of relevance relate to renewable energy; packaging and packaging waste; energy efficiency; alternative fuels infrastructure; energy performance of buildings; pay transparency; and forced labour.

Sustainability Reporting

The Corporate Sustainability Reporting Directive (**CSRD**) entered into force on 5 January 2023. It is required to be transposed into EU member states' national law by 6 July 2024, with France becoming the first EU member state to transpose the CSRD into domestic law by an ordonnance of 6 December 2023. Ireland's Department of Enterprise, Trade and Employment has confirmed that Ireland expects to meet the transposition deadline.

The CSRD builds on the existing disclosure requirements under the Non-Financial Reporting Directive (**NFRD**) and extends both (i) the scope of the information currently required to be reported under the NFRD, and (ii) the companies to which the disclosure regime applies. The CSRD introduces reporting obligations on a phased basis. Companies already reporting under the NFRD will be required to report in 2025 (in respect of their 2024 financial year), with other large companies (whether listed or not) required to report in 2026 (in respect of their 2025 financial year). Other companies that fall within the scope, listed SMEs and non-EU ultimate parents, will be required to report in the following years.

Companies that are required to report under the CSRD will be required to provide a range of information in compliance with the European Sustainability Reporting Standards (**ESRS**), which will include information on: (i) environmental matters (for example, climate impacts of business activities; resource and waste management; and biodiversity); (ii) social matters (for example,

equal opportunities; gender equality and equal pay; working conditions; and human rights matters); and (iii) governance matters (for example, business ethics and culture; anti-bribery and corruption measures; internal controls; and risk management systems). The sector agnostic ESRS were adopted in December 2023. ESRS for listed SMEs as well as voluntary standards for non-SMEs are being consulted on. However, sector-specific ESRS and ESRS that will apply to non-EU companies with significant operations in the EU have been delayed by two years and are now expected to be adopted during 2026. The reason for this delay is to reduce the burden on companies by allowing them more time to focus on implementing the first set of sector agnostic ESRS.

Due Diligence

Corporate Sustainability Due Diligence Directive (CSDDD)

The European Commission has proposed a directive on CSDDD to address the human rights and environmental impacts of global value chains. It was announced in December 2023 that political agreement had been reached on the proposal, however when it went to a vote on 28 February 2024, it failed to reach the qualified majority to be adopted. Following a prolonged period of intense negotiations, the Council of the European Union reached agreement on the text on 15 March 2024, with the European Parliament providing its final approval of the text on 24 April 2024. Final approval from the Council is the last step before the CSDDD is published in the Official Journal of the EU.

Obligations: the main focus of the CSDDD is on conducting due diligence on actual and potential human rights and environmental impacts in respect of (i) the in-scope company itself; (ii) its subsidiaries; and (iii) its direct and indirect business partners throughout its chain of activities. The other key obligation being introduced by the CSDDD is that in scope companies adopt and put into effect a climate transition plan which aims to ensure, through best efforts, compatibility of the business model and strategy of the company with the transition to a sustainable economy and with the limiting of global warming to 1.5°C.

Scope: The CSDDD will apply to companies that are incorporated in an EU member state and had, on average, more than 1000 employees and a net worldwide turnover of more than €450m during the relevant financial year. Non-EU companies with a net turnover of more than €450m in the EU will also be in scope. Companies with a net turnover of more than €80m that enter into franchise or licensing agreements with royalties of more than €22.5m will also be caught once certain conditions are met.

Timeline: Member states are required to adopt implementing legislation within two years of the CSDDD entering into force. Obligations will be introduced on a phased basis, likely starting in 2027.

Deforestation Free Regulation (DFR)

DFR focuses on deforestation-free supply chains and came into force on 29 June 2023. Operators and traders now have until 30 December 2024 to implement the new rules. Micro and small enterprises will enjoy a longer adoption period – with the DFR applying from 30 June 2025, as well as other specific provisions.

The aim of the proposal is to minimise the EU’s contribution to deforestation and forest degradation worldwide and reduce the EU’s contribution to greenhouse gas emissions and global biodiversity loss. This regulation essentially imposes a due diligence obligation on in scope companies, being those that place or make available on the EU market or export the following commodities and derivative products – palm oil, cattle, soy, coffee, cocoa, timber and rubber as well as derived products such as beef, furniture, or chocolate listed in the Annex to the Regulation.

The due diligence obligation consists of three steps: (1) collection of information, such as, evidence of legal harvest and the geographic co-ordinates of the plots of land where the product was produced; (2) analysis of this information against a set risk assessment pillar to verify and evaluate the risk of non-compliance; and (3) adequate and proportionate mitigation measures must be made if more than a negligible risk of non-compliance is found in step 2.

Green Claims and Green Transition

Existing legal frameworks on consumer protection in EU member states address environmental claims to a limited extent. This is primarily under the Unfair Commercial Practices Directive (as implemented in Ireland by the Consumer Protection Act 2007 (as amended)) which prohibits “misleading commercial practices”. The Green Claims Directive (GCD) and Green Transition Directive (GTD) are intended to tackle, more specifically, unsubstantiated and misleading environmental claims and labelling. The GTD is already in force at EU level and awaiting transposition by EU member states by 27 March 2026. The GCD is following swiftly behind, to be voted on by the European Parliament in Q3 2024. Once introduced the Directives will impact all sectors, primarily at business-to-consumer level, with exemptions provided under the GCD for “micro-enterprises”.

Green Claims Directive (GCD)

As consumer demand for more sustainable products and practices increases, a study commissioned by the European Commission found that significant proportions of environmental claims made by businesses were either vague, misleading or unfounded, or entirely unsubstantiated. The same study also noted that “green labels” used within the EU had varying levels of robustness included as to transparency and supervision. The GCD is intended to work in tandem with other initiatives to drive capital flows towards more sustainable activities by ensuring that stakeholders are able to assess commercial environmental claims in an objective manner.

The GCD introduces minimum requirements to substantiate claims. Scientific evidence will be required to support environmental claims and there is a prohibition on only highlighting positive environmental impacts. In particular, the GCD targets explicit environmental claims made by businesses to consumers, about the environmental impacts, aspects or performance of a product or the trader itself. This includes a proposed ban on the use of terms such as “eco” and “green”, and climate-related terms such as “climate neutral”, “carbon neutral” and “biodegradable”, without evidence to support the legitimacy of such claims.

The GCD also proposes criteria for environmental labelling schemes i.e. certification schemes which certify that a product, process or trader complies with the requirements for an environmental label. New schemes will require advance approval, and new third country schemes will require European Commission approval before being used in the EU market. The GCD will apply to explicit environmental claims and labelling, and the substantiation of these claims and labels on a business-to-consumer level.

All businesses making voluntary green claims in the EU market; including SMEs, and international or third country businesses will be within scope except those with fewer than ten employees and annual turnover of less than €2m, unless they choose to participate in approved environmental labelling schemes. The GCD does not aim to change any existing sectoral rules - i.e. it will only apply to voluntary environmental claims which are unregulated by any other EU legislation. Examples of existing regulated areas include organic farming labelling, CE marking for energy-related products, and the marketing of construction products.

Progress on the GCD will continue after the European Parliament elections in June 2024, with the text not expected to enter into force before the end of 2024. Once this occurs, EU member states will have to locally legislate for the GCD by mid to end of 2026, with the measures to come into effect by 2027.

Green Transition Directive (GTD)

The GTD affects commercial practices at all stages of a consumer transaction, with a primary focus on implementing rules for making environmental claims and banning unaccredited sustainability labels. The changes have been introduced as amendments to two pillar pieces of EU consumer law, the Unfair Commercial Practices Directive (**UCPD**) and the Consumer Rights Directive (**CRD**).

Environmental claims related to future environmental performance without clear, objective and verifiable commitments and targets, and an independent monitoring system, are to be considered ‘misleading commercial practices’ under the UCPD if they cause or are likely to cause the average consumer to take a transactional decision that they would not have otherwise taken. The list of commercial practices which are always considered

unfair (i.e. 'prohibited commercial practices') is now extended to encompass the following practices associated with greenwashing:

- displaying a sustainability label which is not based on a certification scheme or not established by public authorities
- making a generic environmental claim without being able to demonstrate recognised excellent environmental performance relevant to the claim
- making an environmental claim about an entire product when it actually concerns a certain aspect of the product
- making claims that a product has a reduced, neutral or positive impact on the environment in terms of greenhouse gas emissions, based on offsetting
- presenting legally required features as a distinctive feature of the trader's offer
- carrying out certain practices in relation to the planned obsolescence of goods

All businesses in the EU market offering products for sale to consumers, including non-EU based businesses are in scope of the GTD. The GTD specifies that the UCPD and the CRD should continue to function as a 'safety net', ensuring a high level of consumer protection in all sectors by complementing sector and product-specific EU law that prevail in case of conflict.

EU member states must have adopted and published implementing legislation by 27 March 2026, with measures taking effect from 27 September 2026.

More Health-Focussed Legislation at EU and Irish Levels

Earlier legislation, at both the EU and Irish levels, concerning F&B was very much focussed on product safety and product liability, more recent trends were focussed on consumer protection and labelling, but the current wave of legislation is more health-focussed.

A key example is Ireland's Public Health (Alcohol) Act 2018, which was before the Irish Parliament for 1,000 days+, and has several far-reaching measures tailored to the health dimension of alcohol. We anticipate that there will be more measures regarding F&B focussed on health as opposed to the more traditional areas. This trend is visible at both the EU and the Irish levels.

At the EU level, a new Health Commissioner will be appointed in the European Commission over the next few months. It is to be expected that the new Commissioner will continue the focus on cancer-related issues but the Commission's remit on health will grow and will include more measures on food and drink. It will be interesting to see whether the results of the June European Parliament elections will impact on the willingness of the EU to adopt health-focussed measures – if there is a move to the right in the European Parliament's composition and a more conservative/libertarian position, then there will be more scrutiny of measures which are health-specific.

More scrutiny of "Foreign Investment" deals on security grounds including in the "Food Security" space

There is already competition-focussed scrutiny of mergers and acquisitions in the F&B sector. This competition legislation – the EU Merger Control Regulation and Ireland's Competition Act 2002 – examines whether a deal is pro- or anti-competitive. However, many jurisdictions around the world also test to see whether inward investment is in accordance with public or security or other strategic concerns. The UK, Australia, the UK, Canada, The Netherlands, the EU and so on, all have such legislation. Ireland has now enacted the Screening of Third Country Transactions Act 2023 and this statute is due to enter into force in early September 2024.

Any acquisition or taking of control of a business where the value of the transaction is more than €2m and the purchaser is not from the EU, the European Economic Area ("EEA") or Switzerland will have to be evaluated to see if the Act applies. If the Act applies then the deal would have to be notified to Ireland's Minister for Enterprise, Trade and Employment who will evaluate whether the deal would give rise to a "public order or security" issue for Ireland. Interestingly, one of the examples given in the legislation of a potential issue is one relating to "food security". So, transactions in the F&B sector could be subject to the regime.

The Act applies to purchases by, for example, UK, US, Australian, Canadian, Chinese and any other interest from outside the EU, EEA or Switzerland. So, it is possible that F&B deals involving Ireland may be blocked or permitted conditionally on public order or security grounds. It may happen rarely, but it would have serious consequences when it does.

Continuing scrutiny by the competition agencies of deals in the food and beverage sector

Any purchaser or seller of a business in the F&B sector should factor in the possibility of scrutiny of a deal by the Competition and Consumer Protection Commission ("CCPC"). Most of the deals are cleared by the CCPC without conditions being imposed. Occasionally, some transactions raise potential competition issues, and the participants (usually, the purchaser) may decide to offer commitments or remedies to the CCPC so as to get the deal approved. For example, in the grocery retail sector, there have been several deals where purchasers have offered commitments including those relating to information exchange, management separation or selling outlets to secure approval. Since 27 September 2023, the CCPC has the power to "call-in" and scrutinise deals which are below the thresholds for mandatory notification so it is best to assume that all deals should be given an initial review from a competition law perspective to see whether they "substantially lessen competition".

5 Generative artificial intelligence

Artificial intelligence (AI) and more specifically Generative AI (GenAI) is one of the most exciting and promising technologies of our time. It has the potential to revolutionise various industries, from healthcare to education, from manufacturing to entertainment. The Food, Beverage and Agriculture sector is a cornerstone to our Irish market. It brings to life our passion for delivering exceptional products that delight our customers and showcase the Irish heartbeat and our passion for life. But how does AI help those working hard to support this sector.

The challenges and opportunities for food and agriculture

The many challenges facing the food and agriculture sector in the 21st century, require innovative solutions that can increase productivity, efficiency, quality, and the sustainability of food production, distribution, and supply chain resilience. AI can offer solutions, alongside the working knowledge from those that have lived and breathed the growth of the sector. It can enable data-driven decision making, automation, and the optimisation of growth and manufacturing processes. For example, AI can help farmers monitor crop health, predict yields, optimise irrigation and fertilisation, detect pests and diseases, and reduce environmental impact. AI can also help F&B producers and retailers optimise supply chains, reduce waste, enhance product safety, deploy dynamic pricing, and tailor products and services to consumer preferences and needs.

AI is already delivering substantial value across industries:

- **Healthcare:** AI can help diagnose diseases, analyse medical images, recommend treatments, design drugs, and improve patient outcomes.
- **Manufacturing:** AI can help automate processes, improve quality control, reduce defects, predict maintenance, and optimise logistics and inventory.
- **Finance:** AI can help detect fraud, manage risk, automate trading, provide customer service, and offer financial advice.

Adoption in the F&B sector has been slower, but the opportunity is vast and includes applications at the farm level such as crop and soil monitoring, on the food processing production floor, with supply chain optimisation right to the end of the food chain, in the retail setting with applications to enhance customer experience through personalisation of shopping. Here are some key benefits that AI is already bringing to this sector:

- **Increasing crop yields by 10-15%** through precision agriculture, which uses data from sensors, drones, satellites, and weather forecasts to optimise irrigation, fertilisation, and pest control.
- **Reducing food waste by 20-35%** through smart packaging, which monitors the freshness and quality of food products and alerts consumers and retailers when they are nearing expiration.

- **Improving food safety and traceability by 30-55%** through blockchain and machine vision, which enable transparent and secure tracking of food products along the supply chain and detecting any anomalies or contaminations.
- **Enhancing consumer experience and loyalty by 15-25%** through personalisation, which leverages data from online platforms, social media, and IoT devices to tailor food products, services, and recommendations to individual preferences and needs.

Key considerations and enablers to AI adoption

Artificial Intelligence can bring many benefits to the food, beverage, and agriculture sector, but it also comes with some challenges and risks. Therefore, business owners who want to adopt AI in this domain should consider the following points:

- **AI is not a magic bullet.** AI can augment human capabilities, but it cannot replace them. AI systems need human input, guidance, and oversight to ensure their reliability, accuracy, and ethical application. Business owners should not rely solely on AI, but rather use it as a tool to complement and enhance human knowledge, expertise, and judgment.
- **AI is not a one-size-fits-all solution.** AI systems need to be tailored to the specific context, goals, and constraints of each use case. Business owners should not adopt AI blindly, but rather evaluate its feasibility, suitability, and value for their particular use case. They should also consider the data availability, quality, and security, as well as the technical, legal, and social implications of using AI in their domain.
- **AI is not a static technology.** AI systems are constantly evolving, learning, and improving, based on new data, feedback, and innovations. Business owners should not adopt AI once and for all, but rather update and maintain it regularly, to ensure its performance, relevance, and compatibility with changing conditions and requirements. They should also monitor and measure the impact and outcomes of AI and adjust their strategies and practices accordingly.

Despite the opportunities that AI presents, only a relatively small number of organisations have robust processes and teams in place to plan for adoption. To make the most of this emerging technology, F&B companies must lay the groundwork for the effective, productive, and safe use of generative AI. According to KPMG, F&B companies should undertake five key actions in order to fully exploit the opportunities presented by Gen AI.

1 - Assemble trusted data sources and start mapping out ways to measure outcomes

Generative AI requires two key components of trust for adoption: trust in data sources and trust in outcomes. Generative AI engines are trained using a vast expanse of data that is largely available to the public. However, not all publicly accessible data sources are reliable nor, in most cases, do they include all the data

individual organisations will need to leverage the technology. These shortcomings illustrate the importance of building a connected data infrastructure that will allow AI and GenAI to thrive and deliver focused insights, drive better decision-making, spot risks, and capitalise on opportunities that might otherwise go overlooked. Importantly, a connected data infrastructure that supports cross-functional data can help organisations learn more about customers and their end-to-end journey. F&B companies can benefit from more connected data infrastructures to tackle many of the risks and new reporting requirements around global supply chains. Furthermore, better data infrastructure can be used to communicate information about the nutritional and sustainability status of F&B products to the consumer.

2 - Develop a “responsible AI” framework

Many organisations are already using AI in some form, and it is important to create and maintain a framework for the responsible use of AI which should include governance and ethical intentions, taking into consideration regulatory compliance, the impact on customers, employees, and other stakeholders. As F&B companies begin to use and exploit GenAI, the development of a responsible AI framework will be critical for maintaining an authentic relationship with customers, gaining their trust, and, in the process, protecting their reputations for responsible use of their personal data. There are risks around the use of GenAI relating to inaccurate results, fraud, and potential infringement of intellectual property and as such F&B companies will need to ensure that the technology is being used not only ethically, but also legally. In addition to mitigating risk, building a responsible AI framework will allow F&B companies to develop and use AI in a more optimised manner, allowing for faster speed to value for the business.

3 - Develop a backlog of relevant and exploratory use cases

As part of a broader data and AI strategy, companies should clearly state that GenAI is worth exploration and investment. Companies should develop a clear strategy that identifies roles and responsibilities, including the people and teams that will be responsible for decision-making around the GenAI agenda and for the technology’s adoption. KPMG advises F&B companies to establish a roadmap and conduct proof of concepts or pilots using GenAI to prepare for future adoption. As this technology’s capabilities are expected to transform rapidly over the coming years, companies are advised to have a technology strategy and to perform a continual scan of market capabilities against the requirements of their use cases.

4 - Deploy an enterprise-class AI engine, underpinned by good data management practices

GenAI holds significant potential to improve business processes and create a more engaging experience for customers. However, underpinning its success is the design and management of robust data principles and trusted data sources. Many F&B companies already have strategies and systems to gather, store and track data on their business processes, to take full advantage of that data, companies can now deploy an enterprise-class GenAI engine, one that can be trained in a secure environment using proprietary data that is uniquely applicable to an individual

business. In addition to safeguarding data while sharpening the value of the GenAI output, GenAI will also facilitate the safeguarding of the questions or “prompts” given to the engine to trigger new outputs. Those prompts or questions have inherent value to companies and are best kept away from public platforms that can be accessed by competitors.

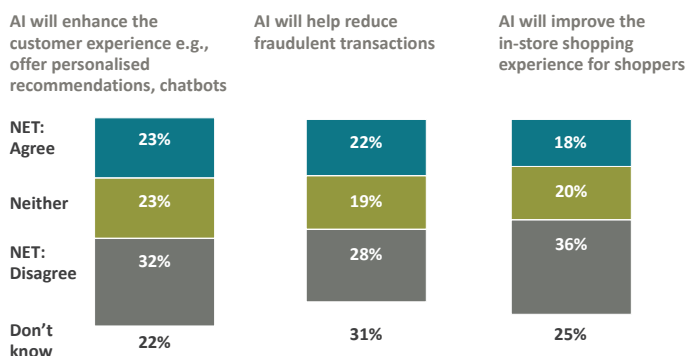
5 - Acquire the right technical talent to take advantage of AI

For organisations to properly execute on their AI strategy and implement use cases they will require the right people and talent. These positions will include experienced data scientists, software engineers, data engineers, and others with industry and domain expertise, all of whom have been important to leveraging AI in the past. But need new specialists, e.g., prompt engineers, will also be needed to test and validate GenAI models and outputs. F&B companies should empower and support these teams to explore this game changing technology to the benefit of their businesses.

More generally, Artificial Intelligence has the potential to transform consumer behaviour and the F&B retail sector. The 2024 KPMG Retail Tracker survey, conducted in conjunction with Red C, provides some interesting insights into the attitudes of Irish consumers to AI. Key results show that,

- two in five consumers feel they will have to trust how retailers are using AI to determine their shopping choices in the future,
- younger consumers feel more strongly that AI will contribute to a better shopping experience online,
- less than one in five feel AI will improve in-store shopping experiences, and
- males and under 35s feel AI will improve the customer experience and make it safer to complete transactions.

Attitudes towards Artificial Intelligence - I



Source: KPMG | Q.12 (Base: All adults aged 18+, n=1,005)

Overall, there is a balance of confusion, curiosity, and uncertainty among consumers of the role AI has to play and what it can offer for their shopper experience, with only 18% saying AI will improve their in-store experience. Unsurprisingly, under 35s are notably more likely to be favourable towards AI and the positive impacts it can have on shopping online and in physical stores.

AI is a complex world of technology, tools, and science. No business owner should feel alone on this journey. There is expertise across sectors to help, to provide guidance and support, and to help navigate this new wave of advanced technology.

6 Health and wellness

The world faces a growing challenge from populations becoming increasingly overweight and obese, driven at least partly by diet and lifestyle choices. The emergence of the double burden of malnutrition, which is the coexistence of overnutrition (overweight and obesity) alongside undernutrition (stunting and wasting) in the same populations, is a major global public health concern. Furthermore, there has been a significant increase in the availability of information, including personalised information through wearable devices, which is driving consumer preferences and purchases. Together these trends are driving sales of health and wellness packaged food products as consumers are seeking preventative health solutions in food.

KPMG estimate that Health and Wellness is a large and significant component of the global F&B market, now accounting for up to 20% of total packaged food in some developed markets. Health and wellness is increasingly influencing portfolio decisions resulting in continued high levels of competition to acquire quality Health and Wellness assets, but also disposals of assets that are not aligned to strategic objectives, or are 'caught in the middle' between Health and Wellness and Indulgence.

Key consumer trends observed in 2023/24 include a continued shift from animal to plant-based protein products. Globally, sales of food and drinks with sugar avoidance claims have grown and will continue to increase on the back of consumer demand and regulatory changes. Products with a focus on digestion and the health of the microbiome are also on the increase with high fibre being a particularly effective tool in injecting a health image into categories such as bread, sweet biscuits and even juice. On the beverage side, non-alcoholic sales continue to thrive. According to the Boston Consulting Group, the global sales volume of non-alcoholic drinks is expected to grow at a compound annual growth rate of approximately 7% between now and 2027, and then make up nearly 4% of the overall alcohol market.

One of the key developments in 2023/24 was the step change in the war on obesity. Research by the World Obesity Federation reports that almost 2.6 billion people globally, 38% of the world population, are already overweight or obese. Based on current trends, this number would rise to more than four billion people (51%) by 2035. The war on obesity is not a new one with a proliferation of low fat, diet and slimming F&B products over recent decades. However, a major game-changer is the emergence and success-to-date of the GLP-1 family of weight-loss drugs. The drug has been a headwind to sentiment towards the food and ingredients sector in recent months, especially following observations from WalMart in August-23 regarding smaller basket sizes and fewer calories purchased by US consumers taking the treatments. Despite this, several operators including Nestlé, The Coca-Cola Company and PepsiCo have reported that they have not yet seen any impact on their sales trajectory to date from the

roll-out of the drugs/treatments; and if things do change, then they can flex their portfolios and innovate to meet any observed changes in future demand.

Overall, the near-term impact of anti-obesity drugs on overall consumption trends is likely to be relatively immaterial, at least on a global basis, due to a host of factors including: i) limited supply; ii) prohibitive cost; and iii) a, for now, uncertain on-market patient experience (in terms of both efficacy and safety). That said, the drugs do have the potential to change consumption patterns over the medium to long term, particularly if R&D and innovation efforts makes them more affordable and convenient. The limited data to date suggests that certain categories like frozen ready meals, snacks, soft drinks and alcohol may experience a noticeable reduction in terms of consumption while others like proactive nutrition, products with higher protein and fresh or clean label/natural/organic foods have tended to benefit from increased demand.

Another emerging issue is the war on 'Ultra-Processed Foods' (UPFs) as they are identified by some as the key driver of the global obesity challenge. UPF is one of four food categories under the NOVA food classification system which was developed by researchers at the university of Sao Paulo, Brazil. These are defined as "industrial formulations typically with five or more ingredients. Such ingredients often include those also used in processed foods, such as sugar, oils, fats, salt, antioxidants, stabilisers, and preservatives. Ingredients only found in ultra-processed products include substances not commonly used in culinary preparations, and additives whose purpose is to imitate sensory qualities of group 1 foods or of culinary preparations of these foods, or to disguise undesirable sensory qualities of the final product".

According to the British Medical Journal, UPFs account for approximately 60% of US, 57% of UK and about 35% of Irish diets. UPF products have become popular as they provide tasty and convenient food at an affordable price point. Indeed, food price data shows that the price of UPFs rose slower through the inflationary period of 2022/23 than fresh products such as fruits and vegetables. While consumer demand remains high for these products, regardless of the health perceptions, brand owners are now under pressure to solve for the nutrition, health, and environmental impact of these products due to regulatory demands.

Ultimately, the emergence of GLP1 drugs, increased consternation regarding UPFs and growing regulations are the recent extensions of the long running health and wellness trend. This creates risks and opportunities for the sector; the best performers will be those who position their portfolios to complement or play into the trends over the medium term.

Emerging opportunities

The key trends facing F&B companies in 2024 present opportunities that can be exploited and challenges that must be managed. This section first presents a review and outlook by KPMG of merger and acquisition activity in the F&B sector, following this some key investment opportunities for 2024 are discussed.

Merger and Acquisition Outlook for the Food and Beverage Sector 2024

Following several years of strong growth, the slowdown in global M&A activity that began in the latter half of 2022 has continued into 2024. This decline in deal activity is primarily a result of the impact of heightened geopolitical uncertainty, a period of high inflationary pressure and a rising interest rate environment.

While interest rates have stabilised and inflation has come back from the highs experienced during 2023, initial optimism that global interest rates would materially reduce during 2024 has been tempered somewhat by increased geopolitical tensions and the stubbornness of inflation to remain above levels desired by financial regulators. These factors will continue to impact the wider M&A environment over the remainder of 2024.

Despite this macroeconomic backdrop, the M&A market in Ireland remains somewhat resilient, with activity levels relatively stable in 2023, a trend that has continued into 2024 with Q1 2024 deal volumes in line with the same period in 2023. Overall, the near-term outlook for deal activity in Ireland remains optimistic. As outlined in the 2024 KPMG M&A Outlook survey, 78% of M&A leaders are planning to pursue deal opportunities in 2024 with 89%.

Deal activity will continue to be driven by recurring themes including companies' need for geographic expansion, diversification of products/services, synergy creation, accelerated growth, and succession planning. In addition, deal activity in the Irish F&B sector will be impacted by the following key trends:

- International M&A: While acquiring businesses internationally is not a new phenomenon for Irish F&B companies, it is expected that there will be a rise, particularly among larger Irish corporates, in acquiring companies outside of Ireland to provide access to new markets and provide product diversification.
- Value-added products: Given the impact of high inflation and volatile commodity prices, many Irish companies are now emphasising the importance of capturing additional value and reducing profit volatility. To achieve this, companies are strategically targeting and acquiring other businesses to gain access to their value-adding products and services, ultimately driving higher and more stable revenues.

- Private equity: The Irish private equity market has grown significantly over the past 10 years and despite the current macroeconomic environment these funds have considerable levels of capital to deploy. There has been an increasing trend within the Irish F&B sector for SME companies to utilise VC/private equity to fuel growth. In addition, an increasing trend is emerging where private equity backed companies are becoming consolidators driving further activity through acquisitions of smaller, but complementary businesses.

In summary, despite macroeconomic turbulence, the M&A market in Ireland remains resilient, and it is expected that within the F&B sector, dealmakers will actively pursue M&A opportunities over the remainder of 2024.

Key Investment Opportunities

Based on the review of trends shaping the F&B sector in 2024, four key investment opportunities have been identified for 2024: precision fermentation, feeding the microbiome, sustainable packaging and better for you beverages.

Precision fermentation	Feeding the microbiome
Sustainable packaging	Better for you beverages

Precision fermentation

The market for alternative protein continues to grow, albeit from a small base relative to animal-based proteins. Alternative proteins include plant based, which is the dominant alternative, followed by fermented, cell and insect-based proteins. Plant-based proteins, consisting mostly of soy, wheat, potato, pea, rice, chickpea, and others, is the largest and most established alternative protein source and receives the most investment. However, as a land using activity, it remains expensive and difficult to scale.

As an alternative, precision fermentation is a form of cellular agriculture, whereby, fragments of DNA from plants or animals are planted into a host microorganism, such as yeast, the host then replicates the DNA producing large amounts of protein. The precision fermentation process helps companies to create animal-free alternatives that are able to mimic the qualities of their traditional counterparts. Meat, eggs, dairy and seafood made using precision fermentation can significantly reduce carbon emissions and are also free from antibiotics. These foods can be produced using existing agricultural side streams, with benefits including reduced pressure on natural resources such as land and water. It is estimated that protein can be delivered through precision fermentation at a cost of between 50% and 80% less than traditional animal systems. Furthermore, the costs of fermentation have declined by around seven orders of magnitude from 1990 to 2021, as a result of increased operating efficiency and scale.

While meat is not going away anytime soon, many companies, including traditional meat processors, are investing in alternative proteins as part of a diversified portfolio approach. For example, Cargill, one of the biggest players in the beef and poultry sector in the US, is continuing to expand meat processing capacity but is also diversifying into plant-based protein but more recently and significantly in precision fermentation. The Good Food Institute, which looks at alternative protein innovation, reported that companies engaged in precision fermentation in the US raised \$911m in venture capital dollars in the first quarter of 2024. The investment in precision fermentation is not confined to private companies alone. The EU announced that it will invest €50m in 2024 to help start-ups scale the production of alternative proteins using technologies such as precision fermentation.

Investing in the Microbiome

Personalised nutrition, focused on analysing individual genetic makeup, lifestyle, and dietary preferences to recommend specific nutrient intakes, is becoming more widespread. Wearable devices, initially adopted to count steps, are becoming more sophisticated in gathering real-time health data and facilitating tailored nutrition advice. Increasingly, wearable devices, personal testing and personalised nutrition are being used by health-conscious consumers to increase their understanding of their gut health.

There is now a widespread understanding that the collection of microorganisms living in the human body have an influence on our health and immune function. Bacteria and other microbes in the gut help with the digestion of food and research now shows that they also support immune, heart, and brain health, among other benefits. Personalised nutrition and testing, incorporating microbiome analysis, can now offer insights into gut health and its impact on overall well-being, enhancing individual health outcomes by providing nutrition that aligns with each person's individual needs, moving beyond one-size-fits-all dietary guidelines. As the scientific understanding of the microbiome deepens, industry experts are predicting that it will unlock the possibility of truly personalised nutrition delivering specific health outcomes.

Research has shown that certain food types and supplements have a beneficial effect on gut health, increasing the number of positive bacteria and reducing disease risks such as diabetes and colon cancer. Exploiting these health benefits presents a growing investment opportunity for F&B companies. According to Strategic Market Research, the human microbiome market worldwide is expected to witness a robust compound annual growth rate of 31%. The market itself was valued at \$115m in 2021 but is expected to reach \$1.3bn by 2030.

By partnering with microbiome companies and conducting basic research, F&B companies can learn more about how their products affect gut health, develop gut health products and provide the evidence to verify health claims on existing products. In 2022 Unilever partnered with the gut microbiome experts at Holobiome to identify food and drink ingredients that could have a positive impact on mental wellbeing by targeting the gut-brain axis. In 2023 New Zealand dairy company, Fonterra, launched a partnership with the University College Cork APC research centre to develop novel probiotic strains with targeted health benefits to tackle unmet consumer needs for natural, evidence-based products. Health and wellness is a growing segment in the F&B sector and gut health is an emerging and exciting area. The coming years will likely see more F&B companies investing in research and development on gut health products.

Sustainable Food Packaging

Globally almost one-third of food is lost in the production system or wasted at the consumer level. It is estimated that between 8 -10% of global greenhouse gas emissions are associated with the production of food that is never consumed and as such food waste represents a major environmental and financial cost to the F&B sector. Regulatory changes and reporting requirements, along with increased consumer and investor awareness, are prompting F&B companies to invest in methods to reduce loss by deriving use and value from by-products of production systems and to develop smarter packaging to extend product shelf-life

and reduce food waste at the consumer level. Furthermore, new EU regulations state that by 2030, all packaging on the EU market must be reusable or recyclable in an economically viable manner.

Recent developments in food packaging can be adopted to reduce waste, extend shelf-life and improve the sustainability credentials of F&B companies and as such packaging is becoming a major area of investment activity in the sector. Compostable, plant-based alternatives to plastic are in high demand and attracting considerable investment. Developed from by-products of food production, with the aim of replacing single use plastic, this packaging development pays double dividends from a sustainability perspective. For example, in March 2024 Mondelez invested in Pack2Earth, a Spanish start-up which is developing bio-based flexible films that are compostable at ambient temperature and organically recyclable.

Technologies that can extend shelf-life are also in demand. Recent developments in invisible packaging are proving of interest to F&B companies, this involves treating products with an invisible spray that is 100% natural, water based that when sprayed on fruit and vegetables, extends shelf-life. A number of start-up companies in this area are attracting major investment interest.

Edible packaging is also attracting the attention of investors. Scientists are creating edible films from soy protein, whey, collagen, corn, and wheat gluten. Scientists are also using fats and oils to enhance the structure of an edible packaging film. Essential oils help to create a protective moisture barrier, and adding these oils to food packaging can enhance their functionality, helping them keep food from mould and bacteria longer. The edible packaging market is estimated to be worth approximately \$2.8bn by 2030, growing at a compound annual growth rate of 14%. Production costs remain high, and scaling can be challenging.

Better for you beverages

Globally the beverage industry, including alcoholic and non-alcoholic, is worth over €2tn annually. While many traditional categories in the beverage sector remain relevant, in recent years there has been a significant rise in demand for beverages with enhanced sensory, functional, or nutritional properties or generally “better for you” beverages. This has been precipitated by more health-conscious consumers, more mindful consumption of alcohol and regulatory developments including the introduction of so-called sin taxes, or taxes on sugar, in a number of markets. The market has seen major developments in low or no sugar beverages and non-alcoholic beverage alternatives.

Low and no sugar soft drinks have been on the market for several decades, sweetened by artificial sugar alternatives such as aspartame, sucralose or acesulfame potassium or by an emerging suite of more “natural” sweeteners such as stevia. With greater appreciation of adverse health impacts from high calorific and sugar consumption, soft drinks have come under greater scrutiny across many developed markets. This was a catalyst for the expansion of specific sugar and calorific beverage taxes being

implemented around the world, and by the end of 2022 they were now in over 80 countries. Beverage companies are striving to develop products that taste just as good as brands with high sugar content without sacrificing nutrition, health and wellness benefits. This has spurred investment in innovations such as new taste refinement systems, bitterness blockers, natural sweetener alternatives and new characterising flavours.

Additionally, consumers are increasingly seeking beverages that serve a purpose beyond a refreshing taste. As a result of evolving consumer preference, the functional beverage market is expected to grow from US\$148bn in 2023 to US\$203bn by 2028 at a compounded annual growth rate of 6.5%. Electrolyte drinks have emerged as an alternative to both energy drinks and traditional sports drinks. Functional waters, organic ingredients and plant-based beverages have also grown market share.

The market for non-alcoholic beverages (NABs) is also on an upward growth trajectory and it is estimated to account for almost 3% of the UK’s total beverage alcohol market. Fitch Ratings expect low- and zero-alcohol drinks to continue to gain market share, further spreading beyond beer to wines and spirits, including rum and gin. Among low-alcohol offerings, ready-to-drink cocktails are growing particularly fast, benefitting from increasing demand for flavoured and convenience drinks in casual gatherings.

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