CLIMATE CHANGE AND SUSTAINABILITY

Processed and Pressured: CPG's Lost Decade of R&D

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Is the R&D bill coming due for big consumer packaged goods companies?

Growth in the food and beverage industry has been hard to come by. Inflation, supply chain disruption, geopolitical turmoil, and consumer belt-tightening have all played a role, but those forces, however severe, are mostly cyclical. The structural shift that many big CPG manufacturers have so far failed to navigate is consumers' growing preference for healthier and simpler products and for greater transparency about ingredients, which has exposed at least a decade of underinvestment in R&D.

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Most food and beverage companies have long pursued a strategy that prioritized scale and marketing muscle. The bet was that size and strength could keep heritage brands relevant without breakthrough product and ingredient innovation. These companies put their money where their thinking was, investing a meager 1.5% of sales in R&D from 2015 to 2025; in 2025, meanwhile, they spent 6% to 15% of revenues on advertising and promotion.

It was a successful formula for a long time, but now the bargain is breaking down. In May 2025, we argued that consumers were transitioning toward healthier food and beverage choices faster than CPG companies were moving to provide them. At the same time, regulators are emphasizing healthy and nutritious eating—and are introducing additional scrutiny and regulatory requirements in some product categories. These shifts have added to the share-loss problem for big manufacturers. Marketing muscle and big brand names cannot compensate for product portfolios that do not reflect today's priorities, including those around health and nutrition.

The Lost Decade

The underinvestment in R&D wasn't a blip; it was a sustained strategic choice. Over the past two decades, while big food and beverage companies were making minimal investments in R&D, other industries dedicated large percentages of revenues to new-product development, including pharmaceuticals (21%), consumer electronics (18%), and software (16% to 20%), according to January 2026 data compiled by New York University's Stern School of Business. The industry comparisons may be imperfect but the order of magnitude is hard to ignore. Moreover, during this period, global CPG R&D spending grew at just 1.2% a year, while advertising and promotion grew at 2.6%, more than double the pace of spending on R&D. (See Exhibit 1.) Of course, marketing remains essential, and it helps carry heritage brands, but it cannot fix a portfolio problem on its own.

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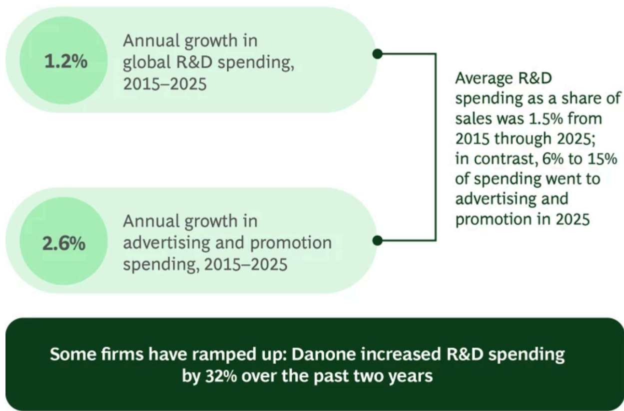
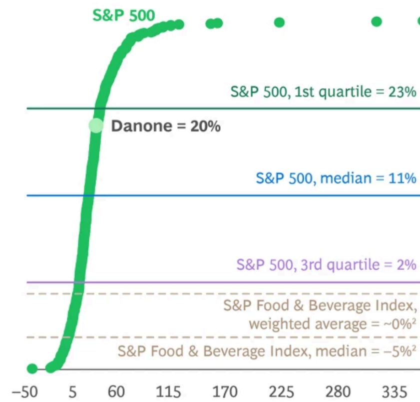
EXHIBIT 1

Advertising and promotion spending at large food and beverage companies has grown twice as fast as R&D





Sources: Barclays Investment Bank Equity Research, "The new rules of the FMCG game," January 2026; S&P Capital IQ; BCG analysis.
[1]Annualized TSR of companies in the S&P Global LargeCap index, as well as Unilever, Nestlé, and Danone; TSRs use company reporting currency and are based on data ending in December 2025.
[2]The S&P Food & Beverage Select Industry Index covers food and beverage manufacturers, whose products include foods and meats, soft drinks, and nonalcoholic beverages. Weighted average and median TSRs calculated by geometrically compounding each company's annual returns over three years and then weighting by market capitalization.

The breakthroughs that are reshaping CPG, such as prebiotic sodas, plant-based dairy, GLP-1-friendly snacks, and reformulated "clean label" products, have overwhelmingly come from challengers and insurgents rather than incumbents. The missing ingredient for big CPG has been a sustained engine of rigorous, well-financed R&D in recipes, ingredients, processes, and equipment that meets consumers where they want to be.

Investors are rendering their verdict. Over the three years through December 2025, the median large-cap food and beverage company delivered a total shareholder return of approximately −5%, while the S&P 500 delivered a cumulative total return of almost 90%. The worst CPG performers registered cumulative TSRs of −20% or less. Investors have repriced growth assumptions, recognizing that what little revenue growth there's been since 2021 has come from price, not volume, which has actually declined 0.6%.

There are exceptions, and they reward study. Danone, for example, increased R&D spending by roughly 32% over the past two years, reinvested in new capabilities, and divested noncore assets. It delivered like-for-like revenue growth of 4.3% in 2024 and 4.5% in 2025, propelled ROIC back into double-digit territory, and delivered TSR well ahead of its large-cap food and beverage peers. Smaller, more nimble manufacturers are also demonstrating that innovation sells—a lot. Their brands are growing faster than the incumbents' despite the latter's considerable scale advantages.

They say you can't cut your way to growth. Nor can you advertise your way to innovation. CPG companies need to reset how they approach R&D.

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Why the Bill Is Coming Due

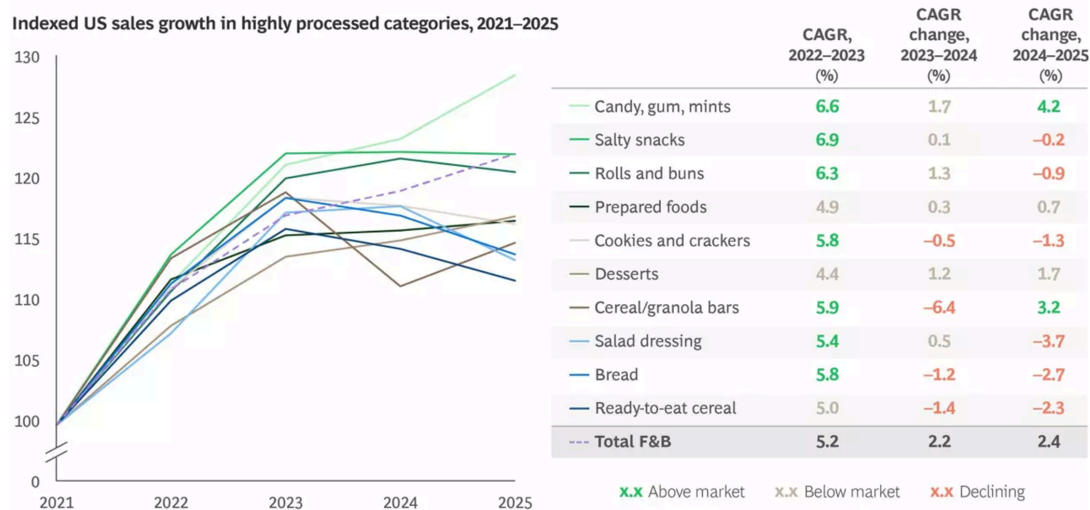
We observed last year that multiple trends were driving big changes in consumers' food and beverage purchases, particularly those involving what are commonly known as ultraprocessed foods (UPFs). Three of the biggest underlying trends are:

- Increasing awareness of health and nutrition, fueled in part by the rising use of GLP-1s
- Expanding regulatory action around food and diet
- An increasing array of digital- and AI-enabled shopping apps and interfaces

These trends are not abating; in fact, they are picking up speed and catalyzing other market forces. UPF categories, which play an outsized role for most major CPG manufacturers, have continued to decline or grow more slowly than the overall food and beverage market. (See Exhibit 2.) While a few categories show short-term rebounds, performance remains uneven and structurally weaker than the total market.

EXHIBIT 2

US Consumers Are Rewiring Demand for Processed Foods and the Shift Is Sticking



	CAGR, 2022–2023 (%)	CAGR change, 2023–2024 (%)	CAGR change, 2024–2025 (%)
Candy, gum, mints	6.6	1.7	4.2
Salty snacks	6.9	0.1	–0.2
Rolls and buns	6.3	1.3	–0.9
Prepared foods	4.9	0.3	0.7
Cookies and crackers	5.8	–0.5	–1.3
Desserts	4.4	1.2	1.7
Cereal/granola bars	5.9	–6.4	3.2
Salad dressing	5.4	0.5	–3.7
Bread	5.8	–1.2	–2.7
Ready-to-eat cereal	5.0	–1.4	–2.3
Total F&B	**5.2**	**2.2**	**2.4**

Sources: Nielsen data; Babak Ravandi *et al.*, "Prevalence of processed foods in major US grocery stores," *Nature Food*, January 13, 2025; BCG analysis.
Note: Highly processed according to FPro (Food Processing) score.

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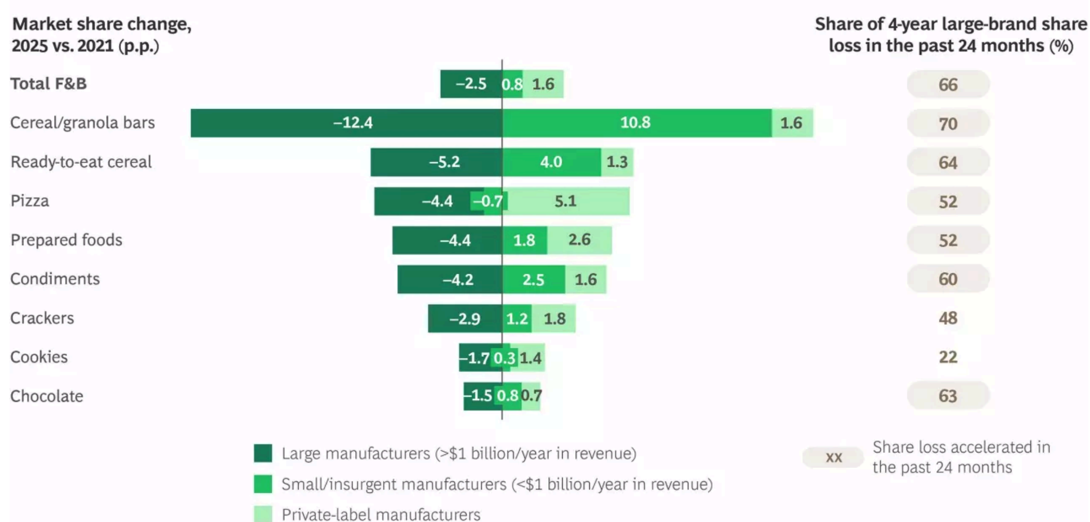
Across multiple categories, large brands continue to lose share to insurgent products from small companies as well as to retailers' house brands. Multiple forces are at work, including affordability (discussed below). Still, it's clear that both insurgents and retailers are gaining share by staying closer to consumers, paying attention to their needs and preferences, and communicating with them through the channels they use today, such as social media. Consider a few category shifts: in cereal and granola bars, a 12.4 percentage-point loss for big brands from 2021 to 2025 versus a gain of 10.8 points for insurgents and 1.6 points for private labels. Or ready-to-eat cereal: a 5.2-point big-brand loss versus a 4-point gain for small brands and a 1.3-point gain for private labels. (See Exhibit 3.)

EXHIBIT 3

Large Brands Continue Losing Share in Ultraprocessed-Food and Beverage Categories to Both Smaller Brands and Private-Label Manufacturers



Sources: Nielsen data; BCG analysis.
Note: Ultraprocessed according to FPro (Food Processing) score.

Some of the fuel for this fire comes from GLP-1 use, which continues to rise. Recent BCG consumer research estimates that there are 16 million GLP-1 users in the US today, up from 6 million in 2022. We estimate that more than 30 million people will be using these drugs by 2030 as prices fall and generics and new oral formulations come to market.

The implications for CPG are structural. Active users of GLP-1s cut their calorie intake by about 30%, with snacking down 40% in processed foods, sugar-sweetened beverages, and refined grains. Roughly a third of food spending shifts to nutritional supplements, fitness, beauty, and self-care. Some 70% of households with one GLP-1 user follow the same patterns, expanding the demand shift to 1.5 times the user base.

One immediate challenge to UPFs comes from regulatory intervention. The US government has introduced a new food pyramid that discourages consumption of UPFs and refined grains in favor of meat, produce, and a broader range of fats, including animal-based fats. The new guidelines

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likely mark the beginning of a broader set of policy interventions targeting UPFs, including required food labeling and the removal of UPFs from government-funded food programs such as SNAP (the Supplemental Nutrition Assistance Program). At the state level, more than 130 proposed bills in almost 20 states could add complexity as well as restrictions to existing regulations.

Governments have cited both fiscal and public-health considerations in recent policy discussions, particularly the growing awareness of the long-term costs to society of chronic illness. Annual US health care costs exceeded $5.3 trillion in 2024, and the Centers for Medicare & Medicaid Services estimates 2025 growth at 7%. Obesity alone costs the US health care system up to $260 billion a year. (Encouragingly, Gallup data through the third quarter of 2025 shows that obesity among US adults has declined for the first time in years, from a peak of 39.9% in 2022 to 37%, coinciding with the scaleup of GLP-1 use.)

The impact on CPG is becoming apparent. For the first time, we are seeing early evidence of a reversal in UPF consumption as an expanding coalition of policy makers, regulators, consumers, and cultural voices reframe food as a systemic health topic.

Power to the (Informed) Consumer

Another significant long-term shift for CPG companies is consumers' rising use of digital apps and new AI-powered interfaces that are reshaping how they find and choose products. Yuka, one of multiple apps that provide real-time information on food products' health and nutritional value, is now available in 12 markets worldwide; the app has 25 million users in the US and is adding 600,000 users a month—without a dollar spent on advertising.

As agentic commerce develops, the balance of power among e-commerce, brick-and-mortar stores, and direct-to-consumer channels will evolve, putting the consumer in greater control and creating both disruption and new routes to market for manufacturers. Increased transparency and comparability mean that product and price differentiation becomes harder to sustain, with digital intermediaries having a greater say in how products are described and assessed. CPG companies need to build visibility and capability in these new interfaces, using test-and-learn approaches and, selectively, developing their own AI-enabled consumer touchpoints.

Then there is the critical issue of affordability, especially in the US, where food prices—more than 30% higher than in 2019—are running well ahead of the 26% rise in the headline consumer price index. Lower-income households are especially hard hit, now spending about a third of their after-

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tax income on food. One result is a more discerning, value-seeking consumer, one for whom R&D and price-value architecture must work together.

Another factor is how private label has become a structural force in the competitive landscape. Major retailers have invested significantly in their own brands, developing offerings that compete on quality, transparency, and innovation as well as on price. The innovation playing field is more crowded than it has been in a generation. Retailers have become genuine competitive peers, not just price followers.

A $100 Billion Challenge?

All of these pressures can be expected to have significant financial implications for food and beverage players, affecting demand, margins, and valuations. UPFs are at particular risk. We see as much as $100 billion in US UPF revenues that could face disruption as a result of shifts in consumer purchasing behavior, restrictions on food assistance program spending (SNAP alone exceeded $100 billion in UPF spending in 2024), and changes in food procurement by government institutions. At the same time, costs for manufacturers are set to increase by 5% to 25%, thanks to increased R&D spending on reformulation efforts, a shift to more expensive clean-label ingredients, and rising marketing expenses and legal and compliance costs.

Of course, the ultimate pace and extent of consumer and regulatory change remains to be seen. But it's already clear that a fast-growing number of both large CPG manufacturers and major retailers are moving to embrace an evolving marketplace:

- More and more retailers and manufacturers, including Walmart, PepsiCo, Nestlé USA, General Mills, Kraft Heinz, Conagra, Hershey, J.M. Smucker, and Kellanova, have committed to removing artificial dyes in foods, drugs, and cosmetics from US products by the end of 2027.
- Retailers such as Kroger and Intermarché are employing nutrition scoring systems and are adjusting the formulas of their private-label products (often to satisfy the criteria of apps such as Yuka).
- CPG companies and retailers are launching "better for you" line extensions of popular brands. UK retailer Marks & Spencer's "Only…Ingredients" product line offers simplified, clean-label recipes (with eight or fewer ingredients). Separately, a growing wave of nutrient-dense launches across the industry—products with more protein, fiber, and key micronutrients per calorie—is targeting consumers, including GLP-1 users, who are eating less.

- Large manufacturers are acquiring and investing in health and nutrition brands. PepsiCo acquired prebiotic-beverage company Poppi for $1.95 billion in 2025.
- Companies such as Nestlé are resetting the cost base to fund reinvestment in innovation, R&D, and AI. Nestlé expects its Fuel for Growth program to deliver CHF 3 billion in savings by the end of 2027, which the company has been clear will fund accelerated innovation and growth.

Companies that wait for clarity risk falling behind. In a market where expectations are moving faster than legacy portfolios, delayed adaptation can quickly translate into share loss and margin erosion.

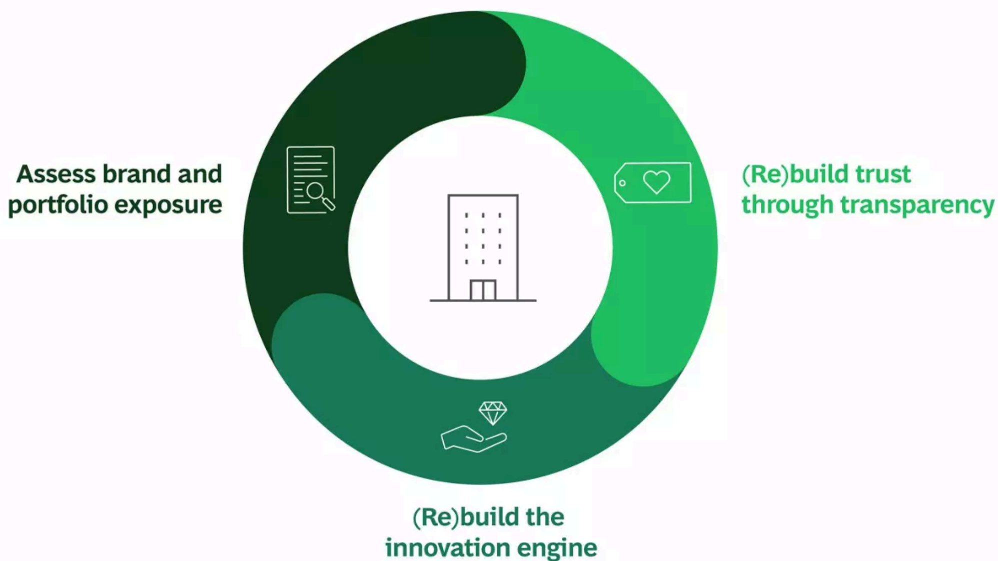
How Companies Can Adapt

The big strategic question involves capital allocation. For the past decade, returning free cash flow to shareholders through dividends and buybacks has been the default value creation tool for many large CPG companies. This model worked well while volume and pricing were dependable. The conversation underway now in many CPG boardrooms is more complex: how to balance shareholder returns with the reinvestment in R&D, new capabilities, and M&A that the next decade will require. Getting this mix right is the main strategic issue of today.

At the same time, companies should pursue a coordinated set of actions across their product portfolios. (See Exhibit 4.)

EXHIBIT 4

How Companies Can Adapt



Source: BCG analysis.

Assess brand and portfolio exposure. Companies need to understand where their brands are most exposed. Some products, such as those with ingredients experiencing consumer or regulatory skepticism, face structural headwinds; others may not be affected or may even benefit from shifting demand. Gaining clarity on exposure involves building a robust foresights capability to understand where the opportunities are today—and discerning the still-weak signals that indicate where opportunities could come from tomorrow. A number of AI-powered tools, including several developed by BCG, are available to monitor and assess relevant trends and developments, foster consumer insights, and help build an in-depth understanding of the intricacies of policy and regulation.

(Re)build trust through transparency. As we argued last May, CPG players may want to take a step back and reset their overall direction on nutrition, developing and communicating a transparent and consistent corporate perspective on processed foods and their role in modern diets. Trust is maintained (or rebuilt) through clearer ingredient narratives, visible commitments to improvement, and alignment ahead of evolving policy expectations. Companies need to be upfront and clear about the makeup of their products, their sustainability, the role of each SKU in the portfolio, and the reasons for and benefits of reformulations as they occur. In an environment shaped by AI-enabled transparency, inconsistencies can quickly surface.

(Re)build the innovation engine. Rebuilding the innovation engine is the work of years, not quarters. There are two avenues that need to be pursued in parallel: building or buying into high-potential adjacencies, and disciplined reformulation of the core. Most companies have historically prioritized one or the other; future leaders will do both.

The first avenue is to seek growth in new market segments or demand spaces (the intersection of consumers' current context and their emotional and functional needs). CPG companies can use a

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demand-centric analysis to rethink products in light of emerging and unmet consumer needs, as well as define new product categories. Execution can take place through internal innovation or M&A. A growing number of big companies are already pursuing the latter route, but it's important to remember that acquisition is only a starting point and often an expensive one at that. Integration must preserve the agility, culture, and authenticity of the acquired brand(s). There are plenty of cautionary tales of fast-growing brands that were undermined by their new owners.

The second route is reformulating winning products using tools such as BCG's "design to sustainable value" approach. Reformulation is often treated as a defensive response to regulatory or reputational pressure, but this view is too narrow. Leading companies are institutionalizing a more disciplined product design model that does the following:

- Integrates consumer value, cost optimization, and health and sustainability objectives into one product design logic
- Differentiates reformulation intensity by product role, occasion, and positioning (not all products should be treated the same)
- Redesigns formulas and sourcing in parallel to protect margins rather than layering cost onto legacy structures
- Uses cross-functional, agile teams and advanced analytics to accelerate decision making and reduce execution risk
- Combines near-term optimization with longer-term category reinvention to future-proof portfolios
- Explores other innovation models, such as "open innovation" approaches that involve collaboration with academia, venture firms, and other players

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UPF categories are under intensifying structural pressure. Incremental tweaks are insufficient solutions; a product line extension here or a clean-label SKU there will not move the needle. The winners of the next decade will be the companies that reshape their portfolios through stronger innovation engines and disciplined M&A and that have the conviction to start before the bill for past strategies comes fully due. For most large CPG players, the first move is straightforward: a brutally honest portfolio diagnosis, done in weeks rather than quarters, that classifies every SKU by its exposure to structural forces in the marketplace. Everything else flows from there.

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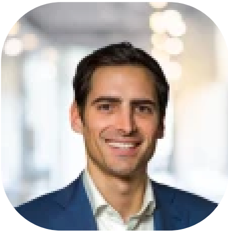

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