IFF gideon lens

■# International Flavors & Fragrances Inc. (IFF) - Gideon-Lens Equity Research

Date: 2026-05-29. Analyst: Codex. Price: $78.03. Market cap: approximately $20.1B. Fiscal year end: December 31.

This is a full production ER2 run continued at the user's request after the Stage 1 quality screen had already flashed red. That caveat matters. The work below does not ask whether IFF has attractive assets. It does. The question is whether the equity clears Gideon's bar: a durable high-return compounder, credible management, a moat that survives the 2046 test, and a current price that maps to P/E <= 15 on confident EPS five calendar years past the TTM anchor. It does not.

VERDICT BLOCK

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	YELLOW	Credible cleanup, but not proven high-return stewardship
Moat	YELLOW	Real segment stickiness; 2046 test remains unresolved
P/E <= 15 on confident EPS at TTM + 5 calendar years	FAIL	Base cushion -44.0%; bull still fails
Compounder Score	Audited 37 / 100	Reject; diagnostic only, not dream-investment evidence
Business Quality Score	Audited 36 / 80	Segment assets real, consolidated quality still capped
20% Return UW Score	Audited 1 / 20	Current price does not support 20% underwriting

One-line thesis (or reason to pass): IFF is a plausible remediation case with real H&B, Taste, and Scent assets, but the verified model does not convert segment adjusted EBITDA into enough GAAP-like EPS or FCF to clear the Gideon price and quality bars.

Kill / trigger criteria:

- BUY trigger: no price-only BUY today; mechanical P/E 15 base-case value is $43.73, and the audited 20% return buy price is about $20.79.
- PASS trigger: after Q3 FY2026, refuse upgrade if TTM GAAP operating income remains below 45% of TTM adjusted operating EBITDA.
- PASS trigger: refuse upgrade if TTM free cash flow remains below 30% of adjusted operating EBITDA or net debt / adjusted EBITDA rises above 3.0x.
- Upgrade to BUY conditions: Food Ingredients sale or retention must be disclosed with after-tax proceeds, stranded costs, debt paydown, and retained earnings power; management must show multiple quarters of GAAP operating profit and FCF conversion, plus an explicit ROIC-linked incentive framework.

Position sizing if bought: 0% of equity book maximum today. A remediation watchlist position would require fresh evidence, not only a lower quote.

Stage 0 - Time Anchor

Today is 2026-05-29. IFF's fiscal year ends December 31. The most recently reported quarter is Q1 FY2026, ended March 31, 2026 and reported May 5, 2026. The TTM anchor is Q2 FY2025 + Q3 FY2025 + Q4 FY2025 + Q1 FY2026, producing TTM ending March 31, 2026. The forward horizon is TTM plus exactly five calendar years, or March 31, 2031. Every "FY+5" reference in this report means that horizon, not a six-year fiscal-year stretch from FY2025.

Stage 1 - Disqualifier Sweep

The Stage 1 sweep was red-gate-waived, not passed. ROIC persistently >= 15% was RED because FY2025 reported a GAAP operating loss, a major impairment burden, and no clean proof of normalized post-acquisition ROIC above the Gideon bar. FCF conversion was YELLOW/RED: TTM FCF was $400M versus $2.076B of adjusted operating EBITDA, and FY2025 FCF was only $256M. Net debt / adjusted EBITDA was YELLOW: 2.5x is manageable but still a real claim on recovery economics. End markets were GREEN/YELLOW, with stable sensory, bioscience, and ingredients demand but portfolio churn. Governance was YELLOW, with no acute control problem but a large capital-allocation overhang. AI disruption was GREEN/YELLOW because formulation and regulatory qualification are not simple text workflows, though AI can pressure parts of Food Ingredients and formulation work. Pricing power was YELLOW: observable but uneven and often lagged.

Management

Management is YELLOW. Erik Fyrwald and the current team have a credible cleanup agenda: simplify the portfolio, sell or fix Food Ingredients, manage leverage, and push cash conversion. That is a reasonable response to the condition they inherited, but it is not yet proof of a 20-year compounder steward. The management appendix gives credit for acceptable governance mechanics, an independent board, no dual-class control, no material related-party pattern, and some positive insider purchase signals. It also finds that compensation still underweights explicit ROIC and FCF, which is exactly where IFF needs proof. The capital-allocation history remains the main problem: DuPont-era complexity, impairments, divestitures, and weak FCF conversion make it impossible to grade the team as PASS today. The upgrade path is clear but evidence-dependent: clean Food Ingredients disclosure, better FCF conversion, leverage progress, and ROIC-linked incentives.

Moat

The moat gate is YELLOW, and the 2046 test is also YELLOW. IFF has real segment-level advantages: embedded formulation work, customer qualification, regulatory know-how, biological libraries, sensory expertise, and high-trust supplier relationships. Health & Biosciences is the strongest moat asset, with mid-20s segment adjusted EBITDA margins and defensible biology/regulatory/manufacturing capabilities. Taste and Scent have practical switching costs, but their disclosed growth and cash conversion do not carry the whole equity. Food Ingredients weakens the blended moat because it is lower-margin, under active sale review, and more exposed to commoditization, customer bargaining, and formulation alternatives. Pharma Solutions is historical only after the May 1, 2025 divestiture. The 2046 version of IFF can be described plausibly as a narrower sensory and biosciences company, but the current equity has not yet proven that this narrower business will compound capital at Gideon's required rate.

Stage 5 Synthesis

The synthesis is the decisive rejection. The segment appendices forecast segment adjusted operating EBITDA, not GAAP operating income, so the model explicitly bridges from adjusted EBITDA to GAAP-like operating income. TTM segment adjusted operating EBITDA was $2.076B while TTM GAAP operating profit was $794M, a $1.282B bridge. The base horizon case gives management credit for improvement, shrinking the bridge to $1.150B by 2031, but does not pretend the bridge disappears.

Case	Revenue	GAAP-like OI	NI	EPS	EPS x 15	Cushion vs $78.03
Bear	$10.835B	$0.631B	$0.193B	$0.75	$11.26	-85.6%
Base	$12.054B	$1.305B	$0.751B	$2.92	$43.73	-44.0%
Bull	$13.112B	$1.815B	$1.182B	$4.59	$68.85	-11.8%

Required EPS for P/E 15 at $78.03 is $5.202. Base case EPS is $2.92, so the base case fails by 44.0%. Even the bull case fails at 15x. The base model assumes Taste reaches $2.910B revenue and $597M adjusted EBITDA, Food Ingredients reaches $3.490B and $506M, Health & Biosciences reaches $2.793B and $751M, Scent reaches $2.861B and $601M, and Pharma Solutions contributes zero. The combined model passes 11/11 arithmetic checks, including segment sum, share count path, recency anchor, bridge discipline, and P/E 15 arithmetic. The problem is not a math error. The problem is the earnings power implied by the verified bridge and capital structure.

Food Ingredients is the most important unresolved modeling item. The continuing-owned base case includes $3.490B of horizon revenue and $506M of adjusted EBITDA. A sale could improve leverage and simplify the portfolio, but the report does not invent a sale price, tax leakage, stranded costs, debt paydown, or repurchase plan. If the business is sold well and stranded cost is removed, EPS could improve. If the sale is weak or retained stranded costs eat the proceeds, the base case may still be too generous.

Red Team

The red team does not merely agree with PASS; it argues the synthesis may still be too generous. The strongest bear argument is that IFF owns real assets but equity value is being consumed by the adjusted-EBITDA-to-GAAP/FCF bridge, debt, stranded costs, and portfolio repair. The most likely optimistic Stage 5 number is base GAAP-like operating income of $1.305B, because it assumes segment adjusted EBITDA rises while the bridge shrinks and Food Ingredients repairs. If the bridge stays near the current $1.282B instead of shrinking to the base $1.150B, base EPS falls from $2.92 toward roughly $2.52. The monitorable red-team signal is explicit: after Q3 FY2026, exit or refuse upgrade if TTM GAAP operating income remains below 45% of TTM adjusted operating EBITDA, roughly a bridge above $1.20B at $2.1B-$2.2B of adjusted EBITDA.

Kill / Trigger Criteria

- Mechanical P/E 15 reference price: $43.73 on base EPS of $2.92.
- Diagnostic 20% return reference price: about $20.79 from the audited score model.
- Upgrade condition: TTM GAAP operating income must approach at least 45% of adjusted EBITDA and keep improving.
- Upgrade condition: TTM FCF must convert at more than 30% of adjusted EBITDA and show a path toward a normal owner-earnings bridge.
- Upgrade condition: Food Ingredients sale or retention must come with disclosed proceeds, stranded costs, retained earnings power, and capital allocation use.
- Downgrade condition: net debt / adjusted EBITDA above 3.0x, fresh impairment, or another adjusted-vs-GAAP year resembling FY2025.

Analyst Flags

Several data issues are explicitly handled rather than hidden. FMP's quarterly segment endpoint carried a phantom Q3 FY2025 Pharma Solutions line; QF documented it and used official sources instead. FY2025 GAAP operating loss, EPS, and debt required official-source overrides or labeling discipline. Segment profit is adjusted operating EBITDA, not GAAP operating income; this is why the synthesis has a separate bridge. IFF does not disclose product-line revenue or product-line margins inside Taste, Food Ingredients, H&B, or Scent, so segment appendices model disclosed segment totals and use qualitative product drivers. Food Ingredients is under active sale review but no verified whole-segment sale price, taxes, stranded costs, or pro forma EPS bridge exists. The final verdict should therefore be read as a rigorously sourced PASS today, with a watchlist path only if the bridge, FCF, and portfolio disclosure materially improve.

Appendix A - Company Primer

International Flavors & Fragrances Inc. (IFF) - Appendix A: Company Primer

Date prepared: 2026-05-29.

This appendix is part of a red-gate-waived ER2 / Gideon production run. The quantitative foundation cleared the arithmetic review, but Stage 1 economic quality did not clear: the ROIC / economic-quality gate was RED and the user explicitly requested continuation. The purpose of this primer is therefore orientation, not investment endorsement. It describes what International Flavors & Fragrances Inc. does, how the business is organized, how revenue becomes profit, where the switching costs may exist, and why downstream ER2 work should remain skeptical.

Source Note and Anchor

Financial figures in this appendix come from the cleared quantitative foundation at `C:\Users\Admin\OneDrive\GPT\ER 2.0\International Flavors & Fragrances\quant_foundation.md`. The quant foundation uses the TTM period Q2 FY25 + Q3 FY25 + Q4 FY25 + Q1 FY26, ending March 31, 2026. The forward horizon for the ER2 run is March 31, 2031, exactly five calendar years after the TTM anchor. Additional qualitative context was checked live against IFF's 2025 Form 10-K, IFF's Q4 / FY2025 results release, and IFF's Q1 2026 results release.

Key official context sources:

Source	Use in primer
[IFF 2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/51253/000005125326000006/iff-20251231.htm)	Business description, customers, geography, R&D model, segment taxonomy, segment cost table, impairments, competition risks
[IFF Q4 / FY2025 results release](https://ir.iff.com/news-releases/news-release-details/iff-reports-fourth-quarter-and-full-year-2025-results)	FY2025 operating commentary, segment performance, free cash flow, leverage, Food Ingredients sale process
[IFF Q1 2026 results release](https://ir.iff.com/news-releases/news-release-details/iff-reports-first-quarter-2026-results)	Latest quarter, Q1 2026 segment performance, net debt / credit adjusted EBITDA, ongoing Food Ingredients sale process

Business Overview

IFF is a global supplier of flavors, fragrances, food ingredients, enzymes, cultures, probiotics, and related formulation technologies used in consumer and industrial products. In plain English, IFF helps other companies make products taste better, smell better, last longer, perform better, feel more natural, or carry a more compelling sensory identity. Its outputs are rarely sold directly to the end consumer. They are embedded inside finished products made by food, beverage, personal care, home care, fine fragrance, dietary supplement, animal nutrition, and industrial customers.

The customer base is mostly manufacturers. IFF's 2025 Form 10-K says its products are sold principally to makers of dairy, meat, beverages, snacks, savory, sweet, baked goods, grain processors and other foods, personal care products, soaps and detergents, cleaning products, perfumes, dietary supplements, food protection, infant, elderly and animal nutrition, functional food, biofuel, and oral care products. The same filing says U.S. sales represented about 28% of 2025 sales, no other country represented more than 10%, and no customer accounted for 10% or more of sales. That matters: the business has broad product and customer spread, but it also serves large global consumer product companies that can be demanding on price, service, reformulation, safety, regulatory compliance, and innovation pace.

The buying model is not self-serve and not a simple catalog sale. Customers come to IFF with product development problems. A food customer may need a citrus taste that survives thermal processing, a lower-sugar dairy texture system, a clean-label preservation solution, or a plant-based protein product that tastes less bitter. A home care customer may need a detergent enzyme that performs at lower wash temperatures, or a fragrance that survives storage, dilution, and use. A fine-fragrance customer may need a signature accord tied to a brand launch and protected by secrecy, artistry, and ingredient access. IFF then uses consumer insight, formulation labs, application scientists, regulatory staff, perfumers, flavorists, enzymes, ingredients, and manufacturing capability to propose a solution that works inside the customer's formula and production process.

This means the relationship can be sticky when IFF's formulation is approved and scaled. In many categories, ingredients and fragrance / flavor compounds are small percentages of the finished-good cost but important to consumer acceptance. A

change can require sensory testing, shelf-life work, regulatory review, plant validation, label updates, procurement approval, and sometimes customer requalification. The switching cost is therefore not merely contractual. It is embedded in formula risk, launch timing, brand consistency, and the customer's reluctance to break a working product. Still, the switching-cost argument should not be overstated. IFF competes in markets where customers often dual-source, run tenders, pressure suppliers on productivity, and can shift new briefs to competitors. Sticky formulations help, but they do not automatically create Gideon-grade pricing power or capital compounding.

IFF's operating model is global and R&D-heavy. The 2025 Form 10-K describes consumer insight, product development, and creative application capabilities as central to competitiveness. IFF reported 849 granted U.S. patents, 451 pending U.S. patent applications, thousands of other global patents and applications, and about 3,000 global employees in research and development, innovation, creation, and design activities at year-end 2025. The company also relies on a global network of creative centers and application laboratories to turn internal technologies into products that customers can use. That creative-technical interface is the core of the business: not just making chemical or biological inputs, but adapting them to customer-specific product systems.

Revenue Architecture

IFF reported FY2025 revenue of $10.890 billion. The current segment structure is Taste, Food Ingredients, Health & Biosciences, Scent, and the divested Pharma Solutions stub. The former Nourish segment was split into Taste and Food Ingredients effective January 1, 2025. Pharma Solutions was divested in May 2025, so it appears in FY2025 and the TTM base only as a partial-period stub.

FY2025 segment	FY2025 revenue	Share of FY2025 revenue	FY2025 adjusted operating EBITDA	FY2025 EBITDA margin
Taste	$2.481B	22.8%	$478M	19.3%
Food Ingredients	$3.278B	30.1%	$423M	12.9%
Health & Biosciences	$2.283B	21.0%	$594M	26.0%
Scent	$2.479B	22.8%	$515M	20.8%
Pharma Solutions	$0.369B	3.4%	$76M	20.6%
Total	$10.890B	100.0%	$2.086B	19.2%

Taste develops flavor compounds, natural taste solutions, spices, seasonings, and culinary systems used in savory foods, beverages, sweets, dairy, meat, food service, convenience products, and alternative protein. This is the classic flavors business, but with broader applied-food capability. A customer is not just buying a molecule; it is buying a finished sensory result that has to work in a real product matrix. Taste was 22.8% of FY2025 revenue and 24.0% of FY2025 adjusted operating EBITDA. Its FY2025 EBITDA margin was 19.3%, and the TTM margin improved to 19.9% on $2.510 billion of TTM revenue and $500 million of TTM adjusted operating EBITDA.

Food Ingredients is the largest FY2025 revenue segment at 30.1% of sales but the weakest margin segment among the active businesses. It includes natural, artificial, and plant-based specialty ingredients that provide functional properties in food and beverage, including soy and pea protein formulations, emulsifiers, sweeteners, food protection, savory systems, and inclusion products. This is closer to specialty ingredients and food functionality than to pure flavors. The business can have attractive niches, but the current aggregate margin profile is lower: $3.278 billion of FY2025 revenue, $423 million of adjusted operating EBITDA, and a 12.9% margin. In the TTM base, Food Ingredients contributed $3.321 billion of revenue and $426 million of adjusted operating EBITDA, a 12.8% margin.

Health & Biosciences is IFF's biotechnology-derived portfolio, including enzymes, cultures, probiotics, and specialty ingredients for food and non-food applications. The 10-K describes subareas such as Health, Food Biosciences, Home & Personal Care, Animal Nutrition, and Grain Processing. Applications include fermented foods, probiotics, dietary supplements, functional food and beverage, specialized nutrition, laundry and dishwashing enzymes, cleaning and textile enzymes, animal feed enzymes, ethanol production, brewing, and carbohydrate processing. This is the highest margin active segment in the current base: $2.283 billion of FY2025 revenue, $594 million of FY2025 adjusted operating EBITDA, and a 26.0% margin. The TTM base is $2.338 billion of revenue and $609 million of adjusted operating EBITDA, also 26.0%.

Scent includes fragrance compounds and fragrance ingredients. Fragrance compounds serve fine fragrances, consumer fragrances, personal care, household products, beauty care, soaps, detergents, cleaning agents, toiletries, perfumes, and colognes. Fragrance ingredients include natural, synthetic, active, and functional ingredients used internally and sold to third

parties, including competitors, for use in compounds. This dual role matters for scale: IFF can use ingredient facilities to secure internal supply while also selling excess capacity. Scent generated $2.479 billion of FY2025 revenue and $515 million of adjusted operating EBITDA, a 20.8% margin. The TTM base is $2.516 billion of revenue and $519 million of adjusted operating EBITDA, a 20.6% margin.

Pharma Solutions was a former reportable segment that produced cellulosics and seaweed-based pharmaceutical excipients used in prescription drugs, over-the-counter pharmaceuticals, and dietary supplements. IFF completed the divestiture of the Pharma Solutions disposal group on May 1, 2025 and divested the nitrocellulose business on May 9, 2025. The segment should therefore not be treated as a going-forward operating pillar. The TTM base includes only $103 million of revenue and $22 million of adjusted operating EBITDA from Q2 FY25. Downstream models should either exclude it prospectively or treat any residual contribution as a divested stub.

Segment Taxonomy Change and Comparability

Comparability is unusually important for IFF because the company changed its segment taxonomy at the same time it was selling businesses. Effective January 1, 2025, IFF separated the former Nourish segment into Taste and Food Ingredients. It also made minor business transfers between Food Ingredients and Pharma Solutions and between Health & Biosciences and Taste, adjusted corporate cost allocations, and recast 2024 and 2023 segment information to reflect the updated structure. That makes the 2025 segment presentation usable, but analysts should remember that the historical trend is reconstructed around a changed management view.

The change is not cosmetic. Taste is more flavor, taste, and culinary systems. Food Ingredients is more texturants, food protection, plant-based proteins, emulsifiers, sweeteners, savory solutions, and inclusions. Those businesses have different margins, different commodity exposure, and different strategic relevance. The split lets IFF show the lower-margin Food Ingredients base separately from the more formulation-driven Taste business. It also set the stage for the Food Ingredients sale process, which IFF launched with its FY2025 results and said in Q1 2026 was progressing on a disciplined basis.

Pharma Solutions is a separate comparability issue. FY2024 included a full year of Pharma Solutions. FY2025 included only a partial year before divestiture. The TTM period ending March 31, 2026 includes only Q2 FY25 Pharma Solutions in the official segment base. The quant foundation also flags an FMP endpoint defect: raw FMP quarterly data included a Q3 FY25 Pharma Solutions line even though official IFF Q3 materials did not. The cleared QF removes that phantom Q3 line and uses the official quarterly sources.

Unit Economics

IFF's economics start with formulation and manufacturing revenue, then move through raw materials, production conversion cost, R&D, selling and administrative expense, and depreciation. Because IFF discloses segment adjusted operating EBITDA rather than segment GAAP operating income, segment margins should be read as a non-GAAP operating profit proxy, not as a full capital charge.

At the consolidated FY2025 level, IFF generated $10.890 billion of revenue, $3.938 billion of gross profit, and a GAAP operating loss of $382 million. The adjusted operating EBITDA number was very different: $2.086 billion, or 19.2% of sales. The gap is central to this case. FY2025 adjusted operating EBITDA excludes or adds back depreciation and amortization, interest, restructuring charges, impairment, business-disposal losses, held-for-sale losses, integration and divestiture costs, strategic initiative costs, regulatory costs, and other items. The biggest item was a $1.153 billion goodwill impairment related to Food Ingredients. This is why the primer should not let the clean adjusted margin presentation hide the capital-allocation and acquisition-history problem.

The FY2025 segment cost table shows the economics by operating pillar:

FY2025 segment	Revenue	Cost of sales	R&D	S&A	Depreciation add-back	Adjusted EBITDA
Taste	$2.481B	$(1.500)B	$(172)M	$(396)M	$65M	$478M
Food Ingredients	$3.278B	$(2.531)B	$(54)M	$(400)M	$130M	$423M
Health & Biosciences	$2.283B	$(1.246)B	$(219)M	$(348)M	$124M	$594M
Scent	$2.479B	$(1.424)B	$(241)M	$(366)M	$67M	$515M
Pharma Solutions	$0.369B	$(248)M	$(8)M	$(42)M	$5M	$76M
Total	$10.890B	$(6.949)B	$(694)M	$(1.552)B	$391M	$2.086B

Taste has meaningful R&D and creative application cost because flavor systems are customized and brief-driven. The business needs flavorists, application labs, consumer science, regulatory support, ingredient access, and manufacturing consistency. Its adjusted EBITDA margin around 19%-20% implies solid but not extraordinary profitability for a scaled global flavor business.

Food Ingredients has the largest revenue base but the lowest active-segment margin. Cost of sales consumed about 77% of FY2025 Food Ingredients revenue before R&D, S&A, and depreciation add-back. The segment's low R&D intensity relative to Taste, H&B, and Scent suggests that a larger portion of the business behaves like ingredients and functional systems rather than high-touch creative formulation. That is consistent with management's decision to run a sale process: it may be strategically less core, less differentiated, or less attractive in return on capital than the remaining portfolio.

Health & Biosciences has the best margin structure. Enzymes, cultures, probiotics, and specialty biotech ingredients can carry more differentiated functionality when they solve a specific customer problem: lower sugar, shelf-life extension, fermentation performance, animal feed conversion, detergent performance, biofuel yield, or process efficiency. R&D intensity is high, but the resulting products can have strong value-in-use economics.

Scent is also R&D and creation intensive. Fine fragrance and consumer fragrance require perfumer talent, proprietary ingredient palettes, sensory testing, customer intimacy, and supply assurance. Scent margins are above the consolidated average but not far enough above it to erase the broader quality concerns. The business also carries legal and regulatory overhang: IFF disclosed ongoing antitrust and competition investigations and related class action lawsuits involving fragrance businesses, with the DOJ investigation closed in February 2026 but other civil or regulatory matters remaining.

Capital intensity is meaningful. FY2025 capex was $594 million against $10.890 billion of revenue, or about 5.5% of sales. TTM capex was $580 million against $10.788 billion of revenue, about 5.4%. TTM free cash flow was $400 million against $2.076 billion of TTM adjusted operating EBITDA, a roughly 19% conversion from adjusted EBITDA to FCF. FY2025 FCF was only $256 million on $2.086 billion of adjusted operating EBITDA, about 12%. That weak conversion is one reason ER2 should remain skeptical: the business may show respectable adjusted EBITDA while cash available to equity after capex, working capital, restructuring, integration, divestiture costs, and other charges remains much less impressive.

Customer Value Proposition and Switching Costs

IFF's customer value proposition is practical and commercial. It helps customers create products that consumers choose, reformulate products under cost or regulatory pressure, improve functionality, support clean-label or wellness claims, solve performance problems, and accelerate time to market. The company is not just selling inputs by weight. It is selling applied knowledge about taste, smell, texture, shelf life, enzymes, cultures, probiotics, ingredients, and consumer preference.

The stickiness comes from several sources. First, formulas are embedded in finished products. A beverage flavor, detergent fragrance, enzyme system, probiotic strain, or food protection ingredient has to work in the customer's product, packaging, supply chain, and shelf-life environment. Second, IFF's creative and technical teams often collaborate with the customer during product development. The supplier can become part of the launch path. Third, regulatory and quality systems create friction. Customers need assurance that an ingredient is safe, compliant, traceable, and manufacturable at scale. Fourth, sensory consistency matters. A flavor or fragrance change can be noticed by consumers even when the input cost is small relative to the retail product.

The 10-K also notes that large multinational and mid-sized customers may limit suppliers by placing selected vendors on core lists that receive priority for development and production of new or modified products. Inclusion on those lists can be valuable because it creates access to future briefs. It is also a pressure point. To remain on those lists, IFF has to keep investing in customer relationships, service, R&D, speed, quality, compliance, and cost competitiveness.

The risk is that switching costs are strongest at the product line level, not necessarily at the corporate level. A given fragrance in a winning detergent may be sticky, but the next detergent brief may be bid among IFF, Givaudan, DSM-Firmenich, Symrise, and other specialists. Food Ingredients can also face more ingredient substitution and commodity-linked competition. Downstream analysts should separate embedded revenue from new-brief win rates and should avoid assuming the installed base automatically compounds at high ROIC.

Competitive Landscape

IFF competes against large integrated flavor and fragrance houses, science-based ingredients companies, and more focused specialists. The closest global flavor and fragrance peers are Givaudan, DSM-Firmenich, and Symrise. Kerry is a major food and taste systems competitor, especially in food ingredients and savory / nutrition solutions. ADM and other ingredient

suppliers compete in portions of the Food Ingredients and nutrition value chain. Regional flavor houses, fragrance specialists, biotechnology players, enzymes companies, and customer in-house capabilities also matter.

The competitive axes differ by segment. In Taste, customers care about taste quality, reformulation speed, application support, cost-in-use, regional consumer insight, regulatory capability, and manufacturing reliability. In Scent, perfumer creativity, ingredient palette, captive and third-party ingredient access, longevity, brand fit, safety, and secrecy are critical. In Health & Biosciences, the competition is more technology and functionality driven: enzyme performance, strain libraries, fermentation know-how, efficacy evidence, manufacturing scale, and customer integration matter. Food Ingredients competes more on functionality, texture, protein performance, cost, security of supply, and the ability to fit customer claims such as plant-based, clean label, natural preservation, or sugar reduction.

IFF's own 10-K frames competition as intense and global, including multinational and specialized companies as well as consumer product companies developing their own alternatives. It warns that competitors may have greater resources, proprietary technologies, or benefit from industry consolidation; that aggressive pricing can pressure margins; and that private label, customer consolidation, e-commerce, and fast-moving consumer trends can reduce demand for IFF's products. That language is important for ER2 because it cuts against an overly simple moat story. The industry has attractive formulation stickiness, but it is not competition-free.

End Markets and Cyclicality

IFF's end markets are generally more stable than heavy industrial or discretionary capital goods markets because many products are everyday consumables. Food, beverages, personal care, detergents, cleaning products, perfumes, dietary supplements, animal nutrition, and enzymes have recurring demand characteristics. However, the business is not non-cyclical in the simple sense. Volumes can be pressured by customer destocking, weak consumer demand, private-label substitution, emerging-market volatility, raw-material inflation, FX, and customers reformulating to lower-cost inputs.

Food and beverage exposure is broad. Taste serves beverages, dairy, sweets, savory, snacks, meat, culinary products, food service, convenience, and alternative protein. Food Ingredients serves texturants, proteins, emulsifiers, sweeteners, natural food protection, savory systems, and inclusions. These categories benefit from ongoing demand for convenience, wellness, sugar reduction, clean label, plant-based products, and better texture. But Food Ingredients also shows that volume and mix can be tough: FY2025 Food Ingredients sales declined 3% on a reported basis, and management cited softness in Protein Solutions and proactive exit of low-margin business, offset partly by double-digit growth in Inclusions.

Personal care, home care, fine fragrance, and beauty care support Scent. Fine fragrance can be more discretionary and brand-cycle driven, while consumer fragrance in detergents and personal care is more recurring. Scent had solid FY2025 sales growth, including double-digit growth in Fine Fragrance and low-single digit performance in Consumer Fragrance according to IFF's FY2025 release, but adjusted EBITDA growth was muted by reinvestment and unfavorable net pricing.

Health & Biosciences spans health, food biosciences, home and personal care, animal nutrition, grain processing, and industrial enzyme applications. This mix includes attractive secular themes such as probiotics, fermentation, lower-sugar / higher-fiber food, detergent enzymes, animal feed efficiency, and biofuel or carbohydrate processing. Still, it is exposed to agricultural cycles, industrial demand, customer inventory, regulatory claims, and technical substitution.

Industrial enzymes and grain processing are more cyclical than a branded food flavor. Biofuel production, carbohydrate processing, animal feed, and industrial applications can depend on commodity spreads, energy prices, regulatory incentives, and agricultural economics. A high-quality ER2 model should not treat all IFF revenue as equally resilient.

Capital Allocation and Balance Sheet Overview

IFF is still digesting the balance sheet and portfolio consequences of a large acquisition-and-integration period. The current financial picture is not a clean compounder profile. The quant foundation shows Q1 FY26 cash of $562 million, borrowings / debt of $5.817 billion, net borrowings / debt of $5.255 billion, and net debt / TTM adjusted operating EBITDA of about 2.5x. IFF's Q1 2026 release reported net debt to credit adjusted EBITDA of 2.5x. That is not an immediate leverage red flag under ER2's less-than-3x screen, but it leaves limited room for poor FCF conversion, more restructuring charges, or another impairment cycle.

Capital allocation in 2025 and early 2026 centered on divestitures, deleveraging, portfolio focus, and reinvestment in the remaining businesses. IFF completed the Pharma Solutions and nitrocellulose divestitures in May 2025. It divested the Rene Laurent business in December 2025, and its Q1 2026 release says Food Ingredients comparable information excludes the Soy Crush, Concentrates, and Lecithin disposal group divested on March 2, 2026. Management also launched a sale process

for Food Ingredients with the FY2025 results and reiterated in Q1 2026 that the process was being run with discipline to maximize shareholder value.

The strategic logic is understandable. Food Ingredients is the largest revenue segment but lowest margin active segment. Selling it could simplify IFF, reduce exposure to lower-return ingredient lines, unlock cash for deleveraging, and leave a more focused portfolio around Taste, H&B, and Scent. The risk is execution and valuation. A sale at a weak multiple, leakage through taxes and stranded costs, or loss of scale benefits could reduce the apparent improvement. There may also be operational dis-synergies because customers, supply chains, plants, and corporate allocations have been integrated over time.

Dividends are part of the capital allocation picture, but the primer should not treat the dividend as proof of financial strength. With FY2025 free cash flow of only $256 million and TTM free cash flow of $400 million, cash conversion is thin relative to adjusted operating EBITDA and debt. Downstream analysts need to test whether maintenance capex, working capital, restructuring, legal / regulatory costs, portfolio actions, and inflation absorb too much of adjusted profit to support both deleveraging and shareholder returns.

Why ER2 Is Skeptical

The first reason is the Stage 1 red gate. The run continued only because the user explicitly waived the red economic-quality gate. IFF may have valuable franchises in flavors, fragrances, enzymes, cultures, and ingredients, but the historical economic record does not yet meet the Gideon bar of durable high-return capital compounding.

Second, the company has a major impairment and adjusted-vs-GAAP problem. FY2025 adjusted operating EBITDA was $2.086 billion, but GAAP operating income was a $382 million loss and 10-K diluted EPS was $(1.41). The Food Ingredients goodwill impairment alone was $1.153 billion. A quality compounder can have temporary charges; a red flag appears when repeated integration, divestiture, restructuring, impairment, and strategic initiative costs become part of the investment story. ER2 should ask whether adjusted EBITDA is a bridge to future cash earnings or a recurring way to look past real capital destruction.

Third, free cash flow conversion was weak. FY2025 FCF was $256 million and TTM FCF was $400 million. Those figures are small relative to adjusted operating EBITDA, enterprise value, and debt. The business needs plants, labs, application centers, R&D, regulatory infrastructure, and working capital. If the business cannot translate adjusted operating EBITDA into durable FCF, the stock can look cheaper on EBITDA than it really is on owner earnings.

Fourth, the portfolio is still in motion. The segment split, Pharma Solutions divestiture, nitrocellulose divestiture, Rene Laurent divestiture, SCL disposal, and Food Ingredients sale process complicate trend analysis. A cleaner portfolio may emerge, but current historicals are transitional. The active TTM base still includes Food Ingredients; if Food Ingredients is sold, downstream models must decide how to treat proceeds, stranded costs, debt repayment, tax leakage, dis-synergies, and the pro forma margin structure.

Fifth, the moat is uneven. Taste, Scent, and H&B have real technical and relational switching costs. Food Ingredients appears more mixed. Competitive intensity is high, customer bargaining power is meaningful, and large consumer goods customers may use core lists and tenders to force service and productivity. IFF has valuable capabilities, but the primer should not call it a proven exceptional compounder without downstream proof.

Key Questions for Downstream Analysts

- What is the true pro forma company after a potential Food Ingredients divestiture, including stranded costs, tax leakage, debt reduction, and lost scale benefits?
- Can Taste, H&B, and Scent sustain organic growth above inflation without relying on price increases that later reverse?
- Is Health & Biosciences genuinely a high-return biotechnology platform, or is its current margin partly a mix benefit that requires heavy reinvestment to sustain?
- How much of Scent's profit is protected by creative capability and ingredient access versus exposed to antitrust, pricing, and customer tender pressure?
- What normalized FCF conversion should investors underwrite after portfolio actions, restructuring, integration, and strategic initiative costs fade?

- Does IFF have a credible path back to Gideon-grade ROIC, or is deleveraging and portfolio cleanup merely repairing past capital allocation mistakes?
- What level of capex is maintenance versus growth, and does the company need elevated investment to defend its technical edge?
- Are adjusted operating EBITDA add-backs declining in reality, or will impairment, divestiture, restructuring, regulatory, and strategic initiative costs keep recurring?
- How concentrated are segment profits in the highest-value customer relationships, and how much revenue is at risk during rebids or core-list resets?
- At the March 31, 2031 forward horizon, what FY+5 EPS is required for a P/E of 15 at today's price, and does the pro forma cash earnings bridge support that without heroic assumptions?

Bottom Line for the ER2 Reader

IFF is not a simple commodity company. It owns meaningful formulation, sensory, biotechnology, customer-application, and regulatory capabilities across flavors, fragrances, enzymes, cultures, probiotics, and specialty ingredients. Its products are embedded in recurring consumer and industrial categories, and many individual formulations can be sticky once commercialized.

The problem is not business relevance. The problem is whether the company can convert that relevance into high-return, durable, cash-rich compounding after a period of leverage, impairments, portfolio reshaping, weak FCF conversion, and large adjusted-vs-GAAP differences. This appendix should equip the reader to understand the business before reading the segment appendices. It should not be read as evidence that IFF passed the Gideon quality gate; it did not. The rest of the ER2 run must prove, segment by segment and cash-flow line by cash-flow line, whether a cleaner IFF can earn its way back into investable territory.

Appendix M - Management Assessment

International Flavors & Fragrances Inc. - Management Assessment

Stage 1 caveat: this appendix is part of a red-gate-waived ER2 / Gideon production run. The quantitative foundation remains RED on ROIC and economic quality. The user explicitly requested continuation after that red gate, so this management assessment does not re-clear the business as a compounder.

Management gate: YELLOW, not a pass. IFF's current team is behaving more like a credible remediation team than a proven 20-year compounder steward. Governance formalities are solid, recent insider buying is constructive, and the team has taken real simplifying actions. But the observable IFF record remains burdened by the DuPont/Rohm-era integration aftermath, goodwill impairment, portfolio reversals, weak FY2025 free-cash-flow conversion, and incentive metrics that still do not put ROIC and FCF at the center. The burden of proof is still on management.

Primary sources: DR-verified `data_package.md` and `quant_foundation.md` dated 2026-05-29 for all financials, segment trends, capital allocation, corporate actions, and verified call excerpts. Live governance and leadership sources were IFF's [2026 DEF 14A](https://www.sec.gov/Archives/edgar/data/51253/000114036126009960/ny20055514x1_def14a.htm), IFF's [2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/0000051253/000005125326000006/iff-20251231.htm), IFF's [leadership page](https://www.iff.com/about/leadership/), the 2025 leadership-alignment release on [IR](https://ir.iff.com/news-releases/news-release-details/iff-aligns-executive-team-business-led-structure), the [2026 annual-meeting 8-K](https://www.sec.gov/Archives/edgar/data/51253/000114036126018910/ef20072401_8k.htm), and live SEC Form 4 checks through EDGAR for CIK 0000051253.

1. Who is running the company

Erik Fyrwald is Chief Executive Officer and a director. He joined as CEO in February 2024, after senior roles that included Syngenta Group CEO, Univar Solutions CEO, and executive roles at DuPont and Rohm and Haas. This matters because he has relevant chemicals, ingredients, agriculture, and merger-integration experience, but his IFF tenure is short. He did not originate the 2021 DuPont Nutrition & Biosciences combination, but he does now own the portfolio cleanup, operating-model reset, segment split, free-cash-flow recovery, and capital-allocation discipline.

Michael DeVeau is Executive Vice President and Chief Financial Officer. The proxy and leadership page describe him as the finance leader responsible for the company's capital structure, reporting, and financial planning. He is not a detached new outsider: he has long IFF tenure across investor relations, strategy, and finance. That is helpful for continuity but also limits the ability to treat the current finance function as completely separate from the prior era's capital allocation and communication record.

The business is now run under a business-led structure. The current public leadership roster includes Yuvraj Arora as President, Taste and Chief Commercial Officer; Leticia Goncalves Lourenco as President, Food Ingredients; Ana Paula Teles de Mendonca as President, Health & Biosciences; and Andres Roberto Muller as President, Scent. IFF's January 2025 leadership release said the structure was meant to align leadership with the revised business model. The segment-head turnover and recast reporting are not inherently bad, but they reinforce that the current team is still rebuilding accountability rather than operating a settled compounding machine.

The board chair is Kevin O'Byrne, listed as non-executive Chair. The board is not controlled through a dual-class structure, and the proxy describes the board as overwhelmingly independent, with only the CEO as a management director. Board composition is not the key weakness here. Directors include people with consumer, food, ingredients, chemicals, finance, and operating backgrounds. The main governance question is not formal independence; it is whether the board has been tough enough on capital allocation after several years of value destruction and whether current incentives have been sufficiently redesigned.

2. Tenure and track record

Fyrwald has been CEO for roughly two years and three months as of the 2026-05-29 Stage 0 anchor. That is long enough to own the current remediation plan, but not long enough to claim a proven IFF track record. A fair assessment separates the old mistake from the new cleanup: current management did not create all of the DuPont-era problems, but current shareholders still need proof that this team can extract value from the asset base instead of merely shrinking it.

The first major decision was the 2025 operating-model and reporting reset. Effective January 1, 2025, IFF separated the former Nourish segment into Taste and Food Ingredients. That made economic accountability clearer. The data package shows FY2025 Taste revenue of $2.481 billion and adjusted operating EBITDA margin of 19.3%, while Food Ingredients generated $3.278 billion at only 12.9%. The split exposed a strong flavors franchise next to a lower-return ingredients portfolio, which is useful candor. It did not by itself create value.

The second major decision was portfolio simplification. Pharma Solutions was divested in May 2025, and Nitrocellulose was also divested in May 2025. The data package shows Pharma Solutions fell to a historical stub of $369 million in FY2025 revenue and is not a continuing segment after Q2 FY2025. IFF also closed the soy crush, concentrates, and lecithin sale to Bunge on March 2, 2026 for $110 million, after noting the business generated about $240 million of 2024 revenue. These moves are directionally right for focus and leverage, but they also confirm that earlier portfolio breadth was not creating adequate per-share value.

The third major decision is the active Food Ingredients sale process. Management officially launched the process in Q4 FY2025 and said in Q1 FY2026 that potential buyers were in second-round diligence. Food Ingredients is the largest TTM revenue segment at $3.321 billion, but with only $426 million of TTM adjusted operating EBITDA and a 12.8% margin. Selling it could simplify the company and reduce debt. A bad sale, however, would crystallize value leakage from the DuPont-era buildout. The outcome of this process is the biggest near-term test of management quality.

The CFO's scorecard is mixed. Debt has improved materially from FY2023 and FY2024 levels, and management is clearly prioritizing leverage. Q1 FY2026 net debt / credit adjusted EBITDA was 2.5x. But FY2025 free cash flow was only $256 million on $10.890 billion of revenue, and TTM FCF through Q1 FY2026 was $400 million. A specialty-ingredients company cannot be treated as a high-quality compounder if it converts so little revenue into free cash flow while goodwill and intangibles remain enormous. DeVeau's job is not just to explain the bridge; it is to prove that the bridge becomes cash.

3. Capital allocation behavior

From the data package, IFF's last five years of capital allocation do not resemble a Gideon-quality allocator. Capex rose from $397 million in FY2021 to $594 million in FY2025, reaching 5.5% of revenue. R&D stayed material and rose from $629 million to $694 million, or 5.4% to 6.4% of revenue. That level of reinvestment is not the problem. The problem is the return on that capital: simple after-tax EBIT / invested capital was 1.4% in FY2021, negative in FY2022 and FY2023, 2.5% in FY2024, and negative again in FY2025. The Stage 1 ROIC red gate is not a spreadsheet artifact; it is the central management issue.

Dividends consumed significant cash through the heavy-debt period: $667 million in FY2021, $810 million in FY2022, $826 million in FY2023, then $514 million in FY2024 and $409 million in FY2025. The reduction was necessary. It was not shareholder-unfriendly; it was overdue balance-sheet discipline. Buybacks were essentially absent in FY2021-FY2023, then modest at $16 million in FY2024 and $38 million in FY2025. The new $500 million authorization announced in Q2 FY2025 is described as "dilution plus," with larger repurchases dependent on leverage and divestiture proceeds. That is a sensible posture. It is also a low bar: the company has not earned the right to aggressive buybacks until FCF conversion and ROIC are demonstrably better.

M&A track record remains the largest stain. The DuPont Nutrition & Biosciences combination created size and scope, but the subsequent impairments, divestitures, segment recasts, and active Food Ingredients sale process show that the asset base did not compound at acceptable returns. The current team is not repeating large M&A today, which is a positive signal. The more important point is that management must demonstrate divestiture discipline: proceeds should reduce risk and improve per-share economics, not fund another strategy pivot.

4. Compensation alignment

The 2026 proxy shows a professional compensation structure, but not one that clears the Gideon bar. Short-term annual incentive metrics emphasize sales, adjusted operating EBITDA, and individual / strategic goals. Long-term incentives are weighted toward performance stock units, restricted stock units, and options. The 2025 PSU design uses relative TSR, adjusted EBITDA margin, and employee engagement. Those are defensible public-company metrics, but they are not the same as ROIC and free cash flow. For a company whose central failure is capital productivity, the omission is material.

There is one favorable sign: the proxy discloses that prior PSU outcomes were reduced sharply when performance missed, including zero payout on certain ROIC-linked tranches and clawback / forfeiture adjustments tied to restated incentive outcomes. That is not cosmetic. It means the compensation system can punish failure. Still, the current forward metrics appear to have moved away from explicit ROIC at the exact moment when shareholders most need capital-return

accountability.

Executive ownership is adequate but not exceptional. The proxy's beneficial-ownership table shows Fyrwald with meaningful ownership, and live Form 4 checks show he bought 15,300 shares in August 2025 and 14,260 shares in March 2026. Paul Fribourg also purchased more than 157,000 shares across August 2025 and March 2026, and Stephen Landsman purchased 3,100 shares in December 2025. Those purchases are better than boilerplate ownership guidelines. Recent open-market selling in the last twelve months was de minimis: live SEC Form 4 review found only 252 shares coded as open-market sales, all by directors Mark Costa and Paul Fribourg, against much larger purchase activity. Most other disposition codes were tax-withholding transactions on RSU vesting.

The proxy also discloses anti-hedging and anti-pledging policies, stock-ownership guidelines, and clawback policy. There is no dual-class protection for management. From a governance-controls standpoint, alignment is acceptable. From an economic-incentive standpoint, the plan still needs more explicit FCF and ROIC weight before it deserves a pass.

5. Disclosure quality and candor

The DR-verified transcript set in the data package covers Q2 FY2025 through Q1 FY2026. I did not import unverified older transcript text. That means the disclosure assessment is strongest for the current operating-model period, which is the relevant period for Fyrwald's strategy, but it is not a full eight-quarter transcript archive.

Within that set, communication is reasonably direct. On Q1 FY2026, Fyrwald reaffirmed full-year 2026 financial guidance rather than annualizing a strong first quarter. DeVeau identified Fine Fragrance Middle East disruption as a Q2 headwind and described pricing / inflation recovery as a 12-18 month cycle. On Q4 FY2025, management explicitly launched the Food Ingredients sale process and said cash flow was a key 2026 priority. On Q3 FY2025, Fyrwald acknowledged short-term pressure in Health & Biosciences instead of pretending the weakness was isolated noise. On Q2 FY2025, the team framed Food Ingredients around a mid-teens EBITDA margin goal and noted that pipeline benefits would be more visible in 2027.

That is a better-than-average candor profile for a turnaround call sequence. Management names the problems: Health weakness, Food Ingredients margin, Fragrance Ingredients pressure, Middle East disruption, inflation, and cash flow. The weakness is not evasiveness; it is credibility. IFF's history has had too many "headwinds" that eventually became impairments, divestitures, or segment redefinitions. Investors should give credit for more specific disclosure while still requiring proof in cash flow and ROIC.

Guidance discipline is mixed but improving. The Q1 FY2026 release reaffirmed 2026 sales of $10.5-$10.8 billion and adjusted operating EBITDA of $2.05-$2.15 billion. Management did not raise the year after a strong Q1, which is prudent given Scent phasing and inflation risk. However, the company still leans heavily on adjusted EBITDA and adjusted EPS ex amortization. For IFF, GAAP, goodwill, amortization, and cash taxes are not minor details; they are part of the economic record. The best future evidence of candor would be management voluntarily foregrounding FCF conversion, ROIC, and proceeds-on-capital from divestitures.

6. Strategic coherence

IFF's 2025 Form 10-K describes the company as a global leader in flavors, fragrances, food ingredients, health, and biosciences. The corporate purpose is branded around science and sensory solutions, but the actual strategy is simpler: focus the portfolio, assign segment accountability, improve margins, improve FCF, and delever. That strategy is coherent. It fits the capital-allocation pattern: Pharma divestiture, Bunge sale, Food Ingredients sale process, modest buybacks, and balance-sheet discipline.

The question is whether coherence is enough. For a 20-year compounder, strategy should identify where the company can reinvest at high incremental returns for a long period. IFF today has two higher-quality engines: Taste and Scent, with TTM margins around 19.9% and 20.6%, plus Health & Biosciences at 26.0%. Food Ingredients, by contrast, is large and lower margin. Management appears to understand the distinction. But the company has not yet shown a clean post-divestiture reinvestment algorithm: how much capital goes into Taste, Scent, and H&B; what returns are expected; and how much excess cash is returned versus used for new deals.

The most favorable interpretation is that Fyrwald is doing the hard work before promising a new compounding story. The less favorable interpretation is that IFF remains a sequence of portfolio pivots after an overbuilt merger. Today, the evidence supports the favorable interpretation only provisionally.

7. Governance flags

The proxy does not show a controlling shareholder, dual-class structure, or material related-party transaction pattern that would create minority-shareholder risk. The board is independent in the conventional public-company sense. The audit committee and compensation committee structures are standard. The 2025 Form 10-K states that disclosure controls and internal control over financial reporting were effective as of December 31, 2025. There was an immaterial correction / restatement context around prior incentive calculations, and the proxy describes compensation recoupment and forfeiture actions; that is a yellow flag on process but also evidence that the board took remediation seriously.

The annual-meeting 8-K shows all director nominees elected and auditors ratified. Shareholders approved executive compensation on an advisory basis, though the approval does not eliminate the deeper issue that incentives should be redesigned around capital productivity.

Insider transactions are a mild positive. Live SEC Form 4 review from 2025-05-29 through 2026-05-29 found substantial open-market purchases by the CEO and directors and only tiny open-market sales. That does not prove future compounding, but it weakens the case that insiders are merely harvesting compensation while avoiding economic exposure.

8. Peer comparison

Against Givaudan, IFF ranks lower on five-year stewardship. Givaudan has had a long record of disciplined execution in flavors and fragrances, and even with CEO transition to Christian Stammkoetter, the company benefits from a more consistent strategic and financial base. IFF's current CEO may be the right repair leader, but Givaudan's stewardship record is cleaner.

Against Symrise, IFF also ranks lower. Symrise under Jean-Yves Parisot and his predecessor structure has been perceived as a more consistent compounding peer with less evidence of merger indigestion. It is not flawless, and all ingredient companies face input cost, consumer, and currency volatility. But relative to IFF, Symrise has fewer self-inflicted portfolio reversals.

Against dsm-firmenich, the comparison is closer because dsm-firmenich also has merger complexity and portfolio repositioning under Dimitri de Vreeze. Even there, IFF does not rank ahead today. IFF is cheaper for a reason: it still has to prove that portfolio simplification will convert into durable per-share value rather than merely a lower-debt, smaller version of the same return problem.

9. Verdict on the management gate

Verdict: YELLOW. This is not a stealth pass. The current team is investable only as a monitored remediation case, not yet as a 20-year compounder steward. Fyrwald and DeVeau deserve credit for segment accountability, divestitures, balance-sheet discipline, specific call commentary, insider purchases, and basic governance. But IFF has not yet produced the evidence that matters most: sustained FCF conversion, restored ROIC, and a capital-allocation framework that explicitly ties compensation and reinvestment to per-share value creation.

Upgrade conditions: first, complete the Food Ingredients sale or retention decision without obvious value leakage and use proceeds primarily for deleveraging / per-share value creation. Second, show FY2026-FY2027 FCF conversion that makes the dividend, buyback, and debt plan self-funding rather than adjusted-EBITDA dependent. Third, reintroduce explicit ROIC and FCF weight into executive compensation. Downgrade to FAIL if the sale process disappoints, if new impairment / restructuring charges continue to absorb the promised improvement, or if management uses divestiture proceeds for another large acquisition before proving returns on the remaining portfolio.

Appendix W - Moat and 2046 Durability

International Flavors & Fragrances Inc. - Moat and 2046 Durability

Date prepared: 2026-05-29. Ticker: IFF. Latest quarter: Q1 FY2026 ended 2026-03-31. TTM anchor: Q2 FY2025 through Q1 FY2026. TTM+5y horizon: 2031-03-31. 2046 test date: 2046-05-29.

This appendix is part of a red-gate-waived ER2 / Gideon production run. The Stage 1 ROIC and economic-quality gate was RED, and the user explicitly requested continuation. That caveat matters for the moat work: IFF has real embedded product and customer advantages, but the consolidated economic record has not proved that those advantages translate into high-return capital compounding.

Primary financial sources are the verified `data_package.md`, the primer, and the five segment appendices: Taste, Food Ingredients, Health & Biosciences, Scent, and Pharma Solutions. External context was checked against IFF's [2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/51253/000005125326000006/iff-20251231.htm), IFF's [Q1 2026 results release](https://ir.iff.com/static-files/02241803-12e0-45ad-90ee-9bc87542c769), and public peer materials cited in the segment appendices. Quantitative segment figures below use Segment Adjusted Operating EBITDA because IFF does not disclose GAAP operating income by segment.

1. Moat Taxonomy Applied

Network effects: IFF does not have a network-effect moat. A flavor, fragrance, enzyme, culture, probiotic, or food ingredient does not become more valuable because more customers use the same product. There are learning effects and data advantages from repeated customer briefs, sensory testing, strain work, regulatory dossiers, and application experience, but those are scale and know-how advantages, not a true network. This matters because a network-effect company can compound with increasing returns; IFF must keep winning technical briefs and defending qualified supply positions.

Switching costs: this is the central moat. The switching cost is not a cancellation fee. It is the customer's risk of breaking a finished product that already works. A fragrance in a detergent, a taste system in a beverage, an enzyme in a grain process, a culture in a fermented food, a probiotic strain in a supplement, or an emulsifier system in a packaged food can require sensory retesting, plant trials, shelf-life work, regulatory review, labeling changes, quality validation, and procurement approval before it can be replaced. This is strongest in Taste, Scent compounds, and Health & Biosciences. It is weaker in commodity-adjacent Food Ingredients and Fragrance Ingredients.

Scale economies: IFF has meaningful scale, but not monopoly scale. The company has a global manufacturing, lab, regulatory, R&D, and customer-service network. The 2025 Form 10-K describes a business with broad global customer and product exposure, and the primer notes roughly 3,000 employees in research, innovation, creation, and design activities at year-end 2025. Scale helps IFF serve multinational customers that need consistent supply and compliance across regions. The problem is that Givaudan, dsm-firmenich, Symrise, Kerry, Novonesis, Cargill, Ingredion, ADM, and other specialists are also scaled in the relevant pockets. Scale is an entry barrier against small entrants for global accounts, not a barrier against the top peer set.

Brand: IFF has a supplier reputation, not a consumer brand moat. End consumers rarely know IFF is inside the product. The value of the IFF name sits with customer R&D, procurement, quality, and regulatory teams that trust IFF to solve problems and supply reliably. That reputation supports inclusion on preferred supplier lists and access to new briefs, but it is not equivalent to consumer pull. A customer can still run a competitive brief among IFF, Givaudan, dsm-firmenich, Symrise, Kerry, and regional specialists.

Regulatory and high-trust procurement: this is a real secondary moat. Food, fragrance, cosmetics, pharma, health, animal nutrition, and industrial bioscience customers care about safety, documentation, traceability, allergen labeling, claims, and quality systems. In Scent, IFRA standards and regional allergen rules create compliance work that favors large houses. In Health & Biosciences, strain-level evidence, probiotic claims, animal nutrition rules, and food-safety requirements create customer friction. In Taste and Food Ingredients, regulatory and quality systems protect approved formulations. This moat raises the cost of competing, but it also raises IFF's own cost to serve.

IP and patents: IFF has patents, trade secrets, formulas, strain libraries, molecule libraries, and process know-how. These matter, especially in enzymes, cultures, probiotics, fragrance molecules, encapsulation, flavor modulation, and ingredient systems. But the moat is not simply a patent wall. Customers buy performance in their product, not legal claims in isolation. The stronger defense is the combination of IP, application know-how, regulatory evidence, manufacturing scale, and customer

qualification.

2. Per-Segment Moat

Taste: Taste is a defensible specialty formulation business. The moat is embedded flavor and taste systems, sensory libraries, application labs, regulatory support, and customer qualification. Once a flavor system is commercialized in a beverage, snack, dairy product, savory product, or foodservice item, switching can risk taste drift and launch disruption. Durability looks solid over five to ten years and plausible over twenty years, because food companies will still need taste, reformulation, sugar/salt reduction, regionalization, and affordability work. What breaks it: large CPG procurement shifts more new briefs to competitors, regional houses win local work faster, or IFF underinvests in application support. Earliest observable sign: Taste comparable growth falls below peers for several quarters while margins compress below the high-teens range.

Food Ingredients: Food Ingredients has partial, product-specific stickiness, not a segment-wide compounder moat. Systems, inclusions, food protection, and technically complex ingredients can be sticky after qualification. Commodity-adjacent proteins, sweeteners, emulsifiers, soy/lecithin-type products, and basic ingredient functions face more price and capacity competition. This is the largest revenue segment but the weakest active margin segment, and management is running an active sale process. Durability inside IFF is therefore weak to moderate and highly ownership-dependent. What breaks it: the sale fails and IFF keeps a low-growth, low-margin asset that consumes focus and working capital. Earliest observable sign: Food Ingredients remains near low-teens margin despite portfolio exits and management's mid-teens EBITDA margin goal.

Health & Biosciences: H&B is the strongest moat asset inside IFF. The moat is biological know-how, enzyme and strain libraries, application proof, regulatory evidence, fermentation/manufacturing scale, and customer process integration. A validated culture, enzyme, probiotic strain, feed enzyme, detergent enzyme, or food bioscience solution is not switched casually when it affects yield, quality, health claims, cleaning performance, shelf life, or animal performance. Durability is good over ten years and plausible over twenty years, but it is not best-in-class against Novonesis, which is more focused and reports much higher biosolutions margins. What breaks it: Novonesis or another biosolutions player out-innovates IFF in feed enzymes, cultures, probiotics, or food bioscience, forcing IFF to defend share with price. Earliest sign: H&B grows below biosolutions peers while adjusted EBITDA margin moves down from the mid-20s.

Scent: Scent has a real but mixed moat. Fine Fragrance and Consumer Fragrance benefit from perfumer talent, molecule palettes, sensory identity, formula qualification, safety documentation, IFRA/allergen compliance, and global customer service. Fragrance Ingredients is weaker where molecules are commodity-like and exposed to Asian capacity or equivalent substitutes. Durability is good in fine and consumer compounds, weaker in commodity aroma chemicals. What breaks it: customer brief wins migrate to Givaudan, dsm-firmenich, Symrise, or faster niche houses, while ingredient pressure keeps total segment growth low. Earliest sign: strong fine fragrance commentary no longer lifts total Scent margins or revenue, implying the attractive sub-line is too small or too offset by ingredients.

Pharma Solutions: Pharma Solutions had a regulated-excipient stickiness moat while owned, but it was divested in May 2025 and is not a continuing moat source for IFF. The TTM base includes only a Q2 FY2025 stub. By 2031 and 2046, it contributes zero unless future evidence shows retained economics, royalties, earn-outs, or transition-service profit. The moat conclusion is historical only.

The blended company moat is weaker than the strongest segments. FY2025 revenue was roughly 23% Taste, 30% Food Ingredients, 21% H&B, 23% Scent, and 3% Pharma stub. Profit mix is better than revenue mix because H&B, Scent, and Taste margins exceed Food Ingredients, but the equity holder owns the blend: portfolio pruning, stranded costs, weak FCF conversion, impairments, and adjusted-vs-GAAP gaps all sit at the company level.

3. Margin Persistence Evidence

Consolidated GAAP margins do not support a clean moat PASS. The data package shows FY2021-FY2025 consolidated operating margins of 5.0%, -10.7%, -18.4%, 6.7%, and -3.5%. FY2025 GAAP operating loss was $382 million despite FY2025 adjusted operating EBITDA of $2.086 billion. Free cash flow was $256 million in FY2025 and $400 million on the TTM base, weak relative to adjusted EBITDA. This is the core red-gate-waived problem: the segment businesses have real economics, but consolidated GAAP returns and owner-cash conversion are not yet Gideon-quality.

Segment adjusted EBITDA margins are more favorable. FY2025 margins were Taste 19.3%, Food Ingredients 12.9%, H&B 26.0%, Scent 20.8%, and Pharma 20.6% as a divested stub. TTM margins were Taste 19.9%, Food Ingredients 12.8%, H&B 26.0%, Scent 20.6%, and Pharma 21.4% on the one-quarter stub. H&B is persistently high margin. Taste and Scent are solid.

Food Ingredients is low and in repair mode. This evidence says IFF owns several moated operating franchises, but not that consolidated capital allocation has been good.

The impairment record also weakens the moat gate. IFF's 2025 Form 10-K disclosed a $1.153 billion Food Ingredients goodwill impairment after the Nourish split, following a much larger Nourish impairment in 2023 and a Pharma impairment in 2024. A real business moat can coexist with a bad acquisition price. For the equity investor, however, overpaying for moated assets still destroys value. The moat cannot be analyzed separately from capital allocation when the question is 20-year compounding.

4. AI Disruption Stress Test

Taste: AI can accelerate formula search, consumer insight analysis, sensory prediction, cost optimization, and regulatory screening. It can make more competitors faster at generating candidate formulas. But the moat does not live only in prompt-to-formula workflow. It also lives in ingredient access, application labs, plant trials, sensory panels, regulatory documentation, customer qualification, and scaled supply. AI is a productivity tool and a brief-response accelerant, not a near-term disintermediator of Taste.

Food Ingredients: AI is more threatening where the task is formulation optimization around known ingredients and cost targets. If customers can simulate texture, sweetness, stability, and nutrition tradeoffs with shared tools, some systems work becomes less scarce. The remaining moat must come from physical ingredient functionality, application validation, supply assurance, regulatory support, and proprietary ingredient combinations. The most AI-exposed portion of IFF is therefore the lower-differentiation Food Ingredients formulation workflow, especially if customers have internal R&D data and alternative suppliers.

Health & Biosciences: AI can help enzyme engineering, strain selection, protein design, screening, and process optimization. That can raise the pace of innovation across the industry. But the economics still require biological assets, fermentation know-how, regulatory evidence, efficacy proof, customer validation, and manufacturing quality. This is closer to chokepoint economics than pure workflow. AI may intensify competition from Novonesis and biotech specialists, but it does not dissolve the moat if IFF keeps investing.

Scent: AI can help perfumers search formulation space, predict consumer preference, substitute restricted ingredients, and generate creative starting points. It can lower the creative tooling barrier for smaller houses. But fine and consumer fragrance still require perfumer judgment, ingredient palettes, stability tests, safety files, allergen/regulatory support, customer qualification, and supply. AI pressure is real in early creative workflow, but the protected layer is the end-to-end creation, compliance, and manufacturing system.

Most exposed segment: Food Ingredients, because parts of the value proposition are formulation workflow plus commodity-adjacent ingredients. Most protected segment: Health & Biosciences, because the value is biological performance, process validation, manufacturing, and regulatory evidence. Scent and Taste sit in the middle: AI helps competitors ideate, but customer qualification and physical-world validation remain barriers.

5. The 2046 Test

On 2046-05-29, the credible bull/base description of IFF is not today's full portfolio frozen in place. It is a narrower sensory and biosciences company. It sells taste systems, flavor modulation, fragrance compounds, specialty fragrance ingredients, enzymes, cultures, probiotics, food bioscience solutions, home and personal care biosolutions, animal nutrition biosolutions, and selected high-value food systems. Its customers are still global and regional food, beverage, personal care, home care, fine fragrance, animal nutrition, supplement, and industrial processing companies. Food Ingredients as a broad low-margin reporting segment has likely been sold, split, or sharply pruned. Pharma Solutions is gone. The surviving profit pools are H&B, Scent compounds, and Taste.

The 2046 business still makes money if IFF remains one of the few suppliers that can combine creative formulation, biological libraries, regulatory evidence, customer application labs, global supply, and trusted quality documentation. In that version, adjusted EBITDA margin is probably stable to modestly higher than today's blended active portfolio because Food Ingredients is lower weight and H&B is higher weight. GAAP returns improve only if restructuring, amortization, impairments, and divestiture friction stop consuming the segment profit pool. The moat that survives is not brand glamour. It is high-trust embedded procurement and formulation qualification in products where failure is costly relative to the ingredient's share of customer cost.

The bear 2046 description is also specific. IFF becomes a collection of decent but not advantaged specialty ingredient lines, with H&B out-innovated by Novonesis and biotech entrants, Scent losing premium brief share to Givaudan/dsm-firmenich/niche houses, Taste competing mostly on service and price, and Food Ingredients either sold at an uninspiring value or retained as a low-return drag. AI and digital formulation tools compress the value of early creative work, customers internalize more development, and procurement treats IFF as one qualified vendor among several. In that bear case, the company remains relevant but does not earn high returns.

The probability of the bear 2046 case is not trivial. It is not the base case, because many IFF products are physically embedded and qualification-heavy. But the historical consolidated record, impairments, low FCF conversion, and active portfolio pruning mean investors cannot simply assume the attractive segment stories survive at the equity level. The 2046 test is therefore YELLOW: the future business can be described specifically, but high-return durability is not yet proven.

6. Competitive Threat Inventory

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Biosolutions out-execution	Novonesis and other focused players innovate faster in enzymes, cultures, probiotics, and animal/feed biosolutions	H&B	H&B growth below peers with margin falling below mid-20s	High
Procurement and dual sourcing	Large CPG and food customers rebid briefs, benchmark formulas, and pressure price after input-cost normalization	Taste, Scent, Food Ingredients	Comparable growth slows while price/mix turns negative	High
Commodity ingredient pressure	Aroma chemicals, proteins, sweeteners, emulsifiers, soy/lecithin-type exposure face capacity and lower-cost suppliers	Scent Ingredients, Food Ingredients	Segment margin weakness despite stable volumes	High
Portfolio execution failure	Food Ingredients sale or pruning creates stranded costs, weak proceeds, customer disruption, or management distraction	Company, Food Ingredients	Sale delay/failure, no margin progress, FCF conversion stays weak	Medium-high
AI-enabled formulation compression	AI tools reduce scarcity of initial formula generation and consumer-insight workflows	Food Ingredients, Scent, Taste	Smaller competitors win more briefs with faster cycles and lower cost	Medium

7. Pricing Power Verification

The evidence for pricing power is positive but not clean enough for a PASS. Management commentary in the data package says the company expects to offset inflation, but the CFO also described a 12-18 month cycle. That is cost recovery, not immediate pricing sovereignty. A truly dominant moat would show faster, cleaner price realization and less volatility in margins.

Segment evidence is mixed. H&B has the best pricing-power signal because it sustains roughly 26% adjusted EBITDA margins and sells high-value, low-dose biological functionality. Scent and Taste have formula-level pricing power in qualified customer applications, but total Scent growth is low-single-digit and Fragrance Ingredients pressure is visible. Taste margins improved but the segment is still a modest grower. Food Ingredients has the weakest pricing evidence: it is the largest revenue segment, lowest active margin segment, and under active sale review.

Contract structure is not disclosed in enough detail to underwrite strong escalators, minimum commitments, or churn protection. The practical contract moat is embedded qualification and customer risk, not transparent multi-year take-or-pay economics. That is a real moat, but the verification standard stays moderate.

8. Moat Verdict

Moat gate: YELLOW. IFF has real moats in H&B, Scent compounds, and Taste, with Food Ingredients only partially moated and Pharma divested. This is not a politeness YELLOW: it means the moat exists but does not yet clear the Gideon bar because consolidated GAAP margins, ROIC, FCF conversion, impairments, and portfolio churn do not prove high-return compounding.

2046 test: YELLOW. A specific 2046 IFF can be described: a narrower sensory and biosciences supplier with embedded formulation, qualification, regulatory, and manufacturing advantages. The test does not PASS because the path from today's

segment moats to 2046 equity-level high returns depends on successful portfolio pruning, sustained H&B innovation versus Novonesis, Scent/Taste brief wins, and much better cash conversion than FY2025/TTM evidence shows.

The segments that drive the positive side of the verdict are Health & Biosciences first, then Scent compounds and Taste. Food Ingredients drives the negative side because it is large, lower-margin, shrinking on the available current-taxonomy history, and for sale. The consolidated moat is therefore real but not yet Gideon-grade. A future upgrade to PASS would require visible pro forma simplification, H&B holding mid-20s-plus margins while growing with peers, Taste and Scent maintaining low-20s margins, Food Ingredients either sold cleanly or repaired to mid-teens margins, and free cash flow conversion proving that adjusted EBITDA becomes owner earnings.

Appendix B1 - Food Ingredients

Food Ingredients - Segment Deep Dive

Company: International Flavors & Fragrances Inc. Ticker: IFF Segment: Food Ingredients Stage status: red-gate-waived production run. Stage 1 ROIC and economic quality were RED, and the user explicitly requested continuation. Nothing in this segment appendix should be read as evidence that IFF passed the Gideon quality bar. Time anchor: Today is 2026-05-29. IFF's fiscal year ends December 31. The latest quarter is Q1 FY2026, ended 2026-03-31. TTM is Q2 FY2025 plus Q3 FY2025 plus Q4 FY2025 plus Q1 FY2026, ending 2026-03-31. TTM+5y is 2031-03-31.

0. Segment boundary + taxonomy note

Food Ingredients is not a long unbroken historical reporting line. The current segment was created when IFF separated the former Nourish segment into Taste and Food Ingredients effective January 1, 2025. The verified data package states that FY2023-FY2025 current-taxonomy annual segment economics are available, while FY2021-FY2022 were disclosed under the old Nourish boundary and should not be compared directly with Food Ingredients without an explicit bridge [data_package section 1, lines 51-63]. This appendix therefore uses the restated FY2023-FY2025 Food Ingredients series and the Q2 FY2025 through Q1 FY2026 TTM base only. The segment is also under an active sale process, while the soy crush, concentrates, and lecithin business was already divested to Bunge on March 2, 2026 [data_package section 9, lines 214-217]. For the segment appendix, the bear/base/bull model treats Food Ingredients as still owned because the broader segment sale has not been consummated, but the completed Bunge divestiture and the active sale process are preserved as synthesis caveats.

1. What this segment actually is

Food Ingredients is the portion of IFF that sells functional food ingredients rather than finished consumer brands or fragrance compounds. In the current taxonomy, the data package describes the segment as specialty food ingredients including proteins, emulsifiers, sweeteners, systems, protection, savory, and inclusions [data_package section 1, line 56]. The quantitative foundation's primary-source taxonomy gives a similar boundary: natural, artificial, and plant-based specialty ingredients, proteins, emulsifiers, sweeteners, protection, savory, and inclusions [quant_foundation P-Taxonomy, line 111]. The practical customer is a food or beverage manufacturer trying to make a product taste, feel, process, hold, ship, or label better.

The segment sells into applications where the ingredient matters to the final consumer experience but is usually a small portion of the finished product bill of materials. Inclusions can add texture, visible particulates, taste bursts, or premium cues in bakery, bars, dairy, frozen desserts, snacks, and prepared foods. Systems combine multiple ingredients into functional blends that help a manufacturer achieve a targeted mouthfeel, stability, protein content, sweetness profile, cost point, or shelf-life requirement. Proteins, emulsifiers, sweeteners, protection ingredients, savory ingredients, and lecithin-type functionality are used to solve formulation problems: keep oil and water mixed, suspend solids, create uniform texture, replace sugar or fat, add body, or stabilize a processed food during storage and distribution.

The FDA's public description of common ingredient functions is useful external context for why the segment exists. Sweeteners add sweetness with or without calories, emulsifiers allow smooth mixing and prevent separation, stabilizers and thickeners produce uniform texture and improve mouthfeel, and enzyme preparations modify proteins, polysaccharides, and fats in food systems [FDA, Types of Food Ingredients](https://www.fda.gov/food/food-additives-and-gras-ingredients-information-consumers/types-food-ingredients). Those broad functions map to Food Ingredients' commercial reason for being: customers pay for technical functionality, application support, formulation speed, sensory performance, supply reliability, and regulatory know-how. They do not pay simply for an undifferentiated crop input.

Pricing is not a pure software-like subscription model. It is a mix of contracted ingredient supply, project-driven formulation wins, and repeat volume once a customer's product is commercialized. Some lines are closer to ingredient systems and technical solutions, where switching is burdensome because a reformulation can change texture, nutrition, label claims, consumer acceptance, processing conditions, and regulatory documentation. Other lines are closer to crop-derived or commodity-sensitive ingredients, where price follows raw material costs and bargaining power is weaker. This split explains why Food Ingredients can be large in revenue but low in segment margin. The segment is the largest active revenue segment in IFF's TTM base, but it has the lowest active-segment margin [data_package section 5, line 161].

Go-to-market is therefore consultative but not fully moat-protected. Sales teams and application scientists work with customers' R&D and procurement teams. A new product launch or reformulation can lead to repeat volumes for years if the ingredient system is qualified into a customer's manufacturing line, but the commercial relationship is still exposed to procurement pressure, raw-material pass-through negotiations, and competing formulations from Cargill, Ingredion, Tate & Lyle, Kerry, ADM, Corbion, DSM-Firmenich, Novonesis, and regional ingredient houses. The customer usually wants innovation and assurance, but also wants a second source where possible.

One taxonomy complication matters for forecasting. The soy crush, concentrates, and lecithin business generated about $240 million of revenue in 2024 and was sold to Bunge for $110 million on March 2, 2026 [data_package section 9, lines 214-217]. That is a completed sub-business divestiture, not the still-open broader Food Ingredients sale process. The TTM segment base still includes much of that business because TTM runs from Q2 FY2025 through Q1 FY2026. The data package does not disclose the exact FY2025 or TTM revenue and Segment Adjusted Operating EBITDA contribution of the sold business, so the forward model cannot strip it with precision. [DATA GAP: exact FY2025 and TTM revenue, Segment Adjusted Operating EBITDA, and margin for the soy crush, concentrates, and lecithin business sold to Bunge are not disclosed in the verified data package.]

2. Current economics (FY-1 or TTM)

The verified TTM base for Food Ingredients is $3.321 billion of revenue and $426 million of Segment Adjusted Operating EBITDA, for a 12.8% Segment Adjusted Operating EBITDA margin [data_package section 5, line 161; quant_foundation P4b, line 241]. IFF's segment profit metric is not GAAP operating income. The data package explicitly states that IFF reports revenue, YoY revenue growth, adjusted operating EBITDA, and adjusted operating EBITDA margin, and that Segment Adjusted Operating EBITDA is not GAAP segment operating income [data_package section 3, line 85]. This appendix therefore uses Segment Adjusted Operating EBITDA as the segment profit metric and labels it as such throughout.

On an annual FY2025 basis, Food Ingredients produced $3.278 billion of revenue, $423 million of Segment Adjusted Operating EBITDA, and a 12.9% margin [data_package section 3, row Food Ingredients, line 90; quant_foundation P2a, line 126]. It represented 30.1% of FY2025 revenue, making it the largest current segment by revenue [data_package section 1, line 56]. That size is not synonymous with quality. Relative to IFF's other active segments, Food Ingredients is the low-margin business. FY2025 Taste margin was 19.3%, Health & Biosciences was 26.0%, and Scent was 20.8%, versus Food Ingredients at 12.9% [data_package section 3, lines 89-92]. In TTM, Food Ingredients remained the largest revenue segment but still earned only a 12.8% margin, versus Taste at 19.9%, Health & Biosciences at 26.0%, and Scent at 20.6% [quant_foundation P4b, lines 240-243].

The historical direction is also not flattering. Current-taxonomy Food Ingredients revenue declined from $3.692 billion in FY2023 to $3.365 billion in FY2024 and $3.278 billion in FY2025 [data_package section 3, line 90]. The data package's YoY table shows Food Ingredients down 8.9% in FY2024 and down 2.6% in FY2025, with the interpretation that revenue contraction reflected soft demand and strategic exits from low-margin business [data_package section 3, line 107]. The available two-year current-taxonomy CAGR from FY2023 to FY2025 is approximately negative 5.8%. Because Food Ingredients did not exist as a separate current-taxonomy segment in FY2022, this is not a clean three-year CAGR. [DATA GAP: current-taxonomy Food Ingredients revenue before FY2023 is not disclosed; the old Nourish segment is not comparable without a bridge.]

The most recent quarterly trend is mixed but slightly less negative than the annual trend. Food Ingredients revenue was $850 million in Q2 FY2025, $830 million in Q3 FY2025, $802 million in Q4 FY2025, and $839 million in Q1 FY2026 [data_package section 5, lines 141, 146, 151, 156]. Comparable currency-neutral sales growth was 1%, negative 3%, negative 4%, and positive 3% across those same quarters. Margin was 14.6% in Q2, 12.8% in Q3, 10.2% in Q4, and 13.6% in Q1 [data_package section 5, same rows]. The Q1 FY2026 rebound should not be over-annualized because management reaffirmed, rather than raised, full-year 2026 guidance after the Q1 beat [data_package section 6, line 169].

The FY2025 segment cost bridge helps frame the economics. On $3.278 billion of FY2025 net sales, the quantitative foundation shows cost of sales of $2.531 billion, R&D of $54 million, S&A of $400 million, and a depreciation add-back of $130 million to arrive at $423 million of Segment Adjusted Operating EBITDA [quant_foundation P2b, line 149]. Cost of sales therefore consumed roughly 77% of revenue, S&A roughly 12%, R&D roughly 2%, and depreciation add-back roughly 4%. The low R&D percentage suggests this is not an ultra-high-intensity discovery science segment. The large cost of sales burden suggests the core economic fight is procurement, plant utilization, formulation mix, and price-cost management. [DATA GAP: segment-level capex, working capital, invested capital, and ROIC are not disclosed for Food Ingredients, so capital intensity must be inferred from depreciation add-back and business model rather than directly calculated.]

Sub-product shares are not disclosed. The data package explicitly says no SKU-level or product-family dollar revenue table was found in the 10-K, 10-Qs, releases, event pages, or FMP product segmentation, and instructs downstream agents not to invent dollars for Inclusions, Protein Solutions, or other sub-lines [data_package section 4, line 114]. The only sub-line directional detail in the last four quarters is qualitative: Inclusions had strong double-digit growth in Q1 FY2026 and was cited as a growth contributor across Q2, Q3, and Q4 FY2025; Protein Solutions was soft in Q3 and Q4 FY2025, with exits from some low-margin business [data_package section 4, lines 129-130]. The model therefore uses one dollar-disclosed line, Food Ingredients total, and uses the sub-lines as qualitative drivers.

3. Unit economics

Food Ingredients' unit economics start with functional value but are constrained by input-cost and asset-utilization realities. Revenue is earned when a customer's product uses IFF's ingredient or ingredient system in commercial production. The gross value proposition is not simply "sell more tons." It is "solve a food formulation problem reliably at scale." Customers can pay a premium when an ingredient system gives a finished product better texture, cleaner label, sugar reduction, shelf-life, process stability, protein delivery, or repeatable sensory performance. That premium is strongest where IFF's application know-how is embedded in the customer's formula and manufacturing process. It is weakest where the product is close to a commodity sweetener, starch, protein, lecithin, or other crop-derived input with multiple credible suppliers.

The data package and quantitative foundation show a segment that is still fighting for margin recovery. FY2023 revenue was higher than FY2025 revenue, but FY2023 Segment Adjusted Operating EBITDA was only $369 million on $3.692 billion of revenue, a 10.0% margin [quant_foundation P2a, lines 137-138]. FY2024 revenue fell to $3.365 billion, but EBITDA improved to $408 million and margin improved to 12.1% [quant_foundation P2a, line 132]. FY2025 revenue declined again to $3.278 billion, while EBITDA improved to $423 million and margin reached 12.9% [quant_foundation P2a, line 126]. That pattern is important: Food Ingredients has not been demonstrating growth-led operating leverage. The margin improvement has come despite revenue contraction, consistent with portfolio pruning, price-cost repair, cost actions, mix, and exits from low-margin activity.

The segment's cost structure has three relevant layers. First, raw materials and manufacturing throughput dominate the P&L. The FY2025 cost bridge shows cost of sales equal to $2.531 billion on $3.278 billion of sales [quant_foundation P2b, line 149]. Inputs such as corn, soy, sugar-related materials, proteins, hydrocolloids, energy, packaging, and freight can move before contract pricing fully catches up. Second, application support and commercial coverage are required to win and retain customer formulations. S&A was $400 million in FY2025, far larger than R&D, and is part of the cost of being a technical selling organization rather than a commodity desk [quant_foundation P2b, line 149]. Third, the business carries meaningful manufacturing assets. Depreciation add-back was $130 million in FY2025, or about 4.0% of sales, which is not extreme for process ingredients but is high enough that volume losses can bite.

Margins move up when IFF can raise price to offset inflation, improve plant utilization, shed low-margin business, increase the mix of systems and differentiated inclusions, reduce procurement and conversion costs, and avoid customer losses during reformulations. Margins move down when input costs reset faster than contracts, when demand softness leaves plants under-utilized, when customers dual-source, when procurement teams force price givebacks after commodity deflation, or when IFF is stuck with low-return volume to keep assets running. The CFO's data-package quote that the company expects to "fully offset any inflation" matters, but the data package also notes the CFO described a 12-18 month cycle [data_package section 6, line 172]. In other words, pricing can recover, but it does not recover instantly.

The difference between Food Ingredients and a stronger Gideon segment is that the unit economics do not obviously compound on themselves. A high-quality compounder would show a flywheel: more revenue funds more innovation, which increases differentiation, which drives higher margins and more reinvestment opportunities. Food Ingredients has some of that in systems and inclusions, but the reported segment still looks like a mixed bag of differentiated formulation work and crop-linked ingredients. Segment margins are below IFF's other active segments; management is trying to sell the business; and the best recent evidence is margin repair despite shrinking revenue, not high-return reinvestment.

The completed soy crush, concentrates, and lecithin divestiture reinforces this diagnosis. Management agreed to sell a sub-business that generated about $240 million of 2024 revenue for $110 million [data_package section 9, lines 214-217]. Without the missing contribution margin, we cannot prove whether that divestiture is margin-accretive or dilutive. But it does indicate portfolio pruning around lower-priority or lower-quality activity. The forward model assumes some benefits from the same discipline: lower revenue base pressure, but better margin mix if IFF exits or deemphasizes unattractive volume.

4. Competitive dynamics

Food Ingredients competes in a broad, fragmented, but sophisticated ingredient market. The competitive set varies by function. In texturants, starches, clean-label systems, and sweeteners, Ingredion and Tate & Lyle are direct comparables. In lecithins, proteins, sweeteners, edible oils, texturizers, and integrated food systems, Cargill and ADM matter because they combine crop origination, processing scale, global supply, and technical services. In taste-plus-nutrition and food protection, Kerry is relevant because it packages taste, biotech, enzymes, preservation, and application support into customer solutions. In selected preservation, cultures, enzymes, hydrocolloids, nutrition, and fermentation-derived ingredients, Corbion, DSM-Firmenich, and Novonesis can compete on science and application expertise. Regional ingredient blenders and commodity processors compete on price, lead time, and customer proximity.

The first competitive pressure is scale. Cargill's public food and beverage page says its North American portfolio spans core and specialty ingredients, ingredient systems, and finished food systems, with categories including lecithins, protein, starches and derivatives, sugar reduction solutions, sweeteners, and texturizing solutions [Cargill Food & Beverage Solutions](https://www.cargill.com/food-beverage/na-foodbev-products). Cargill also says it has over 300 ingredients and solutions across multiple categories and emphasizes global reach, application expertise, and supply chain support. That matters because a customer evaluating a Food Ingredients contract may care as much about continuity of supply and commodity risk management as about formulation creativity. IFF has technical capability, but Cargill can be a brutally credible alternative when the ingredient is close to agricultural processing.

The second pressure is specialization in texture and healthful solutions. Ingredion's 2025 annual report describes the company as a global ingredient solutions provider that transforms grains, fruits, vegetables, and other plant-based materials into value-added ingredient solutions for food, beverage, animal nutrition, brewing, and industrial markets [Ingredion 2025 Annual Report](https://media.corporate-ir.net/media_files/IROL/10/1018414/ingredion-ar-2025/pdf/Ingredion-2025-Annual-Report.pdf). Ingredion's Texture & Healthful Solutions segment increased net sales 1% in 2025, driven by increased volumes for starches and clean-label solutions, while operating income rose 16% due to lower raw material and input costs and improved volumes, partially offset by unfavorable price mix and higher operating expenses. That is a close competitive read-through: specialty texture and clean-label portfolios can produce better margin outcomes than commodity food ingredients, but they remain exposed to raw-material pass-through and price mix.

The third pressure is consolidation. Tate & Lyle says its combination with CP Kelco strengthened its three main areas of sweetening, mouthfeel, and fortification, and that combining specialty food starches with CP Kelco's pectin and specialty gums created a leading position in mouthfeel solutions [Tate & Lyle 2025 Annual Report article](https://www.tateandlyle.com/news/our-2025-annual-report-year-focussed-accelerating-growth). In May 2026, Tate & Lyle also confirmed that Ingredion had made a conditional proposal for a possible cash offer, with a value of up to 615 pence per Tate & Lyle share including permitted dividends, and that discussions were ongoing with no certainty that an offer would be made [Tate & Lyle possible offer statement](https://www.tateandlyle.com/news/statement-regarding-possible-offer-tate-lyle). Ingredion's SEC-filed release similarly called its approach a non-binding indicative all-cash offer and stated that there could be no certainty of a binding offer [Ingredion SEC Exhibit 99.1, May 14 2026](https://www.sec.gov/Archives/edgar/data/1046257/000162828026034886/exhibit991pressrelease.htm). For IFF, the implication is not that a specific transaction changes Food Ingredients' 2026 numbers. The implication is that peers are trying to assemble broader specialty portfolios and customer solution platforms, raising the bar for scale, innovation breadth, and bargaining leverage.

The fourth pressure is science and application depth. Kerry's 2025 annual report says its taste and nutrition strategy is underpinned by taste and biotechnology capabilities, with dedicated teams across technology areas and capabilities in sweetness and salt perception, mouthfeel, masking, enzyme, food protection, preservation, and health portfolios [Kerry Group 2025 Annual Report](https://www.kerry.com/annual-report/). Kerry also discloses a broad science ecosystem with development and application centers, core technologies, technology and innovation centers, and scientists. That is relevant because Food Ingredients' better sub-lines likely compete less on ingredient tonnage and more on solving formulation problems across taste, texture, shelf-life, health, and processing. Where IFF can bring combined taste, texture, and systems expertise, it has a better shot at price. Where the customer can separate those needs into commodity procurement plus third-party application work, IFF's edge is weaker.

Pricing power is therefore uneven. IFF likely has some power in customized systems, complex inclusions, product protection, and high-touch formulation support because the customer's switching cost includes reformulation, quality validation, processing trials, labeling review, and consumer acceptance risk. IFF likely has weaker pricing power in commodity-adjacent sweeteners, proteins, soy/lecithin, and basic emulsifier exposure. The data package's historical contraction and active sale process suggest the blended segment does not enjoy the type of pricing power that could offset cost inflation without volume

or mix pain. The CFO's pricing recovery comment supports some cost pass-through, but the 12-18 month cycle and recent quarterly margin volatility argue against treating that pass-through as permanent moat.

Entry barriers are real but not decisive. A new entrant cannot instantly replicate global regulatory documentation, application labs, food safety systems, manufacturing scale, customer qualification history, and supply chain reliability. But the existing competitor set already has those capabilities. The threat is not a garage start-up displacing Food Ingredients. The threat is large ingredient companies and private competitors using equal or better scale to take share, compress price, or buy the assets if IFF decides Food Ingredients is worth more outside the portfolio than inside it.

5. Moat at the segment level

Food Ingredients has a partial, product-specific moat rather than a segment-wide moat. The strongest defenses are application know-how, customer qualification, regulatory and quality systems, supply assurance, and the risk customers face when changing a functional ingredient in a commercialized food product. Once an inclusion, stabilizer system, sweetener blend, protein solution, or emulsifier is built into a product formula and manufacturing process, switching can require pilot runs, sensory testing, shelf-life testing, label review, procurement validation, and manufacturing rework. That creates stickiness.

The weakness is that this stickiness does not appear to translate into superior reported economics at the segment level. Food Ingredients is the largest revenue segment but has the lowest active-segment margin. Current-taxonomy revenue declined in FY2024 and FY2025. Management is pursuing a sale process. In a Gideon framework, that combination is a warning. A true segment moat should show up as durable pricing power, resilient growth, and above-average returns on incremental capital. Food Ingredients shows some margin repair but not enough evidence of durable compounding.

The moat is also diluted by portfolio breadth. "Food Ingredients" contains differentiated systems and inclusions, but also lower-margin or more commodity-exposed activities. Management's strategic exits from low-margin business and the completed sale of soy crush, concentrates, and lecithin imply that some parts of the segment were not core to IFF's long-term differentiation [data_package section 3, line 107; section 9, lines 214-217]. If the better sub-lines were isolated, they might deserve a stronger moat rating. In the disclosed reporting line, they are blended with lower-quality revenue.

Durability over five to ten years depends on portfolio cleanup and ownership. If IFF keeps the segment, the base case assumes modest organic growth and margin improvement toward management's mid-teens EBITDA margin goal. That is a turnaround case, not a compounding moat case. If the segment is sold to a strategic buyer with better agricultural processing scale or food-texture specialization, the assets may be more valuable in someone else's system. If sold to financial buyers, margin improvement could come from cost actions, but customer-facing investment and innovation could suffer. For IFF shareholders, the moat question therefore bifurcates: the Food Ingredients assets may have value, but IFF's ownership of them is not obviously the best long-term expression of that value.

The segment-level moat grade is therefore weak to moderate. It is not zero. Customer qualification and formulation risk matter. Application science matters. Food safety and regulatory systems matter. But the segment lacks the clean evidence of pricing power and reinvestment runway required for a Gideon-quality compounder. The active sale process is not the cause of that conclusion; it is corroborating evidence.

6. Historical growth rates - reproduced from data package, not re-derived

The historical table below uses the verified data package as the controlling source. Because the current Food Ingredients taxonomy is available only from FY2023 onward, the "3-yr CAGR" column is shown as not available for a true three-year period and includes the available FY2023-FY2025 current-taxonomy CAGR in the same cell. No product-family dollars are invented.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Food Ingredients segment total	$3.692B	$3.365B	$3.278B	N/A true 3-year; FY2023-FY2025 CAGR -5.8%	Q1 FY2026 comparable currency-neutral +3%; FY2025 -2.6%	data_package section 3 row Food Ingredients lines 87-90; YoY row line 107; quarterly row line 156
Inclusions	N/D	N/D	N/D	N/D	Q1 FY2026 strong double-digit; cited growth contributor in Q2-Q4 FY2025	data_package section 4 row Food Ingredients Inclusions line 129
Protein Solutions	N/D	N/D	N/D	N/D	Q3-Q4 FY2025 softness; exited some low-margin business	data_package section 4 row Protein Solutions line 130

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Systems, emulsifiers, sweeteners, protection, savory	N/D	N/D	N/D	N/D	Not separately disclosed	data_package section 4 Food Ingredients product row line 119; no SKU-level dollars line 114
Soy crush, concentrates, and lecithin	N/D	About $0.240B in FY2024	N/D	N/D	Divested March 2, 2026	data_package section 9 Bunge sale lines 214 and 217

Arithmetic tie-out: the Food Ingredients annual dollars tie to the data package's disclosed YoY rates. $3.692B multiplied by 0.911 equals $3.363B, which rounds to the disclosed FY2024 revenue of $3.365B. $3.365B multiplied by 0.974 equals $3.278B, matching disclosed FY2025 revenue. The available current-taxonomy CAGR from FY2023 to FY2025 is calculated as $3.278B divided by $3.692B, raised to one-half, less one, or approximately negative 5.8%.

The sub-line rows are intentionally marked N/D rather than estimated. The data package states no SKU-level or product-family dollar revenue table was found and warns downstream subagents not to invent dollars for Inclusions, Protein Solutions, or similar lines [data_package section 4, line 114]. The one exception is the Bunge-divested soy crush, concentrates, and lecithin business, where management disclosed approximately $240 million of revenue in 2024 but not the FY2025 or TTM contribution [data_package section 9, line 214]. That single disclosed point is useful for judging the likely reported-revenue step-down after March 2026, but it is not enough to construct a clean sub-line history.

7. Management guidance - quoted from data package Section 6

The relevant management guidance and commentary comes from the verified data package's Section 6. I did not re-fetch IFF transcripts or management quotes. The quotes below are short excerpts already captured in the data package, with interpretation for Food Ingredients.

Q1 FY2026 call, 2026-05-06, Erik Fyrwald, CEO, 2026 guidance: "reaffirm our full year 2026 financial guidance" [data_package section 6, line 169]. The modeling read-through is that a strong Q1 should not be treated as a new annual run-rate. For Food Ingredients, Q1's 13.6% margin was better than Q4's 10.2%, but management did not raise the company guide after Q1.

Q1 FY2026 call, 2026-05-06, Erik Fyrwald, CEO, Food Ingredients: "strong interest in this business" [data_package section 6, line 171]. This confirms the sale process remains live. For the segment appendix, the forecast cases are continuing-owned cases because the whole segment sale is not consummated, but the synthesis agent needs a divestiture/pro forma path.

Q1 FY2026 call, 2026-05-06, Michael DeVeau, CFO, inflation and pricing: "fully offset any inflation" [data_package section 6, line 172]. The data package notes the CFO described a 12-18 month cycle. This supports margin recovery over time, but not instant restoration. It is a base-case margin tailwind and a bear-case timing risk.

Q4 FY2025 call, 2026-02-12, Erik Fyrwald, CEO, portfolio: "officially launched the sale process" [data_package section 6, line 173]. This is the strongest management signal that IFF itself does not view Food Ingredients as core to the go-forward portfolio. It does not tell us the price or timing, but it does require the combined model to separate continuing-owned economics from potential proceeds and stranded costs.

Q4 FY2025 call, 2026-02-12, Michael DeVeau, CFO, cash flow: "key priority for us in 2026" [data_package section 6, line 174]. Food Ingredients is relevant because a sale could be a deleveraging and cash-flow reset event. It also means management is likely to prefer working-capital discipline and portfolio simplification over growth-at-any-price inside this segment.

Q2 FY2025 call, 2025-08-06, Erik Fyrwald, CEO, Food Ingredients: "mid-teens EBITDA margin goal" [data_package section 6, line 177]. This is the main explicit Food Ingredients operating target. The base case uses 14.5% Segment Adjusted Operating EBITDA margin at TTM+5y, which is deliberately within but not above the mid-teens goal. The bull case reaches 16.0%, while the bear case assumes the segment fails to sustain the margin bridge and lands at 11.0%.

Q2 FY2025 call, 2025-08-06, Erik Fyrwald, CEO, innovation pipeline: "full benefit in 2027" [data_package section 6, line 178]. This is a broader IFF statement, but it matters for Food Ingredients if systems, inclusions, protection, and formulation investments begin contributing more after 2026. The base case gives some credit in 2027-2031, but not enough to reverse the segment into a high-growth compounder.

Q1 FY2026 release and Q4/FY2025 release guidance: the data package says Q1 FY2026 reaffirmed 2026 sales of $10.5B-$10.8B and adjusted operating EBITDA of $2.05B-$2.15B; Q4/FY2025 framed 2026 comparable currency-neutral sales growth at 1%-4% and comparable currency-neutral adjusted operating EBITDA growth at 3%-8%, with divestitures expected to reduce reported sales and adjusted EBITDA growth by about 5%; Q1 updated the soy crush, concentrates, and lecithin divestiture assumption to two months in guidance because it closed on March 2, 2026 [data_package section 6, line 180]. For Food Ingredients, this means the model should distinguish organic improvement from reported revenue lost through completed divestitures.

8. Forward growth assumptions - explicit, per product, justified

The model compounds exactly five years from the TTM base ending 2026-03-31 to 2031-03-31. The only dollar-disclosed model line is Food Ingredients segment total. Sub-lines are shown as qualitative drivers because the verified data package does not disclose their revenue bases. The active whole-segment sale process is not treated as consummated. The completed soy crush, concentrates, and lecithin divestiture is reflected qualitatively as a drag on reported revenue and a possible margin mix benefit, but exact stripping is blocked by the data gap.

Base case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Food Ingredients segment total	N/A true 3-year; FY2023-FY2025 CAGR -5.8%	Q1 FY2026 +3%; FY2025 -2.6%	No segment revenue guide; company comparable sales growth 1%-4%; Food Ingredients sale process active	1.0%	Base assumes low-single-digit organic growth offset by the completed Bunge divestiture and lingering weak demand. The path is below company sales guide because this is the weakest active segment and because the FY2023-FY2025 trend was negative.
Inclusions	N/D	Strong double-digit in Q1 FY2026	No sub-line guide	Above segment, qualitative only	This is the clearest positive sub-line indicator in the data package. It supports the segment base case but cannot be separately modeled without a disclosed revenue base.
Protein Solutions	N/D	Soft in Q3-Q4 FY2025	No sub-line guide	Below segment, qualitative only	Softness and low-margin exits are consistent with muted reported growth but better mix. This is one reason the base case does not extrapolate Q1's positive segment growth aggressively.
Systems, emulsifiers, sweeteners, protection, savory	N/D	Not separately disclosed	No sub-line guide	Around segment, qualitative only	These functions should grow with reformulation, texture, stability, and sugar-reduction demand, but competitors have similar capabilities and pricing power is uneven.
Soy crush, concentrates, and lecithin	N/D	Divested March 2, 2026	Divestiture assumed for two months in 2026 guide	Excluded after sale, qualitative only	The sale removes revenue from the future perimeter. Exact TTM contribution is not disclosed, so the base case embeds the effect in the segment-level CAGR rather than pretending precision.

Base-case year path for the dollar-disclosed line: the model does not assume a straight-line reported recovery in 2026. It assumes the completed sub-business divestiture and weak Protein Solutions restrain reported revenue early, while inclusions, systems, pricing, and portfolio cleanup allow modest growth later. The five-year CAGR from $3.321B is 1.0%, producing $3.490B at 2031-03-31. This is not a heroic recovery. It merely assumes the segment stops shrinking after portfolio exits and that the remaining mix grows slowly.

Bull case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Food Ingredients segment total	N/A true 3-year; FY2023-FY2025 CAGR -5.8%	Q1 FY2026 +3%; FY2025 -2.6%	No segment revenue guide; company comparable sales growth 1%-4%	2.5%	Bull assumes the FY2024-FY2025 decline was mostly portfolio pruning and demand trough, while inclusions, systems, and reformulation wins pull the retained portfolio into low-to-mid-single-digit growth. It still stays below a true compounder profile because the segment's history and sale process do not justify more.
Inclusions	N/D	Strong double-digit in Q1 FY2026	No sub-line guide	Above segment, qualitative only	Strong inclusions momentum persists and carries better mix. This supports both higher revenue growth and higher margin, but no separate dollar base is disclosed.
Protein Solutions	N/D	Soft in Q3-Q4 FY2025	No sub-line guide	Recovers to segment, qualitative only	Bull assumes customer demand normalizes and exits remove unattractive volume, leaving a healthier but not explosive product line.
Systems, emulsifiers, sweeteners, protection, savory	N/D	Not separately disclosed	No sub-line guide	Slightly above segment, qualitative only	Bull assumes customers continue outsourcing formulation complexity and IFF wins more systems work, with pricing protected by application value.
Soy crush, concentrates, and lecithin	N/D	Divested March 2, 2026	Divestiture assumed for two months in 2026 guide	Excluded after sale, qualitative only	Bull does not reverse a consummated divestiture. The upside is cleaner mix and management focus, not retaining the sold revenue.

Bull-case year path: the first year still absorbs the sold soy-related business and any residual low-margin exits, but volume and mix recover faster than in base. The model compounds from the TTM base at 2.5% for five years, producing $3.757B at 2031-03-31. That endpoint requires the retained portfolio to grow faster than the reported CAGR because part of the TTM base has been divested. It is possible only if the retained systems, inclusions, and differentiated food ingredient lines outperform the disclosed segment history.

Bear case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Food Ingredients segment total	N/A true 3-year; FY2023-FY2025 CAGR -5.8%	Q1 FY2026 +3%; FY2025 -2.6%	No segment revenue guide; company comparable sales growth 1%-4%	-1.0%	Bear assumes the Q1 rebound fades, divested revenue is not replaced, Protein Solutions remains weak, and customers force price givebacks as input costs normalize. The decline is less severe than FY2023-FY2025 because some low-margin exits are already completed.
Inclusions	N/D	Strong double-digit in Q1 FY2026	No sub-line guide	Above segment but insufficient, qualitative only	Inclusions remain a bright spot but are too small or too offset by other lines to change the segment trajectory.
Protein Solutions	N/D	Soft in Q3-Q4 FY2025	No sub-line guide	Below segment, qualitative only	Weak demand, customer switching, and low-margin exits continue to weigh on reported growth.
Systems, emulsifiers, sweeteners, protection, savory	N/D	Not separately disclosed	No sub-line guide	Flat to down, qualitative only	Procurement pressure and competition from scaled ingredient peers limit pricing and win rates.
Soy crush, concentrates, and lecithin	N/D	Divested March 2, 2026	Divestiture assumed for two months in 2026 guide	Excluded after sale, qualitative only	Reported revenue loses the sold business with no clean replacement. The exact drag is unknown because FY2025 and TTM contribution are not disclosed.

Bear-case year path: the model compounds from $3.321B at negative 1.0% for five years, producing $3.158B at 2031-03-31. This is not a collapse case. A more severe case could be built if the entire Food Ingredients sale fails, stranded costs remain, or customers defect during uncertainty. The chosen bear case reflects the already-low starting margin and the possibility that portfolio cleanup prevents a larger revenue fall.

9. Forward Segment Adjusted Operating EBITDA margin assumptions - explicit and justified

All margin references in this section are Segment Adjusted Operating EBITDA margin, not GAAP operating income margin. The current TTM Food Ingredients margin is 12.8%, and FY2025 was 12.9% [quant_foundation P4b, line 241; quant_foundation P2a, line 126]. Management's relevant anchor is a "mid-teens EBITDA margin goal" for Food Ingredients [data_package section 6, line 177]. Because the data package does not disclose product-level margins, the margin model is at the segment-total level.

Case	TTM adj. EBITDA margin	TTM+5y adj. EBITDA margin	Change vs TTM	TTM+5y revenue	TTM+5y adj. EBITDA	Mechanism
Bear	12.8%	11.0%	-180 bps	$3.158B	$0.347B	Lower utilization, price givebacks, persistent Protein Solutions weakness, and dis-synergies from uncertainty or sale preparation overwhelm portfolio pruning.
Base	12.8%	14.5%	+170 bps	$3.490B	$0.506B	Low-margin exits, inflation recovery over 12-18 months, better inclusions/systems mix, and cost discipline move the segment toward management's mid-teens goal.
Bull	12.8%	16.0%	+320 bps	$3.757B	$0.601B	Strong retained-portfolio mix, better plant utilization, successful pricing, and richer systems/inclusions exposure allow the segment to exceed the low end of the mid-teens target.

The bear margin is below current TTM because the TTM figure includes a Q1 recovery that management did not annualize into higher guidance. The segment could also face customer uncertainty during a sale process. If a buyer knows IFF is trying to exit, customers may push for terms, competitors may attack, and management may be reluctant to invest aggressively. In that scenario, cost actions and portfolio pruning are not enough to prevent margin decline.

The base margin reaches 14.5% because management's mid-teens goal is explicit and because the segment has already improved from 10.0% in FY2023 to 12.9% in FY2025 despite revenue contraction [quant_foundation P2a, lines 126 and 138]. The margin bridge is not premised on high growth. It is premised on mix cleanup, exits from low-margin business, inflation recovery, and better execution. The completed Bunge sale may be directionally consistent with that cleanup, but the exact margin contribution of the sold business is not disclosed.

The bull margin reaches 16.0%, which is above the base case but still far below Health & Biosciences' 26.0% TTM margin and below what a truly advantaged high-return specialty segment might produce [quant_foundation P4b, lines 241-242]. The bull case requires the retained Food Ingredients portfolio to skew toward differentiated systems and inclusions, and for pricing to hold after input costs normalize. It also assumes IFF avoids meaningful stranded cost if the sale process does not close.

The reason no product-level margin table is provided is not analytical laziness; it is data discipline. The verified data package does not disclose product-line revenue or margin for Inclusions, Protein Solutions, Systems, Emulsifiers, Sweeteners, Protection, or Savory [data_package section 4, line 114]. Providing product-level margins would create false precision and violate the data package control. The segment-total margin model is the only reconstructable one.

10. Segment rollup - built bottoms-up, arithmetic must tie

The rollup uses the only dollar-disclosed model line available: Food Ingredients segment total. Qualitative sub-lines are not summed because they do not have disclosed revenue bases. This means the arithmetic is simple and auditable: TTM

segment revenue multiplied by the five-year CAGR equals TTM+5y segment revenue; TTM+5y revenue multiplied by TTM+5y Segment Adjusted Operating EBITDA margin equals TTM+5y Segment Adjusted Operating EBITDA. Because the segment sale process has not closed, all three cases are continuing-owned cases. If the segment is sold, the synthesis model should remove Food Ingredients revenue and Segment Adjusted Operating EBITDA from continuing operations, model proceeds and taxes, assess stranded costs, and recalculate leverage and share repurchase capacity.

Case	Dollar model line	TTM revenue base	5-year CAGR	TTM+5y revenue	TTM+5y adj. EBITDA margin	TTM+5y adj. EBITDA	Arithmetic check
Bear	Food Ingredients total	$3.321B	-1.0%	$3.158B	11.0%	$0.347B	$3.321B times 0.99^5 equals $3.158B; $3.158B times 11.0% equals $0.347B
Base	Food Ingredients total	$3.321B	1.0%	$3.490B	14.5%	$0.506B	$3.321B times 1.01^5 equals $3.490B; $3.490B times 14.5% equals $0.506B
Bull	Food Ingredients total	$3.321B	2.5%	$3.757B	16.0%	$0.601B	$3.321B times 1.025^5 equals $3.757B; $3.757B times 16.0% equals $0.601B

The base case increases Segment Adjusted Operating EBITDA by about $80 million from the TTM base of $426 million to $506 million, despite only modest revenue growth. That is the economic heart of the Food Ingredients case. It is not a revenue growth story. It is a margin-recovery and portfolio-simplification story. If the synthesis agent needs a continuing-owned central case, it should use the base case but apply a probability haircut because management is actively trying to sell the segment.

The bear case reduces Segment Adjusted Operating EBITDA by about $79 million from TTM. That is plausible if the segment continues to lose low-margin revenue but fails to replace it with differentiated systems or inclusions, or if customer uncertainty and competitive pressure weigh on pricing. The bear case matters because a failed sale process could leave IFF owning a still-low-margin, low-growth asset while the rest of the company tries to prove economic quality after a Stage 1 red gate.

The bull case adds about $175 million of Segment Adjusted Operating EBITDA from TTM. It requires several things to go right at once: retained portfolio growth, sustained inclusions momentum, Protein Solutions stabilization, pricing discipline, and real conversion of management's margin target. Even then, the resulting 16.0% margin would still be materially lower than IFF's best active segment margins. The bull case therefore supports "sale proceeds or margin recovery could help" rather than "Food Ingredients is a hidden compounder."

Sale-process implication for synthesis: the continuing-owned model and pro forma divestiture model can diverge materially. Keeping Food Ingredients preserves $3.321 billion of TTM revenue and $426 million of TTM Segment Adjusted Operating EBITDA, but also preserves low margin and execution risk [quant_foundation P4b, line 241]. Selling the segment could reduce revenue scale and EBITDA, but may improve mix, sharpen strategic focus, reduce leverage, fund repurchases, or reduce management distraction. The appendix does not assume sale proceeds because no sale price is verified in the data package. It does insist that the synthesis model should not blend the two states without explicitly showing both.

11. Key risks and wildcards

Bear risk - sale process disruption. Food Ingredients is in an active sale process, with data-package commentary that potential buyers were in second-round diligence and an update was expected by the Q2 earnings call [data_package section 9, line 216]. Customers, employees, and competitors may behave differently during a sale. If the process drags or fails, IFF may be left with uncertainty costs but no proceeds.

Bear risk - weak demand and pricing pressure. The segment's FY2024 and FY2025 revenue declines show demand or portfolio pressure was already present [data_package section 3, line 107]. If input costs normalize and customers demand price reductions faster than IFF can improve mix, margins could decline even if volumes stabilize.

Bear risk - commodity-adjacent exposure. Proteins, sweeteners, emulsifiers, soy/lecithin-type functions, and some systems compete against scaled agricultural processors. Cargill, Ingredion, Tate & Lyle, ADM, and regional suppliers can pressure price where the formulation is less unique. This is most damaging to the bear case because it caps pricing power and limits margin recovery.

Base risk - data opacity. Product-line revenue and margin are not disclosed. The appendix therefore cannot prove how much of Food Ingredients is higher-quality inclusions and systems versus lower-quality commodity-adjacent ingredients. The base case may be too optimistic if the attractive sub-lines are smaller than their commentary suggests. [DATA GAP: product-line revenue and margin within Food Ingredients are not disclosed.]

Base wildcard - completed Bunge divestiture. The soy crush, concentrates, and lecithin sale removes revenue and may remove lower-margin complexity. Without exact FY2025 or TTM contribution, the model embeds the effect in the segment-level growth and margin assumptions. The wildcard is whether the sale is margin-accretive enough to help the mid-teens target or mostly just shrinks revenue.

Bull wildcard - inclusions and systems mix. Inclusions had strong double-digit growth in Q1 FY2026 and was cited as a growth contributor across the prior quarters [data_package section 4, line 129]. If that sub-line is larger and more profitable than disclosed, Food Ingredients could approach the bull case through mix rather than broad market growth.

Bull wildcard - strategic buyer value. If a strategic buyer with better processing scale, texturants exposure, or customer overlap acquires the segment, the assets may have more value outside IFF than inside IFF. That is not a continuing-owned operating forecast, but it could matter materially for IFF equity value through proceeds, deleveraging, and stranded-cost management.

Red-gate caveat. The company-level Stage 1 economic quality gate was RED and was waived only because the user requested full production continuation. Food Ingredients does not repair that issue. It is low-margin, shrinking on the available restated history, and under active sale review. The best case is margin recovery or divestiture value; the worst case is continued ownership of a low-return asset.

Summary table:

Case	Segment TTM+5y Revenue	Segment TTM+5y Adjusted Operating EBITDA Margin	Segment TTM+5y Adjusted Operating EBITDA	Probability
Bear	$3.158B	11.0%	$0.347B	25%
Base	$3.490B	14.5%	$0.506B	50%
Bull	$3.757B	16.0%	$0.601B	25%

Note: the summary table margin and profit columns use IFF's Segment Adjusted Operating EBITDA metric, not GAAP operating margin or GAAP operating income.

Appendix B2 - Taste

Taste - Segment Deep Dive

Company: International Flavors & Fragrances Inc. Ticker: IFF Segment: Taste Prepared for: ER2 / Gideon red-gate-waived production run Time anchor: TTM ended March 31, 2026. TTM+5y horizon: March 31, 2031. Primary historical source: `data_package.md`, with `quant_foundation.md` used only where the verified data package points to the QF arithmetic base.

This appendix preserves the Stage 1 caveat: IFF did not clear the ROIC and economic-quality gate. The user explicitly waived that red gate and requested full production continuation. Nothing in this Taste segment analysis should be read as implying that the company passes the Gideon quality bar.

0. Segment boundary + taxonomy note

Taste is a current IFF reportable segment created from the split of the former Nourish segment, effective January 1, 2025. The verified data package states that FY2023-FY2025 current-taxonomy annual segment economics are available, while FY2021-FY2022 were reported under the old Nourish structure and must not be compared directly to Taste without an explicit bridge. This appendix therefore uses only FY2023-FY2025 restated current-taxonomy Taste annual data, the Q2 FY2025 through Q1 FY2026 official quarterly TTM base, and the data package's commentary. The boundary matters because old Nourish included both Taste and Food Ingredients economics; using pre-FY2023 Nourish dollars would overstate Taste scale and corrupt both historical growth and margin comparisons.

The segment profit measure is Segment Adjusted Operating EBITDA, not GAAP segment operating income. The data package is explicit on this point in Section 3, and the quantitative foundation repeats that IFF's CODM segment profit metric is Segment Adjusted Operating EBITDA. In the tables below, "segment profit" therefore means adjusted operating EBITDA unless stated otherwise. [DATA GAP: IFF does not disclose GAAP operating income for the Taste segment.]

1. What this segment actually is

Taste is IFF's flavor and taste formulation business for food and beverage customers. The data package describes the segment as "flavor compounds, taste solutions, spices, seasonings, and food and beverage formulation support." In practical terms, the customer is usually a food or beverage brand, foodservice manufacturer, private-label producer, or consumer packaged goods company trying to launch, reformulate, regionalize, or cost-optimize edible products. The product is rarely a single commodity ingredient. It is usually a designed system of flavor compounds, natural taste solutions, spices, seasonings, masking agents, and application support that helps a customer's finished product taste right, remain consistent at scale, meet local regulatory rules, and fit a target price point.

The go-to-market is consultative rather than catalog-only. Large food and beverage customers often provide a brief: flavor profile, target consumer, desired claim set, permissible ingredients, target cost, geography, manufacturing process, shelf-life requirement, and time to launch. IFF's value comes from translating that brief into a formulation that works in the customer's actual product matrix. A vanilla note in a dairy drink, a savory seasoning in a snack, or a sugar-reduction taste solution in a beverage can behave differently depending on processing temperature, fat content, pH, packaging, and shelf life. That is why the segment's economics are not simply the resale margin on raw ingredients; they are the economics of technical problem solving, sensory libraries, regulatory know-how, and customer intimacy.

Pricing is likely a mix of project-based formulation economics and recurring ingredient supply. The disclosed data does not provide contract-level pricing, but the segment's behavior points to a formulation-led recurring supply model: once a flavor system is approved in a customer's recipe and manufacturing line, replacement risk falls because switching would require reformulation, sensory retesting, regulatory checks, supply-chain qualification, and in many cases consumer validation. That stickiness is real, but not absolute. Large global CPG customers can dual-source or rebid, private-label customers can push hard on cost, and inflation pass-through can lag because management described pricing recovery as a 12-18 month cycle in the data package.

Taste is not the same as Food Ingredients. Food Ingredients contains proteins, emulsifiers, sweeteners, systems, protection, savory, inclusions, soy crush, and lecithin. Some customer conversations may overlap because both segments sell into food and beverage markets, but the official taxonomy split is the controlling boundary. For this appendix, Taste includes only flavor compounds, natural taste solutions, spices, seasonings, and formulation support. It does not include Food Ingredients'

proteins, emulsifiers, sweeteners, systems, inclusions, or the soy crush, concentrates, and lecithin business sold to Bunge.

2. Current economics

The current Taste base is modestly growing, mid-to-high-teens to roughly 20% adjusted operating EBITDA margin, and materially smaller than Food Ingredients but similar in revenue scale to Scent and Health & Biosciences. For FY2025, the data package reports Taste revenue of $2.481 billion, 22.8% of consolidated revenue, and adjusted operating EBITDA of $478 million, a 19.3% margin. For the TTM period ended March 31, 2026, the data package reports Taste revenue of $2.510 billion and adjusted operating EBITDA of $500 million, a 19.9% margin. This is the base used for the TTM-to-TTM+5y model.

Growth has been stable but not exceptional. The restated current-taxonomy annual series is $2.303 billion in FY2023, $2.428 billion in FY2024, and $2.481 billion in FY2025. That implies available-period growth of 3.8% per year from FY2023 to FY2025, with the latest annual YoY at 2.2%. The last four official quarters show comparable currency-neutral Taste sales growth of 6% in Q2 FY2025, 2% in Q3 FY2025, 2% in Q4 FY2025, and 2% in Q1 FY2026. The TTM quarter stack is $631 million, $635 million, $588 million, and $656 million of revenue, with adjusted operating EBITDA margins of 19.8%, 20.2%, 16.0%, and 23.3%, respectively. The very strong Q1 FY2026 margin should not be annualized mechanically; the data package's management commentary says the company reaffirmed full-year guidance rather than raising it.

The most useful current economics signal is consistency rather than acceleration. Taste did not show the Food Ingredients contraction visible in the same data package, and it did not have the commodity fragrance ingredients drag described for Scent. At the same time, it also does not show a high-growth software-like curve or a product mix disclosure that would support aggressive re-rating. The segment's actual recent comparable growth looks like low-single-digit underlying growth with occasional quarter-specific mix or pricing benefits.

Segment-level capital intensity is not fully disclosed. The verified quantitative foundation P2b FY2025 segment cost bridge, which the data package identifies as the controlling quantitative source, includes Taste cost of sales of $1.500 billion, R&D of $172 million, S&A of $396 million, and depreciation add-back of $65 million, tying to $478 million of segment adjusted operating EBITDA. Those figures imply a heavy manufacturing and procurement cost base, meaningful technical and R&D spend, and operating leverage from scale and mix. They do not disclose segment capex. [DATA GAP: Taste segment capex and product-family revenue shares are not separately disclosed.] For modeling, that means the segment can be projected on revenue and adjusted operating EBITDA margin, but not on a standalone ROIC basis with disclosed segment invested capital.

The key sub-products are disclosed qualitatively, not quantitatively. The data package Section 4 says Taste consists of flavor compounds, taste solutions, spices, and seasonings, but it found no SKU-level or product-family dollar table in the 10-K, 10-Qs, releases, transcripts, IR event pages, or FMP product endpoint. Therefore the right model is a segment-level Taste line, not a fabricated flavor-compounds line plus spices line plus seasonings line. A product-level bridge would create false precision.

3. Unit economics

Taste revenue converts into profit through formulation value, approval stickiness, procurement discipline, plant utilization, and pricing execution. The economic unit is best thought of as an approved customer formulation or recipe position, not a one-off ingredient shipment. A win can begin as technical service and sampling work, but the profit comes when the flavor system is commercialized and shipped repeatedly into a customer's finished product. Once embedded, the supplier has an installed position, but the customer still controls demand through product volumes, promotion, and SKU lifecycles.

The gross margin structure starts with raw materials, ingredients, extraction or synthesis processes, blending, quality control, and manufacturing footprint. Natural inputs and botanical-derived materials can create cost volatility. Energy, labor, freight, and packaging can also move against the business. The data package's Section 6 Q1 FY2026 call row, dated May 6, 2026 and attributed to CFO Michael DeVeau, says IFF expects to "fully offset any inflation," while the same read-through describes a 12-18 month pricing cycle. That is important for Taste because a lagged recovery can compress margin even if long-term contracts or customer relationships eventually allow price realization. In the bear case below, this lag is one of the mechanisms that pushes adjusted operating EBITDA margin down.

Operating costs include application labs, sensory science, regulatory support, customer technical service, sales coverage, and R&D. Taste is not as obviously asset-light as a software subscription and not as commodity-heavy as bulk food ingredients. It sits in the middle: manufacturing and raw material costs matter, but the customer pays for know-how, sensory performance, and launch certainty. The FY2025 cost structure in the QF shows R&D at about 6.9% of Taste revenue and S&A at about 16.0% of Taste revenue, using the verified segment cost bridge. That is a meaningful reinvestment burden, but it is

also part of the moat. If IFF cuts too deeply, it may protect next year's margin while weakening the application pipeline and customer relevance.

Margin can move up through mix, project discipline, pricing, and productivity. A higher proportion of differentiated taste systems, natural taste solutions, and reformulation work should carry better economics than more commoditized seasoning or spice exposure. Global supply-chain productivity, procurement savings, and better utilization of labs and plants can also support operating leverage. Margin can move down if customers trade down, if large CPG accounts rebid aggressively, if raw-material inflation outruns price recovery, or if private-label and regional competitors force IFF to defend volume at lower contribution.

The TTM adjusted operating EBITDA margin of 19.9% is already near the FY2025 margin of 19.3% and above the FY2023 margin of 16.9% implied by the data package. The improvement from FY2023 to TTM is notable, but it should be treated cautiously in a Gideon framework. First, it is adjusted EBITDA, not GAAP operating income. Second, segment-level depreciation is added back, while segment capital employed is not disclosed. Third, company-level ROIC remains red. A 20% adjusted EBITDA margin segment can still belong to a company that destroys or fails to compound capital if corporate costs, amortization, integration complexity, impairments, leverage, and portfolio churn consume the segment economics.

4. Competitive dynamics

Taste competes in a global flavors and taste-solutions market dominated by a small set of scaled formulation houses plus food-ingredient and seasoning specialists. The most relevant global competitors are Givaudan, dsm-firmenich, Symrise, Kerry, ADM, Mane, Takasago, T. Hasegawa, and McCormick's Flavor Solutions business. These companies are not identical. Givaudan and dsm-firmenich are broad flavor and fragrance houses with large taste franchises. Symrise combines Taste, Nutrition & Health with pet food and nutrition exposures. Kerry and ADM have broader food ingredient and nutrition portfolios. McCormick Flavor Solutions is more seasoning and flavor-systems oriented, with meaningful foodservice and packaged-food customer exposure.

The external competitive data supports a scale-cluster view rather than an IFF-dominance view. Givaudan reported 2025 group sales of CHF 7.472 billion and Taste & Wellbeing like-for-like growth of 2.4% on its 2025 results page. dsm-firmenich reported 2025 Taste, Texture & Health net sales of EUR 3.146 billion and adjusted EBITDA margin of 20.6% in its 2025 segment note. Symrise reported 2025 Taste, Nutrition & Health external sales of EUR 3.028 billion and EBITDA of EUR 565 million in its 2025 consolidated financial statements. McCormick's May 2025 quarter filing showed Flavor Solutions net sales of $1.415 billion for the six months ended May 31, 2025. These figures are not perfectly comparable because segment boundaries differ, currencies differ, and some include texture, nutrition, health, or seasoning activities outside IFF's Taste boundary. They are still useful for scale context: IFF Taste's $2.510 billion TTM revenue is large, global, and relevant, but it is not a monopoly-scale franchise.

External competitive context sources used: [Givaudan 2025 financial results](https://www.givaudan.com/investors/financial-results), [dsm-firmenich 2025 segment information](https://annualreport.dsm-firmenich.com/2025/financial-statements/consolidated-financial-statements/notes/segment-information.html), [Symrise 2025 consolidated financial statements](https://symrise.com/corporatereport/2025/home/Symrise_GB25_Konzernabschluss_EN_geschuetzt.pdf), and [McCormick Q2 FY2025 Form 10-Q](https://ir.mccormick.com/static-files/e0b62b23-7f6d-4b08-832c-01235b4c5eac).

Competitive advantage tends to sit with suppliers that can solve customer problems quickly across regions. The largest customers value reliable supply, regulatory coverage, application expertise, and the ability to launch a flavor profile in multiple countries without redoing the entire technical process. Large flavor houses can maintain libraries of molecules and natural extracts, sensory panels, consumer insight databases, application labs, and local regulatory teams. Those capabilities create barriers to entry for a small new entrant trying to win global CPG accounts. They do not eliminate competition among the major houses.

Pricing power is therefore project-specific. A differentiated taste solution embedded in a successful product has switching costs. A standard seasoning blend or an easily replicated flavor note has much less pricing power. Customers can pressure suppliers through dual-source qualification, benchmarking, and global procurement tenders. The inflation pass-through commentary in the data package indicates that IFF has some pricing recovery capability, but the 12-18 month cycle also shows that the company is not an immediate price setter in every contract.

Substitution risk is gradual rather than sudden. Consumer preferences shift toward clean label, natural ingredients, sugar reduction, sodium reduction, functional benefits, regional authenticity, and affordability. These shifts can help a flavor house if

it becomes the customer's reformulation partner. They can hurt if customers simplify formulations, switch to in-house development, buy from regional specialists, or reduce premium new-product activity during weak consumer demand. Taste's market is attractive because food and beverage companies continually need innovation and reformulation, but growth is bounded by end-market consumption, customer SKU rationalization, and competitive bidding.

5. Moat at the segment level

Taste has a real but moderate segment moat. The moat is not a patent wall, a network effect, or a regulatory monopoly. It is a combination of customer switching costs, formulation know-how, sensory data, regulatory competence, application labs, global supply reliability, and embedded positions in customer recipes. Once a flavor system is qualified and commercialized, the customer has a reason not to switch casually. Reformulation can risk taste drift, consumer rejection, manufacturing disruption, and delayed product launches. That gives an incumbent supplier some protection.

The moat is strongest in complex, high-value, high-consequence applications: beverages with delicate sensory balance, products requiring sugar or salt reduction without taste loss, regional flavors that need localization, natural taste systems with supply and regulatory constraints, and large multinational launches requiring consistency across markets. In those situations, IFF can be more than a vendor. It can be a technical partner whose speed and reliability matter to the customer's revenue timeline.

The moat is weaker in more commoditized seasoning, spice, and flavor applications where customers can benchmark, dual-source, or accept small taste differences in exchange for cost savings. Large food customers also have procurement sophistication. They can force competition among Givaudan, IFF, dsm-firmenich, Symrise, Kerry, ADM, McCormick, and regional houses. If a supplier's innovation cadence slows or service quality deteriorates, customer stickiness can unwind over several bid cycles.

Durability over the next five to ten years depends on whether IFF can keep Taste close to customer innovation needs while simplifying the broader company. The former DuPont Nutrition and Biosciences integration and subsequent portfolio reshaping have weighed on company-level returns. Taste itself looks more stable than the consolidated ROIC record, but the Gideon question is not "is this segment decent?" It is "does this segment contribute to a company that can compound capital at very high rates for decades?" On the information available here, Taste is a defensible specialty formulation business, but not enough on its own to overturn the Stage 1 red economic-quality signal.

6. Historical growth rates

The historical table below reproduces the verified data package rather than re-fetching IFF figures. The current-taxonomy Taste segment is available for FY2023-FY2025 only. FY2021-FY2022 were old Nourish taxonomy and are excluded from the Taste CAGR. Product-family dollars are not disclosed, so the only valid dollar model line is the Taste segment total.

Product or sub-segment	FY2023 revenue	FY2024 revenue	FY2025 revenue	Available-period CAGR	Most recent YoY	Data package cite
Taste total segment	$2.303B [data_package section 3, current taxonomy segment table, row Taste; 2025 Form 10-K recast current taxonomy]	$2.428B [data_package section 3, current taxonomy segment table, row Taste; 2025 Form 10-K recast current taxonomy]	$2.481B [data_package section 3, current taxonomy segment table, row Taste; 2025 Form 10-K recast current taxonomy]	3.8% over FY2023-FY2025 [calculated from data_package section 3, row Taste]	2.2% [data_package section 3, segment YoY table, row Taste]	data_package section 3, rows Taste in current taxonomy and YoY tables
Flavor compounds, taste solutions, spices, and seasonings	Not separately disclosed [data_package section 4, product disclosure table, row Taste]	Not separately disclosed [data_package section 4, product disclosure table, row Taste]	Not separately disclosed [data_package section 4, product disclosure table, row Taste]	Not separately disclosed [data_package section 4, product disclosure table, row Taste]	Not separately disclosed [data_package section 4, product disclosure table, row Taste]	data_package section 4, row Taste

Arithmetic tie-out: $2.303B times 1.054 equals $2.427B, which rounds to the FY2024 $2.428B reported in the data package. $2.428B times 1.022 equals $2.481B, which ties to FY2025. The available-period CAGR is calculated as FY2025 divided by FY2023 over two years, or 3.8% per year. The data package does not provide a current-taxonomy FY2022 Taste base, so a literal three-year CAGR cannot be calculated without crossing the Nourish taxonomy boundary. [DATA GAP: FY2021-FY2022 current-taxonomy Taste revenue is not disclosed.]

The TTM quarter tie-out is also clean: $0.631B plus $0.635B plus $0.588B plus $0.656B equals $2.510B of TTM revenue. Adjusted operating EBITDA of $125M, $128M, $94M, and $153M sums to $500M. These figures come from the Q2 FY2025, Q3 FY2025, Q4/FY2025, and Q1 FY2026 SEC Exhibit 99.1 releases as summarized in data_package section 5 and the TTM base sentence in section 5. They are not used to create product-family dollars.

7. Management guidance from data package Section 6

The data package Section 6 does not contain a Taste-specific management quote. It does contain company-level guidance, inflation and pricing commentary, and innovation-pipeline commentary that are relevant to Taste. This is a material modeling limitation because Taste's Q1 FY2026 margin was high, but management did not provide a segment-level reason to annualize that margin.

Data package row	Period	Verbatim excerpt	Relevance to Taste	Modeling interpretation
Section 6, Q1 FY2026 call, CEO, 2026 guidance	Q1 FY2026 call dated 2026-05-06	"reaffirm our full year 2026 financial guidance"	Applies to company guide, including Taste, but is not Taste-specific	Do not annualize the Q1 FY2026 Taste margin of 23.3%; use a normalized margin path.
Section 6, Q1 FY2026 call, CFO, inflation and pricing	Q1 FY2026 call dated 2026-05-06	"fully offset any inflation"	Taste has raw-material and manufacturing exposure, so pricing recovery matters	Base case assumes pricing offsets inflation over time; bear case assumes lag and mix pressure.
Section 6, Q2 FY2025 call, CEO, innovation pipeline	Q2 FY2025 call dated 2025-08-06	"full benefit in 2027"	Taste depends on customer innovation, reformulation, and application support	Base case allows modest improvement as pipeline benefits show, but not a step-change.
Section 6, Q1 FY2026 release summary	Q1 FY2026 release and data package summary	Sales guide $10.5B-$10.8B and adjusted operating EBITDA guide $2.05B-$2.15B reaffirmed	Sets consolidated FY2026 envelope after Q1	Taste forecast should be consistent with low-single-digit near-term company growth, not an immediate breakout.
Section 6, Q4 FY2025 release summary	Q4 FY2025 release and data package summary	Comparable currency-neutral sales growth of 1%-4% and adjusted operating EBITDA growth of 3%-8%	Provides FY+1 company-level framing	Taste base CAGR can sit within this envelope, but the appendix flags the absence of a Taste-specific guide.

[DATA GAP: No Taste-specific forward revenue, margin, product mix, pricing, or order-pipeline guidance was found in data_package Section 6.]

8. Forward growth assumptions

The forward growth model compounds from TTM revenue of $2.510 billion for exactly five years to March 31, 2031. Because no product-family dollars are disclosed, the model uses one valid dollar line: Taste total segment. The product families inside the line are flavor compounds, taste solutions, spices, and seasonings. Their contribution is discussed qualitatively, but not separated into invented dollar rows.

Base case: Taste remains a stable, formulation-led food and beverage partner, with pricing and modest innovation offsetting mature end-market growth. The base case uses 3.0% CAGR, below the 3.8% FY2023-FY2025 available-period CAGR but above the latest 2.2% annual YoY, because the data package's management commentary points to inflation offset and innovation-pipeline benefits while recent quarterly comparable growth is mostly 2%.

Product	Historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Taste total segment	3.8% available-period CAGR [data_package section 3, row Taste]	2.2% FY2025 YoY [data_package section 3, YoY row Taste]	Company comparable sales growth guide of 1%-4%; no Taste-specific guide [data_package section 6, guidance summary]	3.0%	Growth normalizes near the middle of company guidance as pricing and innovation offset mature food and beverage demand. The case does not annualize Q1 because management reaffirmed rather than raised guidance.

Bull case: Taste wins more innovation work, maintains strong service levels, and captures premium reformulation demand around natural taste, sugar reduction, affordability, and regional flavor localization. The bull case uses 5.0% CAGR, modestly above the FY2023-FY2025 available-period CAGR and below the Q2 FY2025 comparable growth spike of 6%, because the segment is already large and competes against other scaled houses.

Product	Historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Taste total segment	3.8% available-period CAGR [data_package section 3, row Taste]	2.2% FY2025 YoY [data_package section 3, YoY row Taste]	Company comparable sales growth guide of 1%-4%; innovation pipeline benefit expected in 2027 [data_package section 6, guidance and innovation rows]	5.0%	Bull assumes the 2027 innovation benefit is real, pricing execution is clean, and IFF takes share in complex taste systems. This requires sustained wins despite Givaudan, dsm-firmenich, Symrise, Kerry, ADM, and McCormick competition.

Bear case: food and beverage customers stay cautious, procurement pressure rises, innovation projects are delayed, and inflation recovery lags. The bear case uses 0.5% CAGR, well below the FY2023-FY2025 available-period CAGR, because the latest quarterly trend is only low-single-digit and the company-level red gate warns against assuming quality compounding where the consolidated record has not proved it.

Product	Historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Taste total segment	3.8% available-period CAGR [data_package section 3, row Taste]	2.2% FY2025 YoY [data_package section 3, YoY row Taste]	Company comparable sales growth guide of 1%-4%; pricing recovery can take 12-18 months [data_package section 6, pricing row]	0.5%	Bear assumes customer SKU rationalization and procurement pressure absorb most pricing and innovation gains. It also assumes inflation recovery is delayed enough to discourage volume-seeking growth.

The main judgment call is whether the FY2023-FY2025 improvement is a durable segment trend or a post-recast stabilization period. I use 3.0% for base because it matches the observed mature pattern better than a simple continuation of the 5.4% FY2024 rebound. The segment can compound above GDP if it wins formulation work and price/mix holds, but the lack of product-family disclosure prevents a more granular high-growth line from carrying the model.

9. Forward operating margin assumptions

The current margin anchor is TTM adjusted operating EBITDA margin of 19.9%, not GAAP operating margin. The segment does not disclose product-level margins, so the margin model is also segment-level. Q1 FY2026's 23.3% margin is informative but not controlling because Q4 FY2025 was 16.0%, the TTM margin is 19.9%, FY2025 was 19.3%, and management did not raise company guidance after Q1.

Case	Current margin	TTM+5y adjusted operating EBITDA margin	Change vs current	Mechanism	Product-level margin status
Bear	19.9%	17.5%	-240 bps	Raw-material inflation, pricing lag, weaker mix, and customer procurement pressure reduce contribution despite stable installed positions.	Not disclosed by product family [DATA GAP]
Base	19.9%	20.5%	+60 bps	Modest productivity, pricing recovery, and normalized innovation mix offset cost inflation without assuming Q1 FY2026 margin persists.	Not disclosed by product family [DATA GAP]
Bull	19.9%	22.0%	+210 bps	Better mix in differentiated taste solutions, stronger lab utilization, procurement productivity, and successful pricing lift margins above the TTM base.	Not disclosed by product family [DATA GAP]

The bear case margin is not a collapse. Taste's customer stickiness and technical role should prevent immediate commoditization. The bear mechanism is instead slow erosion: customers accept fewer premium launches, bid more projects competitively, and force IFF to absorb timing mismatches between input costs and price recovery. The base case assumes management can execute the inflation-offset playbook over the 12-18 month cycle and that the 2027 innovation pipeline helps mix, but it gives only 60 bps of margin expansion because the broader company still carries execution and simplification risk. The bull case assumes Taste behaves more like a high-quality specialty formulation house, with differentiated work, pricing, and productivity pushing the segment above 22% adjusted EBITDA margin. That is plausible but should not be the default after a red economic-quality gate.

10. Segment rollup arithmetic

The rollup uses one modeled dollar line because product-family revenue is not disclosed. Segment totals therefore reconcile exactly to the product-level assumptions within the required tolerance. Revenue is compounded from the TTM base of $2.510 billion for five years. Adjusted operating EBITDA is revenue multiplied by the assumed adjusted operating EBITDA margin.

Case	Modeled line	TTM revenue	5-year CAGR	TTM+5y revenue	TTM+5y adjusted operating EBITDA margin	TTM+5y adjusted operating EBITDA	Reconciliation
Bear	Taste total segment	$2.510B	0.5%	$2.573B	17.5%	$0.450B	Single disclosed segment line equals segment total
Base	Taste total segment	$2.510B	3.0%	$2.910B	20.5%	$0.597B	Single disclosed segment line equals segment total
Bull	Taste total segment	$2.510B	5.0%	$3.203B	22.0%	$0.705B	Single disclosed segment line equals segment total

Formula checks: Bear revenue equals $2.510B times 1.005 to the fifth power, or $2.573B. Base revenue equals $2.510B times 1.030 to the fifth power, or $2.910B. Bull revenue equals $2.510B times 1.050 to the fifth power, or $3.203B. Bear adjusted operating EBITDA equals $2.573B times 17.5%, or $0.450B. Base adjusted operating EBITDA equals $2.910B times 20.5%, or $0.597B. Bull adjusted operating EBITDA equals $3.203B times 22.0%, or $0.705B. Rounding differences are less than 1%.

The model intentionally avoids assigning separate revenue to flavor compounds, taste solutions, spices, and seasonings. The data package explicitly says no SKU-level or product-family dollar table was found. A more granular table would look more sophisticated, but it would be less true. For synthesis, the correct input is the Taste segment total by case.

11. Key risks and wildcards

Bear risk: inflation and pricing lag. The data package's Q1 FY2026 call row, dated May 6, 2026 and attributed to CFO Michael DeVeau, says management expects to "fully offset any inflation," but it also frames pricing recovery as a 12-18 month cycle. If raw materials move faster than customer price resets, Taste can lose margin even with stable revenue.

Bear risk: customer procurement pressure. Large food and beverage companies can dual-source, benchmark, rebid, and rationalize SKUs. Taste has switching costs once embedded, but new briefs and reformulations are competitive. This risk pushes both growth and margin toward the bear case.

Bear risk: taxonomy and portfolio distraction. Taste itself is newly separated from Nourish, while IFF is also managing Food Ingredients sale activity and prior Pharma divestiture effects. A cleaner segment taxonomy helps analysis, but operational focus still matters. The broader company's red ROIC gate means execution risk should not be hand-waved away.

Base risk: product-level invisibility. Because product-family dollars are not disclosed, the model cannot isolate whether growth is coming from higher-quality taste solutions or lower-quality seasoning and spice exposure. This limits confidence in any margin expansion assumption above the TTM base.

Base wildcard: 2027 innovation pipeline. The data package's Q2 FY2025 call row, dated August 6, 2025 and attributed to CEO Erik Fyrwald, includes the "full benefit in 2027" comment. If Taste is a meaningful beneficiary, base growth and margin could look conservative. If the benefit is concentrated elsewhere or merely offsets churn, the base case may be too generous.

Bull wildcard: premium reformulation demand. Sugar reduction, sodium reduction, natural flavor systems, affordability reformulation, and regional taste localization can all increase customer need for technical partners. If IFF wins a disproportionate share of those projects, 5% growth and 22% adjusted EBITDA margin are reachable.

Bull wildcard: competitor disruption. dsm-firmenich integration, portfolio changes across ingredient companies, or customer desire to rebalance supplier panels could create share opportunities. This is not the base case because the large competitors remain capable and well scaled.

Gideon risk: segment quality does not equal company quality. Even if Taste is stable and defensible, IFF's consolidated returns, impairments, leverage history, integration complexity, and portfolio churn are the reason this production run remains red-gate waived. Taste can contribute to a better company, but it cannot by itself prove a 20-year high-ROIC compounder.

Final summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Adjusted Operating EBITDA Margin	Segment TTM+5y Adjusted Operating EBITDA	Probability
Bear	$2.573B	17.5% adjusted operating EBITDA margin	$0.450B adjusted operating EBITDA	30%
Base	$2.910B	20.5% adjusted operating EBITDA margin	$0.597B adjusted operating EBITDA	50%
Bull	$3.203B	22.0% adjusted operating EBITDA margin	$0.705B adjusted operating EBITDA	20%

Summary judgment: Taste is one of IFF's cleaner continuing businesses: global, formulation-led, defensible, and growing modestly. The segment deserves a base case above flat and a normalized adjusted EBITDA margin around 20%. It does not deserve a compounder-quality presumption. The current data supports a stable specialty-ingredient segment, not a decisive offset to IFF's red Stage 1 economic-quality gate.

Appendix B3 - Scent

Appendix B - Scent Segment Deep Dive

This appendix covers only International Flavors & Fragrances Inc.'s Scent segment. It uses `data_package.md` and `quant_foundation.md` as the verified source of truth for IFF historical dollar figures, growth rates, and management commentary. The Stage 1 ROIC and economic-quality gate remains RED; the user explicitly waived that red gate to continue the full ER2 / Gideon production run. Nothing in this segment appendix should be read as a Gideon-quality clearance for the company. IFF does not disclose GAAP operating income by segment; all segment profit references in this appendix use Segment Adjusted Operating EBITDA, the company's segment profit metric, and are labeled accordingly.

0. Segment boundary + taxonomy note

Scent is a continuing IFF reportable segment and is comparable in the current segment history from FY2023 through FY2025. The important 2025 taxonomy change in the data package is the January 1, 2025 separation of the former Nourish segment into Taste and Food Ingredients, plus the May 2025 divestiture of Pharma Solutions; Scent did not get split in that reorganization. The data package still warns that FY2021-FY2022 were reported under the legacy taxonomy, and although "Scent" appears in those years, the package labels the earlier portfolio as not fully recast. For this appendix's dollar comparisons and forward model, the clean historical base is therefore FY2023-FY2025 plus the TTM period ending March 31, 2026. The forward horizon is exactly five years from that TTM end date, ending March 31, 2031.

1. What this segment actually is

Scent is IFF's fragrance platform. It makes fragrance compounds for fine fragrance and consumer products, and it also makes fragrance ingredients that are used internally and sold externally to third parties. The segment sits at the point where chemistry, sensory creation, regulatory documentation, customer intimacy, and manufacturing reliability meet. Its customers are global and regional consumer products companies, prestige and niche fine fragrance brands, personal care brands, home care manufacturers, fabric care manufacturers, beauty companies, and other fragrance houses or users of aroma chemicals and natural materials.

The basic economic unit is not just a raw material sale. For fragrance compounds, the commercial process often begins with a customer brief. A brand wants a new eau de parfum, a laundry detergent scent, a shampoo profile, a candle note, a deodorant fragrance, or an odor-control solution that fits a brand idea, cost target, consumer preference, region, and regulatory use category. IFF's perfumers and evaluators develop formulas, test them with the customer, reformulate around performance, stability, safety, cost, and consumer feedback, then work through customer qualification. Once a formula is approved, revenue comes from supplying that compound at scale. The formula can be sticky because the customer has qualified it in a finished product, consumer acceptance is attached to the scent signature, and changing supplier creates reformulation, safety, sensory, and manufacturing risk.

Fine Fragrance is the prestige and fine perfumery side of the portfolio. It is more creative, less purely cost-driven, and exposed to brand launches, niche perfumery, celebrity/franchise launches, travel retail, Middle East demand, and luxury consumer cycles. Consumer Fragrance is the larger recurring-use area across home care, personal care, fabric care, and adjacent consumer products. It tends to have more volume, tighter cost-in-use constraints, and more procurement pressure, but it also benefits from large customers that need global regulatory support and consistent supply. Fragrance Ingredients is the raw-material and molecule side. It can include higher-value captive or specialty molecules, but the data package repeatedly flags commodity fragrance ingredients as a headwind. That means the ingredient line has less pricing power where competitors can supply equivalent aroma chemicals, especially if capacity from lower-cost regions is available.

The segment's go-to-market model is relationship-based and technical. IFF needs perfumers, consumer insight, sensory data, regulatory affairs, toxicology documentation, application labs, and regional sales coverage. Winning a brief matters, but repeat wins matter more. A global home care or personal care customer does not want only a pleasant scent; it wants stability in the formulation, delivery performance in the end-use product, IFRA documentation, allergen disclosure support, continuity of raw materials, consistent quality across manufacturing sites, and rapid reformulation if a regulation or raw-material availability issue changes. Smaller fragrance houses can be creative and fast, especially for indie brands or local briefs, but they often cannot match the full regulatory, supply, and global manufacturing burden required by the largest multinational CPG customers.

[DATA GAP: IFF does not disclose Scent revenue by Fine Fragrance, Consumer Fragrance, or Fragrance Ingredients. The data package says official sources searched found qualitative growth commentary only. This appendix does not allocate dollars across those sub-lines.]

2. Current economics

The verified TTM base for Scent is $2.516B of revenue and $519M of Segment Adjusted Operating EBITDA, a 20.6% adjusted operating EBITDA margin. The TTM period is Q2 FY2025 plus Q3 FY2025 plus Q4 FY2025 plus Q1 FY2026, ending March 31, 2026. FY2025 revenue was $2.479B, FY2025 Segment Adjusted Operating EBITDA was $515M, and the FY2025 margin was 20.8%. Those figures come from data_package Section 3 and the QF P4b segment base; they are the only dollar base used for the forward model.

The recent quarterly profile is mixed rather than uniformly accelerating. Data_package Section 5 gives Scent revenue of $603M in Q2 FY2025, $652M in Q3 FY2025, $610M in Q4 FY2025, and $651M in Q1 FY2026. Comparable currency-neutral sales growth was 1%, 5%, 4%, and 1% in those same quarters. Adjusted EBITDA margin was 21.6%, 20.7%, 17.4%, and 22.7%. The Q1 FY2026 margin was strong, but management's package commentary explicitly says not to annualize the Q1 beat because full-year guidance was reaffirmed, not raised.

The annual history is low-growth but profitable. Scent revenue was $2.393B in FY2023, $2.439B in FY2024, and $2.479B in FY2025, with YoY growth of 1.9% in FY2024 and 1.6% in FY2025. The FY2023-FY2025 disclosed-window CAGR is about 1.8%. Quant_foundation P2a gives Scent adjusted operating EBITDA margins of 20.7% in FY2023, 22.3% in FY2024, and 20.8% in FY2025; data_package Section 3 reproduces the FY2025 adjusted operating EBITDA and margin base. This is not a growth segment on the verified dollar history, even though Fine Fragrance commentary is clearly better than the segment average.

The FY2025 segment cost bridge in the quant foundation shows why the segment can earn a low-20s adjusted EBITDA margin while still requiring heavy technical investment. FY2025 Scent net sales were $2.479B. Cost of sales was $1.424B, R&D was $241M, S&A was $366M, and depreciation add-back was $67M, producing $515M of Segment Adjusted Operating EBITDA. On that base, R&D was about 9.7% of Scent sales and S&A was about 14.8% of sales. The R&D load is a feature of the model, not a temporary inefficiency: fragrance houses need ongoing creation, safety, molecule, application, and reformulation work to defend brief win rates.

Capital intensity is not disclosed at the segment level. At the company level, FY2025 capex was $594M, or 5.5% of revenue, and TTM free cash flow was only $400M. Scent likely consumes less heavy process capital than Food Ingredients and some biosciences assets, but it still needs compounding sites, ingredient manufacturing capacity, labs, quality systems, digital creation tools, and regulatory infrastructure. [DATA GAP: Scent-specific capex, working capital, and invested capital are not disclosed in the data package, so this appendix cannot compute Scent ROIC.]

The most important current economic read-through is mix. Fine Fragrance appears strong, Consumer Fragrance appears steady, and Fragrance Ingredients is the pressure point. Data_package Section 4 says Q3 FY2025 Fine Fragrance grew 20%, Consumer Fragrance grew low-single-digits in Q2 and Q3 FY2025, Q1 FY2026 was positive, and Fragrance Ingredients was down in Q1 FY2026 and down low-single-digits in Q3 FY2025, with commodity portions pressured. That pattern explains why a premium sub-line can sound excellent while total Scent revenue only grows low-single-digits.

3. Unit economics

Scent's unit economics are built around value-in-use rather than commodity tonnage, but the segment contains both high-value creative compounds and more commoditized ingredients. A winning fine fragrance compound can carry a high value per kilogram because the fragrance is part of the product's identity. A consumer fragrance compound can be lower priced per kilogram, but it may run at substantial volume across detergents, shampoos, soaps, deodorants, surface cleaners, fabric enhancers, or home care formats. A commodity aroma chemical, by contrast, can behave closer to specialty chemicals: price depends on capacity, input costs, environmental compliance, molecule availability, and substitution.

Revenue becomes profit through four levers. The first is formula value. A fragrance that helps a customer win a launch, premiumize a brand, mask an off-note, perform in a difficult base, or deliver long-lasting scent has more pricing room than a generic ingredient. The second is technical lock-in. Once the customer's formula, packaging claims, allergen labeling, safety files, and manufacturing process are built around a fragrance, switching suppliers is possible but not frictionless. The third is raw-material and manufacturing control. The same customer brief can be attractive or unattractive depending on whether IFF has access to efficient molecules, captive ingredients, natural material sourcing, and flexible compounding capacity. The

fourth is operating leverage. Perfumers, labs, regulatory teams, and sales coverage are partly fixed capability costs; higher brief wins and better plant loading can improve margins.

Margin breaks when those levers weaken. A customer can pressure price if the scent is not differentiated or if a smaller house can meet the same performance at lower cost. A formula can lose profitability when raw materials inflate before customer pricing catches up. Regulatory change can force reformulation, create documentation burden, or restrict an ingredient that was central to a winning scent. Manufacturing under-utilization can dilute margins. A mix shift toward commodity fragrance ingredients can pull the segment down even if Fine Fragrance is performing well.

The FY2025 cost bridge is useful here. Cost of sales was about 57% of Scent revenue. That means raw materials, manufacturing conversion, logistics, quality, and production overhead are the biggest absolute cost bucket. R&D was nearly 10% of revenue, unusually high compared with many industrial businesses but normal for a high-innovation fragrance platform. S&A was almost 15% of revenue, reflecting customer-facing technical sales, regional coverage, evaluators, marketing support, and administrative infrastructure. Segment Adjusted Operating EBITDA adds back depreciation, so it is not a pure cash profit measure and not GAAP operating income. The $67M depreciation add-back in FY2025 was about 2.7% of Scent revenue.

Fine Fragrance likely has the best structural gross margin within Scent because the product's sensory identity is central to the customer's value proposition. The customer is buying creative distinctiveness, launch support, quality, and prestige positioning. The risk is cyclicality: prestige fragrance demand, Middle East luxury demand, travel retail, and discretionary beauty spending can move faster than the broader home and personal care market. The Q1 FY2026 package quote that "Fine Fragrance volume in the Middle East will be impacted" is a reminder that this sub-line can be volatile even when the structural margin is good.

Consumer Fragrance probably has lower unit margin but more resilient volume. Large CPG products need fragrance every time a detergent, shampoo, deodorant, soap, or cleaner is produced. The customer cares about cost-in-use, formulation stability, safety, and global consistency. This creates procurement pressure, but qualification and performance requirements also protect incumbent suppliers. A fragrance failure in a mass consumer product can damage brand equity, so customers do not switch casually.

Fragrance Ingredients is the weak part of the unit-economic stack. The data package's language around commodity fragrance ingredients is important: if a molecule is not proprietary, not scarce, and not meaningfully differentiated, then the economics look less like a moat and more like a chemical spread business. Asian competition, new capacity, and customer dual-sourcing can cap pricing power. Specialty ingredients, captive molecules, naturals, and high-performance molecules can still be valuable, but the disclosed commentary does not allow this appendix to separate them in dollars.

The unit-economics conclusion is therefore nuanced. Scent has a real technical and customer-qualification moat at the compound level, particularly in Fine and Consumer Fragrance. But the segment's historical dollar growth and margin trend do not show a clean compounder flywheel. The verified numbers show a profitable, defensible low-single-digit grower with mix risk, not a segment that can carry a company-level Gideon BUY case on its own.

4. Competitive dynamics

Scent competes in a concentrated but not closed fragrance industry. The most relevant global competitors are Givaudan, dsm-firmenich, Symrise, and a long tail of smaller fragrance houses. The big four have global creative networks, perfumer benches, safety and regulatory teams, manufacturing scale, global customer relationships, natural and synthetic ingredient palettes, and the balance sheet to invest in creation technology. Smaller houses compete with speed, local taste, founder-led creativity, lower overhead, niche-brand intimacy, and sometimes sharper pricing.

Givaudan is the clearest benchmark for scale and margin. In its 2025 annual materials, Givaudan reported group sales of CHF 7.472B and Fragrance & Beauty like-for-like growth of 7.9%. Its annual report says Fine Fragrance sales increased 18.3% LFL, Consumer Products sales increased 6.8% LFL, and Fragrance Ingredients and Active Beauty decreased 1.4% LFL, with weaker Fragrance Ingredients offsetting Active Beauty strength. Givaudan's Fragrance & Beauty EBITDA was CHF 985M, with a 25.7% EBITDA margin and a 26.5% comparable EBITDA margin. Source: [Givaudan 2025 annual report](https://www.givaudan.com/files/giv-2025-xbrl-tcfd.html) and [Givaudan financial results page](https://www.givaudan.com/investors/financial-results).

The Givaudan comparison is uncomfortable for IFF. Givaudan's disclosed Fragrance & Beauty margin is several hundred basis points higher than IFF Scent's 20.6% TTM adjusted EBITDA margin, and its 2025 fine fragrance growth commentary is stronger at the peer level than IFF's total Scent growth. The comparison is not perfect because Givaudan's Fragrance &

Beauty includes Active Beauty and may have a different mix, while IFF's Scent includes Fragrance Ingredients. Still, it shows that the best competitor can pair stronger growth with higher margin.

dsm-firmenich is the closest strategic peer in breadth after the DSM-Firmenich combination. Its FY2025 continuing-operations table reports Perfumery & Beauty net sales of EUR 3.760B, adjusted EBITDA of EUR 815M, and an adjusted EBITDA margin of 21.7%. Its annual report says Perfumery & Beauty delivered 3% organic sales growth and highlights strong fragrance momentum, new business wins with global and regional consumer brands, and record win rates in prestige and niche Fine Fragrance. The same annual report disaggregates Perfumery & Beauty into Perfumery, Ingredients, and Personal care sales. Sources: [dsm-firmenich FY2025 results](https://our-company.dsm-firmenich.com/en/our-company/news/press-releases/2026/dsm-firmenich-reports-full-year-2025-results.html), [dsm-firmenich Perfumery & Beauty](https://annualreport.dsm-firmenich.com/2025/our-businesses/perfumery-beauty.html), and [dsm-firmenich net sales note](https://annualreport.dsm-firmenich.com/2025/financial-statements/consolidated-financial-statements/notes/net-sales-and-costs.html).

Symrise is smaller in Scent & Care than Givaudan and dsm-firmenich but strategically relevant. Symrise's 2025 release reports Scent & Care revenue of EUR 1.901B, organic sales growth of 3.2%, adjusted EBITDA of EUR 359M, and an 18.9% adjusted EBITDA margin. It says Fragrance achieved high-single-digit organic growth, Fine Fragrances and Consumer Fragrances each reported high-single-digit organic sales growth, while Aroma Molecules had low-single-digit organic growth and was affected by competition from Asia and a dynamic market environment. Source: [Symrise FY2025 release](https://www.symrise.com/newsroom/article/symrise-delivered-solid-organic-sales-growth-and-strong-profitability-improvement-for-2025/).

These peer disclosures show a common industry pattern. Fine fragrance is structurally healthier than commodity ingredients. Consumer fragrance can be resilient, especially when a supplier has global CPG relationships and a strong pipeline. Aroma molecules and commodity fragrance ingredients face tougher pricing because capacity, substitutability, and Asian competition matter more. IFF's own data package tells the same story: Fine Fragrance is strong, Consumer Fragrance is positive/low-single-digit, and Fragrance Ingredients is pressured.

Regulation is both a burden and a barrier. The European Commission's fragrance allergen labeling page explains that cosmetic products generally list ingredients, while perfume aromatic compositions can be listed as "parfum" or "aroma" except where individual labeling is required; it also notes that 26 fragrance allergens were subject to individual labeling and that SCCS called for additional ingredients to be disclosed. Source: [European Commission fragrance allergens labeling](https://single-market-economy.ec.europa.eu/sectors/cosmetics/cosmetic-products-specific-topics/fragrance-allergens-labelling_en). IFRA says its Standards are derived from RIFM safety assessments, that members must comply with IFRA Standards even though they do not replace local law, and that IFRA members cover around 80% of global fragrance industry production volume. IFRA also describes implementation timelines for new and existing creations. Source: [IFRA Standards](https://ifrafragrance.org/initiatives-positions/safe-use-fragrance-science/ifra-standards). For IFF, this helps large-house competitive positioning because customers need compliant formulas and documentation, but it can hurt margins when reformulation, testing, labeling support, or ingredient restrictions raise cost.

Pricing power is therefore bifurcated. In a prestige fragrance launch, a successful creative win can have meaningful pricing power because the scent is part of the brand. In a global detergent or shampoo, pricing power is moderate: switching costs and performance matter, but procurement teams are sophisticated. In commodity ingredients, pricing power can be weak. This appendix's base case assumes those forces net to low-to-mid-single-digit Scent growth, not a high-single-digit category.

5. Moat at the segment level

Scent has a real segment moat, but it is not absolute and not strong enough to override IFF's company-level red gate by itself. The moat is strongest in fragrance compounds for fine fragrance and consumer fragrance, where customer qualification, sensory identity, formula know-how, regulatory documentation, and supply reliability create switching costs. It is weakest in commodity fragrance ingredients, where customers can dual-source and competitors can compete on price, capacity, or equivalent molecule availability.

The first moat source is customer qualification. A fragrance is not a generic input after it has been built into a finished product. The customer's product claims, allergen labels, stability tests, safety files, consumer testing, manufacturing process, and brand identity all interact with the fragrance. If a customer switches supplier, it may need to retest, relabel, reformulate, and risk a consumer-perceptible change. That does not make price increases unlimited, but it creates a reason for customers to stay with a proven supplier when performance matters.

The second moat source is creative and technical capability. A large fragrance house can respond to a brief with perfumers, evaluators, application labs, consumer insight, molecule libraries, naturals sourcing, stability testing, malodor control, encapsulation or delivery know-how, and regulatory support. A small competitor may be brilliant at a niche scent, but a global personal-care customer often wants a supplier that can deliver the same sensory profile and compliance package in multiple regions. That favors scale.

The third moat source is ingredient access. Captive and specialty molecules can help a house create differentiated accords that competitors cannot perfectly copy. Ingredient regulation can also make proprietary substitutes valuable when older materials face restrictions or labeling burden. However, this is not universally protective. The data package's commodity Fragrance Ingredients pressure indicates that part of IFF's ingredient portfolio is exposed to competition rather than protected by exclusivity.

The fourth moat source is regulatory infrastructure. IFRA certificates, allergen disclosure, customer safety documentation, natural complex substance calculations, and jurisdiction-specific rules create friction. This burden is expensive, but large customers value it. In a world with more allergen labeling and ingredient restrictions, the best fragrance houses can win because they make compliance easier for the customer. But this same burden can also compress margins if customers refuse to pay fully for reformulation work or if restricted ingredients force more expensive substitutes.

Durability over five to ten years looks moderate. Fine fragrance and consumer fragrance should remain relevant because scent remains central to beauty, personal care, home care, and fabric care differentiation. The threat is not that customers stop using scent. The threat is that growth accrues more to competitors with better brief win rates, better digital creation tools, stronger captive ingredients, or more efficient cost structures. Peer data make this a live concern: Givaudan's 2025 Fragrance & Beauty margin and growth are better than IFF Scent's current economics, and dsm-firmenich is advertising strong win rates in prestige and niche fine fragrance.

The moat conclusion for Scent is "defensible but not dominant." The segment deserves a base-case margin around the current low-20s adjusted EBITDA level because customer qualification and technical capability are real. It does not deserve a heroic growth assumption because the verified Scent dollar history is only low-single-digit, management flagged Q2 Fine Fragrance volume risk in the Middle East, and Fragrance Ingredients remains a drag.

6. Historical growth rates - reproduced from data package, not re-derived

The table below reproduces the dollar-disclosed Scent history and the qualitative product/sub-line disclosures from the verified data package. IFF does not disclose Fine Fragrance, Consumer Fragrance, or Fragrance Ingredients dollars. The only dollar-modeled revenue line is therefore Scent total.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	FY2023-FY2025 disclosed-window CAGR	Most recent YoY	Data package cite
Scent total dollar-disclosed line	$2.393B from FY2023 in data_package Section 3 current taxonomy row Scent	$2.439B from FY2024 in data_package Section 3 current taxonomy row Scent	$2.479B from FY2025 in data_package Section 3 current taxonomy row Scent	1.8% over FY2023-FY2025, calculated from data_package Section 3 row Scent	1.6% FY2025 YoY from data_package Section 3 YoY row Scent	data_package Section 3 current taxonomy table row Scent and YoY table row Scent
Fine Fragrance	Not separately disclosed in data_package Section 4 row Scent Fine Fragrance	Not separately disclosed in data_package Section 4 row Scent Fine Fragrance	Not separately disclosed in data_package Section 4 row Scent Fine Fragrance	N/A because product dollars are not disclosed in data_package Section 4	Q3 FY2025 Fine Fragrance +20% from data_package Section 4 row Scent Fine Fragrance	data_package Section 4 product disclosure row Scent Fine Fragrance and Section 6 Q3 FY2025 Scent row
Consumer Fragrance	Not separately disclosed in data_package Section 4 row Scent Consumer Fragrance	Not separately disclosed in data_package Section 4 row Scent Consumer Fragrance	Not separately disclosed in data_package Section 4 row Scent Consumer Fragrance	N/A because product dollars are not disclosed in data_package Section 4	Low-single-digit growth in Q2/Q3 FY2025 and positive Q1 FY2026 from data_package Section 4 row Scent Consumer Fragrance	data_package Section 4 product disclosure row Scent Consumer Fragrance
Fragrance Ingredients	Not separately disclosed in data_package Section 4 row Scent Fragrance Ingredients	Not separately disclosed in data_package Section 4 row Scent Fragrance Ingredients	Not separately disclosed in data_package Section 4 row Scent Fragrance Ingredients	N/A because product dollars are not disclosed in data_package Section 4	Down in Q1 FY2026 and low-single-digit decline in Q3 FY2025 from data_package Section 4 row Scent Fragrance Ingredients	data_package Section 4 product disclosure row Scent Fragrance Ingredients

Arithmetic check for the dollar-disclosed Scent total: $2.393B times 1.019 equals $2.438B, which ties FY2024 revenue within rounding to the disclosed $2.439B. $2.439B times 1.016 equals $2.478B, which ties FY2025 revenue within rounding to the disclosed $2.479B. No product-level revenue row was back-solved, because the data package explicitly says product/SKU dollars are not disclosed.

7. Management guidance - quoted from data package Section 6

The management items below come only from data_package Section 6. They are short excerpts already carried in the verified package, not fresh transcript pulls.

Data package row	Verbatim excerpt	Segment read-through
Q1 FY2026 call, Erik Fyrwald, 2026 guidance	"reaffirm our full year 2026 financial guidance"	The Q1 margin strength should not be annualized. Management did not raise the full-year target despite a good quarter.
Q1 FY2026 call, Michael DeVeau, Scent and Q2 phasing	"Fine Fragrance volume in the Middle East will be impacted"	The premium Scent core has near-term geographic and mix risk. This directly argues against using Q1's 22.7% margin as the steady-state base.
Q1 FY2026 call, Michael DeVeau, inflation and pricing	"fully offset any inflation"	Pricing recovery is expected, but the package notes a 12-18 month pricing cycle. Scent margins can lag input inflation before price catches up.
Q3 FY2025 call, Erik Fyrwald, Scent	"Fine Fragrance business has shown tremendous growth rates"	This supports a positive Fine Fragrance driver, but the total segment still grew only 5% comparable currency-neutral in Q3 FY2025 and 1.6% in FY2025.
Q2 FY2025 call, Erik Fyrwald, innovation pipeline	"full benefit in 2027"	Innovation should help Scent and the broader company after 2026, but it is not yet visible enough to justify a high-growth base case.
Q1 FY2026 release and Q4/FY2025 release summary in data_package Section 6	2026 sales guidance of $10.5B-$10.8B and adjusted operating EBITDA of $2.05B-$2.15B; 1%-4% comparable currency-neutral sales growth and 3%-8% comparable currency-neutral adjusted operating EBITDA growth	This is company guidance, not Scent-specific guidance. It anchors Scent base growth to the low-to-mid-single-digit range unless Scent clearly outgrows the portfolio.

[DATA GAP: The data package does not contain Scent-specific FY2026 revenue or adjusted EBITDA guidance by product line. The forward model therefore uses company-level guide plus Scent-specific commentary.]

8. Forward growth assumptions - explicit, per product, justified

The forward model compounds from Scent TTM revenue of $2.516B for exactly five years to March 31, 2031. Because IFF does not disclose product-level Scent dollars, the only dollar rollup line is Scent total. Fine Fragrance, Consumer Fragrance, and Fragrance Ingredients are modeled as qualitative mix drivers that explain the segment-level CAGR rather than as separate revenue bases.

Base case: Scent grows 2.6% CAGR from the TTM base to $2.861B in TTM+5. This is above the 1.8% FY2023-FY2025 disclosed-window CAGR because Fine Fragrance and Consumer Fragrance should contribute, innovation benefits should be more visible after 2026, and company guidance allows low-to-mid-single-digit comparable sales growth. It is below peer fine-fragrance growth rates because IFF's total Scent history is low-single-digit and ingredients remain pressured.

Product	FY2023-FY2025 disclosed-window CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Scent total dollar-disclosed line	1.8% over FY2023-FY2025	FY2025 +1.6%; Q1 FY2026 comparable currency-neutral +1%	Company 2026 comparable currency-neutral sales growth 1%-4%; Scent Q2 Fine Fragrance Middle East risk	2.6%	Base assumes Fine and Consumer lift the segment above recent dollar history, but ingredient weakness and Q2 phasing keep the total below peer Fine Fragrance growth.
Fine Fragrance qualitative driver	Not dollar-disclosed	Q3 FY2025 +20%; Q1 FY2026 positive with Q2 Middle East risk	No product-dollar guide; management says Middle East volume will be impacted	4.5%-5.5% qualitative driver	Premium briefs and peer fine-fragrance momentum support above-segment growth, but the +20% Q3 figure is not used as a steady-state CAGR.
Consumer Fragrance qualitative driver	Not dollar-disclosed	Low-single-digit growth in Q2/Q3 FY2025; Q1 FY2026 positive	No product-dollar guide	2.0%-3.0% qualitative driver	Home and personal care scent demand should be recurring, but large CPG procurement keeps pricing and share gains measured.
Fragrance Ingredients qualitative driver	Not dollar-disclosed	Q1 FY2026 down; Q3 FY2025 low-single-digit decline	No product-dollar guide	-0.5%-0.5% qualitative driver	Commodity ingredients and Asian competition offset specialty molecule opportunities.

Bull case: Scent grows 4.2% CAGR to $3.091B. This case requires IFF to close more fine-fragrance wins, convert the innovation pipeline into 2027-2031 revenue, stabilize Fragrance Ingredients, and retain pricing against inflation. It does not assume Givaudan-like 2025 Fine Fragrance growth for the whole segment; it assumes enough mix improvement to put Scent near the upper end of company comparable-growth ambition.

Product	FY2023-FY2025 disclosed-window CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Scent total dollar-disclosed line	1.8% over FY2023-FY2025	FY2025 +1.6%; Q3 FY2025 comparable currency-neutral +5%	Company 2026 comparable currency-neutral sales growth 1%-4%; innovation benefit in 2027	4.2%	Bull assumes IFF sustains Q3-like Scent growth more often, wins premium briefs, and turns regulatory and molecule capability into share gains.
Fine Fragrance qualitative driver	Not dollar-disclosed	Q3 FY2025 +20%; positive Q1 FY2026	No product-dollar guide; Q2 Middle East risk is temporary	7.0%-8.0% qualitative driver	Strong prestige/niche demand and higher win rates could keep Fine Fragrance well above segment average, though not at the isolated +20% Q3 pace.
Consumer Fragrance qualitative driver	Not dollar-disclosed	Low-single-digit growth in Q2/Q3 FY2025; positive Q1 FY2026	No product-dollar guide	3.5%-4.5% qualitative driver	Bull requires better CPG pipelines, price realization, and regional wins without major procurement giveback.
Fragrance Ingredients qualitative driver	Not dollar-disclosed	Q1 FY2026 down; Q3 FY2025 low-single-digit decline	No product-dollar guide	1.0%-2.0% qualitative driver	Specialty molecules, captive ingredients, and regulatory substitution offset commodity pressure.

Bear case: Scent grows only 0.8% CAGR to $2.618B. This case assumes Fine Fragrance normalizes sharply after recent strength, Middle East pressure is not isolated, Consumer Fragrance stays low-single-digit, and Fragrance Ingredients remains a persistent drag. The bear case is not a recession case; it is a "profitable but ex-growth" case consistent with the segment's verified low growth and commodity ingredient pressure.

Product	FY2023-FY2025 disclosed-window CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Scent total dollar-disclosed line	1.8% over FY2023-FY2025	FY2025 +1.6%; Q1 FY2026 comparable currency-neutral +1%	Company guidance not raised after Q1; Scent Q2 Middle East risk	0.8%	Bear assumes recent low-single-digit history persists and Fine Fragrance is not large enough to offset ingredient decline.
Fine Fragrance qualitative driver	Not dollar-disclosed	Q3 FY2025 +20%; Q2 FY2026 Middle East impact flagged	No product-dollar guide	1.0%-2.0% qualitative driver	Prestige demand and regional volatility slow wins, and high prior growth creates tough comparisons.
Consumer Fragrance qualitative driver	Not dollar-disclosed	Low-single-digit growth in Q2/Q3 FY2025; positive Q1 FY2026	No product-dollar guide	0.0%-1.0% qualitative driver	CPG customers push price and delay launches, leaving only modest volume growth.
Fragrance Ingredients qualitative driver	Not dollar-disclosed	Q1 FY2026 down; Q3 FY2025 low-single-digit decline	No product-dollar guide	-2.0% to -3.0% qualitative driver	Commodity aroma molecules remain oversupplied or price-competitive, especially against Asian producers.

9. Forward adjusted operating EBITDA margin assumptions - explicit and justified

The margin base is Scent TTM adjusted operating EBITDA margin of 20.6%, not GAAP operating margin. IFF does not disclose product-level Scent margins, so the forward margin is modeled at the segment level and explained through mix, pricing, input cost, and ingredient pressure.

Case	Current TTM adjusted operating EBITDA margin	TTM+5y adjusted operating EBITDA margin	TTM+5y revenue	TTM+5y adjusted operating EBITDA	Mechanism
Bear	20.6%	18.5%	$2.618B	$0.484B	Mix shifts away from premium Fine Fragrance, ingredient price pressure persists, and input cost recovery lags customer pricing.
Base	20.6%	21.0%	$2.861B	$0.601B	Fine and Consumer mix offsets commodity ingredients, pricing catches inflation over a 12-18 month cycle, and operating leverage is modest.

Case	Current TTM adjusted operating EBITDA margin	TTM+5y adjusted operating EBITDA margin	TTM+5y revenue	TTM+5y adjusted operating EBITDA	Mechanism
Bull	20.6%	22.3%	$3.091B	$0.689B	Premium wins, innovation benefits after 2027, better utilization, and more specialty ingredients lift margin toward but still below Givaudan's peer margin.

Product / driver	Product margin disclosed?	Base margin read-through	Bear margin read-through	Bull margin read-through
Fine Fragrance	No	Positive mix because creative value and brand identity support pricing	Less helpful if Middle East and prestige demand weaken	Strongest mix contributor if win rates and premium launches hold
Consumer Fragrance	No	Stable recurring volume with moderate procurement pressure	Price concessions and slow CPG launches cap margin	Better launch pipeline and pricing discipline add operating leverage
Fragrance Ingredients	No	Slight drag from commodity pressure	Material drag from Asian competition and weak price/cost spread	Drag fades if specialty molecules and regulatory substitution improve mix
Regulatory and reformulation work	No	Costly but supports customer retention	Cost absorbed by supplier when customers resist repricing	Becomes a service advantage when customers pay for compliant reformulation

The bear margin decline is larger than 100 bps and needs a specific mechanism. It is not arbitrary: Q4 FY2025 Scent margin was only 17.4%, the data package flags commodity Fragrance Ingredients pressure, and management flagged Q2 Fine Fragrance Middle East volume impact. If those pressures combine with input-cost inflation, adjusted operating EBITDA margin can fall below the recent TTM average even without a collapse in revenue.

The bull margin improvement is also larger than 100 bps. The mechanism is mix and scale, not simple optimism. Fine Fragrance wins carry more value; Consumer Fragrance gives recurring volume; specialty molecules can replace commodity exposure; and S&A/R&D infrastructure can leverage if revenue grows faster than capability cost. The cap is peer-aware: even in the bull case, IFF Scent's 22.3% adjusted EBITDA margin stays below Givaudan Fragrance & Beauty's 2025 reported EBITDA margin and only modestly above dsm-firmenich P&B's FY2025 adjusted EBITDA margin.

[DATA GAP: Product-level Scent margins are not disclosed, so the segment margin cannot be revenue-weighted from product margin disclosures. The revenue-weighted calculation is therefore a one-line disclosed-segment rollup.]

10. Segment rollup - built bottoms-up, arithmetic must tie

The rollup uses the only dollar-disclosed Scent revenue line. Fine Fragrance, Consumer Fragrance, and Fragrance Ingredients are embedded in Scent total and treated as qualitative drivers. This is less granular than ideal, but it is the only approach consistent with the verified data package's "do not invent product dollars" control.

Case	Dollar-modeled line	TTM revenue	CAGR TTM to TTM+5y	TTM+5y revenue	TTM+5y adjusted operating EBITDA margin	TTM+5y adjusted operating EBITDA	Arithmetic tie-out
Bear	Scent total, including undisclosed Fine, Consumer, and Ingredients mix	$2.516B	0.8%	$2.618B	18.5%	$0.484B	$2.618B times 18.5% = $0.484B
Base	Scent total, including undisclosed Fine, Consumer, and Ingredients mix	$2.516B	2.6%	$2.861B	21.0%	$0.601B	$2.861B times 21.0% = $0.601B
Bull	Scent total, including undisclosed Fine, Consumer, and Ingredients mix	$2.516B	4.2%	$3.091B	22.3%	$0.689B	$3.091B times 22.3% = $0.689B

Case	Year 0 TTM revenue	Year 1	Year 2	Year 3	Year 4	Year 5 TTM+5y revenue
Bear	$2.516B	$2.536B	$2.556B	$2.577B	$2.597B	$2.618B
Base	$2.516B	$2.581B	$2.649B	$2.717B	$2.788B	$2.861B
Bull	$2.516B	$2.622B	$2.732B	$2.847B	$2.966B	$3.091B

All three segment totals reconstruct from the same formula: TTM revenue of $2.516B compounded for exactly five years at the case CAGR, then multiplied by the case adjusted operating EBITDA margin. The product/sub-line assumptions in Section 8 are not separate dollar lines because the data package provides no product dollars to allocate. The model is therefore conservative in presentation: one disclosed segment line, explicit qualitative drivers, no invented sub-line revenue.

11. Key risks and wildcards

Risk or wildcard	Case most affected	Why it matters	Model impact
Fine Fragrance volatility and Middle East demand	Bear and base	Management specifically flagged Middle East Fine Fragrance volume impact for Q2 FY2026.	Limits the ability to annualize Q1 FY2026 margin and caps base-case growth.
Commodity Fragrance Ingredients pressure	Bear	Data package says ingredients were down in Q1 FY2026 and low-single-digit down in Q3 FY2025, with commodity pressure.	Pulls revenue and margin below segment average if specialty mix does not offset.
Givaudan and dsm-firmenich out-execution	Bear and base	Peers show strong fine fragrance momentum and, in Givaudan's case, higher Fragrance & Beauty margin.	IFF loses briefs or must price more aggressively to defend share.
Smaller fragrance houses winning niche and regional briefs	Base and bear	Smaller houses can be faster and more intimate with indie or local brands.	Limits IFF's ability to monetize prestige and regional growth pockets.
Input-cost inflation and pricing lag	Bear	Data package says management expects to offset inflation, but pricing can take 12-18 months.	Margin compresses before customer pricing catches up.
Ingredient regulation and allergen labeling	Bear and bull	Reformulation can add cost, but compliance capability can favor large houses.	Bear if costs are absorbed; bull if regulatory complexity drives customer retention and premium work.
Innovation pipeline delivery in 2027	Bull	Data package includes management's "full benefit in 2027" comment.	Converts R&D and customer work into higher win rates and better mix if delivered.
Company-level red gate and portfolio constraints	Bear and base	IFF's Stage 1 economic-quality gate is RED and the run is red-gate-waived.	Balance sheet, FCF, and management focus could constrain investment even if Scent is defensible.

The main wildcard is whether IFF can turn good Fine Fragrance commentary into a broader Scent mix upgrade. If Fine Fragrance is a small share of Scent, strong growth there may not move the total. If it is large and growing, the base case may be too low. The data package does not disclose the share, so the model refuses to guess. The second wildcard is whether Fragrance Ingredients is structurally impaired or merely cyclically weak. Peer commentary from Symrise on Aroma Molecules and Givaudan's weaker Fragrance Ingredients/Active Beauty line suggests this is an industry-wide pressure point, not just an IFF execution issue.

The probability weights put most mass on the base case because the verified dollar history and 2026 company guide support low-single-digit growth, while the red-gate-waived company profile, Middle East phasing risk, and commodity ingredient pressure keep the bear case at least as plausible as the bull case.

Case	Segment TTM+5y Revenue	Segment TTM+5y Adjusted Operating EBITDA Margin	Segment TTM+5y Adjusted Operating EBITDA	Probability
Bear	$2.618B	18.5%	$0.484B	25%
Base	$2.861B	21.0%	$0.601B	50%
Bull	$3.091B	22.3%	$0.689B	25%

Appendix B4 - Health & Biosciences

Health & Biosciences - Segment Deep Dive

Company: International Flavors & Fragrances Inc. (IFF) Segment: Health & Biosciences Date anchor: 2026-05-29 TTM base: Q2 FY2025 + Q3 FY2025 + Q4 FY2025 + Q1 FY2026, ending 2026-03-31 Forward horizon: 2031-03-31, exactly five calendar years after the TTM end date

Important gate caveat: this is part of a red-gate-waived ER2 / Gideon production run. The Stage 1 ROIC and economic-quality gate was RED, and the user explicitly requested full production continuation. Nothing in this segment appendix should be read as a company-level Gideon quality clearance. It is a bottoms-up segment forecast using IFF's verified data package and quantitative foundation.

Metric convention: IFF discloses segment revenue and Segment Adjusted Operating EBITDA. It does not disclose segment GAAP operating income. In this appendix, the segment profit metric is Segment Adjusted Operating EBITDA, clearly labeled. This is a CODM / management profitability measure, not GAAP operating income.

0. Segment boundary + taxonomy note

Health & Biosciences is a continuing IFF reportable segment in the current 2025 and Q1 FY2026 taxonomy. The key taxonomy boundary is January 1, 2025, when IFF split the former Nourish segment into Taste and Food Ingredients. Health & Biosciences itself remains a named segment across the old and current regimes, but the data package warns that FY2021-FY2022 are not fully recast and should not be treated as clean current-taxonomy comparables. For modeling, the controlling annual history is FY2023-FY2025, and the controlling forward base is TTM revenue of $2.338B and TTM Segment Adjusted Operating EBITDA of $609M from Q2 FY2025 through Q1 FY2026. Pharma Solutions was divested in May 2025 and is not part of this segment.

The data package defines Health & Biosciences as enzymes, cultures, probiotics, animal nutrition, food biosciences, home and personal care, health, grain processing, and industrial bioscience. It also flags a material non-disclosure: IFF does not provide sub-line dollar revenue for Animal Nutrition, Food Biosciences, Home & Personal Care, Health, Grain Processing, or related product families. Therefore this appendix uses disclosed segment dollars for historicals and an explicit analyst allocation for forward modeling buckets. The allocation is not an IFF disclosure. [DATA GAP: IFF does not disclose Health & Biosciences sub-line revenue by Animal Nutrition, Food Biosciences, Home & Personal Care, Health, or Grain Processing; product-level forecast buckets below are analyst allocations, not reported historical dollars.]

1. What this segment actually is

Health & Biosciences is IFF's applied biology segment. The customer is usually an industrial, food, home-care, animal nutrition, or health-product manufacturer rather than an end consumer. IFF sells biological functionality: enzymes that improve process yield or cleaning performance, cultures and probiotics that support food fermentation or health claims, and specialty ingredients that help customers meet productivity, sustainability, nutrition, or formulation goals. The buyer cares less about the ingredient's standalone identity than about the process outcome it enables: higher cheese yield, cleaner-label fermented food, lower-energy detergent performance, improved animal-feed conversion, more reliable grain-processing economics, or a credible probiotic claim in a supplement or functional product.

The segment's go-to-market is technical and application-led. These are not commodity ingredients sold only on price per pound. A customer generally needs formulation support, application testing, regulatory support, strain or enzyme know-how, and supply reliability. The sales cycle can be consultative: IFF's technical team must prove that a bioscience solution works in the customer's actual process, under the customer's raw-material variability, factory conditions, dosage economics, and regulatory constraints. That makes switching less casual than for a commodity input, but it does not make the business invulnerable. A larger or more focused biosolutions competitor can still win if it has a better strain library, stronger application science, broader local technical service, lower cost fermentation scale, or a more persuasive evidence package.

Pricing is best understood as value-based at the application level, but constrained by customer economics. The enzyme or culture is often a small part of the customer's finished-product cost, yet it can matter disproportionately to yield, quality, energy usage, waste, or health positioning. That creates a pricing umbrella when IFF can demonstrate measurable customer value. It also creates pressure if a competitor can match the functional result or if the customer's end market is weak enough that procurement pushes for savings. In this segment, price is not simply a list-price exercise; it is tied to proof of performance,

local technical service, regulatory confidence, and the customer's risk tolerance.

The natural comparables are not only other flavor and fragrance companies. Health & Biosciences competes directly with Novonesis in enzymes, cultures, probiotics, household-care biosolutions, food and beverage biosolutions, animal nutrition, and grain or bioenergy applications. It also overlaps with dsm-firmenich in health, nutrition, care, taste, texture, and animal nutrition assets, though dsm-firmenich is reshaping its animal nutrition exposure. Kerry is a relevant competitor in enzymes, proactive health, food protection, preservation, and broader taste-and-nutrition biotechnology. Depending on the application, IFF also faces Lallemand, BASF, AB Enzymes, Amano, ADM, Cargill, Evonik, Kemin, Alltech, and regional fermentation or specialty-ingredient players.

2. Current economics (FY2025 and TTM)

The segment is currently IFF's highest-margin reportable segment. Data package Section 1 reports FY2025 Health & Biosciences revenue of $2.283B, equal to 21.0% of company revenue, and FY2025 Segment Adjusted Operating EBITDA of $0.594B. Data package Section 3 reports a 26.0% FY2025 adjusted operating EBITDA margin. The TTM base is slightly larger: Section 5 and QF P4 report TTM revenue of $2.338B and TTM adjusted operating EBITDA of $609M, again about a 26.0% margin. The last four quarters were steady: revenue of $577M in Q2 FY2025, $577M in Q3 FY2025, $589M in Q4 FY2025, and $595M in Q1 FY2026. The comparable currency-neutral growth sequence was +4%, 0%, +5%, and +5%, with adjusted EBITDA margins of 26.2%, 26.0%, 26.3%, and 25.7%.

The current economics therefore show three important traits. First, the segment has resilient margin despite company-level problems. A 26% adjusted operating EBITDA margin is materially above Food Ingredients and above the current company average. Second, the revenue path is not a hypergrowth story. FY2023-FY2025 current-taxonomy revenue went from $2.071B to $2.203B to $2.283B, which is a roughly 5.0% CAGR over the two-year current-taxonomy window, but the most recent quarterly sequence contains a zero-growth quarter and management acknowledged short-term pressure. Third, the segment has mixed end-market drivers: Food Biosciences and Animal Nutrition led Q1 FY2026 growth, Food Biosciences was high-single-digit in FY2025 commentary, while Health in North America was weak and is expected to improve only later in 2026 and into 2027.

The FY2025 cost bridge in the quantitative foundation is useful for understanding the operating model. For Health & Biosciences, FY2025 net sales of $2.283B carried cost of sales of $1.246B, R&D of $219M, S&A of $348M, and a depreciation add-back of $124M, yielding $594M of Segment Adjusted Operating EBITDA. That means the segment carries meaningful R&D intensity and technical selling support, but it also has a high gross-profit pool relative to revenue. The R&D line is not optional if IFF wants to hold its position in enzymes, cultures, probiotics, and specialty bioscience. Underinvesting would flatter near-term EBITDA but weaken the strain, molecule, application, and regulatory base that supports pricing power.

Capital intensity at the segment level is not disclosed. The company discloses consolidated capex and R&D, not Health & Biosciences capex or capital employed. Consolidated FY2025 capex was $594M, or 5.5% of revenue, and consolidated R&D was $694M, or 6.4% of revenue, in the data package. The segment's own FY2025 R&D expense of $219M was 9.6% of segment revenue, based on QF P2b. That is a high reinvestment signal and consistent with a science-led segment. [DATA GAP: IFF does not disclose Health & Biosciences segment capital employed or segment capex; capital intensity must be inferred from consolidated capex and the segment expense bridge.]

The forward model must therefore begin from a strong but not runaway base: $2.338B TTM revenue, $609M TTM adjusted operating EBITDA, and a 26.0% margin. The segment can plausibly outgrow slow industrial volume because enzymes, cultures, and biosolutions can gain penetration. But IFF is not the only scaled biosolutions player, and management's own commentary does not yet prove that North American Health weakness has fully recovered.

3. Unit economics

Revenue becomes profit in Health & Biosciences through three layers: biological know-how, application economics, and manufacturing scale. The biological know-how is the library of strains, enzymes, cultures, and related formulation knowledge. The application economics are the customer's measurable outcome: better yield, less waste, improved protein extraction, lower washing temperature, reduced raw-material variability, or a differentiated health claim. The manufacturing scale is fermentation, formulation, quality control, and supply chain reliability. A supplier with only one of these layers is vulnerable. A supplier with all three can earn attractive margins because the product is small in the customer's cost stack but critical to performance.

Gross margin is helped when the ingredient has high value density and low dosage. Many enzyme and culture applications carry high value per unit because the active biological component does important work at low inclusion rates. That is the attractive part of the model. The customer can pay for the solution because the absolute cost may be small relative to the value created. The risk is that if multiple suppliers can deliver the same functional outcome, procurement can turn a performance sale into a price comparison. In mature detergent enzymes, animal feed enzymes, or grain-processing enzymes, the value proposition is understood and penetration is high in some regions. Price realization then depends on innovation, reliability, local service, and raw-material cost pass-through rather than pure scarcity.

Operating costs are structurally higher than a simple ingredient distribution business. R&D matters because biological products become obsolete if competitors discover a better strain, cleaner label, more robust activity profile, or easier manufacturing route. Application labs and technical teams matter because many customer wins require proof in the customer's process. Regulatory and quality systems matter because probiotics, health ingredients, cultures, and animal applications have compliance requirements that differ by region. The segment's FY2025 R&D expense of $219M on $2.283B of revenue is evidence that this is not a low-touch selling model.

Margins can break upward through mix and productivity. A stronger mix toward differentiated Food Biosciences, proprietary cultures, probiotics, and specialty Home & Personal Care biosolutions can improve margin. Manufacturing productivity and better fermentation yields can also help. The segment's margin can also benefit from pricing if inflation is offset and if customers accept value-based price adjustments. Management commentary in the data package says the company expects to "fully offset any inflation," but the CFO described a 12-18 month cycle. That timing matters: the segment can be a good business and still suffer temporary margin compression when input costs move faster than pricing.

Margins can break downward through competitive matching, weak health end markets, and mix. If North American Health remains soft, higher-margin health and probiotic lines may underperform. If animal nutrition or grain processing becomes more price-competitive, volume may hold while margin falls. If IFF uses price to protect share against Novonesis or other bioscience competitors, the segment can grow revenue without expanding EBITDA. A second margin risk is underinvestment by a debt-constrained parent. Health & Biosciences is the best margin segment in IFF's current portfolio, but IFF's company-level economic quality is weak in the Stage 1 gate. If balance-sheet or portfolio actions starve R&D and application support, the segment's moat could erode slowly before the revenue line shows it.

The key unit-economic conclusion is that Health & Biosciences is a real quality asset inside a not-yet-Gideon-quality company. It earns high segment adjusted EBITDA margins because bioscience solutions can be mission-critical, customized, and technically supported. The same model requires ongoing R&D and application investment, and it faces a formidable pure-play biosolutions competitor in Novonesis. The model is good, but not self-executing.

4. Competitive dynamics

Health & Biosciences sits in one of the more attractive parts of specialty ingredients, but the competitive field is serious. Novonesis is the clearest strategic benchmark. Its 2025 annual report highlights show 7% organic sales growth and a 37.1% adjusted EBITDA margin at group level, with Food & Health Biosolutions at 8% organic growth and a 35.8% adjusted EBITDA margin. Novonesis also reports Human Health organic growth of 10%, Food & Beverages organic growth of 8%, Household Care organic growth of 7%, and Agriculture, Energy & Tech organic growth of 6% in 2025. That is an uncomfortable benchmark for IFF: Novonesis is more focused, has higher margins, and publicly positions itself as a pure biosolutions player. Source: [Novonesis 2025 annual highlights](https://www.novonesis.com/en/investors/annual-report/performance-highlights).

Novonesis' own investor materials also illustrate why the segment can be attractive. Its FY2025 roadshow describes biosolutions as often 1%-5% of a customer's product cost while carrying high strategic value in food and household-care formulas, and it positions the company as the largest producer of biosolutions across enzymes, cultures, and probiotics. The specific numbers belong to Novonesis, not IFF, but the structural point is relevant: if a biological ingredient has small cost share and high process value, the supplier can price on value rather than raw material. Source: [Novonesis FY2025 roadshow slides](https://backend.novonesis.com/sites/default/files/document/2026-02/FY%202025%20Roadshow%20slides.pdf).

dsm-firmenich is a second important competitor, but its strategic posture is shifting. In Health, Nutrition & Care, dsm-firmenich reports 3% organic sales growth and a 19.4% adjusted EBITDA margin in 2025, with activity in early-life nutrition, dietary supplements, pharma, medical nutrition, biomedical materials, prebiotics, probiotics, and postbiotics. This overlaps with IFF's Health and probiotic exposure. At the same time, dsm-firmenich is divesting Animal Nutrition & Health. Its 2025 report says ANH represented about EUR3.5B of annual net sales and about EUR0.5B of adjusted EBITDA, and that the company sold its 50% stake in the Feed Enzymes Alliance to Novonesis for EUR1.5B in 2025 before agreeing to sell remaining ANH activities to CVC. Source: [dsm-firmenich HNC

2025](https://annualreport.dsm-firmenich.com/2025/our-businesses/health-nutrition-care.html) and [dsm-firmenich ANH 2025](https://annualreport.dsm-firmenich.com/2025/our-businesses/animal-nutrition-health.html).

That dsm-firmenich shift matters because it strengthens Novonesis in animal feed enzymes and changes the animal nutrition competitive map. Novonesis' February 2025 announcement said the Feed Enzyme Alliance transaction expands its presence across animal biosolutions, combining enzymes and probiotics for animal nutrition and health. Source: [Novonesis Feed Enzyme Alliance announcement](https://www.novonesis.com/en/news/novonesis-acquire-dsm-firmenichs-share-feed-enzyme-alliance). For IFF, this means Animal Nutrition is not merely competing against fragmented local suppliers; it faces a scaled, increasingly integrated biosolutions specialist.

Kerry is another credible competitor where the overlap is more food, health, and biotechnology than broad industrial bioscience. Kerry's 2025 annual report describes biotechnology capabilities spanning taste, enzyme, proactive health, food protection, preservation, and bio-pharma portfolios, supported by bioinformatics, omics, strain engineering, microbial screening, clinical studies, and enzyme hydrolysis. Kerry also reports a 17.9% group EBITDA margin for continuing operations. Source: [Kerry 2025 annual report](https://www.kerry.com/annual-report/). Kerry's margin is below IFF H&B, but its customer relationships in taste and nutrition can create cross-selling pressure, especially in food biosciences, proactive health, and preservation.

Competitive intensity differs by end market. In Food Biosciences, IFF competes on cultures, enzymes, food protection, yield, texture, and clean-label functionality. The barriers are application science, customer embeddedness, regulatory approvals, and production reliability. In Home & Personal Care, detergent and cleaning enzymes can be attractive because low-dose performance matters, but penetration is already high in developed markets and customers are sophisticated global consumer-products companies. In Animal Nutrition, enzymes and probiotics can improve feed conversion and animal health, but the customer base is cost-sensitive and exposed to farm economics. In Grain Processing, biofuel and starch-processing economics can be cyclical and policy-sensitive; the enzyme supplier's value proposition is strong when yield gains are measurable, weaker when customers are under spread pressure.

Market share is not cleanly disclosed for IFF's Health & Biosciences sub-lines in the data package. The qualitative read is that IFF has a scaled platform inherited from DuPont Nutrition & Biosciences, with real customer relationships and technical capabilities. But Novonesis has a stronger pure-play biosolutions identity, higher reported margins, and recent strategic consolidation in feed enzymes. That argues against underwriting IFF H&B as a dominant price setter. The base case should give IFF credit for above-GDP growth and stable high margins, but it should not assume Novonesis-like group margins or sustained high-single-digit growth without evidence that IFF's own weak Health end market has turned.

5. Moat at the segment level

The segment moat is real but uneven. The strongest moat elements are customer qualification, application know-how, biological libraries, regulatory evidence, and process integration. A customer who has validated a culture, enzyme, probiotic strain, or processing aid in a plant or product does not switch casually. The supplier's solution may be a small cost item, but a failed switch can disrupt quality, yield, consumer claims, shelf life, cleaning performance, or animal performance. That gives IFF stickiness in applications where it has proven value.

The moat is strongest in customized or evidence-heavy applications. Probiotics and health ingredients require strain-level evidence, regulatory confidence, quality assurance, and customer trust. Food biosciences can involve customer-specific process conditions, local raw material differences, and long validation cycles. Home and personal care biosolutions can require compatibility with complex formulations and consumer performance standards. In these areas, the supplier's knowledge base compounds as application experience accumulates.

The moat is weaker in mature enzyme categories where multiple scaled suppliers can meet performance specifications. If a detergent manufacturer, feed producer, or grain processor can qualify several suppliers, procurement can pressure price. The moat is also weaker when the product claim is less differentiated or when local competitors can serve a regional market with acceptable performance at lower cost. IFF's scale helps, but it does not eliminate comparison shopping.

Relative to the rest of IFF, Health & Biosciences has one of the more defensible margin structures. Relative to the best pure-play competitor, the moat looks less dominant. Novonesis' 37.1% group adjusted EBITDA margin and 35.8% Food & Health Biosolutions margin in 2025 show what a more focused biosolutions platform can earn. IFF H&B's 26% margin is strong inside IFF, but it is not evidence of category leadership versus Novonesis. The right interpretation is that H&B has a good segment moat, not a best-in-class moat.

Durability over five to ten years depends on reinvestment. If IFF continues funding R&D, application support, and manufacturing productivity, the segment should remain a high-margin compounder at modest to mid-single-digit revenue growth. If IFF treats the segment as a cash source to repair company-level leverage and lets the innovation engine lag, the margin may hold for a few years before new wins slow and share leaks. This is the central segment-level tension: Health & Biosciences is the asset that most resembles a Gideon-quality specialty platform, but it lives inside a company that failed the Stage 1 economic-quality gate.

6. Historical growth rates - reproduced from data package, not re-derived

The table below uses the verified data package as the controlling source. Current-taxonomy annual dollars are available for FY2023-FY2025 from the IFF 2025 Form 10-K segment table as carried through data_package Section 3; the recent-quarter trend uses Q2 FY2025, Q3 FY2025, Q4/FY2025, and Q1 FY2026 SEC Exhibit 99.1 earnings releases as carried through data_package Section 5. The data package also provides FY2021-FY2022 legacy Health & Biosciences dollars, but it warns that prior-year portfolio boundaries are not fully recast. Therefore the current-taxonomy CAGR below uses FY2023-FY2025 only. Product and sub-line dollar revenue is not disclosed.

Product / sub-segment	FY2023 rev	FY2024 rev	FY2025 rev	Current-taxonomy CAGR	Most recent YoY	Source cite
Health & Biosciences segment total	$2.071B [IFF 2025 Form 10-K segment table via data_package Section 3]	$2.203B [IFF 2025 Form 10-K segment table via data_package Section 3]	$2.283B [IFF 2025 Form 10-K segment table via data_package Section 3]	5.0% over FY2023-FY2025 [data_package Section 3 rows 87-108]	FY2025 +3.6%; Q1 FY2026 +5% [data_package Section 3 YoY row; Q1 FY2026 SEC Exhibit 99.1 via Section 5]	IFF 2025 Form 10-K segment table; Q1 FY2026 SEC Exhibit 99.1; data_package Sections 3 and 5
Animal Nutrition and Food Biosciences	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	N/A due no sub-line dollars [data_package Section 10 gap row SKU-level product revenue]	Q1 FY2026 led H&B growth; FY2025 Food Biosciences high-single-digit [data_package Section 4 commentary row H&B Animal Nutrition and Food Biosciences]	data_package Section 4 rows 120 and 131; Section 10 row SKU-level product revenue
Health in North America	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	N/A due no sub-line dollars [data_package Section 10 gap row SKU-level product revenue]	2025 pressure; expected improvement in second half 2026 and 2027 [data_package Section 4 commentary row Health in North America]	data_package Section 4 rows 120 and 132; Section 6 Q3 H&B commentary row
Home & Personal Care	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	N/A due no sub-line dollars [data_package Section 10 gap row SKU-level product revenue]	Not separately disclosed [data_package Section 4 and Section 10 gap row]	data_package Section 4 row 120; Section 10 row SKU-level product revenue
Grain Processing and industrial bioscience	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	Not separately disclosed [data_package Section 4 row H&B]	N/A due no sub-line dollars [data_package Section 10 gap row SKU-level product revenue]	Not separately disclosed [data_package Section 4 and Section 10 gap row]	data_package Section 4 row 120; Section 10 row SKU-level product revenue

Arithmetic tie-out: FY2023 segment revenue of $2.071B times 1.064 equals $2.204B, which ties to FY2024 revenue of $2.203B within rounding. FY2024 segment revenue of $2.203B times 1.036 equals $2.282B, which ties to FY2025 revenue of $2.283B within rounding. The FY2023-FY2025 current-taxonomy CAGR is (2.283 / 2.071)^(1 / 2) - 1, or about 5.0%. The last-four-quarter TTM base of $2.338B equals $0.577B + $0.577B + $0.589B + $0.595B from data package Section 5 and QF P4c. No product-dollar back-solve is performed because the data package provides no disclosed product base from which to back-solve.

7. Management guidance - quoted from data package Section 6

The data package contains one direct Health & Biosciences row in Section 6 and several company-wide guidance rows that constrain segment modeling. The table below quotes only the short excerpts already provided in the data package and interprets them for this segment.

Data package row	Speaker / source	Topic	Short verbatim excerpt	Segment interpretation
Section 6, Q3 FY2025 call row	Erik Fyrwald, CEO	Health & Biosciences	"short-term pressures in Health & Biosciences"	The segment was not cleanly accelerating through 2025. A model that assumes immediate high-single-digit growth ignores management's own caution.

Data package row	Speaker / source	Topic	Short verbatim excerpt	Segment interpretation
Section 6, Q1 FY2026 call row	Erik Fyrwald, CEO	2026 guidance	"reaffirm our full year 2026 financial guidance"	Q1 FY2026 H&B growth of +5% should not be annualized into a raised company outlook. Base case uses modest acceleration, not a step-change.
Section 6, Q1 FY2026 call row	Michael DeVeau, CFO	Inflation and pricing	"fully offset any inflation"	Pricing can protect margin, but the data package notes a 12-18 month cycle. Bear case assumes temporary lag and mix pressure.
Section 6, Q2 FY2025 call row	Erik Fyrwald, CEO	Innovation pipeline	"full benefit in 2027"	The model allows improvement in 2027 and beyond, especially in base and bull cases, rather than assuming all pipeline benefit is visible in the TTM base.
Section 6, Q4 FY2025 call row	Michael DeVeau, CFO	Cash flow	"key priority for us in 2026"	Company-level cash discipline can support productivity, but it could also pressure reinvestment if taken too far. H&B margin expansion is kept moderate.

Additional data-package context is important even though it is not in the Section 6 quote table. Section 4 says Animal Nutrition and Food Biosciences led Q1 FY2026 H&B growth and that FY2025 Food Biosciences was high-single-digit. Section 4 also says Health in North America was pressured in 2025 and expected to improve in the second half of 2026 and 2027. These two facts drive the forward segmentation: Food Biosciences and Animal Nutrition receive better growth rates than Health in the base case, while Health receives more upside only in the bull case after recovery evidence.

8. Forward growth assumptions - explicit, per product, justified

Because IFF does not disclose sub-line revenue, the model starts with an analyst allocation of the disclosed $2.338B TTM segment base. The allocation is built for forecast mechanics only: Food Biosciences $701M, Home & Personal Care $538M, Animal Nutrition $421M, Health / probiotics / specialty health $351M, and Grain Processing / industrial bioscience $327M. These five buckets sum exactly to the disclosed TTM segment revenue. They are not historical disclosures and should not be cited as IFF-reported product revenue.

The base case uses a 3.6% segment revenue CAGR from TTM to 2031-03-31, below the FY2023-FY2025 current-taxonomy CAGR of 5.0% and close to the latest +5% quarterly run-rate but with explicit deceleration for competitive intensity and Health weakness. The bear case uses 1.2% segment CAGR, reflecting persistent Health weakness, lower pricing, and share pressure. The bull case uses 5.5% segment CAGR, reflecting stronger biosolutions penetration and recovery in Health.

Product	Current-taxonomy segment CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM->TTM+5y	Justification
Food Biosciences	Segment 5.0%; product dollars not disclosed	FY2025 Food Biosciences high-single-digit; Q1 H&B +5%	No product-specific dollar guide; 2026 company comparable growth 1%-4%	2.0%	Bear assumes high-single-digit FY2025 commentary fades as customers pressure price and Novonesis or Kerry compete in enzymes, cultures, and preservation.
Home & Personal Care	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	1.5%	Mature developed-market detergent enzyme penetration and large customer procurement offset emerging-market penetration.
Animal Nutrition	Segment 5.0%; product dollars not disclosed	Q1 FY2026 led H&B growth with Food Biosciences	No product-specific guide	1.5%	Bear assumes feed economics and Novonesis' strengthened feed-enzyme position limit IFF's growth and pricing.
Health / probiotics / specialty health	Segment 5.0%; product dollars not disclosed	Health in North America pressured in 2025	Improvement expected in second half 2026 and 2027, per data package commentary	0.5%	Bear assumes the North America recovery is delayed and probiotics remain promotion-sensitive.

Product	Current-taxonomy segment CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM->TTM+5y	Justification
Grain Processing / industrial bioscience	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	-0.5%	Bear assumes biofuel and grain-processing spread pressure leads customers to defer upgrades and demand savings.

Product	Current-taxonomy segment CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM->TTM+5y	Justification
Food Biosciences	Segment 5.0%; product dollars not disclosed	FY2025 Food Biosciences high-single-digit; Q1 H&B +5%	No product-specific dollar guide; 2026 company comparable growth 1%-4%	4.5%	Base gives credit for cultures, enzymes, food protection, and clean-label demand, but holds growth below the stronger competitor benchmark from Novonesis.
Home & Personal Care	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	3.5%	Base assumes biosolution penetration and cold-wash or biodegradability reformulation offset mature-market volume limits.
Animal Nutrition	Segment 5.0%; product dollars not disclosed	Q1 FY2026 led H&B growth with Food Biosciences	No product-specific guide	4.0%	Base assumes feed enzyme and probiotic demand grows, but Novonesis' Feed Enzyme Alliance consolidation caps share gains.
Health / probiotics / specialty health	Segment 5.0%; product dollars not disclosed	Health in North America pressured in 2025	Improvement expected in second half 2026 and 2027, per data package commentary	3.0%	Base assumes gradual recovery from North American weakness without underwriting a full category rebound.
Grain Processing / industrial bioscience	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	2.0%	Base assumes yield-improvement value remains, but policy and commodity exposure keep growth below the segment average.

Product	Current-taxonomy segment CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM->TTM+5y	Justification
Food Biosciences	Segment 5.0%; product dollars not disclosed	FY2025 Food Biosciences high-single-digit; Q1 H&B +5%	No product-specific dollar guide; pipeline benefit expected in 2027	6.0%	Bull assumes IFF sustains high-single-digit Food Biosciences momentum through innovation, cultures, enzymes, and food-protection wins.
Home & Personal Care	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	5.5%	Bull assumes emerging-market enzyme penetration and sustainability-driven reformulation create higher value-based pricing.
Animal Nutrition	Segment 5.0%; product dollars not disclosed	Q1 FY2026 led H&B growth with Food Biosciences	No product-specific guide	5.5%	Bull assumes IFF defends share despite Novonesis and captures demand for feed efficiency, gut health, and antibiotic-reduction tools.
Health / probiotics / specialty health	Segment 5.0%; product dollars not disclosed	Health in North America pressured in 2025	Improvement expected in second half 2026 and 2027, per data package commentary	6.5%	Bull assumes North American Health recovers, probiotic evidence wins, and pipeline benefits become visible from 2027 onward.
Grain Processing / industrial bioscience	Segment 5.0%; product dollars not disclosed	Not separately disclosed	No product-specific guide	3.5%	Bull assumes improved grain-processing economics and yield-focused enzyme adoption keep the bucket above industrial volume growth.

The deceleration logic is intentional. The segment's current-taxonomy CAGR is about 5.0% and Q1 FY2026 comparable growth was +5%, but management also called out short-term H&B pressure and did not raise full-year 2026 guidance after Q1. The base case therefore assumes a 3.6% segment CAGR, not a straight continuation of the best recent product commentary. The bull case is where sustained Food Biosciences strength and a real Health recovery appear. The bear case is where the segment remains high quality but loses pricing and share momentum against better-focused biosolutions competitors.

9. Forward operating margin assumptions - explicit and justified

The starting segment margin is 26.0% TTM adjusted operating EBITDA margin. Product-level margins are not disclosed, so the current product margins below are analyst allocations calibrated to the disclosed $609M TTM segment adjusted operating EBITDA. The allocated current margins are Food Biosciences 28.0%, Home & Personal Care 29.0%, Animal Nutrition 25.0%, Health / probiotics / specialty health 23.0%, and Grain Processing / industrial bioscience 21.6%. These approximate the idea that differentiated food and home-care biosolutions should be above segment average, while Health weakness and grain-processing exposure should be below or near average in the current base. [DATA GAP: IFF does not disclose Health & Biosciences product-level margins; product margins are modeling assumptions calibrated to the disclosed segment adjusted operating EBITDA.]

Product / modeling bucket	Current TTM margin basis	Bear TTM+5y margin	Base TTM+5y margin	Bull TTM+5y margin	Mechanism
Food Biosciences	28.0% allocated; not disclosed	26.5%	28.5%	30.0%	Bear loses price and mix; base gets modest productivity; bull gets stronger proprietary cultures and enzymes mix.
Home & Personal Care	29.0% allocated; not disclosed	27.0%	30.0%	31.5%	Bear reflects procurement pressure; base reflects formulation value; bull reflects penetration and premium sustainability solutions.
Animal Nutrition	25.0% allocated; not disclosed	23.0%	25.8%	27.0%	Bear reflects feed-cost pressure and Novonesis competition; base reflects stable mix; bull reflects feed efficiency and gut-health value.
Health / probiotics / specialty health	23.0% allocated; not disclosed	20.0%	24.2%	26.5%	Bear assumes North American weakness persists; base assumes recovery; bull assumes evidence-backed probiotic and specialty health mix.
Grain Processing / industrial bioscience	21.6% allocated; not disclosed	19.5%	22.0%	23.5%	Bear reflects commodity spread pressure; base reflects modest yield value; bull reflects stronger bio-processing and productivity adoption.
Segment total	26.0% disclosed TTM segment margin	24.1%	26.9%	28.4%	Weighted average of product buckets; all cases use Segment Adjusted Operating EBITDA, not GAAP segment OI.

The base case margin expands by roughly 90 bps from the TTM segment margin to 26.9%. That is not heroic for a segment with a 26% starting margin and a significant R&D base, but it is also not a Novonesis replication. The main sources are mix, pricing catch-up after inflation, and manufacturing productivity. The bear case margin compresses to 24.1% because a segment can remain revenue-resilient while losing mix and price. The bull case reaches 28.4%, still below Novonesis' 2025 Food & Health Biosolutions margin of 35.8%, because IFF's segment mix, company integration burden, and competitive position do not justify assuming peer-best economics.

Any margin change greater than 100 bps has a named mechanism. Bear compression is driven by Health weakness, feed/grain pricing pressure, and customer procurement. Bull expansion is driven by mix toward differentiated cultures, enzymes, probiotics, and high-value home-care biosolutions, plus scale and pricing recovery. The model does not assume structural margin expansion simply because the segment is high quality.

10. Segment rollup - built bottoms-up, arithmetic must tie

The product-level rollup starts from the disclosed $2.338B TTM segment base and the disclosed $609M TTM adjusted operating EBITDA. The starting revenue allocation is an analyst modeling allocation only. It is calibrated to sum exactly to the disclosed segment total. Forward revenue is each bucket's TTM allocation compounded for exactly five years to 2031-03-31. Forward adjusted operating EBITDA is forward revenue times the scenario margin in Section 9.

Case	Product / modeling bucket	TTM allocated revenue	CAGR TTM->TTM+5y	TTM+5y revenue	TTM+5y margin	TTM+5y adjusted operating EBITDA
Bear	Food Biosciences	$701M	2.0%	$774M	26.5%	$205M
Bear	Home & Personal Care	$538M	1.5%	$580M	27.0%	$157M
Bear	Animal Nutrition	$421M	1.5%	$454M	23.0%	$104M
Bear	Health / probiotics / specialty health	$351M	0.5%	$360M	20.0%	$72M
Bear	Grain Processing / industrial bioscience	$327M	-0.5%	$319M	19.5%	$62M
Base	Food Biosciences	$701M	4.5%	$874M	28.5%	$249M
Base	Home & Personal Care	$538M	3.5%	$639M	30.0%	$192M
Base	Animal Nutrition	$421M	4.0%	$512M	25.8%	$132M
Base	Health / probiotics / specialty health	$351M	3.0%	$407M	24.2%	$98M
Base	Grain Processing / industrial bioscience	$327M	2.0%	$361M	22.0%	$79M
Bull	Food Biosciences	$701M	6.0%	$938M	30.0%	$281M
Bull	Home & Personal Care	$538M	5.5%	$703M	31.5%	$221M
Bull	Animal Nutrition	$421M	5.5%	$550M	27.0%	$149M
Bull	Health / probiotics / specialty health	$351M	6.5%	$481M	26.5%	$127M
Bull	Grain Processing / industrial bioscience	$327M	3.5%	$388M	23.5%	$91M

Case	TTM revenue base	TTM+5y revenue	Revenue CAGR	TTM+5y adjusted operating EBITDA margin	TTM+5y adjusted operating EBITDA	Arithmetic check
Bear	$2.338B	$2.486B	1.2%	24.1%	$0.600B	Product revenue sum $2.486B; EBITDA sum $0.600B; ties within rounding
Base	$2.338B	$2.793B	3.6%	26.9%	$0.751B	Product revenue sum $2.793B; EBITDA sum $0.751B; ties within rounding
Bull	$2.338B	$3.061B	5.5%	28.4%	$0.870B	Product revenue sum $3.061B; EBITDA sum $0.870B; ties within rounding

The base case adds about $455M of revenue over five years and about $142M of adjusted operating EBITDA. That is a meaningful but not transformative contribution to IFF. The bear case grows revenue but loses adjusted operating EBITDA because margin compression more than offsets modest volume growth. The bull case adds about $723M of revenue and $261M of adjusted operating EBITDA, but it requires both recovery in Health and sustained product strength in Food Biosciences, Home & Personal Care, and Animal Nutrition. Given the Stage 1 red gate at the company level, the synthesis should not treat the bull case as the default.

11. Key risks and wildcards

Bear - North American Health recovery fails. The data package explicitly says Health in North America was pressured in 2025 and expected improvement is a 2026/2027 item. If that improvement does not arrive, the Health / probiotics / specialty health bucket can stay near flat and drag segment mix. The practical signal is continued management language about pressure or delayed recovery after Q2/Q3 FY2026.

Bear - Novonesis increases pressure in feed enzymes, cultures, and probiotics. Novonesis is larger and more focused in biosolutions, reports materially higher margins, and has consolidated the Feed Enzyme Alliance. If Novonesis turns this into aggressive cross-selling, IFF can still grow but with lower margin. The signal is IFF H&B revenue growth lagging peer biosolutions growth while margins compress.

Bear - Pricing lag exceeds the 12-18 month cycle. Management expects to offset inflation, but if raw materials, energy, logistics, or fermentation inputs move faster than price, H&B margins can compress. The risk matters because the base case assumes modest pricing catch-up and productivity.

Bear / base - Grain processing and biofuel exposure remains cyclical. Grain-processing enzymes can create measurable yield value, but customer spending depends on spreads, policy incentives, feedstock economics, and plant utilization. Weak spreads can delay upgrades even if the enzyme works.

Base - Parent-company capital allocation distracts from segment reinvestment. IFF is selling assets, repairing leverage, and managing weak company-level ROIC. Health & Biosciences needs R&D and application spending. A cash-harvesting posture could make the segment look good in near-term EBITDA while reducing future win rates.

Base / bull - Pipeline benefit arrives in 2027. Data package Section 6 records management commentary that innovation pipeline benefit is expected more fully in 2027. If this shows up in H&B through product wins rather than just general company language, the base case could prove conservative.

Bull - Biosolutions penetration accelerates across customers. Novonesis' materials point to structural penetration opportunities in food, health, household care, and agriculture/energy/tech. If the industry grows faster and IFF captures its share, H&B could compound near the bull case without requiring a market-share miracle.

Bull - Health and probiotics regain evidence-led momentum. If IFF can convert strain, probiotic, and specialty health science into customer wins after the North America weakness, the Health bucket can shift from segment drag to margin lift. This is the biggest upside swing factor because it affects both growth and mix.

The monitoring dashboard for this segment should track four items: quarterly H&B comparable currency-neutral growth, H&B adjusted operating EBITDA margin, management language on North American Health, and peer growth/margin signals from Novonesis Food & Health, Human Health, Household Care, and animal biosolutions. A single strong quarter is not enough. The segment needs sustained growth plus stable or improving margin to deserve a higher company-level underwriting weight.

The summary table uses Segment Adjusted Operating EBITDA as the profit metric because IFF does not disclose GAAP segment operating income.

Case	Segment TTM+5y Revenue	Segment TTM+5y Adjusted Operating EBITDA Margin	Segment TTM+5y Adjusted Operating EBITDA	Probability
Bear	$2.486B	24.1%	$0.600B	30%
Base	$2.793B	26.9%	$0.751B	50%
Bull	$3.061B	28.4%	$0.870B	20%

Appendix B5 - Pharma Solutions

Pharma Solutions - Segment Deep Dive

This appendix covers only the Pharma Solutions segment of International Flavors & Fragrances Inc. (IFF). It is written for the ER2 / Gideon production run anchored on May 29, 2026, with the latest reported quarter Q1 FY2026 ended March 31, 2026 and the forward horizon ending March 31, 2031. Stage 1 economic quality was RED, and the user explicitly waived the red gate to continue production. Nothing in this segment appendix should be read as a company-level Gideon quality pass.

Production word-count exception: this is a small/simple divested stub. The segment was divested on May 1, 2025, the verified data package identifies no continuing ownership economics, and the key modeling conclusion is the absence of continuing revenue or adjusted operating EBITDA by the TTM+5y horizon. The appendix is therefore intentionally shorter than a normal active-segment B appendix while preserving the required sections, tables, arithmetic checks, and caveats.

0. Segment boundary + taxonomy note

Pharma Solutions is a divested historical stub, not a continuing IFF operating segment. The verified data package states that current reportable segments for 2025 and Q1 2026 are Taste, Food Ingredients, Health & Biosciences, Scent, and Pharma Solutions "as a divested stub"; it further states that Pharma Solutions "was divested in May 2025 and should not be treated as a continuing segment after Q2 FY2025" [data_package Section 1, lines 49-59]. The corporate-actions control gives the exact date as May 1, 2025 [data_package Section 9, lines 210-218]. The quant foundation says the TTM base includes Pharma Solutions only for Q2 FY2025, with Q3 FY2025, Q4 FY2025, and Q1 FY2026 set to zero after the divestiture [quant_foundation P4c, lines 247-256]. Effective January 1, 2025 IFF split former Nourish into Taste and Food Ingredients, but Pharma Solutions itself remains identifiable across FY2021-FY2025. The boundary issue here is not a reporting restatement; it is ownership termination. Segment profit is Segment Adjusted Operating EBITDA, not GAAP operating income, because IFF does not disclose segment GAAP operating income [data_package Section 3, lines 83-85; Section 10, lines 220-226].

1. What this segment actually is

Pharma Solutions was IFF's former pharmaceutical excipients and related pharma ingredients business. The quant foundation describes the former segment as producing "cellulosics and seaweed-based pharmaceutical excipients" [quant_foundation P-Taxonomy, lines 104-114]. In plain English, the business supplied ingredients that help active pharmaceutical ingredients become manufacturable and usable dosage forms: binders, film formers, controlled-release materials, viscosity modifiers, tablet coatings, capsule-related materials, and related formulation aids. These are not usually the molecule that treats the disease. They are the functional materials that make the medicine stable, manufacturable, swallowable, releasable at the intended rate, and consistent across regulated production lots.

The customer set would have included pharmaceutical companies, generic-drug manufacturers, consumer health companies, nutraceutical producers, and contract development or manufacturing organizations that need validated excipient supply and technical formulation support. The pricing model is typically industrial specialty ingredients pricing rather than software-like subscription economics: customers qualify materials, negotiate supply terms, and value reliability, regulatory support, and performance. Switching can be slow because a formulation change may require technical work, validation, and regulatory documentation. That creates customer stickiness for incumbent grades, but the economics remain constrained by specialty-chemical competition, raw-material exposure, capacity discipline, customer procurement sophistication, and the fact that many excipients are mature functional ingredients.

For IFF's continuing-company model, the segment's practical role is now historical and financial clean-up. It contributed to FY2025 and to the TTM base only because one quarter of FY2025 ownership sits inside the trailing twelve months. It should not be grown forward. It should not be given an ongoing terminal margin. It should not be used as evidence that IFF retains a pharmaceutical excipient platform. The verified package contains no residual contractual, transition-services, royalty, earn-out, or retained-minority economics for Pharma Solutions; absent such evidence, the correct continuing segment contribution by March 31, 2031 is zero.

2. Current economics (FY-1 or TTM)

The current economic base is intentionally awkward because TTM captures one final owned quarter rather than a normalized continuing year. For FY2025, the verified data package reports Pharma Solutions revenue of $0.369B and Segment Adjusted Operating EBITDA of $0.076B, a 20.6% adjusted operating EBITDA margin [data_package Section 1, lines 53-59; Section 3,

lines 87-94]. For TTM ended March 31, 2026, the segment contributed revenue of $103M and adjusted operating EBITDA of $22M, a 21.4% adjusted operating EBITDA margin [data_package Section 5, lines 138-161; quant_foundation P4b, lines 236-245]. That TTM contribution is entirely Q2 FY2025: Q2 FY2025 revenue was $0.103B with a 21.4% adjusted EBITDA margin, while Q3 FY2025, Q4 FY2025, and Q1 FY2026 were each $0.000B for Pharma Solutions because the business had been divested [data_package Section 5, lines 138-159; quant_foundation P4c, lines 247-256].

The business was small in the IFF mix by FY2025 because divestiture reduced the reported year to a partial-period stub. In FY2025, Pharma Solutions represented 3.4% of IFF revenue and $76M of the company's $2.086B segment adjusted operating EBITDA [data_package Section 1, lines 53-59; quant_foundation P2a, lines 121-130]. In TTM, the segment represented roughly 1.0% of consolidated revenue and roughly 1.1% of adjusted operating EBITDA, calculated from the verified TTM base of $103M Pharma revenue, $22M Pharma adjusted operating EBITDA, $10.788B consolidated revenue, and $2.076B consolidated adjusted operating EBITDA [data_package Section 5, line 161; quant_foundation P4b, lines 236-245]. These percentages are not a continuing mix forecast. They are only the residue of a divested asset still present in the trailing base.

Capital intensity is not separately disclosed for Pharma Solutions in the data package. The segment-level cost bridge for FY2025 reports Pharma Solutions net sales of $369M, cost of sales of $248M, R&D of $8M, S&A of $42M, a depreciation add-back of $5M, and adjusted operating EBITDA of $76M [quant_foundation P2b, lines 144-155]. That bridge implies the segment had relatively modest R&D dollars inside IFF's FY2025 partial-year presentation and a gross-profit pool before R&D and S&A of about $121M. Because the business was sold, these cost buckets should not be extrapolated into IFF's future overhead base without explicit transition-service evidence. The data package does not provide such evidence.

3. Unit economics

The unit economics of the former Pharma Solutions business were those of a regulated specialty-ingredients supplier. Revenue came from qualified excipient grades and related pharma ingredients sold into formulations where consistency, documentation, and supply reliability matter. Profitability was driven by three layers. First, product functionality and qualification create value beyond commodity input cost; a material that helps a customer control release, stabilize an active ingredient, or produce consistent tablets earns more than a simple raw material. Second, manufacturing scale, grade breadth, and technical support spread fixed costs across many customer programs. Third, regulatory and quality systems create recurring compliance expense, but they also raise the friction of switching suppliers.

IFF's historical segment margins are consistent with a real specialty-ingredients business, not a distressed commodity line. The verified FY2023-FY2025 adjusted operating EBITDA margins were 19.8%, 20.5%, and 20.6%, respectively [quant_foundation P2a, lines 121-142]. TTM margin was 21.4%, but that is only the last owned Q2 FY2025 quarter [quant_foundation P4b and P4c, lines 236-256]. The margin history says the asset could earn around a 20% adjusted operating EBITDA margin while owned. It does not say IFF can continue earning that margin after the asset sale.

The main margin drivers while owned would have been utilization, input costs for cellulose or seaweed-derived materials, energy, quality-assurance costs, customer and product mix, and the ability to pass inflation through regulated supply relationships. A more favorable mix of high-functionality grades, controlled-release applications, or technically supported formulation wins could lift margins. A worse mix of mature commoditized excipients, raw-material inflation, pricing pressure from generic-drug customers, plant underutilization, or incremental compliance cost could compress margins. But those drivers are now relevant mainly as historical context. The continuing IFF model must remove Pharma Solutions revenue and associated adjusted operating EBITDA from the forward rollup once the TTM stub ages out.

The cost bridge also reinforces why this appendix labels the metric carefully. IFF's CODM segment measure is Segment Adjusted Operating EBITDA, and the data package explicitly flags segment GAAP operating income as a true non-disclosure [data_package Section 10, lines 220-226]. Therefore, this appendix does not convert $22M of TTM adjusted operating EBITDA into a supposed GAAP operating income number. In the summary tables, "op income" means the segment profit proxy requested by the dispatch, namely adjusted operating EBITDA, and the table labels preserve that distinction.

4. Competitive dynamics

The competitive set for the former Pharma Solutions business is broad because pharmaceutical excipients span cellulose derivatives, alginates, coatings, binders, fillers, disintegrants, solubilizers, and other functional formulation aids. For cellulosics and seaweed-based excipients, relevant competitors include Roquette, Shin-Etsu Chemical, Ashland, JRS Pharma, and other specialty-ingredient or excipient suppliers. This competitive context is external and used only to frame the former market; IFF historical figures and management commentary remain taken from the verified data package.

Roquette describes its health and pharma offering as plant-based ingredients, excipients, capsules, and formulation support across pharmaceuticals, consumer healthcare, biologics, and related markets. Its public product pages identify cellulose-derived solutions and alginate products sourced from seaweed, which overlap conceptually with the cellulosics and seaweed-based excipient description in the quant foundation. See Roquette's health and pharma page at https://www.roquette.com/pharma and its cellulose derivatives and alginates page at https://www.roquette.com/expertise/products/cellulose-derivatives-alginates. Shin-Etsu Chemical has a Cellulose & Pharmaceutical Excipients business and lists pharmaceutical cellulose excipient offerings, including grades used in pharmaceutical technology. See https://www.shinetsu.co.jp/cellulose/en/pharmaceutical/ and https://www.shinetsu.co.jp/en/products/cellulose-pharmaceutical-excipients-dept/. Ashland has publicly discussed oral solid dose excipients and cellulosic/PVP excipient portfolios. See https://investor.ashland.com/news-releases/news-release-details/ashland-showcase-new-pharmaceutical-oral-solid-dose-excipients. JRS Pharma publicly describes itself as an excipient manufacturer with a portfolio including binders, disintegrants, thickeners, stabilizers, carriers, and coatings. See https://www.jrspharma.com/pharma_en/products/excipients.php.

These competitors matter because they illustrate the industry's mixed moat structure. Technical support, regulatory documentation, quality history, and customer qualification can protect incumbent materials in existing formulations. However, at the industry level there are multiple established suppliers with overlapping portfolios and global technical capabilities. Buyers are sophisticated, regulated, and cost-aware. Generic-drug economics can be brutal, so procurement pressure is real even where switching is slow. New branded drug formulations may value performance and regulatory support more than price, but mature oral solid dose applications can become more standardized. The result is pricing power that is real but bounded: a supplier may hold a qualified position in a customer's formulation, yet the broader market does not resemble a winner-take-most network effect.

For IFF's forward model, the external competitive question is secondary because ownership has ended. A bull case for the excipient industry does not produce a bull case for IFF's Pharma Solutions segment unless IFF retains economics after the sale. The verified package does not show that. A bear case for excipient pricing also does not reduce IFF's future Pharma contribution below zero; IFF's retained exposure is absent in the data package. This makes the segment rollup unusually simple and slightly counterintuitive: the correct modeling variable is not market growth or margin sustainability, but whether the disposed asset leaves any continuing contractual economics. The answer from the verified package is no.

5. Moat at the segment level

While owned, Pharma Solutions likely had a modest segment-level moat rooted in regulated qualification, technical formulation knowledge, quality documentation, customer switching friction, and the need for reliable supply. Excipients are embedded in dosage forms, and changing them can trigger reformulation work, validation, stability studies, and regulatory review. Those frictions are economically meaningful. They can make incumbent grades sticky and can support stable gross margins if the supplier maintains quality, service, and capacity reliability.

The moat was not obviously a Gideon-grade, 20-year compounding moat for IFF shareholders. The verified data package shows a business that was profitable, but it also shows management sold it as part of a broader portfolio reshaping. Pharma Solutions was 3.4% of FY2025 revenue after partial-year ownership and only $103M of TTM revenue [data_package Section 1, lines 53-59; Section 5, line 161]. If the asset had a strong standalone niche moat, that could have supported sale value or buyer interest, but it no longer protects IFF's future economics. IFF's surviving moat must be evaluated in Taste, Food Ingredients, Health & Biosciences, Scent, and corporate execution. Carrying forward Pharma Solutions margin would overstate the remaining company's durability.

For segment-modeling purposes, the moat is therefore "historical only." It may explain why the segment earned roughly 20% adjusted operating EBITDA margins in FY2023-FY2025 [quant_foundation P2a, lines 121-142]. It does not justify any March 31, 2031 revenue or adjusted operating EBITDA for IFF. A retained transition-service arrangement could have changed this conclusion, but the data package does not identify one. Any synthesis model that includes a continuing Pharma Solutions profit pool after the TTM stub should be rejected unless a later reviewer adds documented retained economics.

6. Historical growth rates - reproduced from data package, not re-derived

The historical table below reproduces verified data package and quant foundation figures. Dollars are in billions except where noted. Pharma Solutions is presented as one line because the data package states that no SKU-level or product-family dollar table was found and the FMP product endpoint is segment-level, not SKU-level [data_package Section 4, lines 112-123]. The 3-year CAGR shown is FY2022 to FY2025 because the segment has identifiable legacy FY2022 revenue and FY2025

revenue; it is economically distorted by the May 2025 divestiture. The FY2023-FY2025 current-taxonomy series is also shown because the dispatch asks for FY-3, FY-2, and FY-1.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Pharma Solutions total	$1.020B FY2023	$1.049B FY2024	$0.369B FY2025	-27.6% FY2022-FY2025, divestiture-distorted	-64.8% FY2025, structural from May 2025 divestiture	FY2023-FY2025 revenue and margin: data_package Section 3 lines 87-93; FY2022 legacy revenue: data_package Section 3 lines 96-101; YoY: data_package Section 3 lines 104-110
Excipients and related pharma ingredients	Not separately disclosed	Not separately disclosed	Not separately disclosed	N/A	N/A	Product disclosure: data_package Section 4 lines 112-123

Five-year context is useful for detecting the divestiture break, but it should not be mistaken for a clean organic-growth series.

Fiscal year	Pharma Solutions revenue	Pharma Solutions adjusted operating EBITDA	Adjusted EBITDA margin	Boundary / source
FY2021	$0.809B	$0.165B	20.4%	Legacy taxonomy, data_package Section 3 lines 96-101
FY2022	$0.971B	$0.222B	22.9%	Legacy taxonomy, data_package Section 3 lines 96-101
FY2023	$1.020B	$0.202B	19.8%	Current annual segment summary, quant_foundation P2a lines 121-142
FY2024	$1.049B	$0.215B	20.5%	Current annual segment summary, quant_foundation P2a lines 121-142
FY2025	$0.369B	$0.076B	20.6%	Partial-year divested stub, quant_foundation P2a lines 121-142
TTM ended 2026-03-31	$0.103B	$0.022B	21.4%	Q2 FY2025 only, quant_foundation P4b/P4c lines 236-256

Internal arithmetic checks: FY2024 revenue of $1.049B divided by FY2023 revenue of $1.020B implies 2.8% growth, matching the data package's FY2024 YoY line. FY2025 revenue of $0.369B divided by FY2024 revenue of $1.049B implies a 64.8% decline, matching the data package's FY2025 YoY line. The three-year CAGR from FY2022 revenue of $0.971B to FY2025 revenue of $0.369B is approximately -27.6%, because $0.971B x 0.724 x 0.724 x 0.724 = about $0.369B. This is an ownership-change artifact, not an organic-demand signal.

7. Management guidance - quoted from data package Section 6

The verified data package contains no Pharma-Solutions-specific forward guidance after the May 2025 sale. [DATA GAP: No Pharma-specific management quote, retained transition-service economics, royalty stream, earn-out, or residual contract economics were identified in data_package Section 6 or the recent corporate actions section.] The absence matters because the segment is divested: without explicit retained economics, the model must not invent continuing revenue.

Relevant portfolio and company guidance from the data package points away from continuing Pharma ownership. The recent corporate actions section says, "May 1, 2025: Pharma Solutions disposal group divested" and adds that Pharma is "not a continuing segment after Q2 FY2025" [data_package Section 9, lines 210-218]. The management commentary table includes company-level 2026 guidance, including the CEO's short excerpt "reaffirm our full year 2026 financial guidance" [data_package Section 6, lines 163-180]. That guidance is for the continuing company and does not resurrect Pharma Solutions. The same section says 2026 sales guidance was $10.5B-$10.8B and adjusted operating EBITDA guidance was $2.05B-$2.15B, with divestitures expected to reduce reported sales and adjusted EBITDA growth by about 5% [data_package Section 6, line 180]. That guidance context reinforces that divestitures reduce the reported base rather than create a new Pharma growth platform.

The data package's downstream controls are explicit: "Preserve the red-gate-waived flag" and "treat Pharma Solutions as a divested stub rather than a going-forward operating segment" [data_package Section 10, lines 231-240; quant_foundation P6c, lines 307-315]. The modeling interpretation is therefore binary. If no residual economics are identified, the endpoint revenue is $0 and the endpoint adjusted operating EBITDA is $0 in bear, base, and bull cases. Management did not provide a Pharma growth guide, a retained-services margin guide, or any post-sale economics that would justify a non-zero March 31, 2031 contribution.

8. Forward growth assumptions - explicit, per product, justified

All cases anchor from TTM ended March 31, 2026 and run exactly five calendar years to March 31, 2031. The TTM starting point is $103M revenue and $22M adjusted operating EBITDA, but that base is not a normal run-rate. It is one quarter of Q2 FY2025 ownership followed by three zero quarters after divestiture [quant_foundation P4c, lines 247-256]. The forward growth rate is therefore not a market-demand CAGR. It is an ownership runoff to zero. Because the endpoint is zero, a mathematical CAGR from a positive base to zero is not meaningful; the model uses endpoint dollars rather than a misleading percentage.

Base case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM->TTM+5y	Justification
Pharma Solutions total	-27.6%, divestiture-distorted	-64.8% FY2025	No Pharma-specific guide; data package says divested and not continuing	N/M; endpoint $0 revenue	Ownership ended in May 2025 and no retained economics are disclosed, so the only defensible March 31, 2031 IFF contribution is $0.
Excipients and related pharma ingredients	N/A, not separately disclosed	N/A	No product-level guide	N/M; endpoint $0 revenue	Product dollars are not disclosed and the former product line is outside IFF after the sale; no sub-line can be modeled as continuing.

Bull case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM->TTM+5y	Justification
Pharma Solutions total	-27.6%, divestiture-distorted	-64.8% FY2025	No Pharma-specific guide; data package says divested and not continuing	N/M; endpoint $0 revenue	Even if the former excipient business performs well under its buyer, IFF has no disclosed continuing ownership economics in the data package.
Excipients and related pharma ingredients	N/A, not separately disclosed	N/A	No product-level guide	N/M; endpoint $0 revenue	A favorable industry backdrop accrues to the owner of the disposed business, not to IFF, absent documented earn-outs or royalties.

Bear case:

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM->TTM+5y	Justification
Pharma Solutions total	-27.6%, divestiture-distorted	-64.8% FY2025	No Pharma-specific guide; data package says divested and not continuing	N/M; endpoint $0 revenue	The downside cannot be below zero for this segment in IFF's continuing revenue because ownership has already ended.
Excipients and related pharma ingredients	N/A, not separately disclosed	N/A	No product-level guide	N/M; endpoint $0 revenue	Weak excipient pricing or volume would not create a continuing IFF revenue loss unless IFF retained obligations not identified in the data package.

Thesis-consistency check: a normal active segment would require year-by-year deceleration support. Here, the 21% comparable currency-neutral growth reported for Q2 FY2025 [data_package Section 5, lines 138-144] is explicitly not annualized, because the following three TTM quarters are zero after divestiture [data_package Section 5, lines 145-159]. The official TTM segment provenance is $103M / $22M, $0 / $0, $0 / $0, and $0 / $0 across Q2 FY2025 through Q1 FY2026 [quant_foundation P4c, lines 247-256]. That is the year-by-year bridge: it is not demand deceleration; it is disposal.

9. Forward operating margin assumptions - explicit and justified

Current segment margin, as measured by IFF's Segment Adjusted Operating EBITDA, is 21.4% on the TTM stub and 20.6% in FY2025 [data_package Section 5, lines 138-161; quant_foundation P2a and P4b, lines 121-142 and 236-245]. Those margins show that the disposed asset was profitable while owned. They do not provide a continuing margin for IFF. Once revenue is zero, the economic margin is not meaningful; for arithmetic rollup purposes this appendix uses a 0.0% horizon margin convention and $0 adjusted operating EBITDA in every case.

Case	TTM revenue	TTM adjusted operating EBITDA	TTM adjusted EBITDA margin	TTM+5y revenue	TTM+5y adjusted EBITDA margin convention	TTM+5y adjusted operating EBITDA	Mechanism
Bear	$103M	$22M	21.4%	$0M	0.0%	$0M	No continuing ownership; no disclosed retained economics; downside bounded at zero.
Base	$103M	$22M	21.4%	$0M	0.0%	$0M	Divestiture fully removes revenue and profit by the March 31, 2031 horizon.
Bull	$103M	$22M	21.4%	$0M	0.0%	$0M	Former business may perform well elsewhere, but IFF has no disclosed continuing economics.

The change from a 21.4% TTM adjusted EBITDA margin to a 0.0% rollup convention is more than 100 bps, but the mechanism is not pricing, mix, scale leverage, input cost, or competition. It is ownership. The $22M TTM adjusted operating EBITDA was earned in Q2 FY2025 before the stub rolled off; Q3 FY2025 through Q1 FY2026 were each zero for Pharma Solutions [quant_foundation P4c, lines 247-256]. No retained transition-service margin is disclosed. No royalty margin is disclosed. No stranded-cost allocation specific to Pharma Solutions is disclosed in the data package. A synthesis agent may separately decide how much stranded corporate cost remains at IFF after divestitures, but that is a corporate cost question, not a Pharma Solutions segment profit forecast.

10. Segment rollup - built bottoms-up, arithmetic must tie

The bottom-up rollup has one former product line because no product-family dollars are disclosed. Product-level endpoint revenue sums to segment endpoint revenue exactly. Segment adjusted operating EBITDA equals endpoint revenue multiplied by the rollup margin convention, which is zero in all cases. Dollars are in millions.

Case	Product / sub-segment	TTM revenue	TTM adjusted operating EBITDA	TTM+5y revenue	TTM+5y adjusted EBITDA margin convention	TTM+5y adjusted operating EBITDA
Bear	Pharma Solutions total	$103	$22	$0	0.0%	$0
Bear	Segment total	$103	$22	$0	0.0%	$0
Base	Pharma Solutions total	$103	$22	$0	0.0%	$0
Base	Segment total	$103	$22	$0	0.0%	$0
Bull	Pharma Solutions total	$103	$22	$0	0.0%	$0
Bull	Segment total	$103	$22	$0	0.0%	$0

Arithmetic check: in each case, product revenue of $0M equals segment revenue of $0M, and $0M x 0.0% equals $0M of adjusted operating EBITDA. The segment rollup therefore ties within 1%. The larger synthesis model must be careful not to subtract the $103M TTM stub twice. TTM consolidated revenue already includes Pharma Solutions Q2 FY2025, while the March 31, 2031 forward segment contribution should include none of it. This is exactly why the quant foundation warns not to use the raw FMP Q3 FY2025 Pharma Solutions phantom value and not to treat Pharma as a going-forward operating segment [quant_foundation P6c, lines 307-315].

Case	TTM base revenue	TTM base adjusted operating EBITDA	Horizon revenue	Horizon adjusted operating EBITDA	Rollup note
Bear	$103M	$22M	$0M	$0M	No continuing ownership and no disclosed retained economics.
Base	$103M	$22M	$0M	$0M	Same endpoint as bear because ownership, not market growth, controls.

Case	TTM base revenue	TTM base adjusted operating EBITDA	Horizon revenue	Horizon adjusted operating EBITDA	Rollup note
Bull	$103M	$22M	$0M	$0M	Industry upside does not accrue to IFF without retained economics.

11. Key risks and wildcards

Case tag - Base/Bull: the first risk is synthesis double counting. Because TTM includes one final owned quarter, a mechanical model might compound $103M forward and accidentally add a divested business back into IFF's March 31, 2031 earnings power. This risk affects the bull and base cases most because it would inflate revenue and adjusted operating EBITDA by assigning a normal growth rate to a non-owned asset.

Case tag - All cases: the second risk is phantom data contamination. The verified package identifies a material FMP quarterly defect: Q3 FY2025 includes a phantom Pharma Solutions line even though official sources show the business had been divested [data_package Section 10, lines 220-226; quant_foundation P0 and P1, lines 56-66 and 79-90]. If a later model uses raw FMP quarterly segment data, it will overstate FY2025 and TTM revenue by $369M. This risk affects all cases and should be treated as a hard data-control issue.

Case tag - Bull/Base verification: the third risk is hidden retained economics. If IFF retained a transition-service arrangement, royalty, earn-out, indemnity, or retained minority interest that is not captured in the verified package, the $0 horizon contribution could be incomplete. This is a DATA GAP only in the narrow sense that the data package does not disclose such economics; it is not permission to invent them. The default should remain $0 until a source is added.

Case tag - Company-level synthesis: the fourth risk is corporate-cost allocation. Selling a segment removes revenue and direct profit, but not always all overhead. The segment appendix cannot solve corporate stranded costs because Pharma-specific post-sale cost allocations are not disclosed. This risk affects the company-level synthesis, not the segment endpoint revenue. If the synthesis assumes all divested segment costs disappear, it should support that assumption elsewhere.

Case tag - Base thesis / red-gate waiver: the fifth wildcard is strategic signaling. Pharma Solutions was a profitable, roughly 20% adjusted EBITDA margin asset while owned. Its sale shows management prioritizing portfolio simplification, balance-sheet repair, or strategic focus over retaining every profitable niche. That matters for the Gideon lens because it reinforces that IFF is a restructuring and portfolio-cleanup story, not a clean high-ROIC compounder. The red-gate waiver should remain visible.

Summary table:

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	$0M	0.0% adjusted EBITDA margin convention	$0M adjusted operating EBITDA	25%
Base	$0M	0.0% adjusted EBITDA margin convention	$0M adjusted operating EBITDA	60%
Bull	$0M	0.0% adjusted EBITDA margin convention	$0M adjusted operating EBITDA	15%

The probability weights describe uncertainty around residual evidence, not around market growth. The base case receives the highest weight because the verified package clearly says Pharma Solutions was divested and is not a continuing segment. Bear and bull retain non-zero analytical weight only to remind the synthesis reviewer to check for hidden obligations or retained economics before final assembly.

Appendix S - Synthesis (Combined Earnings Model)

International Flavors & Fragrances Inc. - Synthesis (Combined Earnings Model)

Date prepared: 2026-05-29. Ticker: IFF. This appendix is Sub-Agent S's combined earnings model for the ER2 / Gideon production run. The Stage 1 ROIC and economic-quality gate was RED, and the user explicitly waived that red gate to continue. That caveat is not cosmetic. The bottom-up segment work shows real businesses with credible adjusted operating EBITDA, especially Health & Biosciences, Taste, and Scent, but the equity model must convert that segment EBITDA into consolidated GAAP-like operating income, net income, and EPS before running the P/E 15 test.

Data source rule: this synthesis uses the verified ER2 source chain only: `data_package.md`, `quant_foundation.md`, the five peer-reviewed segment appendices, `appendix_management.md`, and `appendix_moat.md`. No local warehouse/cache data was used. All dollars are USD billions unless noted. Segment profit is IFF's Segment Adjusted Operating EBITDA, not GAAP operating income.

1. Anchors

Anchor	Value
Today	2026-05-29
Fiscal year end	December 31
TTM anchor end date	2026-03-31
TTM quarters	Q2 FY25 + Q3 FY25 + Q4 FY25 + Q1 FY26
Latest completed FY label for historical tie-out	FY2025
Horizon date	2031-03-31
Compounding span	Exactly 5.0 calendar years from TTM end
Current price	$78.03
TTM diluted share count	257M
TTM revenue	$10.788B
TTM Segment Adjusted Operating EBITDA	$2.076B
TTM GAAP operating profit	$0.794B
TTM free cash flow	$0.400B

The quantitative foundation P4 and P6 are the controlling anchors: TTM revenue is $10.788B, TTM adjusted operating EBITDA is $2.076B, TTM GAAP operating income is $0.794B, Q1 FY26 diluted shares are 257M, Q1 FY26 borrowings/debt are $5.817B, Q1 FY26 net borrowings/debt is $5.255B, and reported net debt to credit adjusted EBITDA is 2.5x. FY2025 official GAAP operating loss was $(0.382)B and official 10-K EPS was $(1.41), while the FMP/unaudited-release EPS of $(1.46) is explicitly separated in the source chain.

2. Segment-Level Forward Assumptions

The table below reproduces the peer-reviewed segment appendices. The margin columns are Segment Adjusted Operating EBITDA margin, not GAAP OI margin. This distinction controls the rest of the model.

Segment	TTM revenue	Bear TTM+5y revenue	Base TTM+5y revenue	Bull TTM+5y revenue	Bear adj EBITDA margin	Base adj EBITDA margin	Bull adj EBITDA margin	Source
Taste	$2.510B	$2.573B	$2.910B	$3.203B	17.5%	20.5%	22.0%	appendix_B_taste sections 8-10
Food Ingredients	$3.321B	$3.158B	$3.490B	$3.757B	11.0%	14.5%	16.0%	appendix_B_food_ingredients sections 8-10
Health & Biosciences	$2.338B	$2.486B	$2.793B	$3.061B	24.1%	26.9%	28.4%	appendix_B_health_biosciences sections 8-10
Scent	$2.516B	$2.618B	$2.861B	$3.091B	18.5%	21.0%	22.3%	appendix_B_scent sections 8-10

Segment	TTM revenue	Bear TTM+5y revenue	Base TTM+5y revenue	Bull TTM+5y revenue	Bear adj EBITDA margin	Base adj EBITDA margin	Bull adj EBITDA margin	Source
Pharma Solutions	$0.103B	$0.000B	$0.000B	$0.000B	0.0%	0.0%	0.0%	appendix_B_pharma_solutions sections 8-10

The five segment appendices are internally consistent with the TTM base from the data package and quant foundation. Taste is a stable formulation-led food and beverage segment. Food Ingredients remains the largest revenue segment, the lowest active-margin segment, and an unresolved sale-process caveat. Health & Biosciences is the strongest segment quality asset, but the base case deliberately stays below pure-play biosolutions peer economics. Scent is profitable and defensible, with Fine Fragrance upside offset by Fragrance Ingredients pressure and Middle East phasing risk. Pharma Solutions is a divested stub and contributes zero by the horizon absent documented retained economics.

3. Combined Revenue Build

The continuing-owned base case keeps Food Ingredients because the sale process is unresolved. No corporate revenue eliminations are disclosed in the verified package. Pharma Solutions falls to zero because it was divested in May 2025.

Line	Bear	Base	Bull
Taste	$2.573B	$2.910B	$3.203B
Food Ingredients	$3.158B	$3.490B	$3.757B
Health & Biosciences	$2.486B	$2.793B	$3.061B
Scent	$2.618B	$2.861B	$3.091B
Pharma Solutions	$0.000B	$0.000B	$0.000B
Sum of segment TTM+5y revenue	$10.835B	$12.054B	$13.112B
Corporate eliminations	$0.000B	$0.000B	$0.000B
Combined TTM+5y revenue	$10.835B	$12.054B	$13.112B
Implied TTM to TTM+5y CAGR	0.1%	2.2%	4.0%

The base case is not a heroic growth case. It implies only 2.2% consolidated revenue CAGR over exactly five years, with Food Ingredients growing only 1.0% CAGR and Pharma Solutions rolling off. The bull case reaches 4.0% consolidated CAGR, still modest for a high-quality compounder but demanding for IFF given the red economic-quality gate and portfolio churn. The bear case is effectively flat at the consolidated level because gains in Taste, H&B, and Scent are nearly offset by Food Ingredients weakness and the Pharma runoff.

Food Ingredients sale sensitivity: the base continuing-owned model includes $3.490B of horizon Food Ingredients revenue and $0.506B of horizon Segment Adjusted Operating EBITDA. If the business is sold before 2031, the continuing-company revenue and EBITDA base would be smaller, and the EPS result would depend on sale price, taxes, stranded costs, debt paydown, and repurchases. The verified files do not provide a whole-segment sale price, so this appendix does not invent one. A rough rule of thumb is that each $1.0B of after-tax proceeds used for debt reduction at a 5.5% interest cost would save about $0.055B of pre-tax interest, or roughly $0.16 of EPS after 23% tax and 257.5M shares. That is useful, but it is not enough to offset the lost Food Ingredients EBITDA unless the transaction also removes a meaningful share of bridge/drag and stranded cost.

4. Adjusted EBITDA to GAAP-Like Operating Income Bridge

This is the critical accounting bridge. The segment appendices forecast Segment Adjusted Operating EBITDA. They do not forecast GAAP segment operating income. TTM segment adjusted operating EBITDA sums to $2.076B, while TTM GAAP operating profit is $0.794B, so the TTM bridge/drag is $1.282B. The source files identify FY2025 segment depreciation add-back of $0.391B and disclose that adjusted operating EBITDA excludes specified items. The residual bridge includes depreciation, amortization, restructuring, impairment/portfolio actions, corporate/unallocated cost, and other adjustments. The verified files do not disclose a complete TTM component-by-component bridge, so the horizon bridge is modeled conservatively and flagged as a sensitivity.

Line	Bear	Base	Bull
Sum of segment TTM+5y adjusted operating EBITDA	$1.881B	$2.455B	$2.865B

Line	Bear	Base	Bull
Depreciation and amortization drag	$(0.650)B	$(0.620)B	$(0.600)B
Restructuring, corporate, portfolio, and other drag	$(0.600)B	$(0.530)B	$(0.450)B
Total adjusted EBITDA to GAAP OI bridge/drag	$(1.250)B	$(1.150)B	$(1.050)B
Combined TTM+5y GAAP-like operating income	$0.631B	$1.305B	$1.815B
Implied GAAP-like operating margin	5.8%	10.8%	13.8%

The base bridge of $1.150B is lower than the TTM bridge of $1.282B, giving management credit for simplification and less recurring portfolio noise by 2031, but it does not assume the bridge collapses to only depreciation. That would be too generous for IFF. The company has recently carried impairments, restructuring, amortization, and adjusted-vs-GAAP gaps large enough to change the investment answer. FY2025 is the warning case: official adjusted operating EBITDA was $2.086B, while official GAAP operating loss was $(0.382)B, implying a $2.468B bridge in a year with large impairment and portfolio charges. The base case therefore gives credit for improvement but keeps the bridge visible.

This bridge is also where many false IFF bull cases can slip in. A buyer who starts with $2.455B of base-case horizon segment adjusted operating EBITDA and values it as if it were operating income will overstate the earnings power by more than $1B before interest and taxes. The verified files do not provide enough detail to forecast each amortization class, restructuring program, or stranded corporate allocation precisely, so the honest treatment is to keep the bridge as a named model line and test it. If management proves that restructuring charges fade, integration expense falls, corporate cost is resized after divestitures, and amortization becomes a smaller burden relative to revenue, the bridge can shrink. If the Food Ingredients sale creates stranded cost, if additional impairments follow, or if the company continues to rely on adjusted EBITDA while GAAP income lags, the bridge can remain stubbornly high. The base case assumes partial repair, not full absolution.

5. Net Income and EPS Build

The TTM net income line is not used as a clean forward anchor because Q2 FY25 included non-operating items around portfolio actions, and TTM income before tax was higher than operating income. The forward model normalizes other income to zero and uses net interest expense consistent with a leveraged but deleveraging balance sheet. Tax is set at 23%, above the 21% simple ROIC tax rate used in the data package, to keep the EPS bridge conservative for a global portfolio with uncertain mix and tax attributes.

Line	Bear	Base	Bull
Combined TTM+5y GAAP-like operating income	$0.631B	$1.305B	$1.815B
Net interest expense	$(0.380)B	$(0.330)B	$(0.280)B
Other income	$0.000B	$0.000B	$0.000B
Pre-tax income	$0.251B	$0.975B	$1.535B
Tax rate assumed	23.0%	23.0%	23.0%
Net income	$0.193B	$0.751B	$1.182B
Diluted share count at TTM+5y	257.5M	257.5M	257.5M
EPS at TTM+5y	$0.75	$2.92	$4.59

The base EPS result is intentionally lower than a simplistic adjusted EBITDA multiple story would imply. It starts with $2.455B of segment adjusted operating EBITDA, but then subtracts $1.150B of bridge/drag, $0.330B of net interest expense, and taxes. This is the point of the synthesis: IFF's segment assets can look respectable while the equity EPS still fails the Gideon price gate.

Interest is another quiet limiter. Q1 FY26 net borrowings/debt was $5.255B, and leverage was 2.5x adjusted EBITDA. That is not a crisis balance sheet, but it is still a real claim on future segment profit. The model assumes net interest improves from a conservative bear case to a better bull case as deleveraging and potential divestiture proceeds help. It does not assume the balance sheet becomes irrelevant by 2031. A higher-rate refinancing environment, a delayed Food Ingredients sale, or weaker FCF conversion would push the interest line closer to the bear case. Conversely, a clean sale with proceeds used for

debt reduction could help EPS, but only after subtracting the EBITDA and cash flow that leave with the sold business.

6. Share Count Path

The verified files do not disclose TTM stock-based compensation shares as a clean standalone line. The data package and management appendix do disclose the relevant capital allocation policy: a new $500M authorization was announced in Q2 FY2025, and management described the buyback posture as "dilution plus," with minimum repurchases intended to offset annual dilution of roughly $80M-$100M. Historical buybacks were only $16M in FY2024 and $38M in FY2025, while TTM FCF was $400M and deleveraging remains central. The model therefore assumes $90M of annual repurchases, offsetting a $90M annual dilution proxy. The repurchase price is assumed at $85, above the current $78.03, while SBC issuance is translated at the current price. This produces an almost flat but slightly rising share count.

Year	Starting share count	Buyback dollars	Avg price assumed	Shares retired	SBC issuance	Ending share count
Year 1	257.0M	$0.090B	$85.00	1.06M	1.15M	257.1M
Year 2	257.1M	$0.090B	$85.00	1.06M	1.15M	257.2M
Year 3	257.2M	$0.090B	$85.00	1.06M	1.15M	257.3M
Year 4	257.3M	$0.090B	$85.00	1.06M	1.15M	257.4M
Year 5	257.4M	$0.090B	$85.00	1.06M	1.15M	257.5M

Ending share count is 257.5M. I do not assume aggressive shrink. That would be inconsistent with the historical buyback run-rate, the low FCF conversion, and the leverage constraint. A Food Ingredients sale could increase repurchase capacity, but no sale price is verified and the sale would also remove operating EBITDA. The correct base-case treatment is dilution offset, not buyback-driven EPS engineering.

7. P/E 15 Test

Required EPS for a P/E of 15 at the current price is $78.03 / 15 = $5.202. The base case must clear this confidently to pass. It does not.

Case	EPS at TTM+5y	EPS x 15	Current price	Cushion	Pass?
Bear	$0.75	$11.26	$78.03	-85.6%	FAIL
Base	$2.92	$43.73	$78.03	-44.0%	FAIL
Bull	$4.59	$68.85	$78.03	-11.8%	FAIL

P/E 15 gate verdict: FAIL. The failure is not close in the base case. Base EPS of $2.92 is $2.29 below the $5.202 required EPS, a 44.0% shortfall on the P/E 15 value test. Even the bull case does not reach the current price at 15x under the conservative bridge assumptions.

8. Reflexivity Check

The reported-financial tie-out is clean only if the model respects the adjusted EBITDA bridge. An unbridged segment-profit sum cannot be called GAAP operating income.

Test	Source value	Reconstruction	Difference	Status
TTM segment revenue sum vs consolidated revenue	$10.788B	$10.788B	0.0%	Passed
TTM segment adjusted EBITDA sum vs consolidated adjusted EBITDA	$2.076B	$2.076B	0.0%	Passed
TTM GAAP OI after bridge	$0.794B	$2.076B less $1.282B	0.0%	Passed
FY2025 segment revenue sum vs consolidated revenue	$10.890B	$10.890B	0.0%	Passed
FY2025 adjusted EBITDA to GAAP OI bridge	$(0.382)B	$2.086B less $2.468B	0.0%	Passed

The FY2025 bridge is especially important. FY2025 official GAAP operating loss was $(0.382)B, not the FMP operating-income field. The quant foundation explicitly rejects the FMP field and uses the official 10-K loss. The TTM bridge is less severe than FY2025, but still $1.282B. That is why the forward model does not let adjusted EBITDA flow directly into

operating income.

9. In-Progress FY Reconciliation

The forecast base is TTM, not FY2026 guidance. Still, Q1 FY26 and the company guide are useful recency checks. Q1 FY26 revenue annualized is $10.964B, and Q1 FY26 adjusted operating EBITDA annualized is $2.272B. Management reaffirmed 2026 revenue guidance of $10.5B-$10.8B and adjusted operating EBITDA guidance of $2.05B-$2.15B rather than raising guidance after Q1.

Metric	Q1 FY26 actual	Simple annualized Q1	2026 guide or TTM anchor	Interpretation
Revenue	$2.741B	$10.964B	2026 guide $10.5B-$10.8B	Annualized Q1 is modestly above guide, but management did not raise guidance
Adjusted operating EBITDA	$0.568B	$2.272B	2026 guide $2.05B-$2.15B	Annualized Q1 is above guide, but Scent phasing, inflation, and divestitures argue against annualizing
GAAP operating income	$0.273B	$1.092B	TTM GAAP OI $0.794B	Q1 margin is better than TTM and should not be treated as normalized alone
Revenue vs TTM	N/A	$10.964B	TTM $10.788B	Within 2% of TTM, acceptable recency anchor

This reconciliation supports using TTM as the base. It also prevents overfitting to Q1 FY26. The model's first-forward-year base-case revenue run-rate is roughly $10.94B after the Pharma stub rolloff and continuing-owned segment growth, which is close to Q1 annualized revenue and within 10% of the most recent four-quarter run-rate.

10. Sensitivity

Base case EPS is $2.92. The table varies one driver at a time and holds the rest of the base case constant. For segment margin sensitivities, the margin being varied is Segment Adjusted Operating EBITDA margin, then the consolidated bridge is applied.

Sensitivity	Downside EPS	Base EPS	Upside EPS	EPS impact range	Read-through
Taste revenue CAGR +/- 200 bps	$2.75	$2.92	$3.09	About +/- $0.17	Taste growth helps, but not enough to drive the verdict alone
Food Ingredients adj EBITDA margin +/- 200 bps	$2.71	$2.92	$3.12	About +/- $0.21	Margin repair matters because Food Ingredients remains large
Share count +/- 5%	$3.07	$2.92	$2.78	About -$0.14 to +$0.15	Buybacks cannot fix the gate unless funded by genuine excess FCF or proceeds
Tax rate +/- 300 bps	$3.03	$2.92	$2.80	About +/- $0.11	Tax is second-order versus bridge and margin
EBITDA-to-GAAP OI bridge +/- $0.200B	$3.51	$2.92	$2.32	About +/- $0.60	The bridge is the largest explicit model swing factor

The two variables that matter most are the consolidated EBITDA-to-GAAP operating income bridge and Food Ingredients' ultimate disposition or margin repair. Taste, H&B, and Scent growth assumptions matter, but the base case can still fail the P/E 15 test even with respectable segment-level execution. The bridge is the central evidence problem: IFF needs to prove that adjusted EBITDA turns into GAAP income and free cash flow, not just that segments can report adjusted EBITDA.

Food Ingredients sale sensitivity is binary and under-disclosed. If sold, revenue and adjusted EBITDA decline immediately. EPS can improve only if proceeds are attractive, taxes are manageable, stranded costs are removed, and debt paydown or repurchases offset the lost profit. Because no verified sale price exists in the ER2 files, the continuing-owned case remains the main model and the sale is treated as a monitoring trigger, not a modeled uplift.

11. Combined Earnings Summary

Probability weights are 30% bear, 55% base, and 15% bull. The weighting is deliberately skewed away from bull because the Stage 1 economic-quality gate was red, management is still a remediation team, Food Ingredients is unresolved, and the adjusted-vs-GAAP bridge remains large.

Case	Revenue	OI	OI margin	NI	EPS	Probability	EPS x 15	vs. $78.03
Bear	$10.835B	$0.631B	5.8%	$0.193B	$0.75	30%	$11.26	-85.6%
Base	$12.054B	$1.305B	10.8%	$0.751B	$2.92	55%	$43.73	-44.0%
Bull	$13.112B	$1.815B	13.8%	$1.182B	$4.59	15%	$68.85	-11.8%
Probability-weighted	$11.847B	$1.179B	10.0%	$0.648B	$2.52	100%	$37.76	-51.6%

Combined summary: IFF's bottom-up segment model does not rescue the valuation gate. The base case produces $12.054B of revenue, $2.455B of segment adjusted operating EBITDA, $1.305B of GAAP-like operating income, $0.751B of net income, and $2.92 of EPS. At 15x, that EPS supports $43.73 per share, far below the current $78.03. The company can still have strategic value as a remediation and simplification case, especially if Food Ingredients is sold well and the bridge shrinks. It does not clear the ER2 / Gideon base-case P/E 15 gate on the verified source chain.

The most constructive interpretation is that IFF has an earnings recovery path, not that it already owns a Gideon-quality per-share compounding engine. Taste, H&B, and Scent can plausibly defend or improve segment adjusted EBITDA over five years. Food Ingredients can either recover toward a mid-teens adjusted EBITDA margin or be sold into a cleaner portfolio. Management is acting in the right general direction by simplifying the business and emphasizing cash flow. But the model's burden of proof is higher than "directionally better." For a BUY-quality ER2 outcome, the base case needs to show enough normalized EPS that today's price is no more than 15x FY+5 earnings, and it needs that EPS to come from durable operations rather than one-time gains, accounting add-backs, or unmodeled buybacks. This synthesis does not show that. The base case remains a monitored remediation case with a failed valuation gate.

Tie-Out Checks

- Reported-financial tie-out, TTM and FY2025: Passed. TTM revenue ties to $10.788B, TTM adjusted EBITDA ties to $2.076B, and TTM GAAP OI ties only after subtracting the $1.282B bridge. FY2025 revenue ties to $10.890B, adjusted EBITDA ties to $2.086B, and official GAAP operating loss ties after the larger $2.468B bridge.
- NI divided by shares equals EPS: Passed. Bear $0.193B / 257.5M = $0.75, base $0.751B / 257.5M = $2.92, and bull $1.182B / 257.5M = $4.59 within rounding.
- Segment sum tie-out at horizon: Passed. Combined horizon revenue equals the sum of segment horizon revenues in each case because no corporate eliminations are disclosed.
- Product-to-segment rollup: Passed. Taste, Food Ingredients, Scent, and Pharma use one disclosed segment line plus qualitative sub-line drivers. H&B uses disclosed segment totals with analyst bucket allocation, and its appendix confirms product bucket sums tie within rounding.
- Weighted margin check: Passed with data-disclosure caveat. H&B's weighted bucket margin ties to segment totals. Other segments do not disclose product-level margins, so the only valid weighted margin is the segment-level line.
- Share count path: Passed. Starting 257.0M plus five years of 1.15M SBC issuance less 1.06M buyback retirement per year equals 257.5M ending shares.
- Growth plausibility: Passed with explicit caveats. Taste and H&B base CAGRs are below available disclosed-history CAGRs. Scent base growth is above the low disclosed historical rate but justified by Fine and Consumer mix. Food Ingredients base growth is a turnaround assumption despite negative disclosed history and is tied to portfolio cleanup, not a compounder claim.
- Historical arithmetic: Passed. Each segment appendix shows `TTM revenue x (1 + CAGR)^5 = TTM+5y revenue` within rounding, and adjusted EBITDA equals horizon revenue times the case margin.
- Recency anchor: Passed. Q1 FY26 annualized revenue of $10.964B is within 2% of TTM revenue, and the base first-forward-year revenue run-rate is within 10% of the most recent four-quarter run-rate.

- Adjusted EBITDA bridge discipline: Passed. The model never labels segment adjusted EBITDA as OI. It explicitly subtracts a bridge/drag in every case before calculating operating income.

- P/E 15 arithmetic and markdown tables: Passed arithmetic, gate failed. Required EPS is $5.202, base EPS is $2.92, base EPS x 15 is $43.73, and markdown tables in sections 2, 3, 4, 5, 6, 7, 10, and 11 have consistent columns.

Appendix CS - Compounder Score

International Flavors & Fragrances Inc. - Compounder Score

Date prepared: 2026-05-29. Ticker: IFF. Currency: USD. TTM anchor: March 31, 2026. Horizon date: March 31, 2031. This appendix is Sub-Agent CS's diagnostic compounder score for the ER2 / Gideon production run. The Stage 1 ROIC and economic-quality gate was RED, and the user explicitly waived that red gate to continue the full production run. This score is diagnostic only. It does not override ER2 gates, and it does not convert a red-gate-waived run into a cleared compounder.

1. Executive Verdict

The evidence supports a `Reject` score-implied classification under the CompounderScorer rubric. IFF has real operating franchises, especially Health & Biosciences, Taste, and parts of Scent. The moat appendix correctly identifies embedded formulation, qualification, regulatory, application, and bioscience know-how as genuine sources of customer stickiness. The segment appendices also show credible adjusted operating EBITDA pools: the synthesis base case carries horizon adjusted EBITDA of $0.597B for Taste, $0.506B for Food Ingredients, $0.751B for Health & Biosciences, $0.601B for Scent, and zero for Pharma Solutions after its divestiture.

That is not enough. A compounder score has to ask whether those segment economics become high-return per-share compounding at the equity level, purchased at a price that can underwrite at least a 20% annualized return without terminal multiple expansion. On the verified ER2 evidence, IFF does not meet that bar. The consolidated ROIC record is poor, the Stage 1 economic-quality gate was red, free cash flow conversion is weak relative to adjusted EBITDA, the adjusted-vs-GAAP bridge remains large, and the company's portfolio is still being repaired after a period of impairments and divestitures.

The synthesis appendix is the decisive valuation evidence. At the $78.03 current price, a P/E of 15 requires FY+5 EPS of $5.202. The base case produces EPS of $2.92. Base EPS times 15 equals $43.73, a 44.0% shortfall to today's price. Even the synthesis bull case, at $4.59 of EPS, supports only $68.85 at 15x. The 20% return underwriting case is therefore not merely short; it is structurally absent under the verified base case.

Diagnostic score: `37 / 100`.

Business Quality score: `36 / 80`.

Valuation / 20% Return Underwriting score: `1 / 20`.

Classification: `Reject`.

This is a harsher conclusion than a generic "turnaround watchlist" label, but it follows the rubric. The business has watchable assets, and management is acting in a more coherent remediation direction. However, the diagnostic classification rules say a score below 70, hard vetoes, or an implausible 20% case support rejection under this rubric. IFF currently has all three.

2. Data Source Map

No additional live FMP pull was required for this scoring appendix. The verified ER2 file chain supplied the necessary price, financial, segment, management, moat, and synthesis evidence. The source confidence is high for the tied financial anchors and medium for ROIIC, because segment invested capital and product-level margins are not disclosed.

Evidence item	Primary ER2 source used	Period / scope	Scoring use
Current price, market cap, EV, share count	`quant_foundation.md` P6b	2026-05-29 quote; Q1 FY26 shares	Valuation, FCF yield, EV/NOPAT
TTM revenue, GAAP OI, adjusted operating EBITDA, FCF	`quant_foundation.md` P4 and P6	TTM ended 2026-03-31	Normalized base, cash conversion, bridge
FY2021-FY2025 revenue, OI, EPS, FCF, simple ROIC	`data_package.md` Section 2	FY2021-FY2025	ROIC, historical quality, capital productivity
Segment TTM revenue and adjusted EBITDA	`quant_foundation.md` P4b and `data_package.md` Section 5	TTM ended 2026-03-31	Segment quality and runway
Forward segment base/bear/bull assumptions	Five `appendix_B_*` files and `appendix_synthesis.md`	TTM to 2031-03-31	Revenue runway and margin plausibility
Management quality and capital allocation	`appendix_management.md`	Current team and historical record	Management and capital allocation scoring

Evidence item	Primary ER2 source used	Period / scope	Scoring use
Moat and 2046 test	`appendix_moat.md`	Segment and consolidated durability	Moat scoring, hard veto checks
Combined EPS model and P/E 15 gate	`appendix_synthesis.md`	2031-03-31	20% return underwriting and classification

The controlling quantitative facts are: current price $78.03; market cap $19.921B; enterprise value $25.176B using Q1 net borrowings / debt; Q1 FY26 diluted shares about 257M; TTM revenue $10.788B; TTM GAAP operating income $0.794B; TTM adjusted operating EBITDA $2.076B; TTM FCF $0.400B; and net debt / adjusted operating EBITDA of 2.5x. FY2025 official GAAP operating loss was $(0.382)B and FY2025 official EPS was $(1.41). The source chain explicitly rejects the FMP FY2025 operating-income field as non-controlling.

3. Key Financial and Quality Metrics

IFF's reported financial history does not look like a high-return compounder. The data package shows FY2021-FY2025 revenue of $11.656B, $12.440B, $11.479B, $11.484B, and $10.890B. Over that same period, GAAP operating income / loss was $0.585B, $(1.326)B, $(2.110)B, $0.766B, and $(0.382)B. Simple ROIC, calculated as after-tax EBIT divided by invested capital, was 1.4%, -3.4%, -6.2%, 2.5%, and -1.4%. The 5-year median of that simple ROIC series is negative, not merely below the Gideon hurdle.

Metric	Evidence	Scoring read-through
5-year simple ROIC series	1.4%, -3.4%, -6.2%, 2.5%, -1.4%	Fails normalized ROIC test
TTM adjusted operating EBITDA	$2.076B	Real segment earnings pool, but non-GAAP
TTM GAAP operating income	$0.794B	Large adjusted-to-GAAP bridge remains
TTM FCF	$0.400B	Only 19.3% of adjusted operating EBITDA
TTM FCF yield	2.0% on market cap	Thin current owner-cash yield
Net debt / adjusted EBITDA	2.5x	Manageable, but capital allocation constrained
Goodwill plus intangibles	$14.087B	Impairment and acquisition discipline remain central
Tangible book value	$0.033B	Balance sheet heavily acquisition-shaped

This score gives some credit for the TTM GAAP operating profit recovery, but not enough to erase the prior record. FY2025 is especially important because it shows why adjusted EBITDA cannot be treated as owner earnings. In that year, official adjusted operating EBITDA was $2.086B while GAAP operating loss was $(0.382)B. The synthesis appendix identifies a $2.468B adjusted EBITDA to GAAP OI bridge for FY2025 and a $1.282B bridge in the TTM base. Those gaps include depreciation, amortization, restructuring, impairment and portfolio actions, corporate cost, and other adjustments. Some of that may fade; some is the price of the asset base and restructuring history. A compounder score should not assume it disappears.

4. Rubric Scorecard

Category	Score	Max	Evidence summary
Incremental returns on capital	5	25	Stage 1 red; simple ROIC mostly negative; ROIIC not proven; segment unit economics partly credible
Reinvestment runway	10	20	Large end markets and real R&D base, but growth is modest and portfolio boundaries are changing
Durability of moat	11	15	H&B, Taste, and Scent have genuine embedded advantages; Food Ingredients and consolidated proof are weaker
Accounting and financial quality	5	10	Revenue source chain is clean, but cash conversion, GAAP losses, bridge size, and impairments cap the score
Capital allocation discipline	5	10	Current cleanup is rational; past M&A, impairments, dividend strain, and weak ROIC prevent a pass

Category	Score	Max	Evidence summary
Price and 20% return underwriting	1	20	P/E 15 fails in bear, base, and bull; 20% case absent without major multiple expansion
Total	37	100	Score-implied classification: Reject

The score is not designed to punish IFF twice for the same problem. Instead, it reflects that the same economic issue appears in multiple independent checks: ROIC, FCF conversion, impairment record, adjusted-vs-GAAP bridge, management gate, moat gate, and P/E 15 test. A high-quality compounder normally has at least one clean line of evidence that capital reinvested in the business has produced durable per-share value. Here, the strongest evidence is at the segment adjusted EBITDA level, while the consolidated record remains weak.

5. ROIIC and Reinvestment Analysis

The evidence does not support a high ROIIC score. The data package provides a simple after-tax EBIT / invested capital ROIC series, not a fully rebuilt organic ROIIC series with acquisition-inclusive reinvestment. Given the DuPont Nutrition & Biosciences integration, goodwill impairments, segment recasts, divestitures, and current Food Ingredients sale process, a precise ROIIC calculation would require segment invested capital and clean organic versus acquired capital bridges that the ER2 files do not disclose. Under the scoring rules, that is not a reason to award benefit-of-the-doubt points. It is a reason to score conservatively.

The directional ROIIC evidence is poor. FY2021 revenue was $11.656B and FY2025 revenue was $10.890B, while GAAP operating income moved from $0.585B to a loss of $(0.382)B. Capex remained material, R&D remained material, and the balance sheet continued to carry a large acquisition-shaped asset base. The company spent capital, reorganized the portfolio, and ultimately produced impairments and divestitures rather than a clean upward NOPAT path.

At the segment level, Health & Biosciences has the best reinvestment case. It has a 26.0% TTM adjusted operating EBITDA margin, meaningful R&D intensity, biological know-how, and plausible mid-single-digit growth. Taste and Scent are defensible specialty formulation businesses with approximately 20% TTM adjusted operating EBITDA margins. Those facts justify some points for unit economics and future reinvestment possibility. They do not prove consolidated ROIIC, because IFF does not disclose segment invested capital, segment GAAP operating income, or product-line returns.

Food Ingredients is the clearest counterweight. It is the largest TTM revenue segment at $3.321B, but only $426M of TTM adjusted operating EBITDA and a 12.8% margin. It is under active sale review. The segment can improve through mix, exits, and margin repair, but a business that management is trying to sell should not be treated as a proven long-run reinvestment runway inside IFF unless sale economics or retained economics are documented. Pharma Solutions is gone and contributes zero by the horizon.

The practical conclusion is that IFF may have repair ROIIC ahead if management shrinks low-return assets, delevers, and converts adjusted EBITDA into GAAP income and FCF. That is a remediation thesis, not a demonstrated compounder thesis. The score for incremental returns is therefore 5 / 25.

6. Runway Analysis

The end markets are real and large. Food and beverage companies will continue to need taste systems, reformulation, cost reduction, regional flavor localization, sensory improvement, and technical problem solving. Home and personal care, animal nutrition, grain processing, food biosciences, probiotics, cultures, enzymes, fine fragrance, consumer fragrance, and specialty fragrance applications all give IFF places to compete. The moat appendix's 2046 base description is credible: a narrower sensory and biosciences supplier can still matter in twenty years if it remains one of the few players with global application labs, regulatory support, biological libraries, customer qualification, and manufacturing capability.

The problem is not absence of markets. The problem is the translation from market presence to high-return reinvestment. The synthesis base case grows consolidated revenue from $10.788B TTM to $12.054B by March 31, 2031, a 2.2% CAGR. That is modest. Taste grows from $2.510B to $2.910B, Food Ingredients from $3.321B to $3.490B, H&B from $2.338B to $2.793B, Scent from $2.516B to $2.861B, and Pharma rolls off to zero. This is not a no-growth company, but it is also not a high-growth compounder.

The runway score is also capped by data opacity. Product-level revenue and margin are not disclosed for most sub-lines. The segment appendices are careful not to invent dollars for Fine Fragrance, Consumer Fragrance, Inclusions, Protein Solutions,

Food Biosciences, Animal Nutrition, Health, Home & Personal Care, or other sub-lines. That discipline is important. It also means the score cannot prove that the highest-quality sub-lines are large enough to drive the whole company.

Runway score: 10 / 20. The company has enough market opportunity to stay on a research monitor, but not enough evidence that reinvestment can occur at Gideon-quality returns across the consolidated asset base.

7. Moat Analysis

The moat score is the strongest part of the card. IFF does have real moats. The moat appendix identifies switching costs as the central source of advantage: customers are reluctant to break a formulation, fragrance, enzyme, culture, probiotic, or ingredient system that already works in a finished product or manufacturing process. In many cases, switching requires retesting, shelf-life work, regulatory review, plant trials, quality validation, labeling work, and procurement approval. That is meaningful friction.

Health & Biosciences is the best asset. It benefits from biological know-how, enzyme and strain libraries, application proof, fermentation and manufacturing scale, and customer process integration. A validated enzyme or culture is not swapped casually if it affects yield, health claims, shelf life, detergent performance, animal outcomes, or food quality. Taste and Scent also deserve credit. Taste's moat sits in sensory libraries, application labs, regulatory support, and customer qualification. Scent's moat is strongest in fine fragrance and consumer fragrance compounds, where perfumer talent, molecule palettes, formula qualification, safety files, and global customer service matter.

The score is capped because the blended moat is weaker than the best segments. Food Ingredients is the largest active revenue segment and the lowest active margin segment. It has partial stickiness in systems, inclusions, food protection, and technically complex ingredients, but proteins, sweeteners, emulsifiers, soy / lecithin-type functions, and basic ingredient lines face more commodity and capacity competition. The active sale process also makes its long-term role unresolved.

The 2046 test is YELLOW, not PASS. The future business can be described, but high-return durability is not proven. The moat appendix explicitly says consolidated GAAP margins, ROIC, FCF conversion, impairments, and portfolio churn prevent a Gideon-grade moat pass. I agree with that calibration. Moat score: 11 / 15.

8. Accounting and Capital Allocation Analysis

IFF's disclosure chain is much cleaner than its economics. The quant foundation and data package did good work separating official SEC and IFF release figures from FMP fields that did not control. Segment revenue and segment adjusted operating EBITDA tie. TTM revenue, adjusted EBITDA, GAAP OI, FCF, net debt, and share count tie to the verified source chain. The problem is not that the numbers are unknowable. The problem is what the numbers say.

Accounting and financial quality score: 5 / 10. Revenue recognition is not the central concern. The concerns are GAAP profitability, adjusted-vs-GAAP gap, weak FCF relative to adjusted EBITDA, impairments, and the heavy goodwill and intangible asset base. Goodwill plus intangibles were $14.087B and tangible book value was only $0.033B. The impairment record includes the Food Ingredients goodwill impairment after the Nourish split, prior Nourish impairment, and Pharma impairment. Those are not just non-cash footnotes for a compounder score. They are evidence that prior capital was deployed at valuations or into structures that did not preserve value.

Capital allocation score: 5 / 10. The current management team deserves some credit. The management appendix rates the gate YELLOW, not FAIL. The team has split Nourish into Taste and Food Ingredients, divested Pharma Solutions, sold the soy crush / concentrates / lecithin business, launched a Food Ingredients sale process, prioritized leverage, and kept buybacks modest. That is directionally rational.

The offset is large. The last five years do not resemble a high-quality allocator's record. Dividends consumed substantial cash through the heavy-debt period before being reduced. Buybacks were minimal in FY2021-FY2025 and the new $500M authorization is described as a dilution-plus posture, not an aggressive value-creation engine. Incentive metrics still emphasize sales, adjusted operating EBITDA, adjusted EBITDA margin, relative TSR, and engagement more than explicit ROIC and FCF. The management appendix's upgrade conditions are the right ones: resolve Food Ingredients without value leakage, prove FY2026-FY2027 FCF conversion, and reintroduce stronger ROIC and FCF incentives.

9. 20% Return Underwriting

The valuation score is 1 / 20. The one point is for the fact that the company pays a dividend and may return modest cash while repairing the portfolio. Nothing else in the verified underwriting supports a 20% return case.

The synthesis base case produces FY+5 revenue of $12.054B, GAAP-like operating income of $1.305B, net income of $0.751B, and EPS of $2.92. At 15x EPS, the base case value is $43.73. Against today's $78.03 price, that is a 44.0% shortfall before considering any time value. The required EPS for a 15x multiple at today's price is $5.202. The base case misses by $2.29 per share.

Case	FY+5 EPS	EPS x 15	Assumed cumulative dividends	Approx. 5-year IRR from $78.03	Scoring implication
Bear	$0.75	$11.26	$5.00	-26.9%	Severe downside if bridge and growth disappoint
Base	$2.92	$43.73	$8.00	-7.9%	No 20% case; even capital preservation fails at 15x
Bull	$4.59	$68.85	$9.00	0.0%	Bull still fails the P/E 15 gate

These IRRs use the synthesis 15x EPS endpoints and simple cumulative dividend assumptions based on recent dividend cash use. They are not meant to be a precise dividend forecast. They are meant to show that cash returns do not rescue the underwriting. The base-case maximum purchase price for a 20% annualized return using the 15x endpoint and $8.00 cumulative dividends is about $20.79, calculated as ($43.73 + $8.00) / 1.2^5. That is not a realistic near-price sensitivity; it is a signal that the current price does not underwrite the target return under this framework.

Could a different terminal multiple improve the answer? Yes, mechanically. But that would violate the rule that the 20% return case cannot rely on terminal multiple expansion. Current price / TTM adjusted EPS is already 18.4x. Using a high exit multiple on adjusted EPS or adjusted EBITDA would be a thesis about market appetite, not about owner earnings compounding. The synthesis appendix correctly warns that valuing segment adjusted EBITDA as if it were operating income would overstate earnings power by more than $1B before interest and taxes.

10. Hard Veto Checklist

Hard veto	Status	Evidence
ROIIC below cost of capital with no credible path yet proven	Fail	Stage 1 red; simple ROIC negative in several years; repair path not proven
Reported ROIC high only because invested capital is tiny	Pass	ROIC is not artificially high; it is low
Growth requires persistent external financing	Watch	Leverage is manageable at 2.5x, but FCF conversion and dividends constrain flexibility
Share count rises materially without value creation	Watch	Share count up from FY2021; current plan is dilution offset, not value accretive shrink
Large acquisitions without disclosed returns	Fail	DuPont-era combination aftermath, impairments, divestitures, and recasts weigh on record
FCF consistently lags earnings or adjusted profit structurally	Fail	TTM FCF $0.400B versus adjusted EBITDA $2.076B; FY2025 FCF $0.256B
Customer/regulation/cyclicality/leverage can impair equity	Watch	Procurement, input cost, Food Ingredients sale, and balance sheet all matter
20% return case requires terminal multiple expansion	Fail	Base and bull fail at 15x; 20% needs a dramatically higher endpoint
Company needs flawless execution to justify today's price	Fail	Bridge shrink, Food Ingredients outcome, FCF conversion, and segment growth all must improve
Cannot explain moat in one paragraph	Pass	Moat is explainable, but only YELLOW at consolidated level
Accounting/governance issues impair trust	Watch	Controls effective, but adjusted-vs-GAAP gap, impairments, and incentive restatement context matter
Balance sheet could wipe out equity in downturn	Watch	Not immediate distress, but leverage and low cash conversion constrain optionality

The hard veto table is why `Buy only at lower price` is not the score-implied classification despite the bad valuation. A lower price could eventually make a turnaround speculation attractive, but the current evidence has multiple quality and execution vetoes too. Under this rubric, IFF first has to prove cash conversion, ROIC, and portfolio simplification, then valuation can be revisited.

11. Final Decision

Score-implied classification: `Reject`.

Compounder Score note: 37/100. IFF has real segment assets, especially H&B, Taste, and Scent, but the consolidated evidence is a red-gate-waived remediation case with poor ROIC, weak FCF conversion, impairments, portfolio churn, and a failed P/E 15 test.

Business Quality Score note: 36/80. Segment moats and end-market runway earn partial credit, but business quality is capped by negative/simple low ROIC, unproven ROIIC, Food Ingredients uncertainty, management YELLOW, moat YELLOW, and adjusted EBITDA not converting cleanly into GAAP income and FCF.

20% Return UW Score note: 1/20. Base EPS is $2.92 versus $5.202 required for P/E 15 at $78.03; base EPS x 15 is $43.73, a 44.0% shortfall, and even the bull case fails the P/E 15 gate.

Monitoring conditions are clear. Upgrade from Reject to Watchlist would require at least a clean Food Ingredients decision with transparent proceeds and stranded-cost treatment, FY2026-FY2027 FCF conversion materially above the TTM $0.400B level, explicit evidence that restructuring and impairment charges are fading, renewed ROIC / FCF accountability in compensation, and a refreshed EPS model that no longer fails the P/E 15 test by a wide margin. Until then, IFF is not investable now under this diagnostic rubric.

12. Machine-Readable JSON

See `compounder_score.json` in this folder for the canonical machine-readable version.

Appendix CSA - Scoring Audit

International Flavors & Fragrances Inc. - Scoring Audit

Date prepared: 2026-05-29. Ticker: IFF. Currency: USD. Current price used by the ER2 run: $78.03. TTM anchor: March 31, 2026. Horizon date: March 31, 2031.

Data source rule: this audit uses the verified ER2 file chain as primary evidence: `appendix_compounder_score.md`, `compounder_score.json`, `quant_foundation.md`, `data_package.md`, the five `appendix_B_*.md` segment appendices, `appendix_management.md`, `appendix_moat.md`, and `appendix_synthesis.md`. No additional live evidence was required. No local warehouse or cache data was used.

1. Original vs Audited Scores

The original markdown appendix and `compounder_score.json` agree on the diagnostic score: Business Quality 36 / 80, Valuation / 20% Return Underwriting 1 / 20, total Compounder Score 37 / 100, classification Reject. I found no markdown-versus-JSON discrepancy that would require overriding the original scorer.

Item	Original	Audited	Notes
Business Quality Score / 80	36	36	Fair. The score is low, and it already withholds credit for red-gate ROIC, unproven ROIIC, weak FCF conversion, management YELLOW, moat YELLOW, and portfolio churn.
Valuation / 20% Return UW Score / 20	1	1	Fair. The only preserved point is for modest cash returns; the base, bear, and bull cases all fail the P/E 15 test.
Total Score / 100	37	37	Fair. No raise is justified; no further reduction is needed because the original already applies the major caps.
Classification	Reject	Reject	Required by the diagnostic thresholds: total score below 70, hard vetoes present, and no plausible 20% case.

Original return mechanics were reconstructed as follows: bear IRR -26.9%, base IRR -7.9%, bull IRR approximately 0.0%, and maximum buy price for a 20% IRR of about $20.79. The base-case endpoint is $43.73 per share at 15x FY+5 EPS, plus the scorer's rough $8.00 cumulative dividend assumption, discounted at 1.2^5. That arithmetic matches the original scorecard within rounding.

2. Score Reductions and Reasons

No numerical reduction is made in this audit. That is not a rubber stamp. It is a finding that the original score was already harsh and largely followed the CSA caps. The most important examples are Category 1B, where ROIIC is not calculated and therefore cannot receive credit; Category 6A and 6B, where the base case fails the target return and any 20% outcome would need major terminal multiple expansion; and Category 4B, where cash flow plainly does not support adjusted EBITDA as owner earnings. The original score did not hide these issues. It used them to drive the total score down to Reject.

Rubric category audit:

Category	Original	Audited	Evidence status	Audit finding
1. Incremental returns on capital	5 / 25	5 / 25	Partly supported with major missing data	Preserve. The small positive score is not for proven ROIIC; it is for real segment adjusted EBITDA pools and the fact that low ROIC is not an accounting artifact.
2. Reinvestment runway	10 / 20	10 / 20	Partly supported	Preserve. There are real end markets in H&B, Taste, and Scent, but only modest base growth and unresolved Food Ingredients exposure.

Category	Original	Audited	Evidence status	Audit finding
3. Durability of moat	11 / 15	11 / 15	Supported but capped	Preserve. The moat is real at the segment level but YELLOW at the consolidated level; 11 is high for the scorecard but still defensible because the category is moat-specific, not total-business quality.
4. Accounting and financial quality	5 / 10	5 / 10	Partly supported	Preserve. Revenue and segment ties are clean, while GAAP losses, impairments, bridge size, and FCF conversion cap the score.
5. Capital allocation discipline	5 / 10	5 / 10	Partly supported	Preserve. Current cleanup and insider purchases get credit; prior M&A, goodwill impairment, dividends through a debt-heavy period, and weak ROIC prevent a pass.
6. Price and 20% return underwriting	1 / 20	1 / 20	Mostly unsupported for return hurdle	Preserve. No underwriting credit except a minimal cash-return point.

Subcategory cap audit:

Subcategory	Evidence status	Audit treatment
1A normalized ROIC is high	Calculation error if scored positively	Set to zero. The verified simple ROIC series is 1.4%, -3.4%, -6.2%, 2.5%, and -1.4%.
1B ROIIC is high	Missing data	Set to zero. No credible 3-year or 5-year ROIIC calculation is available.
1C ROIIC not deteriorating sharply	Unsupported	No meaningful positive credit; available returns are poor.
1D unit economics support reported returns	Partly supported	Some credit is fair for H&B, Taste, and Scent margins.
1E cash conversion is real	Weakly supported	Only minimal credit. TTM FCF is $0.400B versus $2.076B adjusted operating EBITDA.
1F ROIC is not an accounting artifact	Partly supported	Low returns are real; invested capital is not artificially tiny.
2A-2F runway items	Partly supported	Large markets exist, but base consolidated revenue CAGR is only 2.2% and Food Ingredients is unresolved.
3A-3F moat items	Supported with caps	Switching costs and qualification friction are real; pricing power and 2046 durability remain YELLOW.
4A-4F accounting items	Mixed	Clean source chain and disclosures offset poor GAAP/FCF quality only partially.
5A-5F capital allocation items	Mixed	Current actions are rational; acquisition-inclusive returns and prior decisions are not good.
6A base-case IRR >= 20%	Unsupported	Zero. Base IRR is negative at the 15x endpoint.
6B conservative exit multiple	Unsupported	Zero. A 20% case would need major terminal multiple expansion.
6C bear case acceptable	Unsupported	Zero. Bear IRR is -26.9%.
6D reverse DCF beatable	Unsupported	Zero. The valuation is not tied to a beatable NOPAT growth path in the verified files.
6E multiple does not price perfection	Unsupported	Zero. Even the bull case fails P/E 15.
6F cash returns help	Partly supported	One point is fair for modest dividends / cash returns, but they do not rescue underwriting.

3. Unsupported Claims

I did not find a material unsupported score-positive claim that inflated the original total. The original scorer was careful about where the evidence stops. It did not claim a clean ROIIC calculation, did not model Food Ingredients sale proceeds as an uplift, did not use segment adjusted operating EBITDA as GAAP operating income, did not assume aggressive buybacks, and did not convert a YELLOW moat or YELLOW management gate into a pass.

The important unproved items are therefore data gaps, not inflated score drivers. Segment invested capital is not disclosed, so segment ROIC and segment ROIIC cannot be rebuilt. Acquisition-inclusive ROIIC is not available despite the DuPont Nutrition & Biosciences integration, goodwill impairments, divestitures, and current Food Ingredients sale process. Product-line revenue and margins are not disclosed for most sub-lines, so the segment appendices correctly avoid fabricated SKU-level economics. TTM stock-based compensation shares are not available as a clean standalone line; the synthesis uses a conservative dilution-plus buyback proxy instead of claiming precise dilution data. No verified whole-segment Food Ingredients sale price, taxes, stranded-cost treatment, debt paydown plan, or repurchase plan is available.

4. Calculation Errors

No material calculation error was found. The core checks tie:

- TTM FCF conversion to adjusted operating EBITDA is $0.400B / $2.076B = 19.3%, matching the original scoring read-through.
- FY2025 adjusted operating EBITDA to GAAP operating income bridge is $2.086B less a $(0.382)B operating loss, or $2.468B.
- TTM adjusted operating EBITDA to GAAP operating income bridge is $2.076B less $0.794B, or $1.282B.
- Base-case EPS of about $2.92 ties to $0.751B net income divided by 257.5M shares.
- Required EPS for P/E 15 at $78.03 is $78.03 / 15 = $5.202.
- Base-case value at 15x is about $43.73, creating a 44.0% shortfall to the current price.
- Maximum buy price for 20% IRR using the original base endpoint and $8.00 cumulative dividends is ($43.73 + $8.00) / 1.2^5 = about $20.79.

The only caution is interpretive, not arithmetic: the return table's cumulative dividends are rough assumptions, not a precise dividend forecast. The original scorer disclosed that limitation and awarded only one point in Category 6, so no score penalty is needed.

5. Missing Data

The missing data that most affects the score is ROIIC evidence. IFF has material acquisition history, impairments, divestitures, and a large goodwill/intangible asset base, yet the verified files do not contain the clean organic versus acquired invested-capital bridge needed to calculate 3-year, 5-year, and acquisition-inclusive ROIIC. Under the CSA rules, that means no benefit-of-the-doubt points.

The second gap is segment capital. The segment appendices provide revenue and Segment Adjusted Operating EBITDA, and in some cases cost bridges, but they do not provide segment invested capital, segment GAAP operating income, segment capex, or segment working-capital allocation. That blocks a segment-level proof that H&B, Taste, or Scent can offset the consolidated red gate.

The third gap is Food Ingredients disposition economics. Food Ingredients is the largest active TTM revenue segment at $3.321B and the lowest active-margin segment at 12.8% adjusted EBITDA margin. It is under active sale review, but the verified files do not supply sale price, taxes, stranded costs, retained obligations, debt repayment, or buyback mechanics. A sale could help or hurt EPS depending on those variables. The audit therefore does not award upside for it.

The fourth gap is clean SBC and dilution. The synthesis explicitly models a near-flat share count using a dilution-plus buyback proxy. That is conservative enough for the score, but not precise enough to award strong buyback or per-share compounding credit.

6. Hard-Veto and Threshold Test Audit

The hard-veto screen supports Reject. ROIIC below cost of capital with no credible path yet proven is a fail. Large acquisitions without disclosed returns is a fail. FCF consistently lagging adjusted profit is a fail. A 20% return case requiring terminal multiple expansion is a fail. The company also needs several execution wins at once: bridge shrink, Food Ingredients outcome, FCF conversion, segment growth, and incentive redesign.

The diagnostic threshold tests also fail. Total score is below 80 and below 70. Business Quality is below 65 / 80. Valuation / 20% Underwriting is below 15 / 20. ROIIC plus runway is not near 35 / 45 because ROIIC is unproven. Base-case IRR is not 20%. Bear-case IRR is not acceptable. No-hard-vetoes is false. Does-not-require-multiple-expansion is false.

7. Final 20% Hurdle Pass/Fail

Final 20% hurdle: FAIL. The base case produces FY+5 EPS of $2.92 against the $5.202 required EPS for a P/E of 15 at $78.03. Bear, base, and bull all fail at 15x. A 20% annualized return would require a materially higher endpoint than the verified EPS model supports, which means the thesis would depend on terminal multiple expansion or a yet-unproven operating step-change. That fails the CSA underwriting rules.

8. Dream Business / Dream Investment Classification

Audited classification: neither dream business nor dream investment. IFF has real segment assets, especially Health & Biosciences, Taste, and Scent. That is not enough for a dream business label because consolidated GAAP margins, ROIC, FCF conversion, impairments, and portfolio churn do not prove a 20-year high-return compounding engine. It is also not a dream investment because the current price does not underwrite the 20% return hurdle and the P/E 15 test fails by a wide margin.

The single biggest reason IFF does not qualify is that respectable segment adjusted EBITDA does not yet convert into consolidated owner earnings at a price that clears the Gideon hurdle.

9. Stage 7 Scorecard Notes

Compounder Score note: 37/100. The audited score preserves the original Reject: real H&B, Taste, and Scent assets are outweighed by red-gate ROIC, unproven ROIIC, weak cash conversion, impairments, portfolio churn, and a failed P/E 15 test.

Business Quality Score note: 36/80. Segment moats and end-market runway earn partial credit, but consolidated business quality remains capped by low/negative ROIC, missing acquisition-inclusive ROIIC, Food Ingredients uncertainty, management YELLOW, moat YELLOW, and adjusted EBITDA not converting cleanly into GAAP income and FCF.

20% Return UW Score note: 1/20. Base EPS is $2.92 versus $5.202 required for P/E 15 at $78.03; base EPS x 15 is $43.73, the shortfall is 44.0%, and even the bull case fails the P/E 15 gate.

10. Auditor JSON


```
{
  "company": "International Flavors & Fragrances Inc.",
  "ticker": "IFF",
  "analysis_date": "2026-05-29",
  "original_business_quality_score": 36,
  "audited_business_quality_score": 36,
  "business_quality_score_max": 80,
  "original_valuation_underwriting_score": 1,
  "audited_valuation_underwriting_score": 1,
  "valuation_underwriting_score_max": 20,
  "original_total_score": 37,
  "audited_total_score": 37,
  "total_score_max": 100,
  "original_classification": "Reject",
  "audited_classification": "Reject",
  "final_20pct_hurdle_pass": false,
  "dream_business_investment_classification": "neither",
  "single_biggest_reason": "Respectable segment adjusted EBITDA does not yet convert into consolidated owner earnings a
  "scorecard_notes": {
    "compounder_score": "37/100. The audited score preserves the original Reject: real H&B, Taste, and Scent assets are
    "business_quality_score": "36/80. Segment moats and end-market runway earn partial credit, but consolidated busines
    "twenty_percent_return_underwriting_score": "1/20. Base EPS is $2.92 versus $5.202 required for P/E 15 at $78.03; b
  },
  "score_reductions": [],
  "unsupported_claims": [
    "No material unsupported score-positive claim was found; the important unproved items are treated as missing data r
  ],
  "calculation_errors": [],
  "missing_data": [
    "3-year, 5-year, and acquisition-inclusive ROIIC are not calculated because clean organic versus acquired invested-
    "Segment invested capital, segment GAAP operating income, segment capex, and segment working-capital allocation are
```

```
    "No verified whole-segment Food Ingredients sale price, taxes, stranded costs, retained obligations, debt paydown,
    "TTM stock-based compensation shares are not disclosed as a clean standalone line in the verified files."
  ],
  "confidence": "Medium-High"
}
```

Appendix RT - Red Team

International Flavors & Fragrances Inc. - Red Team

Date prepared: 2026-05-29. Ticker: IFF. Role: Sub-Agent RT, Red Team. This is a red-gate-waived ER2 / Gideon production run. The Stage 1 economic quality gate was RED and the user explicitly asked to continue, so this appendix treats all constructive conclusions as provisional. It does not re-clear the gate.

Primary evidence is the verified ER2 file chain: `appendix_synthesis.md`, all five `appendix_B_*.md` files, `appendix_management.md`, `appendix_moat.md`, `data_package.md`, `appendix_scoring_audit.md`, and `compounder_score_audit.json`. Recent external context was used only to stress-test industry tone: IFF's [Q1 2026 release](https://ir.iff.com/news-releases/news-release-details/iff-reports-first-quarter-2026-results), Givaudan's [Q1 2026 release](https://www.givaudan.com/media/media-releases/2026/2026-first-quarter-sales), dsm-firmenich's [Q1 2026 trading update](https://our-company.dsm-firmenich.com/en/our-company/news/press-releases/2026/dsm-firmenich-q1-2026-trading-update.html), and Symrise's [Q1 2026 update](https://www.symrise.com/newsroom/article/?cHash=08badfe7c3741d7d4b1e78c5bd01213c&tx_news_pi1%5Bnews%5D=26213). No local warehouse or cache data was used.

Red Team Verdict

The synthesis already says PASS / Reject, but the red team conclusion is harsher: even the Reject base case may be too generous. The base case EPS of $2.92 is not a conservative earnings floor. It is a repair case that assumes a large adjusted-EBITDA pool begins converting better into GAAP-like operating income, that Food Ingredients either recovers toward a mid-teens adjusted EBITDA margin or exits without stranded-cost damage, and that management can keep share count flat while still deleveraging and funding the dividend.

The strongest bear argument is simple: IFF is not a misunderstood compounder; it is a portfolio-repair story whose reported earnings, ROIC, and free cash flow have not earned the right to be valued on adjusted EBITDA. The verified files show FY2025 revenue of $10.890 billion, adjusted operating EBITDA of $2.086 billion, but official GAAP operating loss of $382 million and free cash flow of only $256 million. TTM through Q1 FY2026 improved to $794 million of GAAP operating profit and $400 million of FCF, but the business still has a $1.282 billion adjusted-EBITDA-to-GAAP-operating-income bridge. That bridge is the equity thesis. If it does not shrink in cash terms, the segment assets can be real and the stock can still be wrong.

1. The Most Fragile Assumption

The most fragile assumption is not Taste growth, Scent growth, or H&B growth. It is the Stage 5 base-case corporate bridge from Segment Adjusted Operating EBITDA to GAAP-like operating income: $2.455 billion of horizon segment adjusted operating EBITDA less $1.150 billion of bridge/drag, producing $1.305 billion of GAAP-like operating income.

This is a corporate line, but it is attached to every segment. The synthesis correctly identifies that IFF's segment appendices forecast Segment Adjusted Operating EBITDA, not GAAP operating income. The problem is that the base case still gives management credit for a cleaner company by 2031. The TTM bridge is $1.282 billion. The base bridge is $1.150 billion, so the model assumes $132 million of structural repair from the current TTM state. That sounds modest until one remembers that FY2025's bridge was $2.468 billion because official adjusted operating EBITDA was $2.086 billion and official GAAP operating income was a loss of $382 million. The historical distribution of this bridge is not tight, and it is not a rounding line.

The fragility is amplified by the portfolio actions. Pharma Solutions was sold. Nitrocellulose was sold. Soy crush, concentrates, and lecithin were sold. Food Ingredients is in an active sale process. IFF's Q1 2026 release says certain corporate costs previously attributed to Pharma Solutions were reallocated across Taste, Food Ingredients, H&B, and Scent after divestitures. That is a direct warning that selling assets does not automatically sell the corporate burden. It can move costs around.

The synthesis sensitivity gives the damage function: every $200 million adverse move in the bridge changes EPS by about $0.60. If the bridge merely stays at the current TTM $1.282 billion instead of improving to $1.150 billion, base EPS falls by roughly $0.40, from $2.92 to about $2.52. If the bridge is $200 million worse than base, EPS falls toward $2.32. The current price requires $5.202 of FY+5 EPS to clear 15x. A $2.32 to $2.52 EPS outcome is not a small miss; it means the stock is worth roughly $35 to $38 at 15x before any dividend helper.

The synthesis is right to call the bridge the largest explicit model swing factor. The red team goes one step further: this is the most likely place where even the bear/base/bull framework is still too polite.

2. The Most Likely Optimistic Stage 5 Number

The single Stage 5 number most likely to be optimistic is base-case GAAP-like operating income of $1.305 billion, or 10.8% of revenue. It looks conservative because the reported base revenue CAGR is only 2.2% and the model does not give credit for aggressive buybacks. But the OI line is doing more work than the revenue line suggests.

To reach $1.305 billion, the model needs four things at the same time. First, segment adjusted operating EBITDA must rise from TTM $2.076 billion to $2.455 billion. Second, Food Ingredients must contribute $506 million of adjusted operating EBITDA at a 14.5% margin, up from a TTM margin of 12.8%, even though it is the lowest-margin active segment and is under sale review. Third, the bridge must shrink to $1.150 billion despite repeated divestitures, restructuring, amortization, impairment history, and corporate cost reallocation. Fourth, management must normalize interest expense to $330 million while keeping the share count roughly flat and not starving the remaining businesses of reinvestment.

The external peer check does not rescue this number. IFF reaffirmed 2026 sales guidance of $10.5 billion to $10.8 billion and adjusted operating EBITDA of $2.05 billion to $2.15 billion after Q1, rather than raising it. Givaudan's Q1 2026 release showed Fragrance & Beauty strength, but also Taste & Wellbeing down 0.4% LFL and Fragrance Ingredients / Active Beauty down 5.9% LFL. dsm-firmenich reported 4% LFL sales growth, a 19.1% adjusted EBITDA margin, and an FY2026 outlook that explicitly emphasizes cash conversion. Symrise reported a 0.4% organic sales decline and reaffirmed outlook. The peer set says premium pockets exist, but it also says input costs, fragrance ingredients, taste softness, and regional volatility are live issues. That is not the background against which IFF should get unearned GAAP conversion credit.

Food Ingredients is the second most suspicious Stage 5 number. The base case assumes 1.0% five-year revenue CAGR and 14.5% adjusted EBITDA margin, producing $506 million of adjusted EBITDA. That is better than TTM by about $80 million. Management's "mid-teens EBITDA margin goal" supports the direction, but a goal is not evidence. The segment's FY2023-FY2025 current-taxonomy revenue CAGR was negative 5.8%, FY2025 revenue declined 2.6%, and the attractive sub-lines inside the segment are not dollar-disclosed. If inclusions are smaller than the commentary implies, or if Protein Solutions and commodity-adjacent functions keep dragging, the base $506 million will be too high.

3. Strongest Bear Case

A well-informed short seller would frame IFF this way: the company owns several good ingredients franchises, but the equity owns the debt, amortization, stranded costs, impairments, tax leakage, and portfolio mistakes. Management is selling or pruning assets because the DuPont-era portfolio did not generate acceptable acquisition-inclusive returns, not because it discovered a hidden compounder. Food Ingredients is the proof point: it is the largest active revenue segment, the lowest-margin active segment, and the business under review for sale. The next twelve to eighteen months will show whether IFF can turn adjusted EBITDA into GAAP income and free cash flow; if it cannot, the market will stop underwriting the remediation story and value the company on reported owner earnings instead.

The mechanism is not bankruptcy or sudden demand collapse. It is value leakage through the bridge. Taste, H&B, and Scent can keep customers, but if IFF spends the benefit on amortization, restructuring, stranded overhead, input-cost lag, and weak cash conversion, shareholders do not get a high-return compounding machine. The timeline is short: Q2 and Q3 FY2026 should show whether Q1 was a real conversion step or a phasing benefit. The observable anchor is TTM GAAP operating income as a percentage of adjusted operating EBITDA.

4. Cross-Examination of Management Commentary

Management excerpt from `data_package.md` Section 6	**Skeptical read**	**First place it shows if wrong**
"reaffirm our full year 2026 financial guidance"	This is not a raise after a good Q1. It is an admission that annualizing Q1 margins would be wrong because Scent phasing, inflation, divestitures, and portfolio mix still matter.	Q2/Q3 FY2026 revenue and adjusted EBITDA stay within the old guide rather than stepping up.
"strong interest in this business"	Food Ingredients buyer interest does not equal clean value realization for IFF shareholders. A buyer can like the assets and still price in weak margins, customer uncertainty, and carve-out costs.	Sale update delayed, proceeds disappoint, or stranded costs keep consolidated bridge high after the transaction.
"fully offset any inflation"	The same file notes a 12-18 month pricing cycle. That is lagged recovery, not immediate pricing power. IFF's Q1 Scent adjusted operating EBITDA was down on a currency-neutral comparable basis because price/input cost was unfavorable.	Scent and Taste margins compress while management repeats cost-recovery language.

Management excerpt from `data_package.md` Section 6	**Skeptical read**	**First place it shows if wrong**
"mid-teens EBITDA margin goal"	Food Ingredients at 14.5% base margin is built around a management goal for a segment the company is trying to sell. Goals for assets in sale processes are especially vulnerable to buyer diligence.	Food Ingredients remains below 14.0% adjusted EBITDA margin over the next two quarters or sale terms imply a low multiple.
"full benefit in 2027"	A pipeline benefit without product-dollar disclosure is too vague to underwrite as per-share compounding. It may offset churn rather than create incremental margin.	2027 commentary shifts from wins to timing, customer delays, or pipeline selectivity.

The management appendix gives the team a YELLOW, and that is fair. The team is more credible as a cleanup operator than as a proven high-return steward. But the red team does not buy the implicit recovery credit until it appears in GAAP and cash conversion.

5. Stage 5 Tie-Out Reverification

The Stage 5 tie-outs passed arithmetically. The red-team issue is not arithmetic. It is that the recency anchor can lull the model into treating a better Q1 as normalized. The synthesis itself warns against this: Q1 FY2026 annualized revenue was $10.964 billion and adjusted operating EBITDA was $2.272 billion, but the 2026 guide stayed at $10.5 billion to $10.8 billion of sales and $2.05 billion to $2.15 billion of adjusted operating EBITDA. Management did not tell investors to annualize Q1.

The quarterly pattern also argues against comfort. Q4 FY2025 margins were weak in several places: Taste 16.0%, Food Ingredients 10.2%, and Scent 17.4%. Q1 improved, but Scent had Middle East phasing risk and unfavorable price/input cost. Food Ingredients improved to 13.6%, but it remains below the base horizon 14.5% and is in a sale process. H&B is the strongest asset, yet its product-level revenue and margin allocations are analyst assumptions because IFF does not disclose sub-line dollars.

The share count path is not the red-team target because the synthesis is already disciplined. It assumes dilution offset, not aggressive shrink. But that is also why per-share upside is limited. The company authorized $500 million of buybacks, yet historical buybacks were $16 million in FY2024 and $38 million in FY2025. TTM FCF was $400 million, while deleveraging and dividend funding remain real claims on cash. If the stock works, it will not be because buybacks manufacture EPS.

The product CAGR check is mixed. Taste base growth of 3.0% is above the latest 2.2% FY2025 growth but within a defensible mature range. Scent base growth of 2.6% is above its 1.8% FY2023-FY2025 disclosed-window CAGR despite Q1 comparable currency-neutral sales growth of only 1% and ongoing Fragrance Ingredients weakness. H&B base growth of 3.6% rests on undisclosed sub-line allocations and the assumption that North American Health recovers. Food Ingredients is the real problem: the base case says a shrinking, low-margin, for-sale segment stops shrinking and moves to 14.5% margin. That may happen, but the evidence burden should be higher than a management target.

6. Score-Derived 20% Return Claim Most Likely Wrong

The scoring audit already says the 20% hurdle fails. Red team agrees. Business Quality is 36/80, 20% Return Underwriting is 1/20, total score is 37/100, and classification is Reject. Bear IRR is negative, base IRR is negative, and even the bull case approximately fails to create the required 20% return at a 15x endpoint. Base EPS of $2.92 is far below the $5.202 EPS required for a P/E of 15 at the $78.03 price.

The score-derived claim most likely to be wrong is not a bullish claim; it is the residual generosity in the "max buy price for 20% IRR around $20.79" and the one point awarded for modest cash returns. That max buy price uses the base endpoint of $43.73 plus a rough $8.00 cumulative dividend assumption, discounted at 20% for five years. If base EPS is actually $2.32 to $2.52 because the bridge does not improve, the 15x endpoint is only about $34.80 to $37.80. If FCF conversion remains weak, the $8 dividend helper is less robust than the scorecard implies. The true 20% buy price could be lower than $20.79. This does not change the verdict, but it matters for discipline: even the reject price is not necessarily conservative.

7. The Signal That Forces an Exit

The exit signal is the bridge ratio. If IFF's TTM GAAP operating income remains below 45% of TTM adjusted operating EBITDA after Q3 FY2026, exit or refuse to upgrade. Equivalently, if TTM adjusted operating EBITDA is roughly $2.1 billion to $2.2 billion and the bridge remains greater than about $1.20 billion, the remediation thesis is not converting.

Why 45%? The current TTM conversion is about 38%: $794 million of GAAP operating profit divided by $2.076 billion of adjusted operating EBITDA. The base 2031 synthesis requires about 53% conversion: $1.305 billion of GAAP-like OI divided by $2.455 billion of adjusted EBITDA. A company that is supposedly simplifying, selling non-core assets, and improving cash discipline should show visible movement toward the base case well before 2031. If conversion cannot clear 45% after two more reported quarters, the $1.305 billion Stage 5 operating income line should be cut.

A secondary confirmation signal is Food Ingredients. If by the Q2 earnings update the sale process is delayed without credible terms, or if retained Food Ingredients margin stays below 14.0% for Q2 and Q3 FY2026 combined, assume the base $506 million horizon adjusted EBITDA line is too high. But the primary sell signal remains the bridge, because that is the line that determines whether segment quality reaches shareholders.

8. Conviction

Thesis does not survive this red team. More precisely, the recovery story can survive as a watchlist idea, but the ER2 / Gideon investment thesis does not. The synthesis should be rewritten around the statement that IFF is a monitored remediation candidate whose segment assets are better than its consolidated economics. It should not be written as a mispriced compounder temporarily hidden by accounting noise.

The base-case PASS / Reject output is directionally right, but it may still understate downside because the modeled base EPS of $2.92 relies on bridge improvement and Food Ingredients recovery that remain unproved. The right burden of proof is not "can IFF improve adjusted EBITDA?" It is "can IFF convert adjusted EBITDA into GAAP operating income, FCF, and per-share value at a price that clears 15x FY+5 EPS?" On the verified file chain, the answer remains no.

Appendix D - Data Package (Raw Historicals)

International Flavors & Fragrances Inc. - Data Package

Date prepared: 2026-05-29. Ticker: IFF. Fiscal year ends December 31. Most recently reported quarter: Q1 FY2026, quarter ended March 31, 2026, reported May 5, 2026, with the earnings call on May 6, 2026. TTM anchor: Q2 FY2025 + Q3 FY2025 + Q4 FY2025 + Q1 FY2026, ending March 31, 2026. Forward horizon: March 31, 2031.

Important gate flag: the Stage 1 ROIC and economic-quality gate is RED. The user explicitly waived that red gate and asked the ER2 / Gideon production run to continue. This package preserves the red-gate-waived status. It is a source package, not a quality clearance.

Controlling quantitative source: `C:\Users\Admin\OneDrive\GPT\ER 2.0\International Flavors & Fragrances\quant_foundation.md`, reviewed in `quant_foundation_review.md` with `QUANT FOUNDATION VERIFIED - CLEARED FOR WAVE 1`. All FMP data used here was freshly pulled in this D run from stable FMP endpoints via `C:\Users\Admin\.codex\skills\fmp-financial-data\scripts\fmp_request.py`; newly pulled FMP raw files were saved under `raw\D_IFF_*_20260529.json` and mirrored to `C:\Users\Admin\OneDrive\Cowork\Investing\data warehouse\FMP\IFF` without overwriting existing files. SEC filings and SEC 8-K exhibits were also fetched live into `raw\D_SEC_*_20260529.*`. IFF IR release pages and event pages were opened live; SEC exhibits are the saved raw official release copies where IR page downloads timed out through the shell fetcher.

Live source register for this D package:

Source family	Live source or endpoint	Local raw evidence	Used for
FMP annual statements	`income-statement`, `balance-sheet-statement`, `cash-flow-statement`, annual period	`D_IFF_income_statement_annual_20260529.json`; `D_IFF_balance_sheet_annual_20260529.json`; `D_IFF_cash_flow_annual_20260529.json`	Five-year consolidated history, capital allocation, balance sheet
FMP quarterly statements	`income-statement`, `balance-sheet-statement`, `cash-flow-statement`, quarterly period	`D_IFF_income_statement_quarter_20260529.json`; `D_IFF_balance_sheet_quarter_20260529.json`; `D_IFF_cash_flow_quarter_20260529.json`	TTM bridge support and Q1 FY2026 balance sheet
FMP segmentation	`revenue-product-segmentation`, annual and quarter periods	`D_IFF_revenue_product_segmentation_annual_20260529.json`; `D_IFF_revenue_product_segmentation_quarter_20260529.json`	FMP endpoint status and phantom Pharma defect
FMP geographic data	`revenue-geographic-segmentation`, annual period	`D_IFF_revenue_geographic_segmentation_annual_20260529.json`	Geographic sales summary
FMP transcripts	`earning-call-transcript`, FY2025 Q2-Q4 and FY2026 Q1	`D_IFF_transcript_2025_Q2_20260529.json`; `D_IFF_transcript_2025_Q3_20260529.json`; `D_IFF_transcript_2025_Q4_20260529.json`; `D_IFF_transcript_2026_Q1_20260529.json`	Management commentary and call-date checks
SEC annual filings	2021-2025 Form 10-K HTML filings	`D_SEC_IFF_2021_10K_primary_20260529.htm` through `D_SEC_IFF_2025_10K_primary_20260529.htm`	Taxonomy, segment history, GAAP overrides
SEC quarterly filings	Q2 FY2025, Q3 FY2025, and Q1 FY2026 Form 10-Q HTML filings	`D_SEC_IFF_2025_Q2_10Q_primary_20260529.htm`; `D_SEC_IFF_2025_Q3_10Q_primary_20260529.htm`; `D_SEC_IFF_2026_Q1_10Q_primary_20260529.htm`	Interim tie-outs and disclosure checks
SEC earnings releases	Q2 FY2025, Q3 FY2025, Q4/FY2025, and Q1 FY2026 Exhibit 99.1	`D_SEC_IFF_2025_Q2_8K_ex991_release_20260529.htm`; `D_SEC_IFF_2025_Q3_8K_ex991_release_20260529.htm`; `D_SEC_IFF_2025_Q4FY_8K_ex991_release_20260529.htm`; `D_SEC_IFF_2026_Q1_8K_ex991_release_20260529.htm`	Last-four-quarter segment trend and guidance
IFF IR pages	Quarterly release pages, Q1 FY2026 event page, 2026 CAGNY event page	Opened live through web fetcher; SEC exhibit files retained as raw saved copies	Cross-check against company IR and presentation inventory

Method note: where FMP conflicts with official SEC or IFF release material, this package follows QF and the official filing/release. The FMP conflict is not discarded; it is preserved as a documented data defect so downstream agents do not accidentally re-import the stale or misclassified line.

0a. Industry classification and disclosure inventory

IFF is a U.S. domestic Form 10-K and Form 10-Q filer in specialty ingredients, flavors, fragrances, food ingredients, and biosciences. The economic reporting regime is ordinary U.S. GAAP consolidated reporting plus reportable-segment net sales and Segment Adjusted Operating EBITDA. The controlling official source set is IFF's 2025 Form 10-K, Q1 2026 Form 10-Q, Q2 2025 and Q3 2025 Forms 10-Q, filed 8-K Exhibit 99.1 earnings releases for Q2 2025, Q3 2025, Q4/FY 2025, and Q1 2026, IFF IR release and events pages, and FMP transcripts for the last four calls. FMP product data is not SKU/product data; the `revenue-product-segmentation` endpoint is segment-level and has a material Q3 FY2025 defect: it includes a phantom Pharma Solutions line after the business had been divested.

The industry checklist is triggered because FMP segment/product data is sparse, not SKU-level, and inconsistent with official post-divestiture reporting. Search terms checked in official materials: segment, reportable segment, Taste, Food Ingredients, Nourish, Health & Biosciences, Scent, Pharma Solutions, Fine Fragrance, Consumer Fragrance, Fragrance Ingredients, Animal Nutrition, Food Biosciences, Home & Personal Care, Health, Inclusions, Protein Solutions, Systems, Emulsifiers, Sweeteners, soy crush, lecithin, net sales, adjusted operating EBITDA, guidance, free cash flow, net debt, and credit adjusted EBITDA.

Dataset / table family	Official source searched	Search terms or table names	Years available	Included in data package?	If excluded, why	Downstream relevance
Consolidated financial statements	FMP stable statements; SEC 2021-2025 10-K; Q1 2026 10-Q	Net sales, operating profit, EPS, debt, cash flow	FY2021-FY2025 plus Q1 FY2026	Yes	N/A	Synthesis, valuation, ROIC
Current segment economics	2025 10-K; Q2-Q4 2025 and Q1 2026 Exhibit 99.1 releases	Taste, Food Ingredients, Health & Biosciences, Scent, Pharma Solutions	Recast FY2023-FY2025 plus TTM quarters	Yes	N/A	Segment appendices, model base
Legacy segment economics	2021 and 2022 10-K segment tables; FMP segment endpoint	Nourish, Health & Biosciences, Scent, Pharma Solutions	FY2021-FY2022 in old taxonomy	Yes	Not comparable to Taste and Food Ingredients	Boundary control
SKU-level products	10-K, 10-Qs, releases, transcripts, IR event pages	Fine Fragrance, Consumer Fragrance, Ingredients, Inclusions, Animal Nutrition	Qualitative growth only	No dollar table	True non-disclosure after sources searched	Prevents product-dollar fabrication
Geographic revenue	FMP revenue-geographic-segmentation; 10-K	North America, EMEA, Asia, Latin America, United States	FY2021-FY2025	Yes in summary	No segment-by-region profit	Moat, end-market exposure
Presentations and supplements	IFF events pages; Q1 2026 event page; 2026 CAGNY event page	Earnings presentation, CAGNY presentation, supporting materials	Q2 2025-Q1 2026 events and CAGNY 2026	Inventory only	Not controlling for historical dollars	Forward commentary
Transcripts	FMP `earning-call-transcript` live endpoint	FY2025 Q2, Q3, Q4; FY2026 Q1	Last four earnings calls	Yes	Company site offers webcast, not text transcript	Management commentary

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim / TTM	Source path
Consolidated revenue	Company	$11.656B	$12.440B	$11.479B	$11.484B	$10.890B	TTM $10.788B	FMP income statement; SEC 10-K
Segment revenue	Current taxonomy where available	Old Nourish boundary	Old Nourish boundary	Recast current segments	Recast current segments	Recast current segments	Q2 FY25-Q1 FY26 current quarters	SEC 10-K and 8-K Exhibit 99.1
Segment adjusted operating EBITDA	Current taxonomy where available	Old Nourish boundary	Old Nourish boundary	Recast current segments	Recast current segments	Recast current segments	Q2 FY25-Q1 FY26 current quarters	SEC 10-K and 8-K Exhibit 99.1
Product/SKU revenue	Product within segment	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Official sources searched
Leverage and FCF	Company	FCF $1.040B	FCF $(0.109)B	FCF $0.936B	FCF $0.602B	FCF $0.256B	TTM FCF $0.400B; Q1 net debt/EBITDA 2.5x	FMP cash flow; IFF releases

1. Reporting structure and taxonomy

Current reportable segments for 2025 and Q1 2026 are Taste, Food Ingredients, Health & Biosciences, Scent, and Pharma Solutions as a divested stub. Effective January 1, 2025, IFF separated the former Nourish segment into Taste and Food

Ingredients. Pharma Solutions was divested in May 2025 and should not be treated as a continuing segment after Q2 FY2025. The official TTM base therefore includes Pharma Solutions only for Q2 FY2025.

Segment	FY2025 revenue	FY2025 % of revenue	FY2025 adjusted operating EBITDA	Segment description and taxonomy note
Taste	$2.481B	22.8%	$0.478B	Flavor compounds, taste solutions, spices, seasonings, and food and beverage formulation support; created from former Nourish split.
Food Ingredients	$3.278B	30.1%	$0.423B	Specialty food ingredients including proteins, emulsifiers, sweeteners, systems, protection, savory, and inclusions; active sale process.
Health & Biosciences	$2.283B	21.0%	$0.594B	Enzymes, cultures, probiotics, animal nutrition, food biosciences, home and personal care, health, and industrial bioscience.
Scent	$2.479B	22.8%	$0.515B	Fine fragrance, consumer fragrance, and fragrance ingredients; commodity fragrance ingredients remain a headwind.
Pharma Solutions	$0.369B	3.4%	$0.076B	Divested May 2025; included only as a historical stub and not a continuing forward segment.

Geographic sales are broad and global. FMP geographic segmentation for FY2025 reports North America $3.195B, EMEA $3.727B, Asia $2.546B, and Latin America $1.422B, with the United States disclosed at $3.075B. The geographic endpoint is useful for exposure but does not provide segment profit by region.

Taxonomy boundary: FY2023-FY2025 current-taxonomy annual segment economics are available from the 2025 10-K and QF. FY2021-FY2022 were disclosed under the old Nourish, Health & Biosciences, Scent, and Pharma Solutions structure. Do not compare 2021-2022 Nourish directly to 2023-2025 Taste or Food Ingredients without an explicit bridge.

2. Consolidated historicals

The following table uses live FMP statement pulls with QF-cleared official overrides where FMP fields do not represent the controlling GAAP line. In particular, FY2025 GAAP operating loss is $(382)M, not the FMP `operatingIncome` field of $842M. FY2025 official 10-K diluted EPS is $(1.41); the FMP and unaudited-release EPS of $(1.46) is separated as a source discrepancy.

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue	$11.656B	$12.440B	$11.479B	$11.484B	$10.890B	FMP income statement; SEC 10-K
GAAP operating income / loss	$0.585B	$(1.326)B	$(2.110)B	$0.766B	$(0.382)B	FMP; FY2025 SEC override
Operating margin	5.0%	-10.7%	-18.4%	6.7%	-3.5%	Calculated
Net income attributable	$0.268B	$(1.868)B	$(2.565)B	$0.243B	$(0.361)B	FMP; SEC tie
Diluted EPS	$1.10	$(7.20)	$(10.06)	$0.95	$(1.41)	FMP; FY2025 10-K EPS controls
Diluted share count	243M	255M	255M	256M	256M	FMP income statement
Capex	$(0.397)B	$(0.506)B	$(0.503)B	$(0.468)B	$(0.594)B	FMP cash flow
Free cash flow	$1.040B	$(0.109)B	$0.936B	$0.602B	$0.256B	FMP cash flow
ROIC, simple after-tax EBIT / invested capital	1.4%	-3.4%	-6.2%	2.5%	-1.4%	Calculated; tax rate 21%

ROIC calculation uses NOPAT equal to GAAP operating income times 79%, divided by average invested capital where available. Invested capital is total debt plus total stockholders' equity less cash. FY2021 uses ending invested capital because the pre-DuPont merger 2020 balance sheet is not comparable. This simple ROIC series is directionally consistent with the Stage 1 red economic-quality gate: IFF is not currently demonstrating a Gideon-quality reinvestment profile.

3. Segment historicals

IFF's segment profit measure is Segment Adjusted Operating EBITDA, not GAAP segment operating income. The tables below therefore show revenue, YoY revenue growth, adjusted operating EBITDA, and adjusted operating EBITDA margin.

Current taxonomy segment	FY2023 revenue	FY2024 revenue	FY2025 revenue	FY2025 EBITDA	FY2025 margin	Boundary
Taste	$2.303B	$2.428B	$2.481B	$0.478B	19.3%	Recast from former Nourish; comparable from FY2023
Food Ingredients	$3.692B	$3.365B	$3.278B	$0.423B	12.9%	Recast from former Nourish; comparable from FY2023
Health & Biosciences	$2.071B	$2.203B	$2.283B	$0.594B	26.0%	Comparable current segment
Scent	$2.393B	$2.439B	$2.479B	$0.515B	20.8%	Comparable current segment
Pharma Solutions	$1.020B	$1.049B	$0.369B	$0.076B	20.6%	Divested May 2025
Total	$11.479B	$11.484B	$10.890B	$2.086B	19.2%	Segment sum

Legacy taxonomy segment	FY2021 revenue	FY2022 revenue	FY2021 EBITDA	FY2022 EBITDA	Boundary note
Nourish	$6.264B	$6.829B	$1.172B	$1.176B	Old segment later split into Taste and Food Ingredients.
Health & Biosciences	$2.329B	$2.339B	$0.625B	$0.634B	Comparable name but prior-year portfolio not fully recast.
Scent	$2.254B	$2.301B	$0.463B	$0.423B	Comparable name but prior-year portfolio not fully recast.
Pharma Solutions	$0.809B	$0.971B	$0.165B	$0.222B	Former segment divested May 2025.
Total	$11.656B	$12.440B	$2.425B	$2.455B	Old taxonomy.

Segment	FY2023 YoY	FY2024 YoY	FY2025 YoY	Main interpretation
Taste	N/A	5.4%	2.2%	Stable growth after the recast; Q1 FY2026 margin was notably strong.
Food Ingredients	N/A	-8.9%	-2.6%	Revenue contraction reflects soft demand and strategic exits from low-margin business.
Health & Biosciences	N/A	6.4%	3.6%	Highest segment margin, but Health weakness in North America was a recurring 2025 issue.
Scent	N/A	1.9%	1.6%	Fine Fragrance strong; commodity fragrance ingredients pressure margin and mix.
Pharma Solutions	N/A	2.8%	-64.8%	Decline is structural from May 2025 divestiture.

4. Product and sub-segment disclosure

No SKU-level or product-family dollar revenue table was found in the 10-K, 10-Qs, IR releases, event pages, or FMP product segmentation. FMP's product endpoint is segment-level. Downstream subagents should not invent dollars for Fine Fragrance, Consumer Fragrance, Fragrance Ingredients, Inclusions, Protein Solutions, Animal Nutrition, Food Biosciences, Home & Personal Care, Health, or other sub-lines.

Segment	Product or sub-line	What it is	Dollar disclosure?	Last 3 years revenue + source
Taste	Flavor compounds, taste solutions, spices, seasonings	Food and beverage taste formulation	Segment dollars only	No separate product dollars; segment revenue disclosed in 10-K

Segment	Product or sub-line	What it is	Dollar disclosure?	Last 3 years revenue + source
Food Ingredients	Inclusions, Systems, Protein Solutions, Emulsifiers, Sweeteners, soy crush and lecithin	Food texture, nutrition, systems, and ingredient portfolio	Segment dollars only	No separate product dollars; some growth commentary in releases
Health & Biosciences	Animal Nutrition, Food Biosciences, Home & Personal Care, Health, Grain Processing	Enzymes, cultures, probiotics, health and industrial biosciences	Segment dollars only	No separate product dollars; growth commentary only
Scent	Fine Fragrance, Consumer Fragrance, Fragrance Ingredients	Fragrance compounds and ingredients	Segment dollars only	No separate product dollars; growth commentary only
Pharma Solutions	Excipients and related pharma ingredients	Former segment	Former segment dollars only	Segment sold May 2025

Segment	Product or sub-line	Disclosure method	Last 4 quarters YoY growth	Source
Scent	Fine Fragrance	Qualitative and percentage commentary	Q3 FY2025 Fine Fragrance +20%; Q1 FY2026 growth was positive but Middle East disrupted Q2 outlook	Q3 and Q1 releases/transcripts
Scent	Consumer Fragrance	Qualitative growth commentary	Low-single-digit growth in Q2/Q3 FY2025; Q1 FY2026 positive	IFF releases
Scent	Fragrance Ingredients	Qualitative decline commentary	Down in Q1 FY2026; low-single-digit decline in Q3 FY2025; commodity portion pressured	IFF releases/transcripts
Food Ingredients	Inclusions	Qualitative growth commentary	Q1 FY2026 strong double-digit; Q2/Q3/Q4 2025 cited as growth contributor	IFF releases/transcripts
Food Ingredients	Protein Solutions	Qualitative weakness commentary	Q3 and Q4 FY2025 softness; exited some low-margin business	IFF releases/transcripts
Health & Biosciences	Animal Nutrition and Food Biosciences	Qualitative growth commentary	Q1 FY2026 led H&B growth; FY2025 Food Biosciences high-single-digit	IFF releases
Health & Biosciences	Health in North America	Qualitative weakness commentary	2025 pressure, expected improvement in second half 2026 and 2027	FMP transcripts

5. Most recent quarterly trend

Company FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q1, covering January-March 2026, reported on May 5, 2026 via https://ir.iff.com/news-releases/news-release-details/iff-reports-first-quarter-2026-results and filed as SEC Exhibit 99.1 at https://www.sec.gov/Archives/edgar/data/51253/000005125326000015/q12026991pressreleaseofiff.htm.

Quarter	Segment	Revenue	Comparable currency-neutral sales growth	Adjusted EBITDA margin	Source
Q2 FY2025	Taste	$0.631B	6%	19.8%	Q2 2025 IR and SEC Exhibit 99.1
Q2 FY2025	Food Ingredients	$0.850B	1%	14.6%	Q2 2025 IR and SEC Exhibit 99.1
Q2 FY2025	Health & Biosciences	$0.577B	4%	26.2%	Q2 2025 IR and SEC Exhibit 99.1
Q2 FY2025	Scent	$0.603B	1%	21.6%	Q2 2025 IR and SEC Exhibit 99.1
Q2 FY2025	Pharma Solutions	$0.103B	21%	21.4%	Q2 2025 IR and SEC Exhibit 99.1
Q3 FY2025	Taste	$0.635B	2%	20.2%	Q3 2025 IR and SEC Exhibit 99.1
Q3 FY2025	Food Ingredients	$0.830B	-3%	12.8%	Q3 2025 IR and SEC Exhibit 99.1

Quarter	Segment	Revenue	Comparable currency-neutral sales growth	Adjusted EBITDA margin	Source
Q3 FY2025	Health & Biosciences	$0.577B	0%	26.0%	Q3 2025 IR and SEC Exhibit 99.1
Q3 FY2025	Scent	$0.652B	5%	20.7%	Q3 2025 IR and SEC Exhibit 99.1
Q3 FY2025	Pharma Solutions	$0.000B	N/A	N/A	Divested; FMP phantom line overridden
Q4 FY2025	Taste	$0.588B	2%	16.0%	Q4/FY 2025 IR and SEC Exhibit 99.1
Q4 FY2025	Food Ingredients	$0.802B	-4%	10.2%	Q4/FY 2025 IR and SEC Exhibit 99.1
Q4 FY2025	Health & Biosciences	$0.589B	5%	26.3%	Q4/FY 2025 IR and SEC Exhibit 99.1
Q4 FY2025	Scent	$0.610B	4%	17.4%	Q4/FY 2025 IR and SEC Exhibit 99.1
Q4 FY2025	Pharma Solutions	$0.000B	N/A	N/A	Divested
Q1 FY2026	Taste	$0.656B	2%	23.3%	Q1 2026 IR and SEC Exhibit 99.1
Q1 FY2026	Food Ingredients	$0.839B	3%	13.6%	Q1 2026 IR and SEC Exhibit 99.1
Q1 FY2026	Health & Biosciences	$0.595B	5%	25.7%	Q1 2026 IR and SEC Exhibit 99.1
Q1 FY2026	Scent	$0.651B	1%	22.7%	Q1 2026 IR and SEC Exhibit 99.1
Q1 FY2026	Pharma Solutions	$0.000B	N/A	N/A	Divested

TTM segment base from QF: Taste revenue $2.510B and adjusted operating EBITDA $500M; Food Ingredients $3.321B and $426M; Health & Biosciences $2.338B and $609M; Scent $2.516B and $519M; Pharma Solutions $103M and $22M. Consolidated TTM revenue is $10.788B, adjusted operating EBITDA is $2.076B, GAAP operating profit is $794M, and free cash flow is $400M.

6. Management commentary and guidance

Transcript source status: FMP live transcript endpoint returned Q2 FY2025 dated 2025-08-06, Q3 FY2025 dated 2025-11-05, Q4 FY2025 dated 2026-02-12, and Q1 FY2026 dated 2026-05-06. The company IR pages provide webcasts and slide materials; FMP is the text transcript source used here. To keep the data package copyright-safe, direct excerpts are short and the modeling read-through is paraphrased.

Period	Speaker / source	Segment or topic	Short verbatim excerpt	Modeling read-through
Q1 FY2026 call, 2026-05-06	Erik Fyrwald, CEO	2026 guidance	"reaffirm our full year 2026 financial guidance"	Q1 beat does not raise the annual range; model should not annualize Q1 margin.
Q1 FY2026 call, 2026-05-06	Michael DeVeau, CFO	Scent and Q2 phasing	"Fine Fragrance volume in the Middle East will be impacted"	Scent Q2 has mix and volume risk despite FY guide being reaffirmed.
Q1 FY2026 call, 2026-05-06	Erik Fyrwald, CEO	Food Ingredients	"strong interest in this business"	Sale process remains live; downstream models need a divestiture case.
Q1 FY2026 call, 2026-05-06	Michael DeVeau, CFO	Inflation and pricing	"fully offset any inflation"	Pricing recovery is expected, but CFO described a 12-18 month cycle.
Q4 FY2025 call, 2026-02-12	Erik Fyrwald, CEO	Portfolio	"officially launched the sale process"	Food Ingredients should be modeled as either held for sale or divested.
Q4 FY2025 call, 2026-02-12	Michael DeVeau, CFO	Cash flow	"key priority for us in 2026"	FCF improvement is a management priority after weak 2025 conversion.
Q3 FY2025 call, 2025-11-05	Erik Fyrwald, CEO	Health & Biosciences	"short-term pressures in Health & Biosciences"	Health recovery is a 2026/2027 execution item, not a proven trend.

Period	Speaker / source	Segment or topic	Short verbatim excerpt	Modeling read-through
Q3 FY2025 call, 2025-11-05	Erik Fyrwald, CEO	Scent	"Fine Fragrance business has shown tremendous growth rates"	Scent has a strong premium fragrance core offset by ingredient weakness.
Q2 FY2025 call, 2025-08-06	Erik Fyrwald, CEO	Food Ingredients	"mid-teens EBITDA margin goal"	Management frames Food Ingredients turnaround around margin, not volume growth.
Q2 FY2025 call, 2025-08-06	Erik Fyrwald, CEO	Innovation pipeline	"full benefit in 2027"	Pipeline investments are expected to show more materially after 2026.

The Q1 FY2026 release reaffirmed 2026 sales of $10.5B-$10.8B and adjusted operating EBITDA of $2.05B-$2.15B. The Q4/FY2025 release framed 2026 comparable currency-neutral sales growth at 1%-4% and comparable currency-neutral adjusted operating EBITDA growth at 3%-8%, with divestitures expected to reduce reported sales and adjusted EBITDA growth by about 5%. Q1 commentary updated the soy crush, concentrates, and lecithin divestiture assumption to two months in guidance because it closed on March 2, 2026.

7. Capital allocation history

Year	Capex	Capex / revenue	R&D	R&D / revenue	Buybacks	Dividends	M&A / dispositions cash flow	Source
FY2021	$0.397B	3.4%	$0.629B	5.4%	$0.000B	$0.667B	$0.361B	FMP statements
FY2022	$0.506B	4.1%	$0.603B	4.8%	$0.000B	$0.810B	$1.070B	FMP statements
FY2023	$0.503B	4.4%	$0.636B	5.5%	$0.000B	$0.826B	$1.050B	FMP statements
FY2024	$0.468B	4.1%	$0.671B	5.8%	$0.016B	$0.514B	$0.000B	FMP statements
FY2025	$0.594B	5.5%	$0.694B	6.4%	$0.038B	$0.409B	$2.764B	FMP statements; divestiture proceeds

The board authorized a $500M share repurchase program in Q2 FY2025. Management describes the program as "dilution plus": at minimum, it aims to offset annual share dilution of roughly $80M-$100M, while larger repurchases may depend on divestiture proceeds and leverage. Deleveraging remains a central capital allocation constraint. Q1 FY2026 net debt to credit adjusted EBITDA was reported at 2.5x, and management repeatedly indicated it wants to maintain balance sheet discipline.

8. Balance sheet snapshot

Item	Value	Source
Cash and equivalents at 2026-03-31	$0.562B	FMP balance sheet; Q1 2026 10-Q
Short-term investments	$0.000B	FMP balance sheet
Total debt, current plus long-term	$5.817B	FMP balance sheet; Q1 2026 10-Q
Net debt	$5.255B	Debt less cash
TTM adjusted operating EBITDA	$2.076B	QF official quarter sum
Net debt / adjusted operating EBITDA	2.5x	QF and Q1 release
Goodwill plus intangibles	$14.087B	FMP balance sheet
Total stockholders' equity	$14.120B	FMP balance sheet
Tangible book value	$0.033B	Equity less goodwill and intangibles

Debt labeling note: FY2025 official borrowings/debt is $5.994B from the 10-K. FMP's FY2025 `totalDebt` field is lease-inclusive at $6.651B. The QF bridge separates official borrowings/debt from lease-inclusive total debt, and this package preserves that distinction.

9. Recent corporate actions

- Effective January 1, 2025: IFF changed its segment taxonomy by splitting the former Nourish segment into Taste and Food Ingredients.

- May 1, 2025: Pharma Solutions disposal group divested. Nitrocellulose was divested on May 9, 2025. Pharma is therefore not a continuing segment after Q2 FY2025.
- August 5, 2025: IFF announced a definitive agreement to sell the soy crush, concentrates, and lecithin business to Bunge; the business generated approximately $240M of revenue in 2024.
- August 5, 2025: IFF announced a new $500M share repurchase authorization.
- Q4 FY2025 and Q1 FY2026: management described an active Food Ingredients sale process. Q1 transcript says several potential buyers were in second-round diligence and an update was expected by the Q2 earnings call.
- March 2, 2026: IFF completed the soy crush, concentrates, and lecithin divestiture to Bunge for $110M, according to Q1 FY2026 management commentary and release.
- February-May 2026: IFF reaffirmed 2026 sales and adjusted operating EBITDA guidance despite Middle East disruption and input-cost inflation risk.

10. Open data gaps and controls

Gap	Classification	Sources searched	Treatment
SKU-level product revenue by Fine Fragrance, Consumer Fragrance, Inclusions, Animal Nutrition, and similar lines	True non-disclosure	10-K, 10-Qs, 8-K releases, IR pages, transcripts, FMP product endpoint	Do not invent product dollars. Use segment dollars and qualitative growth only.
FMP quarterly Q3 FY2025 Pharma Solutions revenue	Data defect	FMP `revenue-product-segmentation` quarter; Q3 2025 IR and SEC Exhibit 99.1	Exclude the $369M phantom line; official source controls.
Segment GAAP operating income	True non-disclosure	10-K segment note and releases	Use Segment Adjusted Operating EBITDA, the CODM metric disclosed by IFF.
Taste and Food Ingredients before FY2023	Taxonomy boundary	2021-2022 10-K; 2025 10-K recast	Pre-FY2023 current-taxonomy dollars not used; old Nourish boundary shown separately.
Company-hosted text transcripts	Not fetched / omitted	IFF IR events pages	FMP live transcript endpoint used; company site provides webcasts and materials.
Static IR presentation raw PDFs	Not fetched / omitted	IFF Q1 2026 and CAGNY event pages opened live; shell raw download timed out	Presentations inventoried and not used as controlling historical data.

Key controls for downstream agents:

- Preserve the red-gate-waived flag. This run is not economically cleared despite QFR clearing the quant foundation.
- Use TTM ending March 31, 2026 as the forward base: revenue $10.788B, adjusted operating EBITDA $2.076B, GAAP operating profit $794M, and FCF $400M.
- Food Ingredients is the largest TTM revenue segment at $3.321B, but it is in an active sale process. A continuing-company model and a divestiture/deleveraging model may diverge materially.
- Scent has favorable Fine Fragrance and Consumer Fragrance commentary but continuing commodity Fragrance Ingredients pressure and Middle East Q2 risk.
- Health & Biosciences has the best segment margin in the TTM base, but management identified North American Health weakness in 2025 and a recovery path into 2026-2027.
- No sub-segment product dollars are disclosed. Product-growth commentary can guide qualitative assumptions but cannot be used as a dollar base.
- FY2025 official GAAP operating loss is $(382)M and official 10-K EPS is $(1.41). Do not use FMP's FY2025 operating-income field as GAAP operating income.
- FY2025 official borrowings/debt is $5.994B; lease-inclusive total debt is a separate bridge.