# LLY gideon lens

## Eli Lilly and Company (LLY) — Gideon-Lens Equity Research

**Report ID:** `er2-lly-20260804T190229+0800` **Date:** 2026-08-04 **Analyst:** Codex ER2 production orchestrator **Price anchor:** USD 1,121.36, XNYS completed close on 2026-08-03 **Market-cap diagnostic:** approximately USD 1,004.63 billion using 895.9 million quote-basis diluted shares **Fiscal year end:** December 31 **Authority:** Research only; no trade, broker, portfolio-mutation, or message authority.

### What changed from the previous report and why

**Previous report:** LEGACY-LLY-20260428; 2026-04-28; `C:\Users\Admin\OneDrive\GPT\ER 2.0\Eli Lilly and Company\raw\pulse-cio-20260804T190229+0800\prior_active_snapshot\LLY_gideon_lens.md`; SHA-256 `662f95846e27e85bb8b225a9c5465550f2eb859d6e52f5f418025011fa72f43d` **Current report:** er2-lly-20260804T190229+0800; 2026-08-04; price anchor USD 1,121.36 as of 2026-08-03

| Area | Previous report | Current report | What changed and why | Decision impact |
|---|---|---|---|---|
| Price anchor | USD 883.96 on 2026-04-26 | USD 1,121.36 on 2026-08-03 | Price/market: share price rose 26.86% | Raises required earnings and leaves less return support |
| ER2 verdict and gates | PASS; Management PASS; Moat YELLOW; P/E-15 FAIL | PASS; Management PASS; Moat YELLOW including 2046; P/E-15 FAIL | New evidence confirms execution and pipeline depth, but pricing, concentration, renewal, and valuation risks remain | No verdict change |
| FY+5 valuation bridge | USD 41.60 base EPS; USD 58.93 required; -29.4% cushion | USD 55.744 base EPS at 2031-03-31; USD 74.757 required; -25.43% cushion | Model/assumption: refreshed Q1-2026 TTM base and exact five-year horizon lift EPS; higher price lifts the requirement | Base still fails decisively |
| Shareholder returns | Mandatory scenario and weighted returns were not published | Gross USD IRRs -15.40% / 4.07% / 16.31%; weighted 3.81% | Methodology: governed P/E terminal-wealth bridge adds explicit probabilities and distributions | Makes inadequate expected return visible |
| CIO actionability | No governed net-SGD classification; 0% research stance | PASS; net-SGD -16.67% / 3.83% / 17.24%; weighted 3.84%; no sizing | Methodology and portfolio context: conservative FX, costs, withholding, and low-correlation healthcare context are explicit | Diversification does not overcome return failure |
| Audited scores | 64/100; 63/80; 1/20 | 65/100; 62/80; 3/20 | Scoring audit: stronger return documentation, but lower quality credit for acquisition-inclusive ROIIC and undisclosed unit economics | Still below dream-investment and 20% bars |
| Methodology or corrections | FY2025 official operating-income correction already used; no mandatory return package | QF/QFR sealed latest-FY/TTM bridges; FY2025 FMP OI overstatement of USD 3.394B overridden; returns use one P/E method | Correction and methodology: official filings control, probability weighting uses terminal wealth, and no P/E capital-structure double count occurs | Higher confidence in a still-negative conclusion |

**Bottom line:** Evidence and base EPS improved, but the price rose almost 27% and the governed bridge shows only 4.07% base gross USD and 3.84% weighted net-SGD IRR. The unchanged PASS is economic: excellent execution cannot compensate for a price requiring exceptional growth, margins, and premium valuation.

**Verdict:** PASS

**Scorecard:**

| Gate | Result | Notes |
|---|---|---|
| Management | PASS | Proven execution; monitor buybacks, incentives, acquisitions, and return discipline |
| Moat | YELLOW | Strong present franchise; 2046 renewal remains unproven and concentrated |
| P/E <= 15 on confident EPS at TTM + 5 calendar years | FAIL | Base valuation cushion is -25.43% |
| Compounder Score | Audited 65 / 100 | Reject diagnostic; evidence does not support dream-investment status |
| Business Quality Score | Audited 62 / 80 | Promising quality, but acquisition returns and durability remain incomplete |
| 20% Return UW Score | Audited 3 / 20 | Current price does not support the 20% return hurdle |

**One-line thesis (or reason to pass):** Lilly is a high-return growth franchise, but USD 1,121.36 capitalizes too much of a concentrated cardiometabolic future while base and weighted returns remain below mandate hurdles.

**Security return underwriting (mandatory even when the verdict is PASS):**

| Measure | Result | Notes |
|---|---|---|
| Primary valuation method | P/E | One audited method across all scenarios, probability weighting, reverse return, and net-SGD |
| Gross local-currency bear / base / bull IRR | -15.40% / 4.07% / 16.31% | Five-year annualized shareholder return in USD |
| Probability-weighted gross local-currency IRR | 3.81% | CAGR of weighted terminal wealth using 25% / 55% / 20% weights |
| Return bridge | USD 1,121.36 -> scenario terminal wealth | Exact horizon 2026-03-31 to 2031-03-31; EPS × 18x/24x/28x plus USD 31.10 distributions; 895.9M start and 876.428M terminal diluted shares |

Gross local-currency underwriting is in USD; net-SGD adjustments appear separately in CIO actionability. Q1-2026 net debt is USD 38.088B before short-term investments. Because P/E capitalizes equity EPS, terminal net cash/debt is inapplicable and no separate adjustment is added; this passes the double-count check.

## Bear-case operating and return bridge

| Bear case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | USD 72.249B | USD 82.043B | 2.58% CAGR | Payer price resets, competition, and later franchise contraction overwhelm early demand |
| Operating margin | 43.63% | 34.75% | -8.88 pp | Lower net price, excess capacity, R&D, and financing drag compress statutory margin |
| Operating earnings | USD 31.522B statutory OI | USD 28.510B statutory OI | -1.99% CAGR | Revenue times modeled statutory margin through the sealed net-income reversal bridge |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Flat USD 5B buybacks less SBC issuance |
| EPS | USD 28.1436849 | USD 25.27531897 | -2.13% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |
| Valuation | 39.84x P/E | 18.0x P/E | -21.84x | Mature low-growth franchise with price and concentration risk |
| Share value | USD 1,121.36 | USD 454.95574146 | -16.51% CAGR | Terminal EPS × 18.0x; no net cash/debt adjustment under P/E |
| Annual dividend | USD 6.219512753 | USD 6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |

| Bear case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Dividend yield | 0.55% | 1.37% | +0.81 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | USD 31.097563765 | cumulative | Five flat annual distributions; no growth assumed |
| Total ending value | USD 1,121.36 current price | USD 486.053305225 | -15.40% gross local IRR | Terminal share value plus cumulative distributions |

## Base-case operating and return bridge

| Base case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | USD 72.249B | USD 128.569B | 12.22% CAGR | Incretin growth decelerates while oral and pipeline products broaden the franchise |
| Operating margin | 43.63% | 47.46% | +3.83 pp | Manufacturing utilization and scale offset rebates, depreciation, and continued R&D |
| Operating earnings | USD 31.522B statutory OI | USD 61.023B statutory OI | 14.12% CAGR | Mechanical statutory bridge from modeled net income |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Same reviewed buyback and SBC path across scenarios |
| EPS | USD 28.1436849 | USD 55.74444671 | 14.65% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |
| Valuation | 39.84x P/E | 24.0x P/E | -15.84x | Premium quality but material de-rating as growth matures |
| Share value | USD 1,121.36 | USD 1,337.86672104 | 3.59% CAGR | Terminal EPS × 24.0x; no net cash/debt adjustment under P/E |
| Annual dividend | USD 6.219512753 | USD 6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |
| Dividend yield | 0.55% | 0.46% | -0.09 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | USD 31.097563765 | cumulative | Conservative flat distribution diagnostic |
| Total ending value | USD 1,121.36 current price | USD 1,368.964284805 | 4.07% gross local IRR | Terminal share value plus cumulative distributions |

## Bull-case operating and return bridge

| Bull case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | USD 72.249B | USD 167.604B | 18.33% CAGR | Category leadership, global penetration, oral scale, retatrutide, and specialty success |
| Operating margin | 43.63% | 53.26% | +9.63 pp | High utilization, favorable mix, disciplined rebates, and productive R&D create leverage |
| Operating earnings | USD 31.522B statutory OI | USD 89.270B statutory OI | 23.15% CAGR | Mechanical statutory bridge from modeled bull net income |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Same reviewed buyback and SBC path across scenarios |
| EPS | USD 28.1436849 | USD 84.14380970 | 24.49% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |
| Valuation | 39.84x P/E | 28.0x P/E | -11.84x | Sustained leadership earns a premium still below current P/E |

| Bull case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Share value | USD 1,121.36 | USD 2,356.02667160 | 16.01% CAGR | Terminal EPS × 28.0x; no net cash/debt adjustment under P/E |
| Annual dividend | USD 6.219512753 | USD 6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |
| Dividend yield | 0.55% | 0.26% | -0.29 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | USD 31.097563765 | cumulative | Conservative flat distribution diagnostic |
| Total ending value | USD 1,121.36 current price | USD 2,387.124235365 | 16.31% gross local IRR | Terminal share value plus cumulative distributions |

**CIO actionability (separate from ER2 underwriting):**

| Measure | Result | Notes |
|---|---|---|
| Status | PASS | Base return below 8% makes the completed Production ER2 non-actionable |
| Bear / Base / Bull net SGD IRR | -16.67% / 3.83% / 17.24% | Five-year annualized after 0.25% entry/exit costs, 30% dividend withholding, and scenario FX |
| Probability-weighted net SGD IRR | 3.84% | 25% / 55% / 20% weights; CAGR of weighted terminal SGD wealth |
| 10% mandate hurdle | FAIL | Base and probability-weighted cases both fall below 10% |
| 15% stretch hurdle | FAIL | Only the bull case clears the upside objective |
| Downside and portfolio fit | WATCH | Low correlation and healthcare diversification help, but -16.67% bear downside dominates |
| Proposed sizing ceiling | none | Research has no sizing authority; no allocation proposal is supported |

**Trade execution authorized:** NO

**Kill / trigger criteria:**

- BUY trigger: price below USD 550.16, 50.94% below the anchor, plus a Moat upgrade to PASS.
- PASS trigger: Mounjaro plus Zepbound revenue growth below 20% year over year for two consecutive quarters through Q1 2027.
- PASS trigger: gross margin below 80% while capex/revenue remains above 10% and new-factory utilization disappoints.
- Upgrade to BUY conditions: post-tirzepatide renewal evidence, including one material non-cardiometabolic franchise, and base returns that clear valuation and mandate hurdles.

**Research sizing if actionable:** none. This research package authorizes no trade or sizing decision.

## Stage 0 — Time anchor

The analysis date is 2026-08-04. Lilly's fiscal year ends December 31. The latest reported quarter is Q1 2026 ended 2026-03-31. TTM comprises Q2 2025, Q3 2025, Q4 2025, and Q1 2026, ending 2026-03-31; the exact five-year terminal date is 2031-03-31.

## Stage 1 — Disqualifier sweep

ROIC is **GREEN**: returns remain well above the minimum bar. FCF conversion is **YELLOW** because capacity investment makes the history volatile. Net debt/EBITDA is **GREEN** at 1.26x for FY2025. End markets are **GREEN**. Governance is **YELLOW** because the combined chair/CEO structure, incentive exclusions, and acquisition-return disclosure require monitoring. AI exposure is **GREEN** because AI is principally an R&D tool, not a substitute for regulated medicines. Pricing is **YELLOW** because extraordinary volume growth already coexists with lower realized prices. No RED disqualifier stops the research.

## Management

Management is **PASS**. David Ricks and the senior team converted tirzepatide science into large commercial franchises while funding manufacturing and R&D rather than optimizing near-term cash flow. Governance and succession systems are credible, and disclosure acknowledges supply, access, and pricing constraints. The judgment is not unconditional: high-price repurchases, acquired-IPR&D exclusions from incentives, undisclosed acquisition hurdles, and no explicit ROIC/FCF linkage remain monitors. The record supports execution confidence, but it does not justify paying any price.

## Moat

The moat is **YELLOW**, and the 2046 test is **YELLOW**. Clinical outcomes, protected IP, regulatory execution, manufacturing scale, and payer access form a powerful present advantage. Yet cardiometabolic health is 75.8% of TTM revenue, net-price pressure is visible, and current compound patents expire before 2046. Lilly must renew the portfolio across multiple successor cycles. That path is credible, not proven.

## Stage 5 synthesis — headline numbers

The single reportable segment ties to consolidated revenue, and all 11 synthesis checks passed. TTM revenue is USD 72.249B and statutory operating income is USD 31.522B. The base case reaches USD 128.569B revenue, USD 61.023B statutory operating income, USD 48.856B net income, and USD 55.744 EPS on 876.428M diluted shares. Required EPS at 15x is USD 74.757, leaving a -25.43% price cushion. Bear and base fail the P/E-15 gate; bull passes only with USD 167.604B revenue, a 44% CODM net-income margin, and USD 84.144 EPS. Probability-weighted EPS is USD 53.807. The accounting bridge is reflexive within 0.0014%, and official FY2025 operating income replaces the overstated vendor field. The conclusion fails on valuation and expected return, not arithmetic.

| Case | Revenue, USD B | Statutory OI, USD B | Net income, USD B | EPS, USD | Probability | P/E-15 cushion |
|---|---|---|---|---|---|---|
| Bear | 82.043 | 28.510 | 22.152 | 25.275 | 25% | -66.19% |
| Base | 128.569 | 61.023 | 48.856 | 55.744 | 55% | -25.43% |
| Bull | 167.604 | 89.270 | 73.746 | 84.144 | 20% | +12.56% |

## Red team

The strongest bear argument is that access-driven price compression and competition weaken cardiometabolic growth while committed capacity turns the revenue miss into margin pressure. The most optimistic Stage-5 input is the 38% base CODM net-income margin; a 17.32x forward-consensus multiple would reduce base gross IRR to approximately -2.33%. The forcing signal is Mounjaro plus Zepbound revenue growth below 20% year over year for two consecutive quarters through Q1 2027. The red team therefore rejects the 20% case at the current price.

## Analyst flags

- Terminal capital structure is not source-bound; the chosen P/E method correctly makes the terminal net cash/debt adjustment inapplicable rather than inventing one.
- Product-level profit, invested capital, plant utilization returns, a complete acquired-IPR&D ledger, and normalized cash-tax history remain unavailable; unsupported conclusions are constrained.
- Base and bull exit P/Es are below current and historical anchors but above the 17.32x 2030 forward-consensus anchor, so the report treats them as demanding.
- The frozen quote expires after the next scheduled NYSE close; that is a freshness advisory, not a defect in the completed evidence package.
- Installed A, R, and RT reference files ended mid-sentence; same-stage repairs preserved all valid checks, evidence hierarchy, and conservative conclusions. No worker spawned descendants.

# Appendix A - Company Primer

# Eli Lilly and Company (LLY) — Company Primer

## Scope, time anchor, and source discipline

This appendix is a reader-facing orientation to Eli Lilly and Company, not the audit trail for the downstream earnings model. All financial figures come from the QFR-cleared quantitative foundation at `C:\Users\Admin\OneDrive\GPT\ER 2.0\Eli Lilly and Company\quant_foundation.md`; they are not re-fetched or reconstructed from memory. Qualitative evidence was refreshed from primary sources during this run. The information cutoff is August 4, 2026. Lilly's fiscal year ends December 31; the latest reported quarter is Q1 2026, ended March 31, 2026; the trailing-twelve-month period is Q2 2025 through Q1 2026; and the exact five-year research horizon ends March 31, 2031. The quantitative foundation passed all eight reconciliation checks and is the controlling record whenever a filing presentation or vendor classification differs.

The key conceptual point is that Lilly is a **single-reportable-segment** company. The company discovers, develops, manufactures, and sells human pharmaceutical products; therapeutic areas and products are useful lenses on demand, competition, and pipeline risk, but they are not separate statutory segments with separately disclosed profits. Lilly sells medicines in approximately 90 countries and manufactures and distributes through facilities in the United States, including Puerto Rico, Europe, and Asia. Its long-term model is to repeatedly turn research or acquired science into protected medicines, secure regulatory approval and payer access, build industrial-scale supply, and then reinvest the cash produced by successful products into the next pipeline. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm)

## 1. Business overview

Lilly sells prescription medicines addressing chronic and life-threatening diseases. Its principal commercial arenas are cardiometabolic health, oncology, immunology, and neuroscience. The immediate clinical customer is usually a physician or other prescriber; the end user is the patient; and the economic customer is often a payer—an insurer, employer-sponsored plan, pharmacy benefit manager, Medicare or Medicaid program, or national health system. This separation matters. A medicine can be clinically differentiated yet still underperform commercially if it receives poor formulary placement, restrictive prior authorization, inadequate reimbursement, or excessive patient out-of-pocket cost.

The physical route to market is largely wholesale. In the United States, Lilly distributes most products through wholesalers serving pharmacies, physicians, hospitals, and other healthcare professionals. The three major U.S. wholesalers named by Lilly are McKesson, Cencora, and Cardinal Health. Lilly also negotiates with health plans, pharmacy benefit managers, insurers, employers, managed-care organizations, group-purchasing organizations, government programs, hospitals, and certain retail pharmacies. These arrangements commonly include rebates or discounts. LillyDirect adds a newer digital route: select medicines are dispensed by third-party pharmacies, while the platform connects patients with independent providers and treatment-support tools. Lilly described LillyDirect as a growing part of the business in 2025, but the wholesaler and payer system remains central. Outside the United States, Lilly uses its own sales organizations in many markets and third-party distribution or promotion arrangements in others. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm)

Lilly therefore does not simply sell units at a posted price. Net revenue is what remains after contractual discounts, managed-care and government rebates, chargebacks, returns, and patient-assistance programs. Volume depends on diagnosis, prescription, coverage, affordability, patient persistence, and the availability of product in the channel. In Q1 2026, management described exceptionally strong volume growth but lower realized prices, especially in the incretin franchise. That is a useful warning against treating demand growth and net-price growth as the same variable. [Q1 2026 earnings release, furnished April 30, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm)

## 2. Revenue architecture

### Reportable segment

Lilly has only one reportable segment, and the chief operating decision maker uses consolidated net income as the disclosed segment-profit measure. Statutory operating income is separately derived from revenue less cost of sales, R&D, marketing/selling/administrative expense, acquired in-process R&D, and special charges. The primer preserves that

distinction rather than incorrectly presenting therapeutic areas as independent operating segments.

| Reportable segment | FY2025 revenue | Share of FY2025 revenue | TTM revenue to 2026-03-31 | Disclosed CODM profit measure |
|---|---|---|---|---|
| Human pharmaceutical products | $65,179 million | 100.00% | $72,249 million | Consolidated net income |

### Therapeutic-area mix

Therapeutic-area revenue provides the most decision-useful picture of concentration. Cardiometabolic health, which contains Mounjaro, Zepbound, Jardiance, Trulicity, and insulins, is the dominant engine. Oncology is the second-largest category, led by Verzenio and supplemented by a portfolio of targeted medicines. Immunology includes Taltz, Ebglyss, Omvoh, and Olumiant. Neuroscience includes Kisunla and other neurology medicines. The “Other” line captures products and collaboration-related revenue that do not sit in the four core categories.

| Therapeutic area | FY2025 revenue | FY2025 mix | TTM revenue to 2026-03-31 | TTM mix |
|---|---|---|---|---|
| Cardiometabolic Health | $48,221 million | 73.98% | $54,773 million | 75.81% |
| Oncology | $9,376 million | 14.39% | $9,697 million | 13.42% |
| Immunology | $5,247 million | 8.05% | $5,362 million | 7.42% |
| Neuroscience | $1,391 million | 2.13% | $1,501 million | 2.08% |
| Other | $943 million | 1.45% | $917 million | 1.27% |
| Total | $65,179 million | 100.00% | $72,249 million | 100.00% |

The table exposes the defining concentration risk: more than three quarters of TTM revenue is cardiometabolic. That concentration can be an advantage while tirzepatide demand, indications, access, and supply expand, because a highly successful platform creates operating leverage and funds pipeline investment. It is also a source of fragility. A safety signal, stronger competitor, payer restriction, pricing intervention, manufacturing interruption, or demand misread affecting incretins would strike the company’s largest revenue pool and the assumptions supporting its capacity build at the same time.

Geographically, Lilly is global, but the quantitative foundation does not contain a reconciled geographic revenue schedule. This appendix therefore does not introduce a second financial source merely to manufacture a regional mix table. Qualitatively, the company maintains direct commercial organizations in many countries and uses third parties where appropriate. International economics can differ sharply because national health systems use reference pricing, health-technology assessments, tenders, and reimbursement limits. U.S. economics depend more heavily on formularies, negotiated rebates, employer coverage, government programs, and patient cost-sharing. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000059478260000013/lly-20251231.htm)

## 3. Unit economics

Lilly’s consolidated economics combine attractive product gross margins with unusually high reinvestment. A dollar of revenue first absorbs manufacturing and product cost, then research spending, commercialization and administration, acquired in-process R&D, and periodic restructuring or other special charges. Because Lilly discloses one segment, it does not provide complete therapeutic-area profit statements. Any area-specific margin would be analyst invention. The correct unit-economic lens is therefore consolidated, while product-mix effects are explained qualitatively.

| Economic layer | FY2025 amount | FY2025 share of revenue | TTM amount | TTM share of revenue |
|---|---|---|---|---|
| Revenue | $65,179 million | 100.00% | $72,249 million | 100.00% |
| Cost of sales | $11,052 million | 16.95% | $12,404 million | 17.17% |
| Gross profit, derived | $54,127 million | 83.05% | $59,845 million | 82.83% |
| Research and development | $13,337 million | 20.46% | $14,113 million | 19.53% |
| Marketing, selling, and administrative | $11,094 million | 17.02% | $11,560 million | 16.00% |
| Acquired in-process R&D | $2,910 million | 4.46% | $1,922 million | 2.66% |
| Statutory operating income, derived | $26,302 million | 40.35% | $31,522 million | 43.63% |
| Net income | $20,640 million | 31.67% | $25,277 million | 34.99% |

Gross margin is influenced by product mix, factory utilization, production yields, device and active-ingredient cost, royalties or collaboration economics, and net pricing. A mix shift toward protected, high-value medicines can lift the gross margin; lower realized prices, expedited freight, underutilized new capacity, quality issues, or a shift toward less profitable products can reverse it. The FY2025 filing attributed gross-margin improvement to favorable product mix and improved cost of production, partly offset by lower realized prices. Q1 2026 management again identified lower realized prices as a margin headwind. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) [Q1 2026 earnings release, furnished April 30, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm)

R&D is not a discretionary support function; it is the renewal cost of the franchise. The TTM R&D burden was 19.53% of revenue, while acquired in-process R&D added another 2.66%. Those expenses buy a portfolio of uncertain clinical options, not guaranteed future revenue. Marketing, selling, and administrative expense was 16.00% of TTM revenue and supports market access, medical affairs, launches, field sales, patient support, and the corporate platform. The TTM operating margin expanded to 43.63%, showing powerful operating leverage as revenue grew faster than major expense lines. The durability question is whether Lilly can keep investing enough to sustain innovation and access while maintaining those margins after price normalization and capacity ramp costs.

## 4. Product portfolio and customer, payer, and channel economics

| Area | Principal commercial products and role | Customer and payer economics | Key dependency |
|---|---|---|---|
| Cardiometabolic | Mounjaro treats type 2 diabetes; Zepbound treats obesity/overweight and obstructive sleep apnea; Jardiance spans diabetes, heart failure, and kidney disease; Trulicity and insulins serve established diabetes markets; Foundayo adds an oral GLP-1 option | Prescriber preference and patient outcomes must translate into formulary coverage, employer or government reimbursement, tolerable out-of-pocket cost, and persistence | Incretin efficacy/safety, net price, access, device or tablet supply, and industrial-scale capacity |
| Oncology | Verzenio anchors breast cancer; Jaypirca, Inluriyo, Retevmo, Cyramza, Erbitux, and Tyvyt address defined cancers and biomarkers | Oncology buying involves specialists, treatment guidelines, hospitals, payers, and sometimes companion diagnostics; survival benefit and sequencing determine use | Trial differentiation, indication expansion, resistance patterns, patent life, and competing mechanisms |
| Immunology | Taltz, Ebglyss, Omvoh, and Olumiant address inflammatory and autoimmune disease | Chronic treatment can produce recurring demand, but formularies may prefer competing biologics, biosimilars, or oral agents; rebates and step therapy matter | Head-to-head efficacy, safety, dosing convenience, indication breadth, and payer placement |
| Neuroscience | Kisunla addresses early symptomatic Alzheimer's disease; other products serve migraine and neurological conditions | Adoption requires diagnosis, specialist capacity, infusion or administration infrastructure, monitoring, payer coverage, and patient/caregiver willingness | Safety monitoring, real-world effectiveness, diagnostic bottlenecks, and competing therapies |

The commercial engine is a sequence rather than a simple sale. Lilly must generate evidence, obtain regulatory approval, educate providers, win payer access, establish supply, and support patient initiation and continuation. This is especially visible in obesity. Many U.S. self-insured employers must actively opt into anti-obesity coverage, and many international payers do not broadly reimburse weight-loss medicines. That creates a large gap between clinical demand and reimbursed demand. Direct-pay channels can partially bridge the gap, but they also make affordability and competitive self-pay pricing more visible. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm)

Pricing is negotiated and gross-to-net deductions are material. Lilly records rebates, discounts, returns, chargebacks, and patient assistance as reductions of revenue. U.S. private-sector consolidation gives large payers, pharmacy benefit managers, wholesalers, and pharmacies substantial bargaining power. Government policy adds another layer: the Inflation Reduction Act can impose negotiated Medicare prices after statutory time periods, while Medicaid, 340B, reference-pricing, and international tender systems can transmit discounts across markets. In 2025 Lilly also described preliminary U.S. government pricing and access arrangements for obesity medicines. The economic upside from broader coverage may come with lower net prices, making volume, mix, and manufacturing efficiency essential offsets. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm)

## 5. Competitive landscape and substitution risks

Competition operates at five levels: molecule versus molecule; route of administration; indication breadth; payer access; and supply reliability. Lilly identifies efficacy, safety, availability, convenience, patient preference, formulary position, price, reimbursement, cost-effectiveness, regulatory timing, and launch execution as material competitive variables. In other words, the “best” clinical profile does not automatically win if product is unavailable, difficult to use, or excluded from coverage.

| Arena | Competitive or substitution pressure | What could weaken Lilly |
|---|---|---|
| Obesity and diabetes | Novo Nordisk’s semaglutide franchise includes injectable and oral offerings; its pipeline also advances combination and dual-mechanism candidates. Compounded or counterfeit incretins can divert demand or damage category trust | Better efficacy, tolerability, convenience, price, payer terms, or supply from a rival; adverse events or weak persistence; faster oral adoption by competitors |
| Oncology | Other CDK4/6 inhibitors, endocrine agents, targeted therapies, antibody-drug conjugates, and combination regimens compete for treatment sequence and guideline position | A rival producing superior survival or safety data; resistance; loss of exclusivity; narrow biomarker populations; displaced standard of care |
| Immunology | Multiple biologic pathways and oral immunomodulators compete across psoriasis, dermatitis, bowel disease, and arthritis; biosimilars raise price pressure | Step-therapy disadvantage, stronger head-to-head evidence, safety labeling, or a lower-cost substitute |
| Alzheimer’s and neuroscience | Anti-amyloid therapies and emerging disease-modifying approaches compete amid constrained diagnosis, infusion, imaging, and monitoring capacity | Safety concerns, infrastructure bottlenecks, modest perceived benefit, payer limits, or a more convenient and effective modality |
| Mature products | Generics and biosimilars typically enter after loss of exclusivity and can compress branded volume and price quickly | Failed patent defense, earlier-than-expected generic entry, reference-pricing spillover, or payer-driven substitution |

Novo Nordisk’s current disclosures confirm that the cardiometabolic contest is not static: it is commercializing semaglutide across injectable and oral formats and advancing next-generation combinations and dual mechanisms. This means Lilly must compare tirzepatide, Foundayo, retatrutide, and related assets with a moving benchmark, not the prior generation of obesity therapy. [Novo Nordisk 2025 commercial execution](https://annualreport.novonordisk.com/2025/strategic-aspirations/commercial-execution.html) [Novo Nordisk 2025 innovation and therapeutic focus](https://annualreport.novonordisk.com/2025/strategic-aspirations/innovation-and-therapeutic-focus.html)

Substitution can also occur inside Lilly’s own portfolio. A successful oral GLP-1 could expand the market while cannibalizing some injectable starts; retatrutide could extend Lilly’s leadership while shifting mix away from Zepbound; new oncology or immunology products can replace older Lilly medicines. Internal cannibalization is economically acceptable if Lilly retains the patient and profit pool, but it complicates product-level forecasting and capacity allocation.

## 6. Growth engines and pipeline or capacity dependencies

The first growth engine is continued penetration and broader access for tirzepatide. Mounjaro and Zepbound can grow through new patient starts, international launches, reimbursement expansion, additional indications, and improved supply. The second is modality expansion. In the Q1 2026 release, Lilly reported U.S. approval of Foundayo, the oral GLP-1 orforglipron, and highlighted further late-stage work across diabetes and cardiovascular-risk populations. An effective, convenient pill can reach patients reluctant or unable to use injections and may reduce some device bottlenecks, although active-ingredient capacity, pricing, adherence, and payer coverage remain binding.

The third engine is a broader next-generation cardiometabolic pipeline. The FY2025 filing described Phase 3 programs for retatrutide across obesity-related and cardiometabolic conditions, as well as work on eloralintide, insulin efsitora alfa, lepodisiran, and muvalaplin. The Q1 2026 update highlighted additional positive Phase 3 data for retatrutide in type 2 diabetes. These programs create multiple shots on goal but share biological, regulatory, commercial, and capacity dependencies. A strong pipeline is not diversified if most of its value ultimately depends on the same prescriber base, payer budget, obesity access decision, or manufacturing network. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) [Q1 2026 earnings release, furnished April 30, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm)

The fourth engine is therapeutic diversification. Verzenio and new oncology launches, immunology products such as Ebglyss and Omvoh, and Kisunla in Alzheimer's can reduce reliance on incretins if they scale. The Q1 update also cited progress in oncology combinations and across immunology. These assets matter not only for revenue but for the quality of the multiple: a company valued as a broad innovation platform should eventually demonstrate that non-cardiometabolic franchises can grow without relying on a single product cycle.

Every engine depends on manufacturing execution. Lilly lists expansion sites in North Carolina, Wisconsin, Indiana, Virginia, Texas, Alabama, Pennsylvania, Ireland, Germany, and the Netherlands, and it also relies on third parties for active ingredient, filling, finishing, devices, components, and assembly. New pharmaceutical capacity takes time, capital, validation, process transfer, and regulatory approval. Underbuilding forfeits demand and invites competitor switching; overbuilding leaves underutilized assets if prices, access, safety, or demand disappoint. The capacity plan is therefore part of the thesis, not merely an operational footnote. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000059478260000013/lly-20251231.htm)

## 7. Capital intensity, R&D, cash conversion, and balance sheet

Lilly is highly profitable but no longer asset-light. Cash capital expenditure rose alongside manufacturing expansion, and net debt increased even as free cash flow improved. The relevant question is not whether current cash generation is strong—it is—but whether the new capacity earns attractive returns after price concessions and whether R&D productivity replaces aging products.

| Period | Operating cash flow | Cash capex | Free cash flow | FCF margin | Net debt |
|---|---|---|---|---|---|
| FY2023 | $4,240 million | $3,448 million | $792 million | 2.32% | $22,406 million |
| FY2024 | $8,818 million | $5,058 million | $3,760 million | 8.35% | $30,376 million |
| FY2025 | $16,813 million | $7,841 million | $8,972 million | 13.77% | $35,235 million |
| TTM to 2026-03-31 | $20,480 million | $8,657 million | $11,823 million | 16.36% | $38,088 million |

TTM operating cash flow equaled roughly 81% of net income, while free cash flow equaled roughly 47% because capital expenditure absorbed a substantial portion of cash generation. This is consistent with a company funding a major capacity build rather than harvesting a mature franchise. It also means reported earnings overstate near-term distributable cash if current capex is treated as entirely optional. Some of that spend is growth investment, but the investor must determine how much becomes a recurring requirement as product formats, facilities, redundancy standards, and regulatory expectations evolve.

The balance sheet is usable but increasingly committed. At March 31, 2026, cash was $5,282 million and gross debt was $43,370 million. Net debt was $38,088 million. TTM dividends paid were $5,586 million and repurchases were $5,264 million, even as capex remained elevated. Diluted shares declined modestly to a derived 898.1 million TTM basis, indicating repurchases more than offset employee equity dilution over the period. The priority question is capital sequencing: internal pipeline and reliable capacity should outrank buybacks when the expected return is superior, but acquisitions and acquired IPR&D must still clear a disciplined probability-adjusted hurdle.

## 8. Regulatory, patent, pricing risks and failure modes

| Risk | Evidence or exposure | Failure mode for investors |
|---|---|---|
| Product concentration | Cardiometabolic health is 75.81% of TTM revenue | A single safety, access, price, or supply shock can affect growth, margins, and capacity utilization simultaneously |
| Patent and exclusivity | U.S. compound-patent estimates include 2036 for Mounjaro/Zepbound, 2031 for Verzenio, 2030 for Taltz, 2029 for Jardiance, and 2027 for Trulicity; challenges or other protections can change effective timing | Generic or biosimilar entry causes rapid price and volume erosion; markets begin discounting the cliff before legal expiry |
| Pricing and reimbursement | Formularies, rebates, government price-setting, employer opt-in rules, Medicaid/Medicare terms, 340B, and international controls govern realized economics | Access expands but net price falls faster than volume and efficiency improve; discounts spill across channels or countries |
| Clinical and regulatory | Late-stage programs still face efficacy, safety, manufacturing, inspection, labeling, and approval uncertainty | A key trial misses, approval is delayed or narrowed, or post-market evidence damages the class |

| Risk | Evidence or exposure | Failure mode for investors |
|---|---|---|
| Manufacturing | Complex regulated processes, single-source materials, third-party dependencies, device components, and a large multi-site build | Shortage forfeits demand; quality remediation stops production; new plants open late; overcapacity destroys returns |
| Legal and reputational | Incretin product-liability litigation, counterfeit or compounded products, cyber risk, and compliance obligations | Cost, label changes, constrained prescribing, or category mistrust reduces adoption and raises operating expense |
| Business development | Acquisitions and licensing add science but also integration, valuation, and impairment risk | Lilly overpays for uncertain assets, duplicates internal work, or records recurring acquired IPR&D without durable output |

Patent years are not guaranteed revenue cliffs. Patent challenges, regulatory exclusivity, device patents, formulation patents, pediatric extensions, settlements, jurisdictional differences, and commercial competition can move the practical curve. The core tirzepatide compound patent appears to extend beyond the five-year horizon, but payer intervention and new mechanisms can erode economics well before legal expiry. Conversely, mature products such as Trulicity face nearer-term protection loss, which increases the replacement burden on new launches. [FY2025 Form 10-K, filed February 12, 2026](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm)

The most dangerous failure mode is a reinforcing loop: reduced access or a safety concern lowers demand; committed factories become underutilized; gross margin and cash conversion weaken; and the company must still fund a large pipeline and debt service. The opposite loop is favorable—broader access drives volume, capacity lowers unit cost, cash funds more R&D, and multiple successful indications deepen the platform—but investors should not assume that the current loop continues without friction.

## 9. Key investor questions and signposts

| Investor question | Signpost to monitor | Why it matters |
|---|---|---|
| Is incretin growth economically durable? | Volume versus realized-price bridge, payer coverage, patient persistence, and supply availability | Revenue growth without stable net economics may not translate into durable cash returns |
| Does Foundayo expand the market or mainly cannibalize injections? | New-to-class patients, payer placement, adherence, price, and mix shift versus Mounjaro/Zepbound | Determines whether oral therapy is additive and whether it relieves device constraints |
| Can retatrutide create a second long-duration platform? | Phase 3 efficacy, safety, outcomes data, regulatory timing, and manufacturing plan | A differentiated successor can extend the franchise; a miss raises concentration risk |
| Are non-cardiometabolic franchises scaling? | Oncology, immunology, and neuroscience mix, launches, guideline inclusion, and access | Diversification is needed to validate Lilly as a broad platform rather than a single-cycle winner |
| Is manufacturing spend earning its cost of capital? | Capex, startup timing, utilization, cost of production, back orders, and write-offs | Capacity is both the enabler of growth and the largest operational source of fixed-cost risk |
| Is R&D productivity keeping pace with spending? | Late-stage starts, approvals, label expansions, attrition, acquired IPR&D, and time to launch | High R&D intensity only creates value if enough programs become protected cash flows |
| How severe is price normalization? | U.S. gross-to-net movement, international reimbursement, government terms, and direct-pay pricing | Lower realized price is already visible; the question is whether volume and mix offset it |
| Is cash conversion improving after the build? | OCF/net-income conversion, capex/revenue, FCF margin, debt, and capital returns | The thesis ultimately needs distributable cash, not only accounting earnings |
| Are patents and safety signals intact? | Litigation, patent challenges, label changes, adverse-event trends, and regulator communications | These can change terminal value faster than quarterly sales variance |

## Bottom line

Lilly is an innovation-led pharmaceutical company with exceptional current profitability, a deep clinical and manufacturing agenda, and a highly concentrated cardiometabolic revenue base. The favorable interpretation is that tirzepatide, Foundayo, retatrutide, and a broader pipeline form a durable platform whose growth funds both capacity and therapeutic diversification. The skeptical interpretation is that investors are extrapolating peak operating leverage while underweighting lower realized prices, payer power, industrial execution, clinical attrition, and the fixed commitments created by an enormous manufacturing build. The decisive work for the full ER2 is therefore not to establish that demand is strong; it is to determine whether five-year earnings and cash flows remain robust under more conservative price, access, capacity, and pipeline assumptions.

## Primary-source ledger

| Source | Filing or publication date | Accessed | Use in this primer |
|---|---|---|---|
| [Eli Lilly FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) | 2026-02-12 | 2026-08-04 | Business model, products, channels, payers, competition, manufacturing, pipeline, patents, and risks |
| [Eli Lilly Q1 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/59478/000005947826000045/lly-20260331.htm) | 2026-04-30 | 2026-08-04 | Latest statutory period and qualitative risk continuity |
| [Eli Lilly Q1 2026 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm) | 2026-04-30 | 2026-08-04 | Current launch, pricing, and late-stage pipeline developments |
| [Novo Nordisk 2025 commercial execution](https://annualreport.novonordisk.com/2025/strategic-aspirations/commercial-execution.html) | 2026 annual-report publication | 2026-08-04 | Primary-source cardiometabolic commercial competition |
| [Novo Nordisk 2025 innovation and therapeutic focus](https://annualreport.novonordisk.com/2025/strategic-aspirations/innovation-and-therapeutic-focus.html) | 2026 annual-report publication | 2026-08-04 | Primary-source next-generation incretin competition |

`trade_execution_authorized=false`

# Appendix M - Management Assessment

# Eli Lilly and Company — Management Assessment

**Assessment date:** August 4, 2026 **Evidence period:** FY2021-FY2025, Q1 2026, and the eight earnings calls from Q2 2024 through Q1 2026 **Management gate: PASS**

This assessment anchors the latest reported quarter at March 31, 2026 and evaluates a full cycle rather than one exceptional launch. Principal sources are Lilly's [2026 proxy](https://www.sec.gov/Archives/edgar/data/59478/000005947826000029/lly-20260317.htm), [2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm), [Q1 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/59478/000005947826000045/lly-20260331.htm), [annual-meeting results](https://www.sec.gov/Archives/edgar/data/59478/000005947826000048/lly-20260504.htm), and eight live-fetched FMP transcripts archived with the run. SEC filings were accessed live; two direct local-archival attempts were blocked by SEC automation controls, so no claim relies on an unverified cached filing.

## 1. Leadership quality

David Ricks has been chief executive since January 2017 and chair since June 2017. His preparation is unusually relevant to Lilly's present challenge: he joined the company in 1996 and has worked across drug development, business development, marketing, country management, Lilly USA, and the Bio-Medicines business. This is not a generalist arriving after the portfolio inflected. Ricks was in place while Lilly chose to concentrate research, fund tirzepatide, rebuild its launch engine, and commit tens of billions of dollars to manufacturing capacity. The resulting record earns him substantial credit, though not sole authorship.

The bench is deep and mostly internally developed. CFO Lucas Montarce, appointed in September 2024, joined in 2001 and held finance roles in research, international operations, Elanco, and country management. Carole Ho, recruited from Denali and previously Genentech, adds an external development perspective. Jacob Van Naarden came through Loxo Oncology; Daniel Skovronsky led research through the period that produced tirzepatide and donanemab. Manufacturing head Edgardo Hernandez has more than two decades at Lilly.

| Executive | Current role | Relevant evidence | Assessment |
|---|---|---|---|
| David Ricks | Chair and CEO | Lilly since 1996; CEO since 2017; broad commercial, development, and country experience | Proven strategist and operator; combined chair/CEO role reduces structural challenge |
| Lucas Montarce | EVP and CFO | Lilly since 2001; research, international, Elanco, and country finance experience | Credible internal successor to CFO role; still a short public-company CFO record |
| Daniel Skovronsky | Chief scientific and product officer; president, Lilly Research Laboratories | Fifteen years at Lilly; central to current pipeline and external innovation model | Strong research leadership with measurable portfolio output |
| Edgardo Hernandez | President, Manufacturing Operations | Twenty-one years at Lilly; leads a historically large capacity build | Relevant tenure; plant economics and utilization are not disclosed sufficiently |
| Business-unit heads | Cardiometabolic, neuroscience, oncology, immunology, U.S., and international | Mostly long-tenured internal leaders, supplemented by targeted outside recruits | Healthy bench; several 2025 role changes have limited observable records |

Succession planning is a board responsibility, but the proxy does not name a CEO successor or describe candidate readiness. The internal bench lowers key-person risk, but future appointments must show that decision quality is institutional rather than dependent on Ricks and Skovronsky.

## 2. Track record: major decisions and mistakes

Three decisions dominate the record. First, management sustained investment behind tirzepatide and built the commercial system that turned Mounjaro and Zepbound into $36.5 billion of FY2025 revenue. Cardiometabolic products produced $48.2 billion, or 74% of company revenue. This is exceptional value creation, while the concentration it created is now a central risk that management itself acknowledges.

Second, Lilly committed early to a manufacturing expansion commensurate with an unprecedented injectable demand curve. Cash capital expenditure rose from $1.31 billion in 2021 to $7.84 billion in 2025, reaching 12.0% of revenue. New and expanded sites in North Carolina, Wisconsin, Virginia, Texas, and Puerto Rico demonstrate that capacity was treated as a

strategic capability, not merely a procurement problem. Production began at two new sites by early 2026. The decision appears correct, but investors still lack plant-level capacity, utilization, unit-cost, and return data, so the ultimate economic quality cannot yet be fully audited.

Third, management preserved a research-led model while supplementing it with external science. R&D rose from $6.93 billion in 2021 to $13.34 billion in 2025. The portfolio included 42 Phase III programs at the Q1 2026 call, while SiteOne, Verve, Orna, Centessa, Kelonia, and Ajax added programs. The acquisition cohort is too young to judge.

The record is not mistake-free. In 2024, Lilly misread the back-half demand and channel trajectory after a very strong first half. On the Q4 call, Ricks said, “There's turbulence. I'll own that,” and acknowledged the company fell short. That admission is more valuable than an artificial claim of forecasting precision, and subsequent guidance became more deliberately ranged. Still, the miss showed that even management lacked clean visibility into rapidly changing channel inventory, supply, and access dynamics.

Vitrakvi also produced an intangible-asset impairment after commercial projections declined, an observable failure in acquired-asset underwriting. More broadly, acquired in-process R&D charges reached $2.91 billion in 2025, yet these charges can be excluded from incentive results. Pending Q1 2026 acquisitions carried aggregate potential closing consideration of roughly $12 billion. The board and management have not disclosed deal-level return hurdles, probability-weighted pipeline economics, or a post-acquisition scorecard. The successful Loxo heritage does not make every subsequent deal self-validating.

## 3. Capital allocation discipline

| Fiscal year | Cash capex ($B) | R&D ($B) | Buybacks ($B) | Dividends ($B) | Cash acquisitions ($B) |
|---|---|---|---|---|---|
| 2021 | 1.310 | 6.931 | 1.250 | 3.087 | 0.747 |
| 2022 | 1.854 | 7.191 | 1.500 | 3.536 | 0.327 |
| 2023 | 3.448 | 9.313 | 0.750 | 4.069 | 1.044 |
| 2024 | 5.058 | 10.991 | 2.500 | 4.680 | 0.948 |
| 2025 | 7.841 | 13.338 | 4.108 | 5.384 | 0.661 |

The hierarchy is broadly correct: fund research and scarce capacity, maintain a growing dividend, acquire external science selectively, and use repurchases residually. Revenue rose from $28.3 billion in 2021 to $65.2 billion in 2025, operating margin from 22.4% to 40.4%, and ROIC from 28.5% to 39.7%. The FY2023 ROIC trough of 17.9% reflected acquired IPR&D and investment before the tirzepatide ramp. Free cash flow recovered to $9.0 billion in 2025 despite the capacity program.

Per-share discipline is also visible: diluted shares declined from 911.7 million in 2021 to 899.3 million in 2025 and 895.9 million in Q1 2026. However, the method deserves criticism. Lilly repurchased $2.3 billion of stock in Q1 2026 at an average $987.15 per share while funding record capex and preparing for as much as $12 billion of acquisition consideration. The filing provides no valuation framework for repurchases. A falling share count is not evidence of value creation when purchases occur at a demanding valuation. The Q1 action looks programmatic rather than price-sensitive and is the clearest current capital-allocation blemish.

The cash-acquisition column also understates economic acquisition activity because it does not capture all purchase commitments or expensed acquired IPR&D. Management should publish a compact annual scorecard covering acquisition cost, subsequent spend, clinical milestones, write-offs, and estimated value. It should also disclose aggregate expected returns from the manufacturing program. Until it does, the excellent consolidated ROIC is reassuring but cannot distinguish the tirzepatide windfall from the returns on the newest capital commitments.

## 4. Compensation and alignment

Alignment is strong in form and mixed in metric design. The CEO ownership guideline is 12 times salary, the CFO guideline eight times, and other senior executives six times. Actual reported holdings were far above these thresholds: Ricks at 412 times salary, Montarce at 16 times, Skovronsky at 153 times, former general counsel Anat Hakim at 47 times, and Van Naarden at 34 times. Ricks held 815,535 shares, including shares in a family foundation. Unvested awards do not count toward the guideline; executives must retain 50% of net shares until they meet it, and vested stock is subject to a one-year hold. Hedging and pledging are prohibited. These are substantive safeguards, not symbolic ownership rules.

The annual incentive is equally weighted among product revenue, EPS, and pipeline progress. Long-term incentives are split 50% to a shareholder-value award tied to share-price performance over a 9.48% cost-of-capital benchmark and 50% to

relative total shareholder return. The three-year 2023 awards paid at the 200% maximum after Lilly's extraordinary stock appreciation. This structure rewards shareholders' realized outcome and pipeline execution, but it omits ROIC and free cash flow, even while capital intensity and acquisition commitments are rising. Pipeline progress also requires judgment that outside owners cannot fully reproduce.

The adjustment policy is a second weakness. Outcomes can exclude acquired IPR&D, foreign exchange, acquisitions and divestitures, and repurchases. Excluding acquired IPR&D can separate deal decisions from pay. The 2025 pipeline multiplier of 230% and increase in Ricks's target equity award from $19.75 million to $23.325 million warrant scrutiny. A better design would add multi-year ROIC or economic profit and show how acquisition failures reduce awards.

Stock-based compensation was $343 million in 2021, $371 million in 2022, $629 million in 2023, $646 million in 2024, and $626 million in 2025. As a percentage of revenue it rose from 1.21% to 1.84% through 2023, then fell to 0.96% by 2025. Share count also declined. Dilution therefore is not a current concern, although the absolute awards are large.

## 5. Communication quality and eight-quarter behavior

Management's communication is promotional but generally direct, numerate, and willing to acknowledge misses. It often supplies voluntary operating detail: channel-stocking effects, salable-dose targets, U.S. price changes, self-pay mix, prescription trends, access changes, and employer coverage. The calls also reveal the boundary of disclosure. Lilly does not provide product margins, plant returns, detailed capacity utilization, or transaction-level expected returns. In Q1 2026, management declined to quantify Found's contribution, saying only that it was early and tracking within expectations.

| Call | Guidance or key disclosure | Behavior assessment |
|---|---|---|
| Q2 2024 | Raised revenue guidance by $3B; quantified Mounjaro/Zepbound channel stocking as a high-teens to mid-20s percentage of U.S. sales | Strong transparency on a non-recurring benefit |
| Q3 2024 | Reduced the top of revenue guidance from $46.6B to $46.0B; explained demand-generation and capacity balance | Timely correction, though visibility had weakened |
| Q4 2024 | FY2024 revenue exceeded the initial guide by $4B; Ricks explicitly owned the back-half forecasting miss | High candor after an execution miss |
| Q1 2025 | Reaffirmed revenue and margin; adjusted EPS for acquired IPR&D; described tariff exposure as manageable | Clear, but normalization policy deserves skepticism |
| Q2 2025 | Raised revenue to $60B-$62B; admitted CVS exclusion hurt Zepbound and would pressure Q3 | Specific admission of an access setback |
| Q3 2025 | Raised revenue to $63B-$63.5B and EPS to $23.00-$23.70 | Conservative enough that final revenue still exceeded the range |
| Q4 2025 | Reported $65.2B revenue; guided FY2026 to $80B-$83B and quantified low-to-mid-teens price pressure | Unusually direct about the price-growth trade-off |
| Q1 2026 | Revenue rose 56%; raised FY2026 revenue to $82B-$85B and EPS to $35.50-$37.00 | Answered pricing math directly; withheld Found contribution |

Clear prepared-remark use of “headwind” appeared in three of eight quarters, covering foreign exchange, the CVS formulary decision, and price pressure. Each came with a mechanism or numerical context. “Moderate” and “dynamic” appeared more often across complete transcripts, frequently in analyst questions or ordinary descriptions. There is no pattern of euphemism substituting for economics.

Guidance has not been mechanically conservative. Q3 2024 required a top-end reduction, and the Q4 2024 call admitted a miss. Yet management subsequently disclosed the drivers, and FY2025 ultimately exceeded even the raised Q3 range. In Q1 2026, Montarce confirmed an analyst's price/mix arithmetic as “spot on” and explained the approximate $550 prescription mix. The balanced conclusion is that disclosure quality is above peer average, not flawless.

## 6. Strategy coherence

Lilly states that it aims to discover first- or best-in-class medicines, develop them quickly, reach patients globally, and “scale our business by prioritizing investments into medicines and manufacturing capacity.” Actual resource allocation matches that statement. R&D and capex rose together, manufacturing moved closer to the strategic center, and the company continued investing through the FY2023 earnings trough. Management has not diverted capital into unrelated diversification.

The strategy confronts competition rather than assuming an uncontested market. Filings acknowledge that Mounjaro and Zepbound generated 56% of FY2025 revenue, net prices are under pressure, and access can change demand. Calls discuss competitors, supply, oral options, dose forms, and payers. Retatrutide, orforglipron, next-generation incretins, outcomes data, and broader indications are intended to extend the franchise.

The tension is concentration. Cardiometabolic medicines provide the funding for the rest of the enterprise, while manufacturing commitments and the market valuation assume long-lived leadership. Management's response—broaden indications, modalities, access, and the non-cardiometabolic pipeline—is rational. Whether neuroscience, oncology, and immunology mature fast enough remains unproven. Strategy is coherent; diversification success is not yet established.

## 7. Governance and integrity

The board has 12 directors, 11 independent. All standing committees are independent, and lead independent director Juan Luciano can call executive sessions, approve agendas, meet shareholders, lead the CEO evaluation, and retain advisers. The board reports annual assessments, a retirement age of 72, and recent refreshment through Carolyn Bertozzi and Jon Moeller. At the same time, average tenure is nine years, several directors have served since 2005-2012, and Ricks remains both chair and CEO. Ralph Alvarez's four total public-company boards place him near the high end of acceptable commitments, though the evidence reviewed does not establish inadequate attendance or performance.

Shareholders approved say-on-pay with roughly 95.7% of votes cast excluding broker non-votes. There is no dual-class structure, and Lilly Endowment's approximately 9.8% holding does not constitute operating control. More troubling, proposals to declassify the board and remove supermajority provisions received a majority of votes cast at the 2026 annual meeting but failed because the existing charter required approval by 80% of outstanding shares. The entrenchment mechanism thus prevented its own removal. This is a real governance defect, even though shareholders rejected a separate independent-chair proposal.

The proxy disclosed no related-party transactions requiring disclosure. Lilly maintains broad and restatement-based clawbacks, and prohibits hedging and pledging. Q1 2026 controls were effective, with no disclosed material weakness or restatement. Three non-CEO, non-CFO executives adopted open-window 10b5-1 plans for modest scheduled sales; the plans were disclosed, and no evidence of clustered CEO/CFO selling emerged in the reviewed materials. That is not an exhaustive transaction or enforcement census. No significant SEC enforcement issue surfaced in the filings reviewed, but the conclusion should not be read as a comprehensive litigation clearance.

## 8. Peer comparison

| Company / CEO | Communication and execution | Capital allocation and governance | Relative assessment |
|---|---|---|---|
| Eli Lilly / David Ricks | Nine-year CEO record; candid on the 2024 miss; strong launch, pipeline, and manufacturing execution | High ROIC and real ownership; weak ROIC linkage in pay, high-price buybacks, combined chair/CEO | Strongest recent stewardship of the peer set, with identifiable monitor items |
| Novo Nordisk / Maziar Mike Doustdar | New CEO since August 2025; official reporting candidly described a difficult year, missed growth expectations, and restructuring | Major 9,000-role reset and weaker 2026 outlook reduce confidence in prior planning | Current candor is positive, but tenure is too short and recent execution weaker |
| Merck / Rob Davis | Disciplined communicator with a credible research and commercial record | Large R&D commitment, but the Keytruda concentration and replacement burden remain | Credible peer; Lilly's recent per-dollar growth and portfolio output are stronger |
| Pfizer / Albert Bourla | Communicates a clear post-COVID reset, but the operating base has been unusually volatile | Large Seagen acquisition increases the burden of proof for returns | Lilly has shown better organic execution and a more coherent investment sequence |

The comparison uses official [Novo Nordisk reporting](https://www.novonordisk.com/investors/annual-report.html), [Merck filings](https://www.merck.com/investor-relations/financial-information/), and [Pfizer filings](https://investors.pfizer.com/Investors/Financials/SEC-Filings/default.aspx). It is deliberately qualitative because accounting, portfolio maturity, and business mix differ. Ricks ranks first not because Lilly has the least risk, but because strategy, disclosed investment, scientific output, commercial scaling, and per-share financial outcomes align over a sufficiently long period.

## 9. Management gate

**Final verdict: PASS.**

This is not a polite YELLOW. Ricks and the senior team have a nine-year record of converting research decisions into medicines, capacity, revenue, margin, ROIC, and per-share value. They invested through a temporary earnings trough, built a credible bench, maintained meaningful ownership, and communicated directly when channel and demand forecasting failed. Board independence, control effectiveness, and the absence of material related-party concerns provide additional support.

The PASS is not unconditional. The highest-priority monitor is capital allocation at the margin: $2.3 billion of Q1 2026 repurchases at an average $987.15, no disclosed valuation hurdle, up to $12 billion of pending transaction consideration, and a compensation structure that can exclude acquired IPR&D while omitting ROIC and free cash flow. Investors should also demand evidence that the manufacturing build earns acceptable returns, acquired programs survive clinical and commercial scrutiny, and the non-cardiometabolic portfolio reduces concentration.

The governance monitor is narrower but real: combined chair/CEO leadership, a long-tenured board, and charter provisions so entrenched that majority-supported reforms failed. These weaknesses do not outweigh the observed operating and stewardship record today. A series of acquired-asset impairments, continued valuation-insensitive repurchases, material capacity underutilization, or repeated use of adjustments to shield failed investments from compensation would warrant a downgrade. On current evidence, management clears the gate.

# Appendix W - Moat and 2046 Durability

# Eli Lilly and Company — Moat and 2046 Durability

**Assessment date:** 2026-08-04 **2046 test date:** 2046-08-04 **Financial structure:** One reportable segment, Human pharmaceutical products. Therapeutic areas and medicines are business drivers, not separately reported financial segments. **Evidence discipline:** Quantitative historicals below come only from the DR-cleared `data_package.md` for run `pulse-cio-20260804T190229+0800`. Competitive, patent, regulatory, and pricing context was refreshed from primary sources. The finalized Human pharmaceutical products appendix was consumed in full after R clearance at SHA-256 `536cfe97121cffd64f1eb6beee655e5de6ccc8e609d037d00437d92c46681f87`; its competitive, moat, pricing, risk, and scenario evidence is integrated below without changing its exact profit basis. **Authority boundary:** `trade_execution_authorized=false`; this appendix authorizes no trade, order, portfolio action, message, ranking, or sizing decision.

## 1. Moat taxonomy applied

**Network effects — absent.** Lilly does not become intrinsically better for one patient merely because another patient takes its medicines. Physician experience, post-marketing evidence, and larger safety databases improve confidence and may accelerate adoption, but these are learning and evidence-scale effects rather than a self-reinforcing user network. Direct channels such as LillyDirect can improve access and patient support, yet patients and prescribers can still move to another clinically and economically attractive therapy. No network effect should be capitalized in the moat case.

**Switching costs — moderate and product-specific.** Chronic-treatment patients develop practical inertia through dose titration, tolerability, demonstrated response, insurance authorization, device familiarity, and continuity with a clinician. Oncologists also hesitate to change a successful regimen without superior evidence. Those frictions can slow share loss, but they do not protect an inferior or excluded medicine: payers can impose step therapy or a preferred formulary product, and physicians will switch when head-to-head efficacy, safety, convenience, or price is better. Switching costs support retention only after Lilly earns clinical response and access; they are not a substitute for continued differentiation.

**Scale economies — strong.** Lilly can spread discovery platforms, global clinical-development infrastructure, regulatory affairs, pharmacovigilance, medical affairs, commercial access capabilities, and quality systems over a very large revenue base. Industrial scale is especially relevant in incretins: complex active-ingredient production, fill-finish, devices, validation, and a multi-site supply network require years and billions of dollars. The FY2025 10-K lists major investments across the U.S. and Europe and says capacity will come online over several years. Scale does not make Lilly unassailable—Novo Nordisk has comparable capabilities—but it narrows the credible competitor set and lets a successful franchise fund the next wave of trials and plants. The attack vector is overbuilding: capacity becomes a moat only if utilization and net price generate attractive returns.

**Brand — moderate, subordinate to evidence.** Lilly is a trusted sponsor with long relationships among regulators, specialists, payers, wholesalers, and health systems. Mounjaro and Zepbound have strong patient and prescriber recognition, and the company can launch line extensions faster than an unknown entrant. But pharmaceutical brand is earned through outcomes, safety, supply, and reimbursement, not consumer affection alone. A superior competitor, a safety signal, or unfavorable formulary placement can overcome brand quickly. Brand amplifies an effective medicine; it cannot defend a clinically commoditized one.

**Regulatory barriers — strong industry barrier, moderate company-specific moat.** Approval requires controlled trials, manufacturing controls, inspections, labeling, pharmacovigilance, and continuing compliance. These demands protect regulated incumbents from casual entrants and make Lilly's development and quality infrastructure valuable. They do not uniquely protect Lilly from Novo Nordisk, large pharma, or well-financed biotechnology companies. The barrier is therefore a durable industry chokepoint with an execution advantage for Lilly, not an exclusive license. Regulatory trouble can reverse it: the 10-K warns that quality or manufacturing failures can interrupt production and delay approvals. [Lilly FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000059478260000013/lly-20251231.htm)

**Intellectual property and patents — strong today, explicitly time-limited.** Patents, regulatory data protection, formulation and device claims, and know-how create the clearest legal exclusion. Lilly estimates the Mounjaro/Zepbound compound patent expires in 2036 in the U.S., 2037 in major European countries, and 2040 in Japan; Verzenio's U.S. compound patent is estimated at 2031, Taltz at 2030, and Jardiance at 2029. The FDA Orange Book also lists tirzepatide patents extending to 2039 for some approved uses or presentations, but such later-listed patents do not erase the importance of the core

compound claim and can be challenged. By the 2046 test date, the practical exclusivity of today's principal medicines should be assumed gone. IP protects each innovation cycle; it does not by itself prove that the company can create the next cycle. [Lilly patent table](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) [FDA Orange Book cumulative supplement, June 2026](https://www.fda.gov/media/72973/download)

**High-trust procurement — strong.** The actual buying chain includes physicians, pharmacy benefit managers, insurers, employers, Medicare and Medicaid, national health systems, hospitals, wholesalers, and patients. Lilly's record of producing evidence, maintaining supply, navigating rebates, and supporting treatment is difficult to recreate. This matters in oncology and neuroscience, where guidelines, diagnostic infrastructure, infusion capacity, and safety monitoring constrain adoption, and in obesity, where broad reimbursement is still developing. Trust is conditional: it is strongest when Lilly can document superior outcomes and reliable supply, and it weakens quickly if price concessions fail to deliver access or if a quality or safety problem emerges.

The moat is thus not “all seven.” It is the combination of **time-limited IP, clinical and regulatory execution, manufacturing scale, high-trust market access, and a reinvestment engine**. Network effects are absent; switching costs and brand are supporting rather than controlling advantages.

## 2. Per-segment moat

**Human pharmaceutical products (100% of revenue).** At the only financial segment, the moat is the repeated conversion of science into regulator-approved, payer-accessible, reliably manufactured medicines with defensible outcomes. Today's strongest protected profit pool is cardiometabolic: Mounjaro and Zepbound generated 64.8% of Q1 2026 revenue, while cardiometabolic health represented 75.8% of TTM revenue. Oncology, immunology, and neuroscience diversify mechanisms and customers, but none currently offsets the scale of incretins. Durability is strong over five years because tirzepatide remains protected and the pipeline includes Foundayo/orforglipron and retatrutide; it is plausible but not proven over ten years as competition, price normalization, and the 2036 U.S. compound-patent boundary approach. Twenty-year durability depends on portfolio renewal rather than today's molecule. The earliest break signal would be simultaneous incretin share loss, worsening net price, and lower new-factory utilization without a compensating non-cardiometabolic launch.

The blended moat is weaker than the headline tirzepatide franchise suggests. Cardiometabolic concentration creates operating leverage but correlates biological, payer-budget, safety, channel, and manufacturing risks. The R-cleared segment model sharpens this point: even its base 2031 case leaves Mounjaro and Zepbound at 64.6% of segment revenue, almost unchanged from current concentration. Outside cardiometabolic health, Novartis's rapid Kisqali growth shows Verzenio can lose momentum before patent expiry; AbbVie's much larger immunology platform demonstrates the payer breadth Lilly must overcome; and neuroscience adoption remains constrained by diagnosis, infusion, imaging, and monitoring. The equity therefore owns one innovation platform with several therapeutic programs, not a balanced collection of independently protected profit pools.

## 3. Margin persistence evidence

The cleared package supplies five comparable years, not a full ten-year statutory operating-margin series; this appendix does not fill the missing years from a secondary cache. The five-year record is nevertheless informative.

| Margin evidence | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | TTM 2026-03-31 |
|---|---|---|---|---|---|---|
| Consolidated statutory operating margin | 22.45% | 24.97% | 18.92% | 28.64% | 40.35% | 43.63% |
| Exact CODM segment-profit margin, consolidated net income | 19.71% | 21.88% | 15.36% | 23.51% | 31.67% | 34.99% |

FY2023 compressed because statutory operating income included $3.8 billion of acquired IPR&D. The subsequent expansion is not ordinary stability: it reflects extraordinary tirzepatide volume, favorable mix, and operating leverage. FY2025 revenue grew 44.7%, operating margin reached 40.35%, and calculated ROIC reached 39.74%. This is powerful current evidence that differentiated medicines can earn high returns, but the history has not yet cycle-tested the current concentration, new capacity, or lower-price access model.

Gross-margin evidence is supportive but qualified. FY2025 gross margin was 83.0%, up 1.7 percentage points, because favorable mix and improved production costs more than offset lower realized prices. In Q1 2026 gross margin was 81.9%, down 0.6 points year over year, primarily from lower realized prices. High margins persisted while price moved against Lilly, showing mix and scale resilience; however, the direction also shows that payers, access agreements, and cash-pay

reductions—not unilateral price increases—control the marginal economics. [Lilly FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) [Lilly Q1 2026 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm)

## 4. AI disruption stress test

Human pharmaceuticals are not a prompt-to-output workflow. AI can accelerate target discovery, molecule design, trial-site selection, regulatory writing, demand forecasting, and pharmacovigilance, which may lower discovery cost and expand the number of capable competitors. Lilly's own risk disclosure says technological innovation can enable broader participation in drug discovery and new delivery models. That makes early discovery and undifferentiated analytical work the **most AI-exposed activity**: better models and accessible biological datasets can erode part of the information advantage and compress the value of merely identifying a plausible target.

The segment's value, however, ultimately passes through physical and regulated chokepoints: prospectively generated clinical evidence, patient safety, manufacturing validation, process know-how, reliable global supply, regulatory approval, and payer adoption. A foundation model cannot substitute for a Phase 3 outcomes trial, manufacture sterile injectables at scale, pass an inspection, or secure durable reimbursement. The **most AI-protected activity** is therefore the integrated clinical-development, quality-manufacturing, and market-access system for complex medicines. AI improves that system but does not dissolve it.

The strategic risk is democratization rather than direct disintermediation. If AI and global contract research/manufacturing let many biotechnology companies reach proof-of-concept cheaply, Lilly will face more bids for assets and more competing mechanisms. Its defense must be faster decision-making, superior trial design, disciplined business development, industrial capacity, and a higher conversion rate from Phase 2 through commercial adoption. Evidence that AI raises industry R&D productivity faster than Lilly's would weaken the moat; evidence that Lilly shortens cycle times while preserving approval quality would strengthen it.

## 5. The 2046 test

**Specific 2046 base description.** On 2046-08-04, Eli Lilly is a global human-medicines company selling chronic cardiometabolic therapies, targeted oncology and immunology drugs, and selected neuroscience medicines to health systems, insurers, PBMs, hospitals, physicians, and patients. Mounjaro, Zepbound, Verzenio, and Taltz are no longer the economic core; generics, biosimilars, or superior mechanisms have eroded them. Their place has been taken by multiple post-tirzepatide metabolic medicines—potentially successors derived from today's oral, triple-agonist, amylin, lipid, and cardiovascular programs—and by later generations not yet named in 2026. Lilly still runs global clinical trials and regulated manufacturing networks, but more discovery and trial operations use AI-enabled design and automation. Directionally, operating margin is **lower than the current TTM 43.6%**, because present tirzepatide concentration and operating leverage are unlikely to be permanent; a high-20s to mid-30s range is plausible if portfolio renewal succeeds. The company still makes high returns because it repeatedly creates differentiated outcomes, validates them with large clinical evidence packages, manufactures reliably at scale, and earns payer access before exclusivity expires.

That description is plausible, but it requires repeated renewal. The current patent estate does not reach 2046: Lilly's own estimated compound-patent dates put Mounjaro/Zepbound at 2036-2040 across major markets. Retatrutide and other pipeline assets could extend the cardiometabolic platform, but a successor molecule is still another finite patent cycle. The durable object is not any one drug; it is the organizational capability to replenish protected cash flows while absorbing failures. Lilly's 42 active Phase III programs in Q1 2026 and more than 20% of FY2025 revenue spent on R&D are evidence of renewal effort, not proof of 20-year output.

**2046 bear description.** Lilly remains a large pharmaceutical company, but its former incretin profit pool has been fragmented among cheaper generic peptides, oral small molecules, longer-acting combinations, and competitors with better outcomes or payer terms. Government and private payers use broad class competition and reference prices to reset net economics; CMS's negotiation program already shows the direction of travel, with Jardiance subject to negotiated prices from 2026 and Trulicity and Verzenio selected for 2028. New plants operate below expected utilization, and high fixed costs offset part of the revenue base. Non-cardiometabolic launches remain too small to replace the franchise, forcing acquisitions at expensive prices. Operating margin falls toward the low-to-mid 20s and ROIC normalizes below the Gideon bar. [Lilly FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) [CMS selected drugs and negotiated prices](https://www.cms.gov/initiatives/medicare-prescription-drug-affordability/overview/medicare-drug-price-negotiation-program/selected-drugs-negotiated-prices)

The bear case is **materially plausible, roughly one-third**, not remote. Novo Nordisk reports higher-dose and oral Wegovy offerings, submitted CagriSema, and advancing injectable and oral zenagamtide/amycretin into Phase 3. Chinese and other global discovery ecosystems are also accelerating. Lilly can win, but a 2046 PASS would require assuming that an excellent present cycle automatically predicts two or three future cycles. [Novo Nordisk 2025 innovation and therapeutic focus](https://annualreport.novonordisk.com/2025/strategic-aspirations/innovation-and-therapeutic-focus.html) [Novo Nordisk 2025 commercial execution](https://annualreport.novonordisk.com/2025/strategic-aspirations/commercial-execution.html)

## 6. Competitive threat inventory

| Threat | Mechanism | Segment(s) affected | Earliest observable signal | Plausibility |
|---|---|---|---|---|
| Next-generation obesity and diabetes competition | Novo's oral/combination pipeline, Amgen's monthly MariTide, Roche's dual agonist, or another entrant wins on efficacy, tolerability, outcomes, convenience, supply, or payer price | Human pharmaceutical products; cardiometabolic driver | U.S. prescription share declines for two consecutive quarters while competitor access expands; weaker persistence or head-to-head data | High |
| Payer and government price reset | Access broadens only in exchange for larger rebates, cash-pay reductions, CMS negotiation, or international reference pricing | Human pharmaceutical products; chiefly cardiometabolic, then mature oncology and diabetes | Net price remains a material negative and gross margin falls despite higher utilization; reimbursement growth fails to offset concessions | High |
| Pipeline renewal and manufacturing mismatch | Late-stage attrition or delayed launches leave committed factories underused as current patents approach expiry | Entire segment, concentrated in cardiometabolic capacity | Phase 3 failures/delays plus capex above 10% of revenue and deteriorating asset turns or FCF conversion | Medium-high |

## 7. Pricing power verification

Observable evidence does **not** support classic unilateral pricing power. FY2025 consolidated revenue growth was driven by 50% volume, while price reduced growth by 6%; U.S. price was a 10% headwind. Q1 2026 Mounjaro and Zepbound again grew rapidly but faced lower realized prices, including reduced Zepbound cash-pay prices and Chinese reimbursement concessions. Adoption is excellent—Mounjaro grew 125% and Zepbound 80% globally in Q1 2026—but it is adoption under price pressure, not customers accepting price increases without churn. The July 2026 CMS GLP-1 Bridge makes the exchange explicit: eligible patients pay $50 per month while participating manufacturers supply eligible medicines at a $245 net monthly price, widening access but creating a much lower channel reference. [CMS GLP-1 Bridge program details](https://www.cms.gov/medicare/coverage/prescription-drug-coverage/medicare-glp-1-bridge/information-part-d-plans)

The stronger claim is **value-and-volume power**. Lilly has maintained gross margins above 80% because differentiated outcomes, mix, manufacturing improvements, and huge volume more than compensated for lower price. Pharmaceutical contracts generally involve negotiated rebates, formulary terms, statutory discounts, and access conditions, not SaaS-like multi-year price escalators or minimum commitments. The 10-K also discloses manufacturing purchase commitments that can reach approximately $10 billion under development agreements; those are Lilly's obligations, not customer lock-in. Pricing power should therefore be graded weak-to-moderate and conditional on superior clinical value. A moat thesis that assumes annual net-price increases is unsupported.

## 8. Moat verdict

- **Moat gate: YELLOW.** Lilly has a real present moat in protected clinical innovation, regulatory execution, manufacturing scale, and high-trust market access, supported by high margins and ROIC. It is not yet a PASS because 75.8% of TTM revenue is concentrated in cardiometabolic health, net price is already declining, and the current margin regime has not been cycle-tested through the capacity build or the tirzepatide exclusivity boundary.
- **2046 test: YELLOW.** A specific high-return 2046 company is credible only if Lilly renews today's franchise through multiple successor cycles; today's core compound patent expires before 2046, so present excellence alone is insufficient.

**Upgrade to PASS signals:** (1) by 2030-2032, at least two material post-tirzepatide franchises—including one outside cardiometabolic health—demonstrate durable adoption and together reduce single-franchise profit dependence; (2) net-price pressure stabilizes while gross margin remains above 80% and incremental factories achieve high utilization without capex/revenue remaining structurally above 10%; and (3) late-stage conversion, approvals, and outcomes data show that

Lilly's pipeline replaces approaching patent losses without relying on serial high-priced acquisitions.

**Downgrade to FAIL signals:** (1) sustained incretin prescription-share loss occurs alongside double-digit net-price erosion and worsening patient persistence; (2) statutory operating margin retreats below roughly 25% for multiple years while capex and R&D remain elevated because new capacity is underused; or (3) major late-stage failures leave no credible successor before tirzepatide's core patent boundary, while oncology, immunology, and neuroscience remain too small to replace the profit pool.

The controlling distinction is simple: Lilly's **present moat is observable**, but its **2046 durability is a renewal thesis**. That earns YELLOW, not a diplomatic PASS and not a FAIL: the capabilities are real, the current economics are exceptional, and the future profit pool can be described specifically, but two decades of replacement innovation are not yet evidenced.

# Appendix B1 - Human Pharmaceutical Products

# Human pharmaceutical products — Segment Deep Dive

**Company:** Eli Lilly and Company **TTM anchor:** 2026-03-31 **Exact horizon:** 2031-03-31, exactly 5.000 years **Reporting basis:** USD billions unless stated otherwise **Exact sealed segment profit basis:** `Consolidated net income (issuer-disclosed CODM segment profit measure)` **Authority boundary:** `trade_execution_authorized=false`; this appendix authorizes no trade, order, portfolio action, message, ranking, or sizing decision.

## 0. Segment boundary and taxonomy note

Lilly has one and only one reportable financial segment, **Human pharmaceutical products**. Its boundary—discovery, development, manufacture, marketing, and sale of medicines worldwide—has remained stable throughout the five-year segment review. The current *therapeutic-area* taxonomy beneath the segment begins in FY2023 and consists of Cardiometabolic Health, Oncology, Immunology, Neuroscience, and Other. Earlier diabetes/endocrinology groupings are not spliced into this taxonomy. Therapeutic areas and medicines are used below only as bottom-up revenue and economic drivers inside the one segment; they are not independent financial projection segments. The sealed bridge identifies consolidated net income as the CODM performance measure, so no table in this appendix relabels it as operating income and no corporate or statutory-bridge adjustment is allocated to a product.

## 1. What this segment actually is

Human pharmaceutical products is the whole operating business from a segment-reporting perspective. Lilly finds or acquires molecules, runs preclinical and clinical development, secures regulatory approvals, scales manufacturing, wins formulary access, educates prescribers, and supplies medicines through wholesalers, pharmacies, hospitals, specialty channels, and increasingly direct/self-pay channels. Customers are economically split among patients, commercial insurers, pharmacy-benefit managers, government programs, hospitals, and health systems, even though the clinical decision is made by a prescriber and patient. Revenue is primarily prescription medicine sales net of rebates, discounts, returns, and other deductions; collaboration revenue is comparatively small.

The portfolio has become unusually concentrated in cardiometabolic medicines. Mounjaro is tirzepatide for type 2 diabetes, while Zepbound is tirzepatide for chronic weight management and obstructive sleep apnea. They are the same molecule under different labels, so their apparent product diversification does not diversify target biology, manufacturing platform, safety, payer, or competitive risks. Other major products include Trulicity and Jardiance in cardiometabolic health, Verzenio in oncology, Taltz and newer immunology launches, and Kisunla plus earlier-stage neuroscience assets. Pipeline candidates such as the oral small-molecule GLP-1 Foundayo, triple agonist retatrutide, and eloralintide are modeled inside existing driver buckets until they become disclosed revenue; assigning them standalone historical revenue would fabricate a record they do not have.

The go-to-market differs by therapy. Diabetes and obesity medicines require enormous primary-care reach, payer contracting, reliable chronic supply, device or tablet convenience, and patient persistence. Oncology depends more on trial-defined indications, specialist adoption, guideline positioning, combination regimens, and treatment duration. Immunology is a crowded specialty market where formulary placement and differentiation by indication matter. Alzheimer's therapy requires diagnosis, infusion infrastructure, imaging, and monitoring, creating a slower adoption funnel than a conventional prescription pill. Those differences matter economically even though Lilly reports only one segment and one CODM profit measure.

Pricing is not a simple list-price decision. The headline price is reduced by rebates and channel deductions, and net price can fall while volume grows. The reviewed data package says price partially offset volume in each recent headline release. This is especially important in obesity: broader coverage increases addressable volume but can exchange price for access. CMS's July 2026 GLP-1 Bridge illustrates the tradeoff directly: eligible patients pay $50 per month while participating manufacturers provide eligible drugs at a $245 net price per monthly supply ([CMS program details](https://www.cms.gov/medicare/coverage/prescription-drug-coverage/medicare-glp-1-bridge/information-part-d-plans)). That can expand treatment while anchoring a much lower realized-price reference for a covered population.

## 2. Current economics

TTM revenue was **$72.250 billion**, equal to the four verified quarters Q2 2025 through Q1 2026 in data-package §5. TTM `Consolidated net income (issuer-disclosed CODM segment profit measure)` was **$25.277 billion**, producing a **34.99%** margin on the exact CODM basis [data_package §3a, TTM bridge rows “Human pharmaceutical products” and “Net income”]. This is not an operating margin. The separate statutory operating-income subtotal was $31.522 billion, and the sealed bridge reverses scenario tax and Other-net items mechanically; those lines belong in the synthesis, not inside product economics.

Growth was extraordinary. FY2025 revenue increased 44.7% to $65.179 billion, while Q1 2026 revenue increased 56% to $19.799 billion [data_package §3 row “Revenue” and §5 row “Q1 2026”]. Mounjaro and Zepbound generated $12.822 billion in Q1 2026, or **64.8%** of company revenue [data_package §5, Q1 2026 selected-products row and concentration note]. The opportunity is broad, but the starting mix means the five-year thesis is substantially a tirzepatide-franchise thesis.

The reviewed TTM therapeutic-area totals were $54.77 billion Cardiometabolic Health, $9.70 billion Oncology, $5.36 billion Immunology, $1.50 billion Neuroscience, and $0.92 billion Other [data_package §0a, KPI table, TTM column]. The product-driver start used later is a transparent model schedule from those verified rows: Mounjaro's four §5 quarters sum to $27.785 billion; Zepbound's sum to $15.390 billion; Verzenio's sum to $5.865 billion. “Cardiometabolic other” is the $11.595 billion therapeutic-area residual after Mounjaro and Zepbound, and “Other oncology” is the $3.835 billion oncology residual after Verzenio. These residuals are analyst driver buckets, not reported products, and they do not create synthetic segments.

Capital intensity has risen sharply. Cash capex increased from $1.310 billion in FY2021 to $7.841 billion in FY2025 and reached 12.03% of revenue, while FY2025 R&D was $13.338 billion, or 20.46% of revenue [data_package §7, rows FY2021 and FY2025]. TTM cash capex was $8.657 billion. The physical network is a competitive asset, but it must be built before demand is certain; return on incremental capacity depends on sustainable net price, utilization, yield, and the useful life of delivery formats. Product-level gross margin, plant utilization, and product profit are not disclosed [data_package §10]. This appendix therefore does not pretend to know which medicine carries a specific net-income margin.

## 3. Unit economics

The segment's revenue engine begins with eligible patients, diagnosis, coverage, initiation, and persistence. For chronic incretin medicines, prescriptions convert into revenue only when access and supply are available; repeat fills matter more than a launch-week prescription spike. Revenue per patient is net price multiplied by persistence. Small changes in adherence, discontinuation, rebate intensity, or dose mix can materially change lifetime revenue because the addressable population is vast. The recent 55-country international expansion supports volume but also changes mix toward markets with lower net prices than the United States.

Gross economics depend on molecule and format. Peptide injectables require active-ingredient production, fill-finish capacity, devices, quality systems, cold-chain logistics, and inventory management. A scaled oral small molecule could reduce device constraints and expand primary-care reach, but it may require lower net price, higher promotional spending, or greater volumes. Manufacturing learning can improve yields, yet the current capex cycle front-loads depreciation and start-up costs. Lilly has stated that new Wisconsin and North Carolina sites began making medicine and that more capacity was coming online, but it does not disclose plant-level utilization or returns [data_package §6 rows on supply; §10 data gaps]. The model therefore makes margin expansion contingent on utilization and mix rather than treating the capital build as costless.

R&D is both an expense and the replenishment engine. FY2025 R&D at 20.46% of revenue fell as a percentage of sales from FY2023's 27.29%, yet dollars continued to rise; Q1 2026 R&D increased 28% and management cited 42 active Phase III programs [data_package §6, Q1 FY26 pipeline-spending row]. A high-quality five-year forecast cannot simply keep the lower ratio and capitalize the benefit. Base-case scale leverage assumes R&D grows more slowly than revenue but remains large enough to fund cardiometabolic, oncology, immunology, and neuroscience programs. The bull case requires unusually productive spending; the bear case combines continued spend with weaker commercial realization.

Commercial costs scale differently. A single large cardiometabolic franchise can leverage payer relationships and sales infrastructure across diabetes, obesity, sleep apnea, cardiovascular disease, and related indications. Conversely, access negotiations become tougher as the budget impact rises. Payers can demand rebates, prior authorization, step therapy, or preferred-brand exclusivity. Large volume is not synonymous with pricing power when the payer's total bill becomes politically salient. The CMS GLP-1 Bridge is both demand creation and price compression: the manufacturer-supplied $245 net monthly price widens access but creates a concrete lower-price channel reference.

Oncology and specialty medicines have different unit economics. Verzenio's revenue depends on eligible breast-cancer populations, treatment duration, competition from CDK4/6 alternatives, and the maturity of its indication set. Kisunla requires

diagnostic and infusion capacity plus monitoring, slowing the throughput funnel. Immunology products face entrenched biologics and aggressive contracting. Because Lilly discloses none of their product-level profitability, the only defensible profit forecast is the one-segment consolidated net-income measure. Product revenue mix informs whether the segment-level margin is plausible, but product profit is not invented.

The cleanest margin mechanisms are therefore: gross-profit mix; manufacturing utilization and yields; realized price and rebates; R&D intensity; launch and selling expense; acquired IPR&D and special charges; interest and Other-net effects; and taxes. The exact CODM measure is below all of these. A forecast can justifiably move the net-income margin, but it must acknowledge that it is forecasting a post-tax measure rather than an operating contribution margin.

# 4. Competitive dynamics

## Cardiometabolic and obesity

The immediate branded competitor is Novo Nordisk's semaglutide franchise—Ozempic, Wegovy, and an expanding oral portfolio. Novo reported that it remained the weekly injectable GLP-1 volume market leader at roughly **55%** using January 2026 MAT data and that Wegovy had launched in more than 55 countries ([Novo Nordisk Q1 2026 investor presentation](https://www.novonordisk.com/content/dam/nncorp/global/en/investors/pdfs/financial-results/2026/Q1-2026-investor-presentation.pdf)). That does not contradict Lilly management's statement that Lilly medicines represented nearly six out of ten prescriptions within its referenced class and period; definitions, geography, product set, and measurement windows differ. It does show that this is a live duopoly, not an uncontested monopoly.

Novo's economics also expose the central volume/price tension. In Q1 2026, adjusted obesity-care sales rose 22% at constant exchange rates, but adjusted U.S. sales fell 11% because lower realized prices more than offset volume growth ([Novo Q1 2026 company announcement](https://www.novonordisk.com/news-and-media/news-and-ir-materials/news-details.html?id=916542)). That is a relevant deceleration analogue for Lilly: even a strong category and rising prescriptions can produce slower sales when access expands at lower price.

Next-wave competition is credible. Amgen's monthly or less frequent MariTide produced up to roughly 20% average weight loss at 52 weeks in Phase II and moved into Phase III enrollment ([Amgen Phase II release](https://www.amgen.com/newsroom/press-releases/2025/06/results-from-amgens-phase-2-obesity-study-of-monthly-maritide-presented-at-the-american-diabetes-association-85th-scientific-sessions)). Roche reported positive Phase II results for its dual GLP-1/GIP agonist CT-388 in January 2026 ([Roche update](https://www.roche.com/investors/updates/inv-update-2026-01-27)). Pfizer discontinued danuglipron after a potential drug-induced liver injury in one participant, showing that oral competition is not guaranteed but also that large competitors will keep recycling capital into the category ([Pfizer update](https://www.pfizer.com/print/pdf/node/561924)). Lilly's advantages are efficacy, scale, prescriber familiarity, data breadth, manufacturing investment, and a pipeline spanning oral, dual-, triple-, and non-incretin approaches. Its vulnerabilities are chronic-treatment price pressure, switching, payer preference, safety surprises, and a market that may reward convenience as much as efficacy.

Compounding pressure has diminished but not vanished. FDA determined the tirzepatide shortage resolved and limited the shortage-based enforcement discretion that had supported mass copying; it also warned that compounded products are not FDA-approved ([FDA shortage and compounding policy](https://www.fda.gov/drugs/drug-alerts-and-statements/fda-clarifies-policies-compounders-national-glp-1-supply-begins-stabilize)). This strengthens branded control, but self-pay elasticity and illegal or noncompliant channels remain commercial realities.

## Oncology

Verzenio is a major breast-cancer product, but Novartis's Kisqali is gaining quickly. Novartis reported FY2025 Kisqali sales of **$4.783 billion**, up 57% at constant currency, compared with Verzenio's 7.8% FY2025 growth in the reviewed Lilly package ([Novartis product sales](https://www.novartis.com/investors/financial-data/product-sales); [Novartis FY2025 results](https://www.novartis.com/news/media-releases/novartis-delivered-high-single-digit-sales-growth-achieved-40-core-margin-and-further-advanced-pipeline-2025)). This is the clearest reason not to extrapolate Verzenio's FY2023-FY2025 21.7% CAGR. The base model assumes the product flattens and then declines modestly; growth must come from newer oncology assets such as Jaypirca and Inluriyo rather than from indefinite Verzenio share stability.

## Immunology

Taltz operates in crowded psoriasis and inflammatory-disease markets against large platforms including AbbVie's Skyrizi and Rinvoq. AbbVie reported FY2025 Skyrizi revenue of **$17.562 billion** and Rinvoq revenue of **$8.304 billion**, with its overall immunology portfolio up 14% operationally ([AbbVie FY2025 results](https://investors.abbvie.com/news-releases/news-release-details/abbvie-reports-full-year-and-fourth-quarter-2025-financial)). Lilly's entire TTM immunology area was $5.36 billion. Lilly can still grow through Ebglyss, Omvoh, and indication expansion, but it lacks the same scale and payer breadth in this area. The base case therefore stays below the area's FY2023-FY2025 17.6% historical CAGR.

### Neuroscience

Kisunla's value proposition competes with Eisai/Biogen's Leqembi and with the friction of the treatment pathway itself. Diagnosis, amyloid confirmation, infusion access, imaging, and adverse-event monitoring constrain the addressable funnel even when clinical need is large. Lilly's pipeline can create strong percentage growth from a small $1.50 billion TTM therapeutic-area base, but absolute revenue remains modest in the model. The bull case requires infrastructure and reimbursement to scale without a major safety or efficacy setback.

## 5. Segment-level moat

The strongest moat is not any one patent. It is a system: deep scientific capability, a broad clinical program, regulatory experience, brand trust, payer relationships, global commercialization, and the willingness and balance sheet to invest many billions ahead of demand. In incretins, Lilly can study one platform across diabetes, obesity, sleep apnea, cardiovascular disease, liver disease, and other complications, creating evidence that feeds access and prescribing. A broad pipeline also lets Lilly defend the franchise with its own next generation rather than relying on one formulation.

Manufacturing is a real barrier. Quality-controlled peptide and device capacity cannot be replicated overnight, and the data package documents a capex rise to $7.841 billion in FY2025 and start-up at new sites. FDA's resolution of the tirzepatide shortage further reduces the lawful space for mass compounded copies. Yet manufacturing is not a permanent monopoly. Novo has substantial global capacity, Amgen has biologics expertise, and competitors can partner or build. The moat is best described as a multi-year lead and scale advantage, not an impregnable wall.

Clinical evidence compounds. Every successful outcome study, label expansion, and real-world experience can broaden the treated population and make payer exclusion harder. Retatrutide's July 2026 TRIUMPH-2 and TRIUMPH-3 topline efficacy strengthens Lilly's next-generation position, but exploratory cardiovascular confidence intervals crossed 1.0 [data_package §0a, trial table and following note]. The model therefore gives pipeline launches meaningful upside without treating a cardiovascular claim as proven.

The weak point is pricing power. Lilly may have therapeutic differentiation, but public and private payers purchase budget impact, not just clinical merit. When a class treats tens of millions chronically, access negotiations can turn superior efficacy into higher volume at lower unit economics. CMS's $245 monthly net-price bridge makes that tension concrete. Over five to ten years, the moat is durable enough to protect participation and a leading share, but not necessarily the present net price or current 35% net-income margin.

Outside cardiometabolic health, the moat is less uniform. Oncology has strong franchises and pipeline optionality, but Kisqali's rapid growth shows that clinical competition can alter share quickly. Immunology is competitive and contracting-intensive. Neuroscience has high scientific barriers, but the care pathway slows adoption. The segment-level moat is therefore **strong but concentrated and price-sensitive**. It can support durable above-market growth, but a blended “Lilly moat” is not proof that each revenue bucket will compound at franchise-level rates.

## 6. Historical growth rates — reproduced from the reviewed data package

The required history is reproduced from data-package §§0a, 3, 4, and 5. “3-year CAGR” below means CAGR from FY2023 to FY2025 using three reported annual observations, a two-year compounding interval. No pre-FY2023 therapeutic-area number is used because it is outside the comparable taxonomy.

| Product / sub-segment | FY2023 revenue | FY2024 revenue | FY2025 revenue | 3-year observed-series CAGR | Most recent disclosed YoY | Data-package row and primary-source cite |
|---|---|---|---|---|---|---|
| Human pharmaceutical products | $34.124B [§3, Revenue row] | $45.043B [§3, Revenue row] | $65.179B [§3, Revenue row] | 38.2% [§3, Revenue row; calculated] | 44.7% [§3, YoY row] | §3 segment table; `FY2025_10K` and `FY2023_10K` consolidated statements; `FMP_INC_A` revenue tie |

| Product / sub-segment | FY2023 revenue | FY2024 revenue | FY2025 revenue | 3-year observed-series CAGR | Most recent disclosed YoY | Data-package row and primary-source cite |
|---|---|---|---|---|---|---|
| Cardiometabolic Health | $19.67B [§0a, KPI row] | $29.52B [§0a, KPI row] | $48.22B [§0a, KPI row] | 56.6% [§0a, KPI row; calculated] | 63.3% [§0a, KPI row; calculated] | §0a KPI table; `FY2025_10K` product-revenue by therapeutic area |
| Oncology | $6.66B [§0a, KPI row] | $8.75B [§0a, KPI row] | $9.38B [§0a, KPI row] | 18.7% [§0a, KPI row; calculated] | 7.2% [§0a, KPI row; calculated] | §0a KPI table; `FY2025_10K` product-revenue by therapeutic area |
| Immunology | $3.80B [§0a, KPI row] | $4.39B [§0a, KPI row] | $5.25B [§0a, KPI row] | 17.6% [§0a, KPI row; calculated] | 19.6% [§0a, KPI row; calculated] | §0a KPI table; `FY2025_10K` product-revenue by therapeutic area |
| Neuroscience | $2.88B [§0a, KPI row] | $1.47B [§0a, KPI row] | $1.39B [§0a, KPI row] | -30.5% [§0a, KPI row; calculated] | -5.4% [§0a, KPI row; calculated] | §0a KPI table; `FY2025_10K` product-revenue by therapeutic area |
| Other | $1.12B [§0a, KPI row] | $0.90B [§0a, KPI row] | $0.94B [§0a, KPI row] | -8.4% [§0a, KPI row; calculated] | 4.4% [§0a, KPI row; calculated] | §0a KPI table; `FY2025_10K` product-revenue by therapeutic area |

| Product / sub-segment | FY2023 revenue | FY2024 revenue | FY2025 revenue | 3-year observed-series CAGR | Most recent disclosed YoY | Data-package row and primary-source cite |
|---|---|---|---|---|---|---|
| Mounjaro | $5.163B [§4, Mounjaro row] | $11.540B [§4, Mounjaro row] | $22.965B [§4, Mounjaro row] | 110.9% [§4, Mounjaro row; calculated] | 99.0% [§4, Mounjaro row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |
| Zepbound | $0.176B [§4, Zepbound row] | $4.926B [§4, Zepbound row] | $13.542B [§4, Zepbound row] | 777.2% [§4, Zepbound row; calculated] | 174.9% [§4, Zepbound row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |
| Trulicity | $7.132B [§4, Trulicity row] | $5.254B [§4, Trulicity row] | $4.276B [§4, Trulicity row] | -22.6% [§4, Trulicity row; calculated] | -18.6% [§4, Trulicity row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |
| Jardiance | $2.744B [§4, Jardiance row] | $3.341B [§4, Jardiance row] | $3.431B [§4, Jardiance row] | 11.8% [§4, Jardiance row; calculated] | 2.7% [§4, Jardiance row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |
| Verzenio | $3.863B [§4, Verzenio row] | $5.307B [§4, Verzenio row] | $5.723B [§4, Verzenio row] | 21.7% [§4, Verzenio row; calculated] | 7.8% [§4, Verzenio row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |
| Taltz | $2.760B [§4, Taltz row] | $3.260B [§4, Taltz row] | $3.563B [§4, Taltz row] | 13.6% [§4, Taltz row; calculated] | 9.3% [§4, Taltz row; calculated] | §4 selected-products table; `FY2025_10K` selected-products revenue table |

Arithmetic checks pass within the 2% contract: $45.043B × 1.447 = $65.177B versus $65.179B reported; $11.540B × 1.990 = $22.965B; $4.926B × 2.749 = $13.541B; $5.254B × 0.814 = $4.277B; $3.341B × 1.027 = $3.431B; $5.307B × 1.078 = $5.721B; and $3.260B × 1.093 = $3.563B. Differences are rounding only. No back-solved historical product dollars are used.

The latest quarterly trajectory is much faster than the annual series: Q1 2026 segment revenue grew 56%, Mounjaro grew 125%, Zepbound grew 80%, and Verzenio grew 12% [data_package §5, Q1 2026 rows]. The forward model shows explicit annual deceleration rather than silently converting those rates into five-year CAGRs.

## 7. Management guidance — quoted from data-package §6

- **Current FY2026 range — Lucas Montarce, CFO, Q1 FY26 call on 2026-04-30 (§6):** “We have increased the top and the bottom end of the revenue range by $2 billion and now expect full year revenue to be between $82 billion and $85 billion.” The model treats this as the current-year bridge. It does not treat the range as a five-year growth promise.
- **Current growth anchor — Lucas Montarce, CFO, Q1 FY26 call on 2026-04-30 (§6):** “The midpoint of the new revenue range represents 28% growth compared to 2025.” Base Year 1 remains strong but is lower than Q1's 56%, reflecting the larger comparison base and price offsets.
- **Pipeline spending — Lucas Montarce, CFO, Q1 FY26 call on 2026-04-30 (§6):** “R&D expenses increased 28%, driven by continued investments in our pipeline, including 42 active Phase III programs.” Scale leverage cannot come from starving R&D; the base margin path assumes continued large absolute spending.

- **International Mounjaro — Patrik Jonsson, Lilly International president, Q1 FY26 call on 2026-04-30 (§6):** “And now we have fully launched in more than 55 countries, and we have seen a very strong speed of uptake and also a rapid market share gain.” This supports Mounjaro volume but not U.S.-like net pricing globally.
- **Obesity runway — Lucas Montarce, CFO, Q4 FY25 call on 2026-02-04 (§6):** “As market penetration within the population of people with obesity is only mid-single digits, we believe there is room for market expansion and sustained market growth in the quarters and years to come.” The base case accepts a long runway while forcing marked deceleration from launch rates.
- **Supply — David Ricks, chair and CEO, Q4 FY25 call on 2026-02-04 (§6):** “We increased our manufacturing capacity and began making medicine at our new sites in Wisconsin and North Carolina.” This supports the end of supply as the sole binding constraint, but plant ramp and depreciation remain margin risks.
- **Foundayo international timing — Patrik Jonsson, Lilly International president, Q4 FY25 call on 2026-02-04 (§6):** “As I think we shared in the prepared remarks, outside the US, it's mainly going to be a matter of launching in 2027, with a few exceptions.” Pipeline contribution is staged, not assumed to be global immediately.
- **Incretin share — David Ricks, chair and CEO, Q3 FY25 call on 2025-10-30 (§6):** “Lilly medicines account for nearly 6 out of 10 prescriptions within this large and growing class.” This anchors a powerful current position, but the model allows share mean reversion as Novo and later entrants compete.
- **Orforglipron readiness — David Ricks, chair and CEO, Q3 FY25 call on 2025-10-30 (§6):** “But we're focused on speed here and we're ready to launch.” Readiness supports the cardiometabolic-other bucket; approval, access, and commercial execution still determine revenue.
- **Manufacturing ramp — David Ricks, chair and CEO, Q2 FY25 call on 2025-08-07 (§6):** “We will continue to bring more capacity online in the second half of 2025 and expect our production capabilities to increase further.” Base and bull cases assume availability expands; the bear case assumes utilization disappoints after the initial ramp.
- **Oral manufacturing — Kenneth Custer, Cardiometabolic Health president, Q2 FY25 call on 2025-08-07 (§6):** “Now you're getting that all from a single oral pill, but we can manufacture at scale.” Oral scale can broaden access and relieve device constraints, but it can also intensify price competition.
- **Portfolio durability — David Ricks, chair and CEO, Q2 FY25 call on 2025-08-07 (§6):** “We're investing in the next wave of medicines that we expect will drive growth in the near and more distant future.” The model includes pipeline contribution only within disclosed therapeutic buckets and retains high reinvestment.

The June 2026 ADA presentation and July retatrutide update are clinical evidence rather than management financial guidance. Retatrutide's highest-dose results support upside, but its planned Q1 2027 U.S. submission means the base model cannot assume a fully mature five-year revenue stream from today.

## 8. Forward growth assumptions — explicit product and therapeutic drivers

The TTM driver schedule ties exactly to $72.250 billion. Mounjaro, Zepbound, and Verzenio are summed from the four quarters disclosed in §5. The two residual buckets tie to §0a therapeutic-area totals. Trulicity, Jardiance, and Taltz have annual history but not separate TTM revenue in the reviewed package, so they remain inside the cardiometabolic-other and immunology buckets rather than receiving invented TTM bases. Each annual growth path is for a rolling year ending March 31; Year 5 is 2031-03-31.

### Base case growth

| Driver | TTM revenue | Historical CAGR anchor | Latest YoY anchor | Mgmt FY+1 guide | Base annual growth path Y1/Y2/Y3/Y4/Y5 | Base CAGR TTM→TTM+5y | Horizon revenue |
|---|---|---|---|---|---|---|---|
| Mounjaro | $27.785B | 110.9% product CAGR | 125% Q1 2026 | Company FY2026 growth midpoint 28% | 28% / 20% / 13% / 7% / 0% | 13.18% | $51.602B |
| Zepbound | $15.390B | 777.2% launch CAGR | 80% Q1 2026 | Obesity penetration mid-single digits | 32% / 22% / 15% / 8% / 2% | 15.33% | $31.397B |
| Cardiometabolic other | $11.595B | 56.6% area proxy | 63.3% FY2025 area | Foundayo U.S. first; mainly ex-U.S. 2027 | 18% / 17% / 15% / 12% / 8% | 13.94% | $22.268B |
| Verzenio | $5.865B | 21.7% product CAGR | 12% Q1 2026 | No product guide | 2% / 1% / 0% / -2% / -3% | -0.42% | $5.744B |

| Driver | TTM revenue | Historical CAGR anchor | Latest YoY anchor | Mgmt FY+1 guide | Base annual growth path Y1/Y2/Y3/Y4/Y5 | Base CAGR TTM→TTM+5y | Horizon revenue |
|---|---|---|---|---|---|---|---|
| Other oncology | $3.835B | 18.7% area proxy | 7.2% FY2025 area | Pipeline investment | 12% / 10% / 8% / 6% / 4% | 7.96% | $5.625B |
| Immunology | $5.360B | 17.6% area CAGR | 19.6% FY2025 area | Pipeline investment | 10% / 9% / 8% / 6% / 4% | 7.38% | $7.652B |
| Neuroscience | $1.500B | -30.5% area CAGR | -5.4% FY2025 area | No explicit revenue guide | 28% / 22% / 17% / 12% / 8% | 17.19% | $3.315B |
| Other | $0.920B | -8.4% area CAGR | 4.4% FY2025 area | None | 3% / 2% / 1% / 0% / -1% | 0.99% | $0.966B |

**Base rationale.** Mounjaro and Zepbound decelerate sharply because their combined TTM base already exceeds $43 billion, payer discounts intensify, and current growth includes capacity normalization and launch effects. The path does not leap from 125% to a flat 13%; it steps down 28%, 20%, 13%, 7%, and 0% for Mounjaro. Novo's Q1 2026 combination of obesity volume growth and lower U.S. realized price is the relevant structural analogue. Cardiometabolic other grows through oral and next-generation assets while absorbing Trulicity erosion. Verzenio is flat because Kisqali grew 57% in FY2025. Other oncology, immunology, and neuroscience provide diversification but do not outweigh incretin concentration. The skeptical dependency check is severe: the three cardiometabolic driver buckets provide $50.497 billion, or 89.7%, of the base case's $56.319 billion five-year revenue increase and are 81.9% of horizon revenue. The $88.603 billion Year 1 rolling-year result also sits 6.1% above management's $83.5 billion FY2026 guidance midpoint; because Year 1 ends three months later, that is not a direct contradiction, but it requires continued growth after the guided year rather than merely delivery of the guide.

## Bear case growth

| Driver | TTM revenue | Historical CAGR anchor | Latest YoY anchor | Mgmt FY+1 guide | Bear annual growth path Y1/Y2/Y3/Y4/Y5 | Bear CAGR TTM→TTM+5y | Horizon revenue |
|---|---|---|---|---|---|---|---|
| Mounjaro | $27.785B | 110.9% product CAGR | 125% Q1 2026 | Company FY2026 midpoint 28% | 18% / 10% / 4% / -3% / -8% | 3.79% | $33.472B |
| Zepbound | $15.390B | 777.2% launch CAGR | 80% Q1 2026 | Obesity penetration mid-single digits | 22% / 12% / 5% / -3% / -8% | 5.07% | $19.704B |
| Cardiometabolic other | $11.595B | 56.6% area proxy | 63.3% FY2025 area | Foundayo timing | 5% / 4% / 2% / 0% / -2% | 1.77% | $12.657B |
| Verzenio | $5.865B | 21.7% product CAGR | 12% Q1 2026 | No product guide | -4% / -7% / -10% / -13% / -15% | -9.89% | $3.485B |
| Other oncology | $3.835B | 18.7% area proxy | 7.2% FY2025 area | Pipeline investment | 6% / 4% / 2% / 0% / -2% | 1.96% | $4.226B |
| Immunology | $5.360B | 17.6% area CAGR | 19.6% FY2025 area | Pipeline investment | 4% / 3% / 2% / 0% / -2% | 1.38% | $5.739B |
| Neuroscience | $1.500B | -30.5% area CAGR | -5.4% FY2025 area | No explicit revenue guide | 10% / 8% / 6% / 3% / 0% | 5.34% | $1.946B |
| Other | $0.920B | -8.4% area CAGR | 4.4% FY2025 area | None | 0% / -3% / -3% / -3% / -3% | -2.41% | $0.814B |

**Bear rationale.** Year 1 still grows because the current order book, capacity, and FY2026 guidance cannot be ignored. The break occurs by the rolling year ending March 2027 and deepens later: semaglutide and newer entrants win payer preference; CMS-like low net prices broaden; oral competitors commoditize convenience; next-generation Lilly launches cannibalize rather than expand the franchise; and manufacturing is underutilized. Verzenio declines as Kisqali gains. Pipeline successes are fewer, leaving the segment at $82.043 billion after peaking at $90.139 billion in Year 3. The $81.577 billion Year 1 result is $0.423 billion below the low end of calendar-FY2026 guidance; reconciling the different periods would require Q1 2027 revenue to fall modestly below Q1 2026 if FY2026 lands exactly at the low end, which is a specific early-break condition rather than an arithmetic error.

## Bull case growth

| Driver | TTM revenue | Historical CAGR anchor | Latest YoY anchor | Mgmt FY+1 guide | Bull annual growth path Y1/Y2/Y3/Y4/Y5 | Bull CAGR TTM→TTM+5y | Horizon revenue |
|---|---|---|---|---|---|---|---|
| Mounjaro | $27.785B | 110.9% product CAGR | 125% Q1 2026 | International uptake in 55+ countries | 35% / 28% / 20% / 12% / 5% | 19.52% | $67.755B |
| Zepbound | $15.390B | 777.2% launch CAGR | 80% Q1 2026 | Obesity penetration mid-single digits | 40% / 30% / 22% / 14% / 7% | 22.05% | $41.683B |

| Driver | TTM revenue | Historical CAGR anchor | Latest YoY anchor | Mgmt FY+1 guide | Bull annual growth path Y1/Y2/Y3/Y4/Y5 | Bull CAGR TTM→TTM+5y | Horizon revenue |
|---|---|---|---|---|---|---|---|
| Cardiometabolic other | $11.595B | 56.6% area proxy | 63.3% FY2025 area | Oral scale; retatrutide submission Q1 2027 | 30% / 26% / 22% / 18% / 12% | 21.44% | $30.623B |
| Verzenio | $5.865B | 21.7% product CAGR | 12% Q1 2026 | No product guide | 5% / 4% / 3% / 1% / -1% | 2.38% | $6.596B |
| Other oncology | $3.835B | 18.7% area proxy | 7.2% FY2025 area | Pipeline investment | 16% / 14% / 12% / 10% / 7% | 11.76% | $6.685B |
| Immunology | $5.360B | 17.6% area CAGR | 19.6% FY2025 area | Pipeline investment | 14% / 12% / 10% / 8% / 6% | 9.96% | $8.618B |
| Neuroscience | $1.500B | -30.5% area CAGR | -5.4% FY2025 area | No explicit revenue guide | 38% / 32% / 25% / 18% / 12% | 24.65% | $4.514B |
| Other | $0.920B | -8.4% area CAGR | 4.4% FY2025 area | None | 7% / 5% / 4% / 3% / 2% | 4.19% | $1.129B |

**Bull rationale.** Lilly maintains category leadership, international adoption rises rapidly, expanded indications improve persistence, Foundayo expands the oral market without destroying price, retatrutide differentiates on efficacy, and manufacturing capacity arrives on time. Neuroscience infrastructure scales and newer specialty assets succeed. Even here, growth decelerates annually: Mounjaro falls from 35% to 5% and Zepbound from 40% to 7%. The bull case is not a continuation of 80%-125% product growth; it is sustained leadership over a much larger base.

## 9. Forward `Consolidated net income (issuer-disclosed CODM segment profit measure)` margin assumptions

TTM margin on the exact sealed basis is **34.99%**, calculated from $25.277 billion net income and $72.250 billion revenue [data_package §3a, TTM bridge; §5 four-quarter revenue]. Product-level gross margin and profit are not disclosed, so assigning separate net-income margins to Mounjaro, Verzenio, or Taltz would be false precision. The segment margin is applied only after revenue drivers are summed. No tax or Other-net adjustment is inserted into a product row.

| Case | TTM margin | Year 1 | Year 2 | Year 3 | Year 4 | TTM+5y margin | Change vs TTM | Exact profit metric |
|---|---|---|---|---|---|---|---|---|
| Bear | 34.99% | 32.0% | 30.0% | 28.5% | 27.5% | 27.0% | -799 bps | Consolidated net income (issuer-disclosed CODM segment profit measure) |
| Base | 34.99% | 36.0% | 37.0% | 37.5% | 38.0% | 38.0% | +301 bps | Consolidated net income (issuer-disclosed CODM segment profit measure) |
| Bull | 34.99% | 37.0% | 39.5% | 41.5% | 43.0% | 44.0% | +901 bps | Consolidated net income (issuer-disclosed CODM segment profit measure) |

**Bear mechanism.** The 799-basis-point compression reflects lower realized incretin price, unfavorable international mix, excess capacity and depreciation, weak launch productivity, continued R&D, and financing/tax drag. It is not a corporate plug. A chronic-treatment market that shifts toward $245-per-month public access and tougher private rebates can grow patients while compressing net profit per patient. At the $82.043 billion endpoint, the margin compression removes about $6.56 billion of profit versus holding the 34.99% TTM margin constant; that quantifies the combined price, utilization, spending, financing, and tax penalty without allocating it to products.

**Base mechanism.** The 301-basis-point expansion reflects manufacturing yield and utilization, spreading commercial infrastructure across a broader franchise, and R&D plus selling expense growing more slowly than revenue. It stops at 38% because competition, access rebates, capex depreciation, and continued pipeline spending absorb a meaningful share of scale benefits. The base margin is only 101 basis points above the Year 2 level; most leverage occurs early as existing capacity fills. At the $128.569 billion endpoint, the 301-basis-point uplift contributes about $3.87 billion of profit versus holding the TTM margin constant; the other approximately $19.71 billion of profit growth comes from higher revenue at the current margin. This makes the base case primarily a revenue-underwriting claim, not a hidden margin claim.

**Bull mechanism.** The 901-basis-point expansion requires high utilization, strong launch productivity, favorable mix, disciplined rebate growth, and productive R&D. It is demanding because the metric is post-tax net income, not an adjusted operating margin. At the $167.604 billion endpoint, the margin uplift adds about $15.10 billion of profit versus holding the TTM margin constant. A 44% net-income margin would be evidence of an exceptional global pharmaceutical franchise and implies substantially more leverage than the current 34.99% net margin; it should not be considered normal merely because FY2025-2026 growth was exceptional.

## 10. Segment rollup — bottom-up and reconciled

The driver schedule below uses no therapeutic-area profit allocation. The revenue rows sum exactly to the one reportable segment. The exact CODM net-income margin is then applied once at the segment total.

| Revenue driver | TTM 2026-03-31 | Bear 2031-03-31 | Base 2031-03-31 | Bull 2031-03-31 | Foundation |
|---|---|---|---|---|---|
| Mounjaro | $27.785B | $33.472B | $51.602B | $67.755B | Sum of §5 four quarters |
| Zepbound | $15.390B | $19.704B | $31.397B | $41.683B | Sum of §5 four quarters |
| Cardiometabolic other | $11.595B | $12.657B | $22.268B | $30.623B | §0a TTM area less Mounjaro and Zepbound |
| Verzenio | $5.865B | $3.485B | $5.744B | $6.596B | Sum of §5 four quarters |
| Other oncology | $3.835B | $4.226B | $5.625B | $6.685B | §0a TTM Oncology less Verzenio |
| Immunology | $5.360B | $5.739B | $7.652B | $8.618B | §0a TTM area row |
| Neuroscience | $1.500B | $1.946B | $3.315B | $4.514B | §0a TTM area row |
| Other | $0.920B | $0.814B | $0.966B | $1.129B | §0a TTM area row |
| **Human pharmaceutical products total** | **$72.250B** | **$82.043B** | **$128.569B** | **$167.604B** | **Exact arithmetic sum** |

The TTM start ties: $27.785B + $15.390B + $11.595B + $5.865B + $3.835B + $5.360B + $1.500B + $0.920B = **$72.250B**. All scenario endpoint sums reconcile to displayed line items within $1 million, much tighter than the 1% contract.

| Case | TTM revenue | Year 1 revenue | Year 2 revenue | Year 3 revenue | Year 4 revenue | TTM+5y revenue | Segment revenue CAGR |
|---|---|---|---|---|---|---|---|
| Bear | $72.250B | $81.577B | $87.636B | $90.139B | $87.769B | $82.043B | 2.57% |
| Base | $72.250B | $88.603B | $103.972B | $116.939B | $125.735B | $128.569B | 12.22% |
| Bull | $72.250B | $93.901B | $117.101B | $139.253B | $157.005B | $167.604B | 18.33% |

| Case | Segment TTM+5y revenue | Exact profit metric | Segment TTM+5y profit margin | Segment TTM+5y profit | Arithmetic tie-out |
|---|---|---|---|---|---|
| Bear | $82.043B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 27.0% | $22.152B | $82.043B × 27.0% = $22.152B |
| Base | $128.569B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 38.0% | $48.856B | $128.569B × 38.0% = $48.856B |
| Bull | $167.604B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 44.0% | $73.746B | $167.604B × 44.0% = $73.746B |

These are the exact nine scenario outputs for synthesis: revenue, exact-basis margin, and exact-basis profit for bear, base, and bull. The base case adds $56.319 billion of revenue over five years. Of the $128.569 billion endpoint, Mounjaro and Zepbound remain $82.999 billion, or 64.6%, almost unchanged from the current concentration. The base thesis therefore does not diversify away from tirzepatide; it assumes the franchise remains enormous while pipeline and specialty medicines prevent concentration from worsening.

## 11. Key risks and wildcards

- **[Bear] Net-price reset.** Wider public and commercial access could be won at much lower net prices. CMS's $245-per-month bridge is an explicit reference point. Volume may grow while sales and profit per patient slow.
- **[Bear] Competitive share loss.** Novo has scale and an oral portfolio; Amgen and Roche have differentiated late-stage mechanisms. A payer-preferred competitor or superior convenience can compress Lilly's share and rebate position.

- **[Bear] Safety or outcomes disappointment.** A rare safety signal, cardiovascular disappointment, or unfavorable long-term persistence evidence can affect several products sharing biology and patient populations. Retatrutide's exploratory cardiovascular intervals crossing 1.0 are not proof of harm, but they prevent treating cardiovascular superiority as established.
- **[Bear] Concentration.** Two labels for one molecule produced 64.8% of Q1 2026 revenue. A tirzepatide-specific manufacturing, safety, patent, pricing, or payer issue is a company-level event.
- **[Bear] Capacity overshoot.** Capex reached 12.03% of FY2025 revenue. If price or share falls after plants are committed, depreciation and underutilization squeeze the exact CODM margin.
- **[Bear/Base] Verzenio erosion.** Kisqali's 57% FY2025 growth versus Verzenio's 7.8% is evidence that the oncology franchise can lose momentum before patent expiry.
- **[Base/Bull] Oral GLP-1 adoption.** Foundayo can unlock primary care and reduce device constraints. It can also cannibalize injectables and reset price, so demand expansion must exceed cannibalization for the bull economics to emerge.
- **[Bull] Retatrutide differentiation.** Strong obesity efficacy and a planned Q1 2027 U.S. submission can extend franchise leadership. The wildcard is whether labels, tolerability, outcomes, capacity, and reimbursement support commercial differentiation.
- **[Bull] International penetration.** Launches in more than 55 countries create a long volume runway. The risk is that lower international price mix produces less profit than prescription growth implies.
- **[Bull] Pipeline breadth.** Forty-two active Phase III programs can diversify the revenue base. The opposite interpretation is high spending and trial risk; pipeline count is not pipeline value.
- **[Base/Bear] Policy and access.** Medicare demonstrations, drug-price negotiation, utilization management, and employer budgets can reshape both eligible populations and realized prices faster than patent events.
- **[All cases] Data limitation.** Product-level gross margins, net income, plant utilization, and invested capital are not disclosed. Any apparent product profit precision would be fabricated, so monitoring must focus on total net-income margin, price/volume commentary, capex, R&D, and mix.

## Summary

| Case | Segment TTM+5y Revenue | Exact profit metric | Segment TTM+5y Profit Margin | Segment TTM+5y Profit | Probability |
|---|---|---|---|---|---|
| Bear | $82.043B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 27.0% | $22.152B | 25% |
| Base | $128.569B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 38.0% | $48.856B | 55% |
| Bull | $167.604B | Consolidated net income (issuer-disclosed CODM segment profit measure) | 44.0% | $73.746B | 20% |

The non-uniform 25% / 55% / 20% weights reflect the evidence asymmetry. Base receives the majority weight because the current $82-$85 billion FY2026 guide, Q1 2026 growth, capacity coming online, and management's obesity-runway commentary support continued expansion. Bear is weighted above bull because one-molecule concentration, price as a repeated offset to volume, the explicit lower-price access reference, and committed capex make a downside break more credible than the bull case's simultaneous 18.33% revenue CAGR and 44% post-tax margin. Bull retains 20% because current share, international uptake, and pipeline breadth create a real but demanding upside path.

The segment earns a strong but not unquestioned moat assessment. The reviewed evidence supports a massive addressable market, leading current share, a broad pipeline, and manufacturing scale. It also supports a skeptical conclusion about straight-line extrapolation: growth is concentrated in one molecule, price is already an offset to volume, major competitors are active, and the capital build raises the cost of a demand miss. The base case requires a still-exceptional 12.22% segment revenue CAGR and a 301-basis-point expansion in the exact post-tax CODM margin. Those assumptions are possible, but they are not conservative simply because they are far below the current 56% quarterly growth rate.

**Data-gap flags:** [DATA GAP: product-level gross margin, net income, invested capital, and plant utilization are not disclosed in the reviewed data package]; [DATA GAP: separate TTM revenue for Trulicity, Jardiance, and Taltz is not tabulated in the reviewed package, so they remain within verified therapeutic-area driver buckets rather than receiving invented TTM bases].

# Appendix S - Synthesis (Combined Earnings Model)

# Eli Lilly and Company — Synthesis (Combined Earnings Model)

## Scope, evidence discipline, and clearance state

This appendix mechanically consolidates the reviewed one-segment forecast for Eli Lilly and Company into statutory operating income, pretax income, net income, and quote-basis earnings per share. It introduces no new price, financial filing, accounting classification, product forecast, corporate allocation, or balancing item. The controlling forecast source is `appendix_B_human_pharmaceutical_products.md`, after the R review sealed that file at SHA-256 `536cfe97121cffd64f1eb6beee655e5de6ccc8e609d037d00437d92c46681f87`. The exact common profit basis remains `Consolidated net income (issuer-disclosed CODM segment profit measure)`. That label matters: the segment output is already post-tax net income, so the statutory bridge must reverse the scenario tax and Other-net lines to reach operating income and then apply those same lines once below operating income. Treating segment profit as operating income would understate operating income and double-count the below-line deductions.

Before model work, the installed strict validators were run against the exact bytes of `quote_packet.json` and `statutory_bridge.json`. The quote packet returned `QUOTE_PACKET_VALID` and SHA-256 `94274d2919771388b757b18a2f8dbedddc2a6dd528fcf9dd163c08a22ee8f248`. The statutory bridge returned `STATUTORY_BRIDGE_VALID` and SHA-256 `2a7f8e7d251efae6411f9d90ca0f22a8b76eae29432916449b847cfbe4a5a3bf`. The validation timestamp, 2026-08-04 20:35 SGT, precedes the packet's 2026-08-05 04:00 SGT expiry. The durable gate manifest records QFR Wave 1 clearance, DR forecasting clearance, a cleared R review, Management PASS, Moat YELLOW, 2046 YELLOW, and zero descendant workers for every upstream stage. The actual post-review file hashes for the segment, management, and moat appendices match the gate manifest.

The combined model clears all 11 required arithmetic checks. The valuation conclusion is nevertheless negative under the framework's entry-price rule: the base case produces USD 55.74 of earnings per listed common share at the 2031-03-31 horizon, versus USD 74.76 required for 15 times earnings at the sealed USD 1,121.36 price. Base-case EPS times 15 is USD 836.17, a negative 25.43% cushion. The bull case clears, but the confident base case controls the binary P/E 15 gate; therefore the P/E 15 gate is **FAIL**.

## 1. Anchors

- Today: **2026-08-04**.
- Fiscal year end: **December 31**.
- TTM anchor: **2026-03-31**.
- TTM quarters: **Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026**.
- Latest completed fiscal year used only for the historical sanity check: **FY2025**, ended 2025-12-31.
- Horizon: **2031-03-31**, exactly 5.0 calendar years after the TTM end. No row compounds for six years and no forward row starts from FY2025.
- Valuation price: **USD 1,121.36 per XNYS:LLY common share**, raw exchange close from the completed 2026-08-03 session. Raw-source SHA-256 is `1f71919acc73e113279f43ce07e5e38440adfd912c74fea78e6aaebd3048dbe9`; sealed packet SHA-256 is `94274d2919771388b757b18a2f8dbedddc2a6dd528fcf9dd163c08a22ee8f248`; actionability expiry is 2026-08-05 04:00 SGT.
- Security and currency basis: XNYS:LLY, ISIN US5324571083, common stock, financial reporting currency USD, quote currency USD, and listed security unit one common share.
- Split bridge: 895.9 million financial-statement diluted shares at 2026-03-31 multiplied by the sealed 1.0 split factor equals 895.9 million quote-basis diluted financial shares. There was no intervening split through the quote date. The split-source SHA-256 is `3a6042cbf061bd811ba86d04dd6ab8f8fc5539eacdf6ee853169cb17b2400d16`.

- Listed-unit bridge: depositary ratio 1.0 multiplied by share-class factor 1.0 equals 1.0 financial share per listed unit. Therefore 895.9 million quote-basis financial shares divided by 1.0 equals 895.9 million listed-equivalent units.
- FX bridge: 1.0 USD of quote currency per 1.0 USD of reporting currency on 2026-08-03. This is an identity conversion because both currencies are USD.
- Statutory bridge: exact SHA-256 `2a7f8e7d251efae6411f9d90ca0f22a8b76eae29432916449b847cfbe4a5a3bf`; latest-FY and TTM residuals are all zero; DR status is `STATUTORY BRIDGE VERIFIED — CLEARED FOR FORECASTING`.
- Trade execution authorized: **false**. This appendix contains no order, ranking, sizing, portfolio, or messaging authority.

The price and unit bridge are frozen. EPS is calculated in USD per quote-basis financial share, multiplied by the 1.0 financial-shares-per-listed-unit factor, and multiplied by the 1.0 quote-currency-per-reporting-currency factor. No second price or adjusted-close series enters the calculation.

## 2. Segment-level forward assumptions

Lilly has one reportable and modeled segment. Therapeutic areas and products are revenue drivers within that segment, not independent profit centers. The reviewed appendix therefore applies one exact-basis margin after all product-driver revenues are summed. The nine scenario outputs below are reproduced, not re-derived.

| Segment | Exact profit metric | TTM revenue, USD B | Bear horizon revenue | Base horizon revenue | Bull horizon revenue | Bear profit margin | Base profit margin | Bull profit margin |
|---|---|---|---|---|---|---|---|---|
| Human pharmaceutical products | Consolidated net income (issuer-disclosed CODM segment profit measure) | 72.250 | 82.043 | 128.569 | 167.604 | 27.0% | 38.0% | 44.0% |

Source: reviewed `appendix_B_human_pharmaceutical_products.md`, sections 8, 9, and 10. The corresponding horizon segment-profit values are USD 22.152 billion in bear, USD 48.856 billion in base, and USD 73.746 billion in bull. The displayed TTM base is USD 72.250 billion after product-driver rounding; the controlling statutory consolidated revenue is USD 72.249 billion. The USD 0.001 billion difference is 0.0014%, disclosed-scale rounding rather than a forecast residual.

The base case's 12.22% five-year segment revenue CAGR is a deceleration from the 38.2% FY2023-to-FY2025 observed-series CAGR and from Q1 2026's 56% year-over-year growth. The base path is not a single smooth assumption hidden behind the endpoint. The segment appendix steps Mounjaro growth down through 28%, 20%, 13%, 7%, and 0%; Zepbound through 32%, 22%, 15%, 8%, and 2%; and the other drivers according to their reviewed annual paths. This matters to the recency check: the model allows a strong first forward year because the primary-source FY2026 guidance also calls for strong growth, then forces deceleration as the revenue base becomes much larger.

## 3. Combined revenue build

There are no other reportable segments, corporate revenue rows, or eliminations in the reviewed data package. The combined company therefore equals the one segment in every scenario.

| Line | Bear | Base | Bull |
|---|---|---|---|
| Sum of segment TTM+5y revenue, USD B | 82.043 | 128.569 | 167.604 |
| Corporate eliminations, USD B | 0.000 | 0.000 | 0.000 |
| **Combined TTM+5y revenue, USD B** | **82.043** | **128.569** | **167.604** |
| Implied TTM 2026-03-31 to TTM+5y 2031-03-31 CAGR | 2.57% | 12.22% | 18.33% |

The CAGR arithmetic is `horizon revenue / USD 72.250 billion`, raised to the one-fifth power, less one. The base endpoint is USD 56.319 billion above TTM. Mounjaro, Zepbound, and cardiometabolic other contribute USD 50.497 billion, or 89.7%, of that increase. The model is consequently a concentrated cardiometabolic underwriting, even though oncology, immunology, and neuroscience provide some diversification. This is consistent with the Moat YELLOW conclusion: Lilly has strong present clinical, regulatory, manufacturing, and access advantages, but the five-year result still depends heavily on one therapeutic platform and on continued volume growth despite net-price pressure.

## 4. Combined statutory operating-income build

The sealed segment metric is consolidated net income. To reach statutory operating income, the model adds back exactly two scenario-owned lines: income taxes and Other-net, (income) expense. It then applies the same Other-net amount below operating income and the same income-tax amount below pretax income. There is no corporate or unallocated line in the sealed packet.

| Line | Bear | Base | Bull |
|---|---|---|---|
| Sum of segment horizon profit on sealed common metric, USD B | 22.152 | 48.856 | 73.746 |
| Corporate or unallocated adjustments, USD B | 0.000 | 0.000 | 0.000 |
| Consolidated horizon segment-profit metric, USD B | 22.152 | 48.856 | 73.746 |
| Income taxes, directional reversal, USD B | 5.538 | 11.460 | 15.105 |
| Other-net, (income) expense, directional reversal, USD B | 0.820 | 0.707 | 0.419 |
| **Combined statutory horizon operating income, USD B** | **28.510** | **61.023** | **89.270** |
| Implied statutory operating margin | 34.75% | 47.46% | 53.26% |

The tax reversal is not an independent operating expense forecast. For each scenario, tax expense equals exact-basis net income multiplied by `tax rate / (1 - tax rate)`: 20.0% in bear, 19.0% in base, and 17.0% in bull. Those rates are anchored to the data-package history: FY2021-FY2025 effective tax rates ranged from 8.25% to 20.05%, FY2025 was 19.79%, and TTM was 18.79%. Bear uses the supported high end, base uses a normalized rate near TTM and FY2025, and bull uses a lower but historically supported rate. Because segment profit is already net income, the tax line is solved from the sealed segment output; forecasting a second independent tax dollar would be double counting.

The exact Other-net line is an expense of 1.00% of revenue in bear, 0.55% in base, and 0.25% in bull. The base rate reproduces the TTM burden of USD 0.397 billion on USD 72.249 billion of revenue, or 0.55%. Bear increases the burden for higher debt cost or adverse other items; bull reduces the rate for a lower financing drag. The resulting dollar amounts are independently scheduled once, reversed once to construct operating income, and applied once below operating income. No amount is allocated to a product and no residual is introduced.

| Sealed bridge line | Forecast driver | Bear rule | Base rule | Bull rule |
|---|---|---|---|---|
| Income taxes, directional reversal | Scenario tax schedule amount | Add back USD 5.538B | Add back USD 11.460B | Add back USD 15.105B |
| Other-net, directional reversal | Exact opposite of below-line schedule | Add back USD 0.820B | Add back USD 0.707B | Add back USD 0.419B |
| Other-net, below line | Revenue-scaled financing and other burden | Expense at 1.00% of revenue | Expense at 0.55% of revenue | Expense at 0.25% of revenue |
| Income taxes, tax line | Pretax income times explicit rate | Expense at 20.0% | Expense at 19.0% | Expense at 17.0% |

This construction also exposes why operating margin is not the segment appendix's profit margin. Base segment profit is 38.0% of revenue because it is net income. Adding back tax and Other-net produces a 47.46% statutory operating margin. Those metrics are related through the sealed bridge but are not interchangeable.

## 5. Net income and EPS build

The below-line table reverses the operating-income construction without adding a standalone interest estimate. The issuer-disclosed bridge has only `Other-net, (income) expense` below operating income; interest is not separately source-bound in the sealed packet. A separate net-interest or other-income amount is therefore shown as unavailable and included in Other-net, rather than assigned an invented zero or plug.

| Line | Bear | Base | Bull |
|---|---|---|---|
| Combined horizon statutory OI, USD B | 28.510 | 61.023 | 89.270 |

| Line | Bear | Base | Bull |
|---|---|---|---|
| Net interest expense or income | Unavailable separately; included in Other-net | Unavailable separately; included in Other-net | Unavailable separately; included in Other-net |
| Other income | Unavailable separately; included in Other-net | Unavailable separately; included in Other-net | Unavailable separately; included in Other-net |
| Exact Other-net, (income) expense, USD B | (0.820) | (0.707) | (0.419) |
| Pretax income, USD B | 27.690 | 60.316 | 88.851 |
| Tax rate assumed | 20.0% | 19.0% | 17.0% |
| Income-tax expense, USD B | (5.538) | (11.460) | (15.105) |
| **Net income, USD B** | **22.152** | **48.856** | **73.746** |
| Quote-basis diluted financial shares at horizon, M | 876.428 | 876.428 | 876.428 |
| EPS in reporting currency per quote-basis financial share | 25.275 | 55.744 | 84.144 |
| Financial shares per listed unit | 1.000 | 1.000 | 1.000 |
| EPS in reporting currency per listed unit | 25.275 | 55.744 | 84.144 |
| FX, quote currency per reporting currency | 1.000 | 1.000 | 1.000 |
| **EPS in quote currency per listed unit at horizon** | **25.275** | **55.744** | **84.144** |

The exact EPS formula is `NI in USD billions × 1,000 / quote-basis diluted financial shares in millions`. Bear therefore equals `22.152 × 1,000 / 876.4281087 = USD 25.2753`; base equals `48.856 × 1,000 / 876.4281087 = USD 55.7444`; and bull equals `73.746 × 1,000 / 876.4281087 = USD 84.1438`. Multiplication by the sealed listed-unit and FX factors of 1.0 reproduces those values without conversion.

## 5a. Return-method input bridge

S supplies the inputs for the later shareholder-return method selection but does not select the controlling method. Statutory OI, normalized tax, NOPAT, and diluted listed-equivalent shares are available. Terminal capital-structure paths are not forecast in any reviewed upstream appendix, so they are explicitly unavailable rather than filled with a residual net-debt assumption. That finding prevents EV/NOPAT from controlling unless a later stage obtains a properly source-bound terminal path; it does not prevent a fully reconciled EPS/P-E method.

| Return-method input at 2031-03-31 | Bear | Base | Bull | Source or status |
|---|---|---|---|---|
| Statutory operating income, USD B | 28.510 | 61.023 | 89.270 | Section 4 mechanical bridge |
| Normalized cash or statutory tax rate | 20.0% | 19.0% | 17.0% | Data-package historical range and Section 3a rule |
| Normalized NOPAT, USD B | 22.808 | 49.429 | 74.094 | OI multiplied by one minus scenario tax rate |
| Terminal cash, USD B | Unavailable | Unavailable | Unavailable | Q1 2026 anchor is USD 5.282B; no sealed terminal path |
| Terminal gross debt, USD B | Unavailable | Unavailable | Unavailable | Q1 2026 anchor is USD 43.370B; no sealed terminal path |
| Terminal lease liabilities, USD B | Unavailable | Unavailable | Unavailable | FY2025 reference is USD 1.362B; Q1 amount and terminal path unavailable |
| Preferred equity, USD B | Unavailable | Unavailable | Unavailable | No forecast-ready source-bound terminal line |
| Minority interest, USD B | Unavailable | Unavailable | Unavailable | No forecast-ready source-bound terminal line |
| Other senior claims, USD B | Unavailable | Unavailable | Unavailable | No forecast-ready source-bound terminal line |

| Return-method input at 2031-03-31 | Bear | Base | Bull | Source or status |
|---|---|---|---|---|
| Separately valued non-operating assets, USD B | Unavailable | Unavailable | Unavailable | No forecast-ready source-bound terminal line |
| Diluted listed-equivalent shares, M | 876.428 | 876.428 | 876.428 | Section 6 explicit five-year path |

Current balance-sheet anchors are provided only as context and are not silently carried five years forward. At Q1 2026 Lilly had USD 5.282 billion of cash and USD 43.370 billion of gross debt, while FY2025 lease liabilities were USD 1.362 billion. Carrying those numbers unchanged would be a terminal capital-structure assumption, not a source fact, and is therefore prohibited here.

## 6. Explicit five-year share-count path

The path begins with the packet's 895.9 million quote-basis diluted financial shares, not the 898.141 million day-weighted TTM EPS denominator. Annual buybacks are set at USD 5.0 billion, close to TTM repurchases of USD 5.264 billion and above FY2025's USD 4.108 billion, but far below annualizing Q1 2026's unusually fast USD 2.3 billion quarterly pace. The assumption recognizes TTM FCF of USD 11.823 billion, TTM dividends of USD 5.586 billion, and heavy TTM capex of USD 8.657 billion. It therefore does not escalate buybacks with scenario earnings.

For transparent share mechanics, the average repurchase and award price is held at the sealed current USD 1,121.36 price in every year. At that price, USD 5.0 billion retires 4.458871 million shares annually. TTM SBC of USD 0.633 billion divided by the same price implies 0.564493 million shares of annual issuance. This is the required disclosed approximation, not a claim that award vesting exactly follows expense recognition. The net modeled reduction is 3.894378 million shares per year.

| Year ending March 31 | Starting quote-basis financial shares, M | Buyback, USD B | Avg price, USD | Shares retired, M | SBC issuance, M | Ending quote-basis financial shares, M |
|---|---|---|---|---|---|---|
| 2027 | 895.900 | 5.000 | 1,121.36 | 4.459 | 0.564 | 892.006 |
| 2028 | 892.006 | 5.000 | 1,121.36 | 4.459 | 0.564 | 888.111 |
| 2029 | 888.111 | 5.000 | 1,121.36 | 4.459 | 0.564 | 884.217 |
| 2030 | 884.217 | 5.000 | 1,121.36 | 4.459 | 0.564 | 880.322 |
| 2031 | 880.322 | 5.000 | 1,121.36 | 4.459 | 0.564 | 876.428 |

The path ties exactly before display rounding: `895.900 + 5 × (0.564493 - 4.458871) = 876.428109 million`. Historical diluted shares declined from 904.1 million in FY2024 to 899.3 million in FY2025 and to 895.9 million in Q1 2026. The modeled annual reduction is slower than the recent decline and is therefore not an aggressive EPS lever. Management's capital-allocation appendix also warns that the Q1 2026 repurchases occurred at an average USD 987.15 despite record capex and a demanding valuation. Holding the buyback budget flat, rather than assuming ever-larger repurchases, respects that concern.

## 7. P/E 15 test

Required horizon EPS is `USD 1,121.36 / 15 = USD 74.7573` per listed common share. The base case, not the bull case, controls the confident entry-price test.

| Case | EPS in USD per listed unit at horizon | EPS × 15 | Quote-packet price | Cushion | Pass? |
|---|---|---|---|---|---|
| Bear | 25.275 | 379.13 | 1,121.36 | -66.19% | FAIL |
| Base | 55.744 | 836.17 | 1,121.36 | -25.43% | FAIL |
| Bull | 84.144 | 1,262.16 | 1,121.36 | +12.56% | PASS |

Cushion equals `(EPS × 15 - 1,121.36) / 1,121.36`. The base case misses required EPS by USD 19.01 per share, or 25.43% on the price-cushion convention. The bull case's positive cushion does not rescue the gate because it requires USD 167.604 billion of revenue, a 44% net-income margin on the exact CODM metric, and USD 73.746 billion of net income. Those outcomes are upside, not the confident case.

## 8. Reflexivity check

The TTM segment revenue schedule sums to USD 72.250 billion, versus USD 72.249 billion of consolidated TTM revenue in the quantitative foundation. The USD 0.001 billion difference is 0.0014%, inside the 2% limit. FY2025 segment and consolidated revenue both equal USD 65.179 billion.

On the exact common profit basis, TTM segment profit is USD 25.277 billion. Adding USD 5.848 billion of income taxes and USD 0.397 billion of Other-net expense reproduces USD 31.522 billion of statutory operating income exactly. Applying USD 0.397 billion of Other-net expense produces USD 31.125 billion pretax income; applying USD 5.848 billion of tax produces USD 25.277 billion net income. For FY2025, USD 20.640 billion of segment profit plus USD 5.091 billion of tax plus USD 0.571 billion of Other-net expense equals USD 26.302 billion statutory operating income. Both anchors have zero validator residuals, with tolerances of USD 15.761 million and USD 13.151 million respectively.

The model compounds from the TTM revenue and exact-basis profit anchor. It does not compound FY2025 or mix statutory operating margin with the CODM net-income margin. The historical reconstruction is therefore reflexive within much less than 2% and uses no plug.

## 9. Latest interim bridge reconciliation

The controlling P4 schedule comprises four non-overlapping quarters: Q2 2025, Q3 2025, a Q4 2025 residual derived as FY2025 less the official nine months, and standalone Q1 2026. Their exact disclosed-decimal sum is USD 72.2495 billion revenue, USD 31.5220 billion statutory OI, USD 31.1250 billion pretax income, and USD 25.2767 billion net income. The rounded statutory bridge independently uses `FY2025 - Q1 2025 + Q1 2026` and reaches USD 72.249 billion, USD 31.522 billion, USD 31.125 billion, and USD 25.277 billion respectively.

The cumulative formula is explicit: revenue is `65.179 - 12.729 + 19.799 = 72.249`; statutory OI is `26.302 - 3.695 + 8.915 = 31.522`; pretax income is `25.731 - 3.456 + 8.850 = 31.125`; and net income is `20.640 - 2.759 + 7.396 = 25.277`, all in USD billions. The Q1 periods both cover January 1 through March 31, so the subtraction and addition windows are like-for-like. TTM diluted shares are day-weighted rather than summed: `899.3 - (900.6 - 895.9) × 90 / 365 = 898.1411 million`. No cumulative half-year, YTD, or quarter overlaps another input.

The share count used for the forward path is deliberately different from the day-weighted TTM EPS denominator. The packet's 895.9 million point-in-time diluted shares at 2026-03-31 are the required starting quote-basis security unit for forecasting.

## 10. Sensitivity — variables that drive the conclusion

The sensitivity starts from base revenue of USD 128.569 billion, exact-basis net-income margin of 38.0%, horizon shares of 876.428 million, base tax of 19.0%, and EPS of USD 55.74. One variable changes at a time.

| Variable changed | Downside setting | Downside EPS or bridge result | Base result | Upside setting | Upside EPS or bridge result |
|---|---|---|---|---|---|
| Single-segment revenue CAGR | 10.22%, down 200 bps | USD 50.95 EPS on USD 117.513B revenue | USD 55.74 EPS | 14.22%, up 200 bps | USD 60.89 EPS on USD 140.442B revenue |
| Exact CODM net-income margin | 36.0%, down 200 bps | USD 52.81 EPS | USD 55.74 EPS at 38.0% | 40.0%, up 200 bps | USD 58.68 EPS |
| Horizon diluted shares | 920.249M, up 5% | USD 53.09 EPS | 876.428M and USD 55.74 EPS | 832.607M, down 5% | USD 58.68 EPS |
| Tax rate in sealed reversal bridge | 16.0%, down 300 bps | USD 55.74 EPS and USD 58.869B OI | USD 55.74 EPS and USD 61.023B OI | 22.0%, up 300 bps | USD 55.74 EPS and USD 63.343B OI |

Revenue CAGR is the largest tested EPS driver: a 200-basis-point move changes EPS by approximately negative USD 4.79 to positive USD 5.15. Margin and share count each move EPS by roughly USD 2.7 to USD 2.9. Tax does not change EPS in this synthesis because the sealed segment metric is already net income; changing tax changes the implied statutory OI reversal, then the same tax line is applied below pretax income. Treating tax as an additional EPS driver would double-count a variable already embedded in the segment net-income margin.

Even the upside revenue-CAGR sensitivity produces USD 60.89 of EPS, still below the USD 74.76 requirement. The conclusion therefore cannot be repaired by a modest change in one assumption. A passing base case would require a combination of substantially higher revenue, a materially higher post-tax margin, much lower share count, or a lower entry price. The most decision-relevant monitoring variables are cardiometabolic revenue deceleration and exact-basis net-income margin, with payer price pressure, prescription share, capacity utilization, and launch productivity as observable precursors.

## 11. Combined earnings summary

Scenario probabilities are 25% bear, 55% base, and 20% bull. The weights are not uniform: the base receives majority weight because current guidance and recent volume trends support continued growth, while Moat YELLOW, the plausible one-third 2046 bear framing, payer price pressure, and franchise concentration justify a larger bear than bull weight.

| Case | Revenue, USD B | OI, USD B | OI margin | NI, USD B | EPS, USD per listed unit | Probability | EPS × 15 | Versus USD 1,121.36 |
|---|---|---|---|---|---|---|---|---|
| Bear | 82.043 | 28.510 | 34.75% | 22.152 | 25.275 | 25% | 379.13 | -66.19% |
| Base | 128.569 | 61.023 | 47.46% | 48.856 | 55.744 | 55% | 836.17 | -25.43% |
| Bull | 167.604 | 89.270 | 53.26% | 73.746 | 84.144 | 20% | 1,262.16 | +12.56% |
| Probability-weighted EPS | 124.745 | 58.544 | 46.93% | 47.158 | 53.807 | 100% | 807.11 | -28.02% |

Probability-weighted EPS is `25.27531897 × 25% + 55.74444671 × 55% + 84.14380970 × 20% = USD 53.80703737`. Because the share path is common across scenarios, weighted net income of USD 47.158 billion divided by 876.428 million shares reproduces the same EPS. Probability-weighted revenue is USD 124.7445 billion and weighted statutory OI is USD 58.5443 billion. These probability-weighted values are diagnostics; the binary P/E 15 gate still uses base EPS.

## Tie-out checks

### 1. PASS — reported-financial and statutory-bridge tie-out

TTM revenue ties at `USD 72.250B segment schedule / USD 72.249B consolidated = 100.0014%`, comfortably inside 2%. TTM exact-basis profit plus bridge lines is `25.277 + 5.848 + 0.397 = USD 31.522B statutory OI`; the sealed residual is zero and the tolerance is USD 15.761 million. FY2025 revenue is USD 65.179 billion for both segment and consolidated company. FY2025 OI is `20.640 + 5.091 + 0.571 = USD 26.302B`; residual zero, tolerance USD 13.151 million. Applying the same Other-net and tax lines reproduces pretax and net income for both anchors. Files and tables: `statutory_bridge.json`, both period objects; `data_package.md` sections 2, 3, and 3a; `quant_foundation.md` P3A and P4.

### 2. PASS — NI, shares, listed unit, and FX equal EPS

Bear is `USD 22.152B × 1,000 / 876.428109M = USD 25.275319`; base is `48.856 × 1,000 / 876.428109 = USD 55.744447`; bull is `73.746 × 1,000 / 876.428109 = USD 84.143810`. Each reporting-currency EPS is multiplied by 1.0 financial share per listed unit and 1.0 USD quote currency per USD reporting currency, reproducing the displayed listed-unit EPS. File and table: `quote_packet.json` unit bridge and this appendix section 5.

### 3. PASS — segment sum at horizon

There is one segment and no corporate elimination. Bear is `82.043 / 82.043 = 100.000%`; base is `128.569 / 128.569 = 100.000%`; bull is `167.604 / 167.604 = 100.000%`. File and table: reviewed segment appendix section 10 and this appendix section 3.

### 4. PASS — product-to-segment rollup

The eight displayed driver rows sum to USD 82.043 billion bear and USD 128.569 billion base exactly at displayed precision. Bull rows sum to USD 167.603 billion versus the USD 167.604 billion controlling endpoint, a USD 0.001 billion rounding difference or 0.0006%. All are within 1%, with no product residual or hidden Other plug. File and table: reviewed segment appendix section 10.

### 5. PASS — weighted margin check, conditional construct not triggered

Product-level net-income margins are not disclosed and were not modeled. Therefore no weighted-average product-margin construct exists to misstate the segment margin. The exact segment margin is applied once after the revenue-driver sum: `82.043 × 27.0% = USD 22.152B`, `128.569 × 38.0% = USD 48.856B`, and `167.604 × 44.0% = USD 73.746B`, each subject only to USD 1 million display rounding. This is the correct structural pass for a one-segment issuer whose CODM measure is consolidated net income. File and table: reviewed segment appendix sections 9 and 10.

### 6. PASS — share count and security-unit path

Starting financial-statement diluted shares are `895.9M × 1.0 split factor = 895.9M quote-basis financial shares`; dividing by `1.0 depositary ratio × 1.0 share-class factor` gives 895.9 million listed-equivalent units. Five annual retirements of 4.458871 million and five annual SBC issuances of 0.564493 million produce `895.900 + 5 × (0.564493 - 4.458871) = 876.428109M`. The path is in financial shares, not ADR units. Files and tables: `quote_packet.json` share and unit bridge; `quant_foundation.md` P6; this appendix section 6.

## 7. PASS — growth plausibility

The one segment's base CAGR is 12.22%. The disclosed FY2023-to-FY2025 observed-series CAGR is 38.2%, so 1.2 times that rate is 45.84%. The base forecast does not exceed the historical threshold and therefore does not require a peer override. The annual product paths also decelerate from recent launch rates and are explicitly justified. File and table: reviewed segment appendix sections 6 and 8.

## 8. PASS — historical forward arithmetic over exactly five years

Every product-driver row was recomputed as `TTM revenue × (1 + displayed CAGR)^5`. The largest absolute deviation from the reviewed endpoint is 0.052%, caused by displaying CAGR to two decimals; every row is inside 1%.

| Driver | Bear calculated / endpoint / difference | Base calculated / endpoint / difference | Bull calculated / endpoint / difference |
|---|---|---|---|
| Mounjaro | 33.465 / 33.472 / -0.022% | 51.601 / 51.602 / -0.002% | 67.766 / 67.755 / +0.017% |
| Zepbound | 19.708 / 19.704 / +0.018% | 31.401 / 31.397 / +0.014% | 41.680 / 41.683 / -0.007% |
| Cardiometabolic other | 12.658 / 12.657 / +0.009% | 22.266 / 22.268 / -0.007% | 30.625 / 30.623 / +0.007% |
| Verzenio | 3.484 / 3.485 / -0.016% | 5.743 / 5.744 / -0.020% | 6.597 / 6.596 / +0.015% |
| Other oncology | 4.226 / 4.226 / -0.003% | 5.624 / 5.625 / -0.010% | 6.686 / 6.685 / +0.022% |
| Immunology | 5.740 / 5.739 / +0.021% | 7.652 / 7.652 / +0.002% | 8.617 / 8.618 / -0.016% |
| Neuroscience | 1.946 / 1.946 / -0.020% | 3.315 / 3.315 / +0.014% | 4.514 / 4.514 / -0.002% |
| Other | 0.814 / 0.814 / +0.044% | 0.966 / 0.966 / +0.047% | 1.130 / 1.129 / +0.052% |

File and table: reviewed segment appendix section 8, with TTM start 2026-03-31 and horizon 2031-03-31.

## 9. PASS — recency anchor with quantified primary-source step-change evidence

Base Year 1 revenue is USD 88.603 billion versus the most recent reproducible TTM USD 72.250 billion, a 22.63% increase, which exceeds the ordinary 10% comparison band. The permitted evidence exception is satisfied: Lilly's Q1 FY2026 primary-source guidance is USD 82-85 billion for calendar FY2026, with the USD 83.5 billion midpoint explicitly described by management as 28% growth over FY2025. The base Year 1 rolling period ends 2027-03-31, three months later than the guided year, and is 6.11% above the guidance midpoint. The reviewed appendix quantifies this period difference and requires continued growth after the guided year; it does not hide an unsupported day-one step. Files and tables: `data_package.md` sections 5 and 6; reviewed segment appendix sections 7, 8, and 10.

## 10. PASS — period and horizon integrity

The four forecast-base quarters are non-overlapping Q2 2025, Q3 2025, Q4 2025, and Q1 2026. The independent cumulative bridge uses like-for-like January 1 through March 31 windows: FY2025 less Q1 2025 plus Q1 2026. Revenue, OI, pretax, and NI arithmetic is reproduced in section 9; share arithmetic uses the correct day weighting. All displayed forward growth begins 2026-03-31 and ends 2031-03-31, exactly 5.0 calendar years later. No row begins at FY2025 or compounds for six fiscal years. Files and tables: `quant_foundation.md` P3A and P4; `statutory_bridge.json`; reviewed segment appendix section 8; this appendix sections 1 and 9.

## 11. PASS — valuation, unit bridge, packet hashes, and probability arithmetic

Exact packet-byte hashes recompute to `94274d2919771388b757b18a2f8dbedddc2a6dd528fcf9dd163c08a22ee8f248` for the quote packet and `2a7f8e7d251efae6411f9d90ca0f22a8b76eae29432916449b847cfbe4a5a3bf` for the statutory bridge. The raw price evidence recomputes to `1f71919acc73e113279f43ce07e5e38440adfd912c74fea78e6aaebd3048dbe9`. Listing is XNYS:LLY common share; price is USD 1,121.36 raw completed-session close; split, depositary, share-class, and FX factors are all 1.0. Scenario EPS multiplied by 15 reproduces USD 379.13, USD 836.17, and USD 1,262.16. Probabilities sum to `25% + 55% + 20% = 100%`; weighted EPS is `USD 53.807037`. Base cushion is `(836.166701 - 1,121.36) / 1,121.36`

= -25.43%, so base controls a binary P/E 15 FAIL. Files and tables: quote_packet.json, statutory_bridge.json, gate_manifest.json, this appendix sections 1, 7, and 11.

## Synthesis conclusion

The accounting and security-unit bridges clear. The base economic case is substantial: revenue rises from USD 72.250 billion to USD 128.569 billion, statutory operating income reaches USD 61.023 billion, net income reaches USD 48.856 billion, and explicit buybacks net of SBC lower quote-basis diluted shares to 876.428 million. That produces USD 55.74 of EPS. It is not enough at the sealed price. The USD 74.76 EPS required for the 15-times entry-price gate is 34.1% above base EPS. A modest improvement to revenue CAGR, margin, or share count cannot close the gap individually.

The model's most important risks are not arithmetic. They are whether cardiometabolic revenue can keep compounding on an already enormous base while net pricing declines, whether new capacity earns adequate utilization, and whether pipeline renewal offsets product concentration without requiring a structurally lower post-tax margin. Management PASS supports execution confidence, but Moat YELLOW and 2046 YELLOW prevent extrapolating the present franchise cycle as a permanent state. The bear is therefore meaningful, the base remains the highest-probability case, and the bull is not an acceptable substitute for the confident-case valuation test.

**SYNTHESIS CLEARED — 11/11 TIE-OUTS PASSED.**

**P/E 15 gate: FAIL — cushion -25.43%.**

# Appendix CS - Compounder Score

# Eli Lilly and Company (LLY) - Compounder Score

Analysis date: 2026-08-04 Run ID: `pulse-cio-20260804T190229+0800` Report ID: `er2-lly-20260804T190229+0800` Currency: USD unless stated otherwise Primary valuation method: **P/E** Authority boundary: `trade_execution_authorized=false`. This is security underwriting, not a trade, order, ranking, portfolio, messaging, or sizing instruction.

## 1. Executive Verdict

**Compounder Score: 70/100. Business Quality Score: 66/80. 20% Return Underwriting Score: 4/20. Score-implied classification: Buy only at lower price.**

The evidence supports a high-quality pharmaceutical reinvestment engine, but it does not support buying LLY at USD 1,121.36 for a 20% annualized return. Lilly's recent value creation is exceptional: TTM revenue is USD 72.249 billion, TTM statutory operating income is USD 31.522 billion, TTM diluted EPS is USD 28.1436849, and the current cardiometabolic platform has unusually strong adoption. Management passes the ER2 gate, the current research and manufacturing system is real, and both three-year and five-year acquisition-inclusive ROIIC diagnostics remain above 35%. The company also has a long demand runway because obesity treatment penetration is still low and the pipeline spans oral, triple-agonist, oncology, immunology, and neuroscience programs.

The evidence does not support treating those operating strengths as an attractive security at any price. Current P/E is 39.844107x on reconciled TTM statutory diluted EPS. The base case produces USD 55.74444671 of 2031-03-31 EPS and only a 4.07% gross USD annualized shareholder return at a 24x exit P/E. The probability-weighted gross USD return is 3.81%, calculated from probability-weighted terminal wealth rather than an arithmetic average of scenario IRRs. The base case therefore misses both the 20% diagnostic hurdle and the owner's 10%-15% net-SGD mandate range. The bull case reaches 16.31% gross USD, but it requires USD 167.604 billion of revenue, a 53.26% statutory operating margin, and USD 84.14380970 of EPS. That is upside, not a defensible base.

This score is capped for two reasons. First, capitalizing five years of R&D reduces the five-year median adjusted ROIC to about 19.01%, below the headline simple-ROIC median of 28.05%. Lilly still earns attractive returns, but part of the apparent capital efficiency comes from expensing the research asset that creates future products. Second, five-year cumulative FCF conversion is only 51.30% of NOPAT because capacity and working-capital investment are absorbing cash. Those investments may be value creating, but the cash outcome has not yet proven that the current earnings and margin regime will persist through a full manufacturing and price cycle.

The 20% return case does not require terminal multiple expansion from today's 39.84x P/E; it requires much more earnings than the reviewed model supports. At a 24x base exit P/E and the same USD 31.097563765 cumulative dividend estimate, a 20% return from today's price requires USD 114.966872976 of terminal EPS, a 32.51% five-year EPS CAGR from TTM. The reviewed bull EPS is only USD 84.14380970. A maximum entry price of USD 550.156042955 would allow the modeled base terminal wealth to compound at 20%. That gap makes the classification clear: strong business, inadequate entry price.

## 2. Data Source Map

The upstream ER2 chain controls operating assumptions. New live FMP pulls were used only where CS needed current forward valuation and FX evidence not present in the synthesis. Every new response is archived and SHA-256 bound.

| Evidence need | Controlling source | Period / retrieval | Source binding |
|---|---|---|---|
| Price, listing, shares, currency | `quote_packet.json`; QFR review | XNYS:LLY close 2026-08-03 | Packet SHA `94274d2919771388b757b18a2f8dbedddc2a6dd528fcf9dd163c08a22ee8f248` |
| Historical statutory financials | `quant_foundation.md`; `data_package.md` | FY2021-FY2025 and TTM 2026-03-31 | Official SEC values control FMP classification differences |
| Scenario revenue, OI, NI, EPS, shares | `appendix_synthesis.md` | TTM to 2031-03-31 | S cleared 11/11; segment file SHA bound upstream |
| Segment runway and unit economics | `appendix_B_human_pharmaceutical_products.md` | FY2023-FY2025, TTM, five-year scenarios | Reviewed one-segment forecast |
| Management and allocation | `appendix_management.md` | FY2021-Q1 2026 | Management gate PASS |

| Evidence need | Controlling source | Period / retrieval | Source binding |
|---|---|---|---|
| Moat and 2046 durability | `appendix_moat.md` | Evidence through 2026-08-04 | Moat YELLOW; 2046 YELLOW |
| Historical P/E observations | FMP ratios annual archive | FY2018-FY2025 | SHA `89e3e0d6bfc9bcfc756bc41561fcc8550d0716e71c80ad738d48737926b7abda` |
| Ten-plus-year R&D history | Live FMP income statement | FY2014-FY2025; retrieved 2026-08-04 | `raw/.../cs/fmp_income_annual_12y_live_2026-08-04.json`; SHA `bbc10a992d924d39945b6c3e301eb54446a17d64ddcf078eb997e1ec845638e9` |
| Forward analyst estimates | Live FMP analyst estimates | FY2023-FY2030; retrieved 2026-08-04 | `raw/.../cs/fmp_analyst_estimates_annual_live_2026-08-04.json`; SHA `d9e0b97709f5f7624a059a3cd54699279b1d75cfcd38061cc9969aff7c4969ae` |
| Entry USD/SGD | Live FMP USD/SGD quote | 2026-08-04 | 1.28218 SGD/USD; SHA `3f7d4a1eba061fad0c9e6cbee3a12aa040036305b32958c9e1cbaabf0f37cdc9` |

The historical operating series is shorter than the requested ten years on a fully SEC-reconciled basis. Twelve years of live FMP income data support the R&D-capitalization schedule, while the scored statutory ROIC and earnings bridge use the official five-year series. This avoids creating a false ten-year statutory history from vendor operating-income fields that are known to exclude acquired IPR&D and special charges in FY2025.

## 3. Key Financial and Quality Metrics

| Metric | 1-year / latest | 3-year | 5-year | 10-year | Interpretation |
|---|---|---|---|---|---|
| Revenue CAGR | 44.7% FY2025 | 31.69% from FY2022 | 21.58% from FY2020 | Insufficient reconciled history | Tirzepatide launch creates an unusually high recent base |
| NOPAT CAGR | 95.9% FY2025 | Not scored due FY2023 IPR&D volatility | 27.85% from FY2020 | Insufficient reconciled history | Growth is real but highly nonlinear |
| FCF CAGR | 138.6% FY2025 | Volatile / not meaningful from low FY2023 | 14.95% from FY2020 | Insufficient reconciled history | Trails earnings growth because of capacity build |
| Simple statutory ROIC | 39.74% FY2025 | 28.08% median FY2023-FY2025 | 28.05% median FY2021-FY2025 | Insufficient reconciled history | Includes goodwill through total equity |
| R&D-capitalized adjusted ROIC | 30.20% FY2025 including FY2025 leases | 22.22% median FY2023-FY2025 | 19.01% median FY2021-FY2025 | Insufficient reconciled history | Five-year straight-line R&D asset prevents expensing artifact |
| Simple ROIC excluding goodwill | 44.64% FY2025 | 32.27% median FY2023-FY2025 | 33.82% median FY2021-FY2025 | Insufficient reconciled history | Useful sensitivity, not the controlling score |
| Acquisition-inclusive ROIIC | - | 39.54% | 37.10% | Insufficient evidence | Includes cash acquisitions and R&D growth adjustment |
| Organic ROIIC | - | 42.61% | 40.88% | Insufficient evidence | Excludes acquisitions from reinvestment denominator |
| FCF / NOPAT | 42.53% FY2025 | 35.0% average FY2023-FY2025 | 51.30% cumulative | Insufficient reconciled history | Cash conversion is the major quality deduction |
| CFO / net income | 81.46% FY2025 | 78.1% cumulative FY2023-FY2025 | 92.81% cumulative | Insufficient reconciled history | Better than FCF because capex is elevated |
| FCF / net income | 43.47% FY2025 | 34.9% cumulative FY2023-FY2025 | 52.41% cumulative | Insufficient reconciled history | Confirms capacity investment is economically material |
| Diluted-share CAGR | -0.53% FY2025 | -0.20% from FY2022 | -1.23% from FY2020 | Insufficient reconciled history | Repurchases more than offset employee issuance |
| SBC / revenue | 0.96% FY2025 | - | - | - | Low relative to revenue |
| SBC / FCF | 6.98% FY2025 | - | - | - | SBC is treated as a real cost |
| Net debt / EBITDA | 1.26x FY2025 | - | - | - | Balance sheet is serviceable but absolute debt is rising |
| Current P/E | 39.84x TTM | - | - | - | USD 1,121.36 / USD 28.1436849 |
| Current EV / NOPAT | 40.79x TTM diagnostic | - | - | - | Secondary only; EV/NOPAT is not the return method |
| TTM FCF yield | 1.18% | - | - | - | Little valuation support from current cash yield |
| TTM dividend yield | 0.56% | - | - | - | Cash return helps only marginally |

| Metric | 1-year / latest | 3-year | 5-year | 10-year | Interpretation |
|---|---|---|---|---|---|
| TTM net buyback yield | 0.46% | - | - | - | Repurchases less SBC, divided by current market cap |

The simple statutory ROIC formula is NOPAT divided by average invested capital, with NOPAT equal to statutory operating income times one minus the effective tax rate. Invested capital is debt plus equity less cash and short-term investments. The five-year R&D adjustment capitalizes research over five years, amortizes the preceding five annual cohorts straight-line, adds the unamortized research asset to invested capital, and adds current R&D less amortization back to operating profit before tax. FY2025's USD 1.362 billion lease liability is added to the latest adjusted denominator. The adjustment is deliberately conservative: Lilly is a research business, so expensing all R&D while calling the resulting ROIC entirely capital-light would overstate economic returns.

## 4. Rubric Scorecard

| Category / test | Score | Maximum | Evidence-based reason |
|---|---|---|---|
| 1A Normalized ROIC is high | 3 | 5 | Five-year R&D-capitalized median is 19.01%, while simple median is 28.05% |
| 1B ROIIC is high | 8 | 8 | Three-year and five-year acquisition-inclusive diagnostics are 39.54% and 37.10% |
| 1C ROIIC not sharply deteriorating | 3 | 3 | Three-year ROIIC exceeds the five-year measure and current returns rose |
| 1D Unit economics support returns | 3 | 3 | Gross margins above 80%, strong adoption, scale, and evidence breadth support economics |
| 1E Cash conversion is real | 2 | 3 | CFO supports earnings, but five-year FCF/NOPAT is only 51.30% |
| 1F ROIC not an accounting artifact | 2 | 3 | R&D capitalization still leaves positive returns but cuts the headline result materially |
| **Incremental returns on capital** | **21/25** | **25** | High incremental economics with an explicit R&D and cash-conversion haircut |
| 2A Large remaining market opportunity | 5 | 5 | Obesity penetration is still low and international access is expanding |
| 2B Proven reinvestment at scale | 5 | 5 | Research, launches, and manufacturing translated into large revenue and NOPAT growth |
| 2C Organic growth opportunity | 4 | 4 | Current medicines, indications, oral assets, and retatrutide support organic growth |
| 2D Repeatable expansion playbook | 2 | 3 | Present cycle is proven; post-tirzepatide repetition remains unproven |
| 2E Market structure supports growth | 2 | 2 | Large unmet need and regulated barriers support a long category runway |
| 2F Growth without ROIC collapse | 0 | 1 | Net-price pressure, capex intensity, and underutilization risk remain material |
| **Reinvestment runway** | **18/20** | **20** | Long runway, but continuation economics are not guaranteed |
| **Durability of moat** | **11/15** | **15** | Clinical, manufacturing, regulatory, and access strengths offset by price and concentration risk |
| **Accounting and financial quality** | **8/10** | **10** | Clean statutory bridge and low dilution, with weak FCF conversion and some governance friction |
| **Capital allocation discipline** | **8/10** | **10** | Rational research/capacity priority, but expensive repurchases and opaque acquisition hurdles reduce score |
| **Business Quality Score** | **66/80** | **80** | Strong enough for a lower-price thesis; not enough to ignore valuation |
| 6A Base-case IRR at least 20% | 0 | 6 | Base gross USD IRR is 4.07% |

| Category / test | Score | Maximum | Evidence-based reason |
|---|---|---|---|
| 6B Conservative exit multiple | 2 | 4 | Base 24x is below current and historical median, but return still misses the hurdle |
| 6C Bear case acceptable | 0 | 3 | Bear gross USD IRR is -15.40% |
| 6D Reverse-return hurdle beatable | 0 | 3 | Requires USD 114.97 terminal EPS versus USD 84.14 reviewed bull EPS |
| 6E Multiple does not price perfection | 0 | 2 | Current 39.84x TTM P/E capitalizes exceptional continuation |
| 6F Cash returns help | 2 | 2 | Dividend and repurchase capacity exist, though current yields are low |
| **20% Return Underwriting Score** | **4/20** | **20** | Security does not clear the stretch-return hurdle |
| **Compounder Score** | **70/100** | **100** | Buy only at lower price under this diagnostic rubric |

## 5. ROIIC and Reinvestment Analysis

The ROIIC calculation uses statutory NOPAT rather than FMP's overstated FY2025 operating-income field. Five-year NOPAT rises from approximately USD 6.177 billion in FY2020 to USD 21.098 billion in FY2025, an increase of USD 14.921 billion. Cumulative reinvestment is USD 40.219 billion: USD 11.584 billion of net capex after depreciation, USD 17.546 billion of non-cash working-capital investment, USD 7.361 billion of the five-year growth in the capitalized-R&D adjustment, and USD 3.728 billion of cash acquisitions. Dividing the NOPAT increase by that acquisition-inclusive denominator produces 37.10%. Excluding acquisitions produces an organic diagnostic of 40.88%.

The three-year calculation begins at FY2022 NOPAT of USD 6.539 billion and ends at FY2025 NOPAT of USD 21.098 billion. The USD 14.559 billion increase is divided by USD 36.822 billion of cumulative acquisition-inclusive reinvestment: USD 11.490 billion net capex, USD 16.533 billion working-capital investment, USD 6.147 billion R&D growth adjustment, and USD 2.653 billion cash acquisitions. That produces 39.54%; excluding acquisitions produces 42.61%.

These are diagnostics, not spurious precision. Product-level invested capital, plant utilization, product profit, and manufacturing returns are not disclosed. Acquired IPR&D charges also make annual NOPAT volatile. The evidence nevertheless supports a high ROIIC score because both windows remain above 35% after including working capital, R&D growth, and acquisitions. The score is not perfect because R&D-capitalized ROIC is far lower than headline ROIC and because the large 2024-2025 working-capital build has not yet completed a cash cycle.

## 6. Runway Analysis

The runway is large but concentrated. Cardiometabolic health represents 75.8% of TTM revenue. Mounjaro and Zepbound together were 64.8% of Q1 2026 revenue and share the tirzepatide molecule, manufacturing platform, payer budget, and safety exposure. Low obesity-treatment penetration, more than 55 international launches, new manufacturing sites, oral GLP-1 development, retatrutide, and indication expansion can drive many years of volume. Lilly also has 42 active Phase III programs and non-cardiometabolic opportunities.

The main underwriting risk is that access expands at lower price. FY2025 revenue growth was volume led while price reduced growth, and the CMS GLP-1 bridge provides a concrete USD 245 monthly net-price reference for an eligible population. A large treated population can therefore coexist with lower revenue per patient. The bear case makes this explicit: revenue grows early because guidance and installed demand cannot be ignored, peaks in Year 3, and ends at USD 82.043 billion with margin compression. The base case requires USD 128.569 billion of revenue and still gets 89.7% of its absolute increase from three cardiometabolic driver buckets. This is a long runway, not a diversified runway.

## 7. Moat Analysis

The evidence supports a current moat in clinical evidence, regulatory execution, manufacturing scale, quality systems, payer relationships, and global commercialization. These assets narrow the credible competitor set and permit Lilly to fund unusually broad trials. They also make AI more likely to enhance the system than replace it: a model cannot substitute for Phase 3 outcomes, sterile manufacturing validation, inspection, pharmacovigilance, or reimbursement.

The moat is YELLOW rather than PASS because classic pricing power is weak. Superior outcomes can win access and volume, but public and private payers can demand larger rebates as budget impact rises. Novo Nordisk remains a scaled competitor, and Amgen, Roche, Pfizer, biotechnology companies, and Chinese developers can challenge efficacy, convenience, or price. Today's core compound patent does not reach 2046, so long-run durability is a portfolio-renewal claim. Customer stickiness exists after clinical response and formulary access, but it is weaker than software switching costs. The moat score therefore recognizes a real present system while withholding credit for unproven post-tirzepatide replacement cycles.

## 8. Accounting and Capital Allocation Analysis

The historical statutory bridge is clean and fully reconciled. The exact CODM segment profit metric is consolidated net income; taxes and Other-net expense are reversed once to reach statutory operating income and applied once below operating income. This prevents a common double-count error. SBC was only 0.96% of FY2025 revenue and 6.98% of FCF, while diluted shares declined. Leverage is manageable at 1.26x FY2025 net debt/EBITDA.

The deductions are economic rather than accusatory. Five-year cumulative FCF is only 51.30% of NOPAT because capex rose to USD 7.841 billion and working capital absorbed cash. Management's capital hierarchy - research, manufacturing, dividend, selective external science, and residual repurchases - is rational, but Q1 2026 repurchases at an average USD 987.15 appear valuation-insensitive. Pending acquisition consideration and acquired IPR&D are not paired with disclosed deal-level return scorecards. Compensation aligns executives through ownership and shareholder returns, but omits explicit multi-year ROIC and FCF tests. Governance also retains a combined chair/CEO and supermajority provisions that blocked majority-supported reform.

## 9. 20% Return Underwriting

**Primary valuation method: P/E.** Reconciled statutory diluted EPS supports publication; terminal cash, debt, leases, senior claims, and non-operating-asset paths are unavailable. EV/NOPAT therefore cannot control. Under P/E, capital structure is already reflected in statutory EPS and the equity multiple. Terminal net cash/debt is **inapplicable** and no cash is added or debt subtracted after EPS times P/E. This method is frozen across bear, base, bull, probability weighting, the reverse-return diagnostic, and net-SGD.

The P/E-15 test remains a separate binary entry gate and is not an exit multiple. The exit P/Es are independently justified from three evidence sets:

| Valuation evidence | Observation | Implication |
|---|---|---|
| Current TTM statutory P/E | 39.844107x | No scenario assumes expansion from today's multiple |
| FMP year-end P/E, 2018-2025 | 36.85x, 15.12x, 26.10x, 47.22x, 55.68x, 99.99x, 65.65x, 46.73x | Eight-year median is 46.97x, but it includes launch euphoria and is not a terminal anchor |
| Live FMP 2030 EPS average | USD 64.7575 | Current price equals 17.32x that forward estimate |
| Forward P/E at current price | 32.00x FY2026, 24.82x FY2027, 21.50x FY2028, 19.11x FY2029, 17.32x FY2030 | Market already expects rapid earnings catch-up |
| Bear exit P/E | 18.0x | Low growth, compressed margin, price pressure, and concentration warrant near-forward-consensus maturity multiple |
| Base exit P/E | 24.0x | Premium quality and remaining runway, but below current and historical median with no expansion |
| Bull exit P/E | 28.0x | Sustained leadership and 24.49% EPS CAGR merit a premium, still far below current P/E |

Distributions use a source-bound conservative estimate rather than zero. TTM cash dividends of USD 5.586 billion divided by 898.1410959 million TTM diluted shares equal USD 6.219512753 per share. The model holds that annual amount flat for five years, producing USD 31.097563765 cumulative distributions per share in every scenario. This likely understates dividends if earnings compound, but avoids inventing a scenario payout policy. Terminal shareholder wealth equals EPS times exit P/E plus this cumulative distribution.

| Scenario | Probability | Terminal EPS | Exit P/E | Terminal equity value / share | Cumulative distributions / share | Terminal shareholder wealth / share | Gross USD IRR |
|---|---|---|---|---|---|---|---|
| Bear | 25% | $25.27531897 | 18.0x | $454.95574146 | $31.097563765 | $486.053305225 | -15.40% |
| Base | 55% | $55.74444671 | 24.0x | $1,337.86672104 | $31.097563765 | $1,368.964284805 | 4.07% |

| Scenario | Probability | Terminal EPS | Exit P/E | Terminal equity value / share | Cumulative distributions / share | Terminal shareholder wealth / share | Gross USD IRR |
|---|---|---|---|---|---|---|---|
| Bull | 20% | $84.14380970 | 28.0x | $2,356.02667160 | $31.097563765 | $2,387.124235365 | 16.31% |
| Probability-weighted | 100% | Not averaged | Method-consistent | $1,320.770966257 weighted | $31.097563765 | $1,351.868530022 | 3.81% |

Probability-weighted terminal shareholder wealth is `25% x 486.053305225 + 55% x 1,368.964284805 + 20% x 2,387.124235365 = USD 1,351.868530022`. The 3.81% return is `(1,351.868530022 / 1,121.36)^(1/5) - 1`. It is not the arithmetic average of scenario IRRs.

All values below are gross local-currency underwriting. Net-SGD adjustments appear after the three operating and return bridges.

## Bear-case operating and return bridge

| Bear case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | $72.249B | $82.043B | 2.58% CAGR | Early demand gives way to payer price reset, competition, and later franchise contraction |
| Operating margin | 43.63% | 34.75% | -8.88 pp | Lower net price, excess capacity, R&D, and financing drag compress statutory margin |
| Operating earnings | $31.522B statutory OI | $28.510B statutory OI | -1.99% CAGR | Revenue times modeled statutory margin; tied to the sealed net-income bridge |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Flat $5B buybacks less SBC issuance under the reviewed share path |
| EPS | $28.1436849 | $25.27531897 | -2.13% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |
| Valuation | 39.84x P/E | 18.0x P/E | -21.84x | Mature low-growth franchise with price and concentration risk |
| Share value | $1,121.36 | $454.95574146 | -16.51% CAGR | Terminal EPS times 18.0x; no net cash/debt adjustment under P/E |
| Annual dividend | $6.219512753 | $6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |
| Dividend yield | 0.55% | 1.37% | +0.81 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | $31.097563765 | cumulative | Five flat annual distributions; no growth assumed |
| Total ending value | $1,121.36 current price | $486.053305225 | -15.40% gross USD IRR | Share value plus cumulative distributions |

## Base-case operating and return bridge

| Base case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | $72.249B | $128.569B | 12.22% CAGR | Incretin growth decelerates while oral and pipeline products broaden the franchise |
| Operating margin | 43.63% | 47.46% | +3.83 pp | Manufacturing utilization and scale offset rebates, depreciation, and continued R&D |
| Operating earnings | $31.522B statutory OI | $61.023B statutory OI | 14.12% CAGR | Mechanical statutory bridge from modeled net income |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Same reviewed buyback and SBC path across scenarios |
| EPS | $28.1436849 | $55.74444671 | 14.65% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |

| Base case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Valuation | 39.84x P/E | 24.0x P/E | -15.84x | Premium quality but material de-rating as growth matures; no expansion |
| Share value | $1,121.36 | $1,337.86672104 | 3.59% CAGR | Terminal EPS times 24.0x; no net cash/debt adjustment under P/E |
| Annual dividend | $6.219512753 | $6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |
| Dividend yield | 0.55% | 0.46% | -0.09 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | $31.097563765 | cumulative | Conservative flat distribution diagnostic |
| Total ending value | $1,121.36 current price | $1,368.964284805 | 4.07% gross USD IRR | Share value plus cumulative distributions |

## Bull-case operating and return bridge

| Bull case | Start (TTM 2026-03-31 / price 2026-08-03) | Horizon (2031-03-31) | CAGR / change | Justification |
|---|---|---|---|---|
| Revenue | $72.249B | $167.604B | 18.33% CAGR | Category leadership, international penetration, oral scale, retatrutide, and specialty success |
| Operating margin | 43.63% | 53.26% | +9.63 pp | High utilization, favorable mix, disciplined rebates, and productive R&D create exceptional leverage |
| Operating earnings | $31.522B statutory OI | $89.270B statutory OI | 23.15% CAGR | Mechanical statutory bridge from modeled bull net income |
| Diluted share count | 895.900M | 876.428M | -0.44% CAGR | Same reviewed buyback and SBC path across scenarios |
| EPS | $28.1436849 | $84.14380970 | 24.49% CAGR | Statutory diluted EPS used in the P/E shareholder bridge |
| Valuation | 39.84x P/E | 28.0x P/E | -11.84x | Sustained leadership earns a premium, still below current P/E |
| Share value | $1,121.36 | $2,356.02667160 | 16.01% CAGR | Terminal EPS times 28.0x; no net cash/debt adjustment under P/E |
| Annual dividend | $6.219512753 | $6.219512753 | 0.00% CAGR | Flat source-bound TTM cash-dividend estimate |
| Dividend yield | 0.55% | 0.26% | -0.29 pp | Annual dividend divided by endpoint share value |
| Five-year dividends | - | $31.097563765 | cumulative | Conservative flat distribution diagnostic |
| Total ending value | $1,121.36 current price | $2,387.124235365 | 16.31% gross USD IRR | Share value plus cumulative distributions |

## CIO actionability diagnostic: net-SGD security returns

This is a bounded security-level diagnostic, not a portfolio-fit or sizing decision. Entry FX is the live 1.28218 SGD per USD quote. Bear exit FX is 1.218071, exactly 5% below entry; base is flat at 1.28218; bull is 1.346289, exactly 5% above entry. Entry and exit transaction costs are each 0.25%. U.S. dividend withholding is conservatively assumed at 30% because the investor account and treaty treatment are not supplied. Capital-gains tax is assumed zero; custody, platform, and financing costs are excluded. Entry SGD cost per share is USD 1,121.36 x 1.28218 x 1.0025 = SGD 1,441.379828212.

| Scenario | Exit SGD per USD | Net terminal SGD wealth / share | Net-SGD IRR |
|---|---|---|---|
| Bear | 1.218071 | SGD 579.298302384 | -16.67% |
| Base | 1.282180 | SGD 1,739.008359518 | 3.83% |
| Bull | 1.346289 | SGD 3,193.269475319 | 17.24% |

| Scenario | Exit SGD per USD | Net terminal SGD wealth / share | Net-SGD IRR |
|---|---|---|---|
| Probability-weighted | Scenario-specific | SGD 1,739.933068395 | 3.84% |

Net terminal SGD wealth equals `terminal equity value x (1 - 0.25% exit cost) x exit FX + cumulative dividends x (1 - 30% withholding) x exit FX`. Probability-weighted net-SGD IRR annualizes probability-weighted terminal SGD wealth; it does not average net-SGD scenario IRRs. All visible net-SGD IRRs are rendered to exactly two decimal places. The base and probability-weighted results remain far below the 10%-15% mandate range.

The reverse-return test is equally restrictive. Required terminal wealth for 20% is USD 1,121.36 x 1.2^5 = USD 2,790.30251520. After subtracting USD 31.097563765 of cumulative dividends and dividing by the frozen 24x base exit P/E, required terminal EPS is USD 114.966872976. That is a 32.51% CAGR from TTM EPS. The maximum current price for a 20% return from modeled base terminal wealth is USD 550.156042955.

## 10. Hard Veto Checklist

| Hard-veto item | Status | Evidence |
|---|---|---|
| ROIIC below cost of capital | Pass | Three-year and five-year acquisition-inclusive ROIIC exceed 35% |
| High ROIC only from tiny or negative capital | Pass | R&D capitalization lowers but does not erase attractive returns |
| Growth requires external financing | Pass | FCF, balance-sheet capacity, and internal earnings fund the program, though debt rose |
| Material dilution without value creation | Pass | Diluted shares declined and SBC/revenue is below 1% |
| Undisclosed acquisition returns | Watch | Deal-level hurdle and post-acquisition scorecards are absent |
| Structural FCF lag | Watch | Five-year conversion is only 51.30%; capacity cycle may be temporary but is not complete |
| Concentration, regulation, or leverage can impair equity | Watch | Tirzepatide and payer exposure are company-level risks; leverage remains manageable |
| 20% case requires multiple expansion | Pass | All exits are below current P/E; the problem is required earnings, not expansion |
| Flawless execution needed for today's price | Watch | Base return is inadequate and bull depends on exceptional revenue and margin outcomes |
| Moat cannot be explained | Pass | Clinical evidence, regulated development, manufacturing, and access form a coherent moat |
| Accounting or governance impairs trust | Pass | Statutory bridge is clean; governance issues are deductions, not trust-breaking |
| Balance-sheet risk can wipe out equity | Pass | Net debt/EBITDA is 1.26x and current cash generation is strong |

There is no hard veto that turns the business into a Reject. The failed investment proposition is price-specific. That supports `Buy only at lower price` rather than `Investable now` or a business-quality rejection.

## 11. Final Decision

**Score-implied classification: Buy only at lower price.** The Business Quality Score of 66/80 clears the rubric's 65/80 quality threshold, and the ROIIC-plus-runway subtotal is 39/45. However, the Compounder Score is only 70/100, the 20% Return Underwriting Score is 4/20, base gross USD IRR is 4.07%, bear gross USD IRR is -15.40%, and probability-weighted net-SGD IRR is 3.84%. The evidence supports continued monitoring, not purchase at the sealed price.

Compounder Score note: **70/100; Lilly is a strong reinvestment franchise, but current valuation leaves only a 3.81% probability-weighted gross USD return under independently justified exit P/Es.**

Business Quality Score note: **66/80; high ROIIC, management quality, and runway are offset by R&D-adjusted ROIC, weak FCF conversion, tirzepatide concentration, price pressure, and renewal risk.**

20% Return UW Score note: **4/20; the base case yields 4.07% gross USD and needs a USD 550.16 entry price to underwrite 20% with the same 24x P/E and distributions.**

The most important upgrade evidence would be sustained net-price stabilization, high utilization of the manufacturing build, two material post-tirzepatide franchises including one outside cardiometabolic health, FCF conversion moving toward NOPAT, and a price near or below the reverse-return threshold. The most important downgrade evidence would be simultaneous incretin share loss, ongoing net-price erosion, underused factories, margin retreat, or late-stage failures that leave no credible successor ahead of the core patent boundary.

## 12. Machine-Readable JSON

The full-precision companion artifact is `compounder_score.json`. It preserves the P/E method, scenario probabilities, terminal EPS, exit P/Es, diluted shares, equity values, distributions, gross USD IRRs, net-SGD inputs and outputs, source hashes, and method-consistency checks. The JSON sets `trade_execution_authorized=false`.

# Appendix CSA - Scoring Audit

# Eli Lilly and Company (LLY) - Scoring Audit

Analysis date: 2026-08-04 Run ID: `pulse-cio-20260804T190229+0800` Price anchor: USD 1,121.36 per XNYS:LLY common share TTM / horizon: 2026-03-31 / 2031-03-31, exactly 5.0 years Primary valuation method: P/E Trade execution authorized: NO

## 1. Original vs Audited Scores

The scorer's valuation arithmetic is reliable, but the quality score is not fully earned. The main defect is methodological rather than a spreadsheet error: the reported "acquisition-inclusive" ROIIC includes cash acquisitions but excludes separately expensed acquired IPR&D, even though the source package explicitly says cash acquisitions exclude that spending. The calculation also uses statutory NOPAT based on each year's volatile effective tax rate while adding a capitalized-R&D growth adjustment only to the reinvestment denominator. That is not a consistently normalized economic ROIIC. The direction of the result is strong, but 8/8 is too precise and too generous.

| Item | Original | Audited | Notes |
|---|---|---|---|
| Business Quality Score / 80 | 66/80 | 62/80 | ROIIC, unit-economics, and capital-allocation deductions |
| Valuation / 20% Return UW Score / 20 | 4/20 | 3/20 | Cash returns are real but too small for full credit |
| Total Score / 100 | 70/100 | 65/100 | Falls below the diagnostic rubric's 70/100 floor |
| Classification | Buy only at lower price | Reject | Score-implied classification only; not an ER2 gate or trade instruction |

The original and audited gross local-currency returns are the same because the security-return bridge is arithmetically correct. Bear, base, and bull gross USD IRRs are -15.40%, 4.07%, and 16.31%. The probability-weighted gross USD IRR is 3.81%, calculated from probability-weighted terminal wealth rather than by averaging scenario IRRs. The maximum buy price for a 20% gross USD IRR from the frozen base bridge is USD 550.1560429548109.

## 2. Score Reductions and Reasons

| Rubric item | Original | Audited | Evidence status | Audit decision |
|---|---|---|---|---|
| 1A Normalized ROIC / 5 | 3/5 | 3/5 | Supported | Five-year R&D-capitalized median ROIC of 19.01% maps to 3/5 |
| 1B ROIIC / 8 | 8/8 | 6/8 | Partly supported | Directionally high, but acquisition and normalization perimeter is incomplete |
| 1C ROIIC trend / 3 | 3/3 | 3/3 | Partly supported | Three-year exceeds five-year; precision is weakened but trend is not contradicted |
| 1D Unit economics / 3 | 3/3 | 2/3 | Partly supported | High gross margin and adoption are visible; product profit and invested capital are not disclosed |
| 1E Cash conversion / 3 | 2/3 | 2/3 | Supported | Five-year FCF/NOPAT is only 51.30% and the capacity cycle is unfinished |
| 1F Accounting artifact test / 3 | 2/3 | 2/3 | Supported | R&D capitalization cuts the headline ROIC materially |
| Category 1 / 25 | 21/25 | 18/25 | Partly supported | High returns remain plausible, but not at original precision |
| 2A Market opportunity / 5 | 5/5 | 5/5 | Supported | Low obesity penetration, international expansion, and clinical evidence support runway |

| Rubric item | Original | Audited | Evidence status | Audit decision |
|---|---|---|---|---|
| 2B Reinvest at scale / 5 | 5/5 | 5/5 | Supported | Revenue, NOPAT, manufacturing, and R&D grew at scale |
| 2C Organic opportunity / 4 | 4/4 | 4/4 | Supported | Existing medicines, indications, oral assets, and retatrutide are organic drivers |
| 2D Repeatable playbook / 3 | 2/3 | 2/3 | Partly supported | Current cycle is proven; a post-tirzepatide replacement cycle is not |
| 2E Market structure / 2 | 2/2 | 2/2 | Supported | Regulatory and development barriers narrow the credible competitor set |
| 2F Growth without ROIC collapse / 1 | 0/1 | 0/1 | Partly supported | Price pressure, capex intensity, and utilization risk remain unresolved |
| Category 2 / 20 | 18/20 | 18/20 | Supported | Long but concentrated runway |
| 3A Clear advantage / 4 | Not disclosed | 4/4 | Supported | Clinical, regulatory, manufacturing, and access system is observable |
| 3B Pricing power / 3 | Not disclosed | 1/3 | Partly supported | Evidence supports value-and-volume power, not unilateral price increases |
| 3C Competitive evidence / 3 | Not disclosed | 2/3 | Partly supported | Strong execution, but Novo and other pipelines remain credible |
| 3D Customer stickiness / 2 | Not disclosed | 1/2 | Partly supported | Titration and response create inertia; formulary changes can force switching |
| 3E Stress resilience / 2 | Not disclosed | 2/2 | Supported | High margins survived recent price pressure, though not a full patent cycle |
| 3F Disruption risk / 1 | Not disclosed | 1/1 | Supported | AI is more likely to enhance than replace regulated drug development |
| Category 3 / 15 | 11/15 | 11/15 | Supported | Moat and 2046 gates remain YELLOW, appropriately limiting credit |
| 4A Revenue and earnings quality / 2 | Not disclosed | 2/2 | Supported | Official statutory lines and the sealed bridge reconcile cleanly |
| 4B Cash flow support / 2 | Not disclosed | 1/2 | Partly supported | Multi-year tests exist, but five-year FCF/NOPAT is only 51.30% |
| 4C SBC and dilution / 2 | Not disclosed | 2/2 | Supported | SBC is treated as a cost and diluted shares declined |
| 4D Balance sheet / 2 | Not disclosed | 1/2 | Partly supported | Leverage is serviceable, but absolute debt and commitments are rising |
| 4E Disclosure / 1 | Not disclosed | 1/1 | Supported | Statutory and product evidence is unusually well reconciled |
| 4F Governance/accounting flags / 1 | Not disclosed | 1/1 | Partly supported | No trust-breaking issue, though entrenchment provisions deserve monitoring |
| Category 4 / 10 | 8/10 | 8/10 | Supported | Clean statutory bridge and low dilution offset weak FCF conversion and governance friction |
| 5A Reinvestment priority / 2 | Not disclosed | 2/2 | Supported | Research and scarce manufacturing capacity receive priority |
| 5B Acquisition discipline / 2 | Not disclosed | 1/2 | Partly supported | Deal hurdles and post-deal scorecards are absent; acquired-asset impairment exists |

| Rubric item | Original | Audited | Evidence status | Audit decision |
|---|---|---|---|---|
| 5C Buyback discipline / 2 | Not disclosed | 1/2 | Partly supported | Shares fell, but Q1 2026 repurchases at USD 987.15 lacked a disclosed valuation hurdle |
| 5D Incentive alignment / 2 | Not disclosed | 1/2 | Partly supported | Ownership is strong; compensation omits ROIC and FCF and can exclude acquired IPR&D |
| 5E Owner mentality / 1 | Not disclosed | 1/1 | Supported | Long tenure and large ownership support alignment |
| 5F Past decisions / 1 | Not disclosed | 1/1 | Partly supported | Tirzepatide and capacity execution are strong, but the newest acquisition cohort is immature |
| Category 5 / 10 | 8/10 | 7/10 | Partly supported | High-price buybacks, undisclosed deal hurdles, and no ROIC/FCF pay metric require another point off |
| 6A Base IRR / 6 | 0/6 | 0/6 | Supported | Base gross USD IRR is 4.07% |
| 6B Exit multiple / 4 | 2/4 | 2/4 | Partly supported | Multiples are source-bound but base/bull are not conservative versus forward consensus |
| 6C Bear case / 3 | 0/3 | 0/3 | Supported | Bear gross USD IRR is -15.40% |
| 6D Reverse hurdle / 3 | 0/3 | 0/3 | Supported | Required terminal EPS is USD 114.96687297644517 |
| 6E Price perfection / 2 | 0/2 | 0/2 | Supported | Current 39.84x TTM P/E embeds exceptional continuation |
| 6F Cash returns / 2 | 2/2 | 1/2 | Partly supported | Flat dividends add only USD 31.10 over five years; buybacks are in the share path, not an extra distribution |

This score is reduced because the scorer labels an incomplete reinvestment perimeter "acquisition-inclusive," awards full unit-economics credit without product-level profit or capital, and gives full cash-return credit for a 0.56% starting dividend yield.

## 3. Unsupported Claims

The evidence does not support calling 37.10% five-year ROIIC and 39.54% three-year ROIIC fully acquisition-inclusive. The data package says the cash-acquisition series excludes separately expensed acquired IPR&D, while FY2023 acquired IPR&D alone was USD 3.8 billion and FY2025 was USD 2.91 billion. Those amounts are economically acquisition-related investment and are material to the denominator. The figures are useful diagnostics, but not 8/8-quality measurements.

The evidence also does not support a full 3/3 unit-economics score. Lilly does not disclose product- or therapeutic-area profit, assets, invested capital, plant utilization, or plant-level returns. Consolidated gross margin above 80% and adoption are strong evidence, but they cannot prove that each expansion dollar earns the reported consolidated return.

The 18x, 24x, and 28x exit P/Es are source-bound rather than invented. Their cited eight-year P/E series is reproducible from the hash-bound warehouse ratios file, and the forward EPS series is archived. They are below the 39.84x current P/E and the 46.97x historical year-end median. However, the 2030 consensus EPS of USD 64.7575 implies only 17.32x at the current price. Therefore 24x and 28x are conservative relative to today's and euphoric historical valuations, but premium relative to forward consensus. The bear 18x is close to that forward anchor and is not especially punitive for a low-growth, margin-compression case. This is why 6B remains only 2/4. I do not alter the multiples or blend methods.

## 4. Calculation Errors

The historical spot checks are internally consistent: five-year simple ROIC is 28.05%, R&D-capitalized ROIC is 19.01%, and ROIC excluding goodwill is 33.82%; five-year FCF/NOPAT is 51.30%, CFO/net income is 92.81%, diluted-share CAGR is -1.23%, SBC/revenue is 0.96%, and SBC/FCF is 6.98%. Current EV/NOPAT of 40.7858x reproduces from USD 1.044076 trillion of enterprise value divided by USD 25.599 billion of TTM NOPAT. EV/NOPAT remains a secondary diagnostic and

does not control returns. The required reinvestment-rate field is null rather than calculated, which is a disclosed missing calculation.

There is no security-return arithmetic error. Under the frozen P/E method, terminal equity value per share is terminal statutory diluted EPS times exit P/E: USD 454.95574146 bear, USD 1,337.86672104 base, and USD 2,356.02667160 bull. Multiplying by 876.4281087 million terminal diluted listed shares gives terminal equity values of approximately USD 398.736 billion, USD 1,172.544 billion, and USD 2,064.888 billion. Terminal net cash/debt is inapplicable under P/E and is not separately adjusted.

| Scenario | Probability | Equity value / share | Distributions / share | Terminal wealth / share | Gross USD IRR |
|---|---|---|---|---|---|
| Bear | 25% | USD 454.95574146 | USD 31.097563765314842 | USD 486.053305225314842 | -15.40% |
| Base | 55% | USD 1,337.86672104 | USD 31.097563765314842 | USD 1,368.964284805314842 | 4.07% |
| Bull | 20% | USD 2,356.02667160 | USD 31.097563765314842 | USD 2,387.124235365314842 | 16.31% |
| Probability-weighted | 100% | USD 1,320.770966257 | USD 31.097563765314842 | USD 1,351.868530022314842 | 3.81% |

Probability-weighted wealth is `25% x bear + 55% x base + 20% x bull`; its CAGR is not the arithmetic average of scenario IRRs. The reverse 20% test also ties: required terminal wealth is USD 2,790.3025152; after distributions, required terminal EPS at 24x is USD 114.96687297644517. The base max-buy price is USD 1,368.964284805314842 divided by 1.2 to the fifth power, or USD 550.1560429548109.

The calculation breaks only in the quality diagnostic's methodology. Annual statutory NOPAT uses volatile effective statutory tax rates rather than a normalized cash-tax rate, while the ROIIC denominator includes a capitalized-R&D growth adjustment without presenting a matching normalized NOPAT series. This does not invalidate statutory EPS or the P/E return bridge; it limits confidence in Categories 1 and 5.

The net-SGD overlay also ties and uses the same P/E terminal wealth. Entry cost is 0.25%, exit cost is 0.25%, withholding on dividends is 30%, capital-gains tax is 0%, and entry FX is SGD 1.28218 per USD. Scenario exit FX is 1.218071 / 1.28218 / 1.346289. Terminal SGD wealth is SGD 579.2983023837605 / SGD 1,739.0083595181377 / SGD 3,193.2694753193177, producing exactly two-decimal visible IRRs of -16.67% / 3.83% / 17.24%. Probability-weighted SGD wealth is SGD 1,739.9330683947796 and the visible probability-weighted net-SGD IRR is 3.84%.

## 5. Missing Data

The most important missing evidence is a complete acquisition ledger that combines cash acquisitions, separately expensed acquired IPR&D, subsequent development spend, impairments, and realized clinical/commercial outcomes. Also missing are a normalized cash-tax series, a calculated reinvestment rate, ten-year reconciled history, product-level profit and invested capital, factory utilization and return data, deal-level hurdle rates, and a mature-growth comparable set or terminal-growth bridge for the exit P/Es. These gaps lower confidence to Medium. They do not justify changing the already frozen P/E return method.

## 6. Hard-Veto and Threshold Test Audit

No method-consistency veto is triggered. P/E controls bear, base, bull, probability weighting, reverse return, max-buy price, and net-SGD. Cash, debt, leases, senior claims, and non-operating assets are not added after EPS times P/E. Distributions, withholding, and transaction costs are each counted once.

No business hard veto is proven, but acquisition disclosure, structural FCF lag, franchise concentration, price pressure, and execution dependence remain Watch items. The audited score fails the diagnostic thresholds for total score, Business Quality, Valuation / 20% Return Underwriting, base-case IRR, and bear-case return. It passes only the ROIIC-plus-runway subtotal directionally, the no-multiple-expansion test, and the absence of a proven hard veto.

## 7. Final 20% Hurdle Pass/Fail

**FAIL.** The 20% case requires terminal EPS of USD 114.97 at 24x, versus reviewed bull EPS of USD 84.14. Even the bull gross USD IRR is only 16.31%. The entry price consistent with the modeled base bridge and a 20% gross USD IRR is USD 550.16, about 50.9% below USD 1,121.36. This is a stretch-score conclusion, not the owner's 10%-15% net-SGD mandate decision.

## 8. Dream Business / Dream Investment Classification

**Neither.** Lilly is a high-quality franchise, but a dream-business label is not earned while the moat and 2046 test are YELLOW, cardiometabolic revenue concentration is 75.8%, classic pricing power is weak, and acquisition-inclusive returns are incompletely measured. It is not a dream investment at this price because base and probability-weighted returns are low and the bear case destroys capital.

The single biggest reason it does not qualify is price: USD 1,121.36 capitalizes exceptional execution so completely that even the reviewed bull case fails the 20% gross hurdle.

## 9. Stage 7 Scorecard Notes

Compounder Score note: **65/100; strong operating evidence is outweighed by incomplete acquisition-return measurement and an inadequate price-to-return bridge.**

Business Quality Score note: **62/80; high consolidated returns and runway are offset by incomplete acquisition-inclusive ROIIC, undisclosed unit economics, concentration, and renewal risk.**

20% Return UW Score note: **3/20; base gross USD IRR is 4.07%, bull gross USD IRR is 16.31%, and the base 20% max-buy price is USD 550.16.**

## 10. Auditor JSON

The companion `compounder_score_audit.json` contains full-precision gross USD and net-SGD IRRs, terminal equity and shareholder-wealth bridges, the reverse-return calculation, scenario FX and costs, audited rubric scores, method-consistency flags, and `trade_execution_authorized=false`. Unknown or inapplicable EV/NOPAT fields are represented as null rather than fabricated.

# Appendix RT - Red Team

# Eli Lilly and Company — Red Team

**Assessment date:** 2026-08-04 **Run ID:** `pulse-cio-20260804T190229+0800` **Price anchor:** USD 1,121.36 per XNYS:LLY common share **Stage 5 base:** USD 128.569 billion revenue, USD 61.023 billion statutory operating income, USD 48.856 billion net income, and USD 55.744 diluted EPS at 2031-03-31 **Authority boundary:** `trade_execution_authorized=false`; this appendix contains no order, trade instruction, or portfolio sizing.

## Red-team verdict

**The thesis does not survive at the quoted price.** The synthesis correctly rejects the P/E-15 gate, but its base case remains too generous in three linked places: it assigns 55% probability to a revenue build in which cardiometabolic products supply almost all incremental sales; it expands the exact CODM net-income margin to 38% while realized price, R&D, depreciation, and access costs are all moving against that expansion; and it assumes a 24x exit P/E when the archived 2030 consensus anchor implies 17.32x. These are not independent assumptions. Lower price can widen access and preserve prescriptions, but it reduces revenue per patient, capacity returns, margin, and the terminal multiple simultaneously.

## 1. The most fragile assumption

The most fragile assumption is the **Human pharmaceutical products base revenue line of USD 128.569 billion**, specifically the Mounjaro, Zepbound, and cardiometabolic-other product drivers. Those three rows reach USD 51.602 billion, USD 31.397 billion, and USD 22.268 billion, respectively, or **USD 105.267 billion and 81.9% of horizon revenue**. They contribute USD 50.497 billion, or **89.7% of the entire USD 56.319 billion base-case increase**. Mounjaro and Zepbound alone remain 64.6% of horizon revenue. The model is therefore not diversified growth; it is a concentrated bet that one therapeutic platform can compound through a price reset, new modalities, and several competitors without losing its economics.

The historical CAGR comparison gives false comfort. A base 12.22% company CAGR is mathematically below the 38.2% FY2023-FY2025 observed CAGR, but the earlier period captured launch, shortage relief, and initial capacity normalization. It does not establish the sustainable rate on a USD 72.25 billion TTM base. Q1 2026 total revenue rose 56%, yet price reduced FY2025 growth by 6 percentage points and U.S. price was a 10-point headwind. The relevant peer pattern is already visible at Novo Nordisk: Q1 2026 adjusted sales fell 4% at constant exchange rates and U.S. adjusted sales fell 11%, despite GLP-1 volume growth, because realized prices declined. That is an official operating example of expanding demand failing to produce expanding revenue. [Novo Nordisk Q1 2026 announcement](https://www.novonordisk.com/content/nncorp/global/en/news-and-media/news-and-ir-materials/news-details.html?id=916542)

Policy reinforces the same mechanism. CMS states that participating manufacturers will provide eligible GLP-1 drugs at a **USD 245 net monthly price** under the Medicare bridge. That channel may increase treated patients, but it is a much lower reference point than list price and pressures private negotiations. [CMS Medicare GLP-1 Bridge FAQ](https://www.cms.gov/files/document/medicare-glp-1-bridge-expectations-faqs.pdf) Competition is no longer merely Novo: Roche reported 22.5% placebo-adjusted weight loss at 48 weeks for enicepatide/CT-388 in Phase II, and Amgen has multiple MariTide Phase III studies, including a switch study from weekly tirzepatide or semaglutide to less frequent dosing. [Roche CT-388 Phase II release](https://www.roche.com/investors/updates/inv-update-2026-01-27) [Amgen Q1 2026 release](https://investors.amgen.com/static-files/4e8e58ab-1e91-441e-94ea-4c8285338ec9)

The EPS consequence is material. If the three cardiometabolic base endpoints are only 10% lower, revenue is USD 10.527 billion lower. At the modeled 38% net-income margin and 876.428 million shares, EPS falls by approximately **USD 4.56**, from USD 55.74 to about USD 51.18. Stage 5's own broader sensitivity reaches the same conclusion: a 200-basis-point reduction in revenue CAGR lowers horizon revenue to USD 117.513 billion and EPS to **USD 50.95**, a USD 4.79 decline. Neither outcome approaches the USD 74.76 P/E-15 requirement.

## 2. The Stage 5 number most likely to be revised down

The single most-likely-to-be-optimistic Stage 5 number is the **38.0% horizon net-income margin on the issuer-disclosed CODM segment-profit basis**. This number mechanically creates USD 48.856 billion of net income and, after the sealed reversal bridge, implies a **47.46% statutory operating margin**. It is not a modest normalization: the 38% net margin is 301 basis points above the 34.99% TTM level, while the business is moving from a scarcity-and-launch regime into a

broader-access, heavier-depreciation, more competitive regime.

The supporting argument is operating leverage from fuller factories and slower growth in commercial and research infrastructure. The opposing evidence is more direct. FY2025 capex was 12.03% of revenue; TTM capex reached USD 8.657 billion; R&D increased 28% in Q1 2026; 42 Phase III programs require continued spending; and lower realized prices reduced Q1 2026 gross margin by 60 basis points year over year to 81.9%. New plants do not create margin merely by opening. They create depreciation and fixed cost first, then earn leverage only if utilization, yield, and net price are high enough. Lilly does not disclose plant-level utilization or returns, so the claimed leverage is an assumption, not an observable fact.

Holding the base revenue at USD 128.569 billion but leaving net margin at the TTM 34.99% produces EPS of approximately **USD 51.33**, USD 4.41 below Stage 5. At a 34% net margin, EPS is about **USD 49.88**. That is the direction the red team considers more credible if access grows through rebates and public-price concessions while the capacity and pipeline build remain intense. The synthesis presents revenue and margin as separate sensitivities, but economically they can fail together: price pressure lowers revenue per patient and factory contribution margin at the same time.

## 3. The strongest bear case, stated in its strongest form

Lilly is being capitalized as if unprecedented incretin volume, current market share, high factory utilization, and premium pharmaceutical margins can coexist for five years, even though wider access is already being purchased with lower realized price. By 2027-2028, Novo's oral and higher-dose products, Amgen's less-frequent MariTide program, Roche's enicepatide/petrelintide portfolio, and payer preference convert obesity from a scarcity market into a competitive formulary class; Mounjaro and Zepbound volume still grows, but combined sales growth falls below the rate needed for the USD 82.999 billion endpoint. Committed plants and elevated R&D then turn a revenue miss into margin compression, while non-cardiometabolic products remain too small to absorb the shortfall. The confirming line is combined Mounjaro and Zepbound quarterly revenue growth: once it falls below 20% year over year for two consecutive quarters before March 2027, the base case's early growth bridge and terminal concentration are no longer supportable.

## 4. Cross-examination of management commentary

Management earned a PASS for execution and candor. That gate is not evidence that its forward statements will become shareholder returns. The statements below are reasonable operating aspirations but weak underwriting anchors.

| Management statement | Skeptical cross-examination | First evidence of failure |
|---|---|---|
| “Market penetration ... is only mid-single digits” and there is room for “sustained market growth.” — David Ricks, Q4 FY2025 call, `data_package.md` §6 | Total category growth says nothing about Lilly's net revenue or profit per patient. Novo's Q1 2026 U.S. adjusted sales fell 11% at constant exchange rates despite Wegovy volume growth. CMS's USD 245 bridge shows that access can expand by resetting economics. | Price remains a double-digit revenue headwind while combined incretin sales growth drops below the model path. |
| “Fully launched in more than 55 countries” with “rapid market share gain.” — Patrik Jonsson, Q1 FY2026 call, `data_package.md` §6 | International penetration is a volume claim, not a margin claim. Lower international prices, Chinese reimbursement concessions, and launch costs can produce prescription growth with adverse mix. The model assumes international adoption helps take CODM net margin to 38%, which is not yet demonstrated. | International Mounjaro volume rises while consolidated gross margin falls below 80% or price/mix worsens. |
| “R&D expenses increased 28% ... including 42 active Phase III programs.” — Lucas Montarce, Q1 FY2026 call, `data_package.md` §6 | Pipeline count is not probability-adjusted pipeline value. Forty-two programs consume cash now; they diversify the franchise only after approval, access, manufacturing, and commercial adoption. Recent Vitrakvi impairment and material acquired-IPR&D charges show that scientific activity does not guarantee economic return. | Late-stage delays or failures occur while R&D stays above 20% of revenue and non-cardiometabolic revenue remains too small to reduce concentration. |

The same skepticism applies to “we can manufacture at scale.” Lilly has proven it can build and launch capacity, but it has not disclosed salable output by plant, utilization, cost per dose, or return on invested capital for the expansion cohort. Capex rose sixfold from FY2021 to FY2025. Capacity is a moat only when it is both scarce and economically utilized; after a price or share reset, it becomes fixed-cost exposure.

## 5. Stage 5 tie-out reverification and attack

### Recency anchor

The four-quarter recency tie is correct. Q2 2025 through Q1 2026 sum to the disclosed TTM revenue, operating income, pretax income, and net income, and total-company quarterly growth of 38%, 54%, 43%, and 56% does not show a current consolidated collapse. The problem is interpretation, not arithmetic. Zepbound's reported growth already decelerated from 172% and 185% in Q2-Q3 2025 to 123% in Q4 and 80% in Q1 2026. The TTM base also contains shortage relief, capacity additions, and launch effects that should not be treated as a normal starting trend.

Base Year 1 revenue of USD 88.603 billion is 22.63% above TTM and 6.1% above management's USD 83.5 billion calendar-FY2026 guidance midpoint, with only three additional months in the rolling period. The timing bridge is legitimate, but it requires continued growth beyond a very strong guided year. The recency anchor therefore passes as a source tie and fails as a margin of safety.

## Share count, buybacks, and distributions

The modeled USD 5.0 billion annual buyback consumes about **80% of TTM free cash flow remaining after dividends**: USD 11.823 billion FCF less USD 5.586 billion dividends leaves USD 6.237 billion. Only USD 1.237 billion remains after the assumed repurchase, before acquisitions or incremental balance-sheet repair, while gross debt was USD 43.370 billion and pending acquisitions carried up to roughly USD 12 billion of closing consideration. Base earnings growth may ultimately fund the program, but the first years of the capacity cycle do not make the cadence conservative.

The model also assumes every repurchase occurs at the frozen USD 1,121.36 price. If the stock earns the base terminal value, average repurchase prices would likely be higher and shares retired lower. If buybacks are omitted but annual SBC issuance is retained, horizon shares are approximately 898.722 million rather than 876.428 million and base EPS is about **USD 54.36**, USD 1.38 lower. Buybacks help optics but do not repair valuation.

Flat cumulative dividends of USD 31.10 per share are not aggressive; they are simply too small to matter. They equal only 2.8% of entry price over five years before time value and costs. The return case is therefore overwhelmingly dependent on terminal EPS and terminal P/E, not distributions.

## Product paths and renewal

The cardiometabolic-other bucket is an underappreciated risk. It nearly doubles from USD 11.595 billion to USD 22.268 billion while absorbing mature-product erosion and assuming oral and next-generation launches succeed. Foundayo's ex-U.S. rollout is mainly a 2027 event, and retatrutide remains a clinical, regulatory, manufacturing, access, and cannibalization question. A new Lilly product can protect franchise share while replacing revenue that otherwise would have stayed in Mounjaro or Zepbound; gross launch sales are not automatically incremental company sales.

Neuroscience grows at a 17.19% base CAGR from a negative 30.5% historical anchor without explicit product revenue guidance, although its USD 1.815 billion increment is too small to rescue a cardiometabolic miss. Verzenio is modeled roughly flat despite Kisqali's rapid growth, which is appropriately cautious. The key asymmetry remains: pipeline success outside cardiometabolic is too small to move the base, while pipeline disappointment inside cardiometabolic can break most of it.

## Exit P/E is the second forecast, not a neutral conversion

The 18x, 24x, and 28x exits are arithmetically source-bound, but the base and bull multiples are not conservative against the **17.32x 2030 forward-consensus P/E** implied by the archived consensus EPS and current price. Base 24x is a 38.6% premium to that anchor; bull 28x is a 61.7% premium. Bear 18x is only 3.9% above it, so even the bear multiple does not price a genuine de-rating after concentration and margin break.

| Exit P/E applied to base EPS | Terminal equity value / share | Terminal wealth including USD 31.10 distributions | Gross USD IRR |
|---|---|---|---|
| 17.32x | USD 965.49 | USD 996.59 | -2.33% |
| 18.00x | USD 1,003.40 | USD 1,034.50 | -1.60% |
| 24.00x | USD 1,337.87 | USD 1,368.96 | 4.07% |
| 28.00x | USD 1,560.84 | USD 1,591.94 | 7.26% |

This table holds Stage 5 base EPS constant and changes only the exit multiple. At the consensus anchor, the reviewed base earnings path produces a negative gross return. Replacing only the base scenario's 24x with 17.32x reduces probability-weighted gross USD IRR from 3.81% to approximately **0.45%**. The premium exit multiple is therefore doing material work despite the claim that valuation is conservative relative to today's 39.84x P/E and an elevated historical median. A mature-growth anchor is more relevant than a scarcity-era historical multiple.

## 6. Score-derived 20% return claim most likely to be wrong

There is no defensible score-derived 20% claim left to attack. The audited score is **65/100**, including only **3/20** for return underwriting, and its classification is Reject. The red team agrees. A 20% gross return requires terminal EPS of **USD 114.97 at 24x**, 36.6% above the reviewed bull EPS of USD 84.14. If the exit multiple is the 17.32x consensus anchor, required terminal EPS rises to approximately **USD 159.31**, 89.3% above bull EPS.

The first break is the exit multiple, followed by NOPAT/EPS growth. FCF conversion also weakens confidence: five-year FCF/NOPAT was only 51.3%, and the factory cycle is unfinished. Buybacks and dividends cannot bridge the gap because buybacks are already embedded in the share count and total modeled distributions add only USD 31.10. The audit correctly refuses to convert an excellent recent business cycle into a plausible 20% security return.

## 7. Quantitative thesis-kill signal

**Kill signal: combined Mounjaro plus Zepbound revenue growth below 20% year over year for two consecutive reported quarters at any point through Q1 2027.**

The base path requires their combined rolling-year revenue to rise from USD 43.175 billion to approximately USD 55.88 billion in Year 1, about **29.4% growth**, before still reaching USD 82.999 billion at the horizon. Two consecutive sub-20% quarters this early would show that price, share, persistence, or capacity is slowing the franchise well before the modeled deceleration. Because the two products produce 64.6% of horizon revenue and the cardiometabolic complex produces 89.7% of incremental revenue, non-cardiometabolic growth cannot offset that break. This is a thesis invalidation threshold, not a trade authorization.

## 8. Conviction after red team

**Thesis does NOT survive.** The specific break is not that Lilly lacks a moat or capable management. It is that the security price requires concentrated cardiometabolic growth, margin expansion, sustained capital productivity, and a premium exit multiple to work together, while primary evidence already shows the industry's access-for-price trade-off and an accelerating competitor pipeline.

The synthesis and red team agree on the published conclusion that the P/E-15 gate fails and expected returns miss the owner's mandate. The red team explicitly disagrees with the synthesis's generosity inside that rejection: **55% base probability, a 38% CODM net margin, and a 24x base exit are too optimistic as a bundle.** The narrative should be rewritten around an excellent but cycle-concentrated company whose capacity build and pipeline must first prove they can offset lower net pricing and diversify tirzepatide dependence. Management PASS is execution evidence; Moat YELLOW and 2046 YELLOW are the more relevant durability constraints. At USD 1,121.36, valuation provides no room for those constraints to be wrong.

# Appendix D - Data Package (raw historicals)

# Eli Lilly and Company (LLY) — Production ER2 Data Package

**Run ID:** `pulse-cio-20260804T190229+0800` **Information cutoff:** 2026-08-04 19:02:29 SGT **Reporting currency and scale:** USD millions unless otherwise stated **Stage 0 anchor:** Fiscal year ends December 31. Latest reported quarter is Q1 2026 ended 2026-03-31. TTM is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31. Exact five-year horizon is 2031-03-31. **Authority boundary:** `trade_execution_authorized=false`. This package contains research evidence only and authorizes no trade, order, portfolio action, message, ranking, or sizing decision.

## Source-control ledger

All new evidence below was fetched live in this run. No investing-data-warehouse file was read. FMP URLs are shown without the API key. The local paths are immutable run-specific archives.

| Source ID | Live source and covered period | Archived raw path | SHA-256 |
|---|---|---|---|
| FMP_INC_A | [FMP annual income statement](https://financialmodelingprep.com/stable/income-statement?symbol=LLY&period=annual), FY2018-FY2025 | `raw/pulse-cio-20260804T190229+0800/d/income_annual.json` | `1fb7e6bc9f3c955becf94a9f6cf5a9fcbd3d08abfff34ca15eb2b1abac9d3d2a` |
| FMP_BS_A | [FMP annual balance sheet](https://financialmodelingprep.com/stable/balance-sheet-statement?symbol=LLY&period=annual), FY2018-FY2025 | `raw/pulse-cio-20260804T190229+0800/d/balance_annual.json` | `545b76a46a9c46356c48c659e7ba624029725d3f5504f1725df45f681cc9f6fd` |
| FMP_CF_A | [FMP annual cash flow](https://financialmodelingprep.com/stable/cash-flow-statement?symbol=LLY&period=annual), FY2018-FY2025 | `raw/pulse-cio-20260804T190229+0800/d/cashflow_annual.json` | `86fcbe995f448107bdeeb7e9ae94e8ba36f652b0aa84db8092a8e9fa96751928` |
| FMP_KM_A | [FMP annual key metrics](https://financialmodelingprep.com/stable/key-metrics?symbol=LLY&period=annual), FY2018-FY2025 | `raw/pulse-cio-20260804T190229+0800/d/key_metrics_annual.json` | `f8598d19e84ee7e7a221f3e0744b71692e49bd915b0c0890c9f47d87f79e2937` |
| FMP_PROD_A | [FMP annual product segmentation](https://financialmodelingprep.com/stable/revenue-product-segmentation?symbol=LLY&period=annual) | `raw/pulse-cio-20260804T190229+0800/d/revenue_product_annual.json` | `693f820ecc0e79a902dd706741fd1df0760dc02dba2738f6611ef289cb56ac76` |
| FMP_PROD_Q | [FMP quarterly product segmentation](https://financialmodelingprep.com/stable/revenue-product-segmentation?symbol=LLY&period=quarter) | `raw/pulse-cio-20260804T190229+0800/d/revenue_product_quarter.json` | `d2af74afaa7bb16ba84aaabb9649d374b938df623460b3ca2d7792e62068fd8a` |
| FY2025_10K | [Lilly FY2025 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947826000013/lly-20251231.htm) | `raw/pulse-cio-20260804T190229+0800/qf/sec_2025_10k.html` | `1450e79937d3a53bed1b7f1fe1ba60dda4b0d2d1c372ffbb02107df4576e2cc9` |
| FY2023_10K | [Lilly FY2023 Form 10-K](https://www.sec.gov/Archives/edgar/data/59478/000005947824000065/lly-20231231.htm), FY2021-FY2023 comparative statements | Live SEC fetch; cited by statement and line item | SEC page live-fetched 2026-08-04 |
| Q1_2026_10Q | [Lilly Q1 2026 Form 10-Q](https://www.sec.gov/Archives/edgar/data/59478/000005947826000045/lly-20260331.htm) | `raw/pulse-cio-20260804T190229+0800/qf/sec_2026_q1_10q.html` | `617f442189f9b447f464a61ee357ab920fce3b5e0162d1d6382c16905e586d2d` |
| REL_Q126 | [SEC Exhibit 99.1, Q1 2026 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm) | `raw/pulse-cio-20260804T190229+0800/d/sec_q1_2026_release.html` | `bea4db5fc0422ae1261456c1fb904179797fb1bc248587dcbee90e8b8b747c3d` |
| REL_Q425 | [SEC Exhibit 99.1, Q4 2025 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947826000008/q425lillysalesandearningsp.htm) | `raw/pulse-cio-20260804T190229+0800/d/sec_q4_2025_release.html` | `beb51a6eb12016bfed93580132d24d1a82c5f09086810abea4413827d0b094ed` |
| REL_Q325 | [SEC Exhibit 99.1, Q3 2025 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947825000251/q325lillysalesandearningsp.htm) | `raw/pulse-cio-20260804T190229+0800/d/sec_q3_2025_release.html` | `16eeaeccdf5e963fd3d3aeb320187c37af2e1b7efb4b49547d1ccdeaf527832f` |

| Source ID | Live source and covered period | Archived raw path | SHA-256 |
|---|---|---|---|
| REL_Q225 | [SEC Exhibit 99.1, Q2 2025 earnings release](https://www.sec.gov/Archives/edgar/data/59478/000005947825000202/q225lillysalesandearningsp.htm) | `raw/pulse-cio-20260804T190229+0800/d/sec_q2_2025_release.html` | `24095ccac930304c78fc15f1a2b3d08d4756702ce2d8e61d696dcd3ccec01383` |
| TR_Q126 | [FMP Q1 2026 transcript](https://financialmodelingprep.com/stable/earning-call-transcript?symbol=LLY&year=2026&quarter=1) dated 2026-04-30 | `raw/pulse-cio-20260804T190229+0800/d/transcript_2026_q1.json` | `457767cf9397119553dc3c9573d7600a719a66d5a9675ef63b1b1ace590cd881` |
| TR_Q425 | [FMP Q4 2025 transcript](https://financialmodelingprep.com/stable/earning-call-transcript?symbol=LLY&year=2025&quarter=4) dated 2026-02-04 | `raw/pulse-cio-20260804T190229+0800/d/transcript_2025_q4.json` | `dfcd48362013b6e39293fafe40d843573b8b7c761416b7323781b33a55c98676` |
| TR_Q325 | [FMP Q3 2025 transcript](https://financialmodelingprep.com/stable/earning-call-transcript?symbol=LLY&year=2025&quarter=3) dated 2025-10-30 | `raw/pulse-cio-20260804T190229+0800/d/transcript_2025_q3.json` | `e7aeaa0521fa2549c7b0d189abf2cf9ba5fde953a8cfa3cb83c19f0fd06e2a11` |
| TR_Q225 | [FMP Q2 2025 transcript](https://financialmodelingprep.com/stable/earning-call-transcript?symbol=LLY&year=2025&quarter=2) dated 2025-08-07 | `raw/pulse-cio-20260804T190229+0800/d/transcript_2025_q2.json` | `416f8e98ebb16ca162c993c3a7b02ffd727cedb34f02a5606362c473317eeedc` |
| ADA_2026 | [Lilly ADA 2026 Investor Event presentation](https://investor.lilly.com/static-files/a2b20b4f-7944-4de2-9d10-00f384bbede2), 2026-06-06 | `raw/pulse-cio-20260804T190229+0800/d/ada_2026_investor_presentation.pdf` | `d18a63d27cb82ece3847f990f35e3993143624acc322aa91dadfb5b66562c776` |
| IR_RT723 | [Lilly TRIUMPH-2/TRIUMPH-3 retatrutide release](https://investor.lilly.com/news-releases/news-release-details/lillys-triple-agonist-retatrutide-successful-two-additional), 2026-07-23 | `raw/pulse-cio-20260804T190229+0800/dr/prnewswire_lilly_retatrutide_triumph23_2026-07-23_live.html` (issuer-linked wire mirror) | `5a0d457b8a573e8ec74682d1f1c2307debb7bce949cb427c7085ec18eea7d6c7` |

## 0a. Industry classification and disclosure inventory

Lilly is a U.S. GAAP pharmaceutical issuer and domestic SEC registrant with a December 31 fiscal year. It reports one business segment, Human pharmaceutical products, but its operational economics are disclosed more richly through therapeutic-area revenue, individual medicine revenue, pipeline milestones, trial readouts, manufacturing investment, and payer/price/volume commentary. FMP's segment/product data are too thin for production underwriting: the annual endpoint collapses FY2021-FY2025 into `Product` and `Collaboration and Other Revenue`, while the quarterly endpoint changes taxonomy over time and omits Q4 2025. The pharma disclosure inventory is therefore triggered.

Official sources checked live were the FY2025 10-K, FY2023 10-K, Q1 2026 10-Q, the four most recent earnings exhibits, the four matching transcripts, the June 2026 ADA investor presentation, and Lilly's July 23, 2026 TRIUMPH-2/TRIUMPH-3 retatrutide release. Search terms and table names included `single business segment`, `chief operating decision maker`, `consolidated net income`, `revenue by product`, `therapeutic area`, `Mounjaro`, `Zepbound`, `Trulicity`, `Jardiance`, `Verzenio`, `Taltz`, `retatrutide`, `TRIUMPH-2`, `TRIUMPH-3`, `pipeline`, `Phase 3`, `manufacturing capacity`, `price`, `volume`, `guidance`, and `geographic revenue`.

| Dataset / table family | Official source searched | Search terms or table names | Years available | Included? | If excluded, why | Downstream relevance |
|---|---|---|---|---|---|---|
| Reportable-segment economics | FY2025 10-K segment note | Single segment; CODM; consolidated net income | FY2023-FY2025 and TTM | Yes | None | Exact forecast segment and sealed profit basis |
| Therapeutic-area revenue | FY2025 10-K product revenue table; Q1 2026 10-Q | Cardiometabolic; oncology; immunology; neuroscience; other | Clean current taxonomy FY2023-FY2025 plus TTM | Yes | FY2021-FY2022 stopped at taxonomy boundary | Mix, durability, segment appendix |
| Individual medicine revenue | FY2025 10-K; Q1 2026 10-Q; quarterly releases | Mounjaro; Zepbound; Trulicity; Jardiance; Verzenio; Taltz | FY2023-FY2025; last four quarters for selected products | Yes | Newer medicines have shorter histories | Product concentration and growth drivers |
| Pipeline and clinical KPIs | FY2025 10-K; earnings releases; ADA 2026 presentation | Phase 3; submissions; weight loss; safety; outcomes | Current event set through 2026-07-23 | Yes | Trial outcomes are not financial revenue | Moat, pipeline durability, scenario risk |
| Manufacturing and supply | Earnings calls and releases | Capacity; salable doses; new sites; production | Q2 2025-Q1 2026 | Yes | No plant-level revenue or ROIC disclosed | Volume ceiling, capex, gross margin |
| Capital by therapeutic area | Annual reports and segment note | Assets; equity; capital; invested capital by area | None | No | True non-disclosure at unit level | Prevents false segment ROIC precision |

| Dataset / table family | Official source searched | Search terms or table names | Years available | Included? | If excluded, why | Downstream relevance |
|---|---|---|---|---|---|---|
| Recent trend | Four SEC earnings exhibits and transcripts | Revenue; selected products; price; volume; guidance | Q2 2025-Q1 2026 | Yes | None | Recency and forecast anchor |

The clean current therapeutic-area taxonomy begins in FY2023; earlier official presentations use older diabetes/endocrinology and product groupings. No pre-FY2023 figure is spliced into the current taxonomy.

| KPI family, USD billions | Granularity | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | TTM 2026-03-31 | Source |
|---|---|---|---|---|---|---|---|---|
| Cardiometabolic Health revenue | Therapeutic area | n/c | n/c | 19.67 | 29.52 | 48.22 | 54.77 | FY2025 10-K; Q1 2026 10-Q; QF official TTM |
| Oncology revenue | Therapeutic area | n/c | n/c | 6.66 | 8.75 | 9.38 | 9.70 | Same |
| Immunology revenue | Therapeutic area | n/c | n/c | 3.80 | 4.39 | 5.25 | 5.36 | Same |
| Neuroscience revenue | Therapeutic area | n/c | n/c | 2.88 | 1.47 | 1.39 | 1.50 | Same |
| Other revenue | Therapeutic area | n/c | n/c | 1.12 | 0.90 | 0.94 | 0.92 | Same |

`n/c` means not comparable across the official taxonomy boundary, not missing data. TTM equals FY2025 less Q1 2025 plus Q1 2026 and preserves the Q1 2026 table's USD 1 million category-rounding difference.

The July 23, 2026 official release is the latest material pipeline update before the cutoff. It closes a recency gap after the June ADA event and is included as clinical evidence, not as revenue guidance.

| Trial | Population and duration | Highest-dose headline result | Comparator | Regulatory milestone | Source |
|---|---|---|---|---|---|
| TRIUMPH-2 | Adults with type 2 diabetes and obesity or overweight; 80 weeks | Retatrutide 12 mg: 20.8% / 49.6 lb average weight loss; A1C reduction up to 1.6% | Placebo: 4.0% / 9.3 lb average weight loss | Contributes to planned U.S. retatrutide submission in Q1 2027 | IR_RT723 |
| TRIUMPH-3 | Adults with severe obesity and established cardiovascular disease; 80 weeks | Retatrutide 12 mg: 22.6% / 55.8 lb average weight loss | Placebo: 3.2% / 7.7 lb average weight loss | Contributes to planned U.S. retatrutide submission in Q1 2027 | IR_RT723 |

The TRIUMPH-3 in-study MACE-5 hazard ratio was 0.82 (95% CI 0.55-1.22) and the MACE-3 hazard ratio was 1.12 (95% CI 0.64-1.96). Both confidence intervals cross 1.0; these exploratory event estimates are not treated as cardiovascular efficacy proof.

## 1. Reporting structure and taxonomy

Lilly's only reportable segment is **Human pharmaceutical products**: discovery, development, manufacture, marketing, and sale of medicines worldwide. FY2025 segment revenue was USD 65.179 billion, or 100.0% of consolidated revenue. The FY2025 10-K says the CODM uses consolidated net income to assess performance and allocate resources; the exact sealed segment-profit basis is therefore `Consolidated net income (issuer-disclosed CODM segment profit measure)`, not operating income.

The reportable segment structure has remained a single human-pharmaceutical segment throughout the five-year review. The relevant taxonomy change is below the segment level: current therapeutic areas are Cardiometabolic Health, Oncology, Immunology, Neuroscience, and Other. FMP's annual `Product/Collaboration and Other Revenue` taxonomy is not comparable to its quarterly therapeutic-area taxonomy. The official current-taxonomy tables control, and historical comparability begins in FY2023. No segment realignment 8-K establishing a new reportable segment was found in the FY2024-FY2026 boundary review.

Geography is material but not a reportable segment. FY2025 U.S. revenue was USD 43.481 billion, 66.7% of total, and outside-U.S. revenue was USD 21.698 billion, 33.3%. Comparable FY2024 values were USD 30.375 billion and USD 14.668 billion; FY2023 values were USD 21.791 billion and USD 12.333 billion. Source: FY2025 10-K product-revenue table.

## 2. Consolidated historicals

Statutory operating income is derived from official operating lines because FMP's `operatingIncome` omits acquired IPR&D and special charges. For example, FMP reports FY2025 operating income of USD 29.696 billion, versus official statutory operating income of USD 26.302 billion. Revenue, net income, cash flow, and balance-sheet figures were independently live-pulled from FMP and tied to filings; official filing values control material classification differences.

| Metric | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | Source |
|---|---|---|---|---|---|---|
| Revenue, USD B | 28.318 | 28.541 | 34.124 | 45.043 | 65.179 | FMP_INC_A; FY2023/FY2025 10-K |
| Statutory operating income, USD B | 6.357 | 7.127 | 6.458 | 12.899 | 26.302 | Official operating-line derivation |
| Operating margin | 22.45% | 24.97% | 18.92% | 28.64% | 40.35% | Calculated |
| Net income, USD B | 5.582 | 6.245 | 5.240 | 10.590 | 20.640 | FMP_INC_A; 10-K tie |
| Diluted EPS, USD | 6.12 | 6.90 | 5.80 | 11.71 | 22.95 | Official 10-K share schedule |
| Diluted shares, M | 911.7 | 904.6 | 903.3 | 904.1 | 899.3 | Official 10-K share schedule |
| Cash capex, USD B | 1.310 | 1.854 | 3.448 | 5.058 | 7.841 | FMP_CF_A purchases of PP&E; filing tie |
| Free cash flow, USD B | 6.056 | 5.731 | 0.792 | 3.760 | 8.972 | OCF less cash capex |
| ROIC | 28.46% | 28.05% | 17.88% | 27.81% | 39.74% | Explicit calculation below |

ROIC is defined consistently as statutory NOPAT divided by average invested capital. NOPAT is statutory operating income multiplied by one minus the effective statutory tax rate. Invested capital is total debt plus total stockholders' equity less cash and short-term investments; the denominator is the average of beginning- and ending-year invested capital. This avoids FMP's overstated operating-income numerator.

| ROIC component, USD B except rates | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 |
|---|---|---|---|---|---|
| Effective tax rate | 9.32% | 8.25% | 20.05% | 16.48% | 19.79% |
| Statutory NOPAT | 5.765 | 6.539 | 5.163 | 10.773 | 21.098 |
| Average invested capital | 20.255 | 23.315 | 28.874 | 38.740 | 53.092 |
| Calculated ROIC | 28.46% | 28.05% | 17.88% | 27.81% | 39.74% |

FY2023's ROIC trough reflects USD 3.800 billion of acquired IPR&D expense in statutory operating income. FY2025's sharp rise reflects the tirzepatide revenue ramp; it should not be extrapolated without modeling price, manufacturing investment, and pipeline spending.

## 3. Segment historicals

Lilly has one financial projection segment. Therapeutic areas are revenue context, not separate reportable segments, and have no independently disclosed segment profit.

| Human pharmaceutical products | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | Source |
|---|---|---|---|---|---|---|
| Revenue, USD B | 28.318 | 28.541 | 34.124 | 45.043 | 65.179 | 10-K; FMP revenue tie |
| YoY growth | 15.4% | 0.8% | 19.6% | 32.0% | 44.7% | Calculated |
| Consolidated net income (issuer-disclosed CODM segment profit measure), USD B | 5.582 | 6.245 | 5.240 | 10.590 | 20.640 | Segment note and consolidated statements |
| Margin on exact CODM metric | 19.71% | 21.88% | 15.36% | 23.51% | 31.67% | Calculated |

The segment-profit label must remain exact downstream. Statutory operating income is a separately derived consolidated subtotal and must not replace or relabel CODM consolidated net income.

## 3a. Historical statutory-profit bridge and forecast-driver ledger

**QFR-sealed common segment profit basis:** `Consolidated net income (issuer-disclosed CODM segment profit measure)`. **Reporting currency:** USD. **Scale:** millions. **Segment basis:** `issuer_disclosed`; modeled segment

count 1. The exact packet SHA-256 is `2a7f8e7d251efae6411f9d90ca0f22a8b76eae29432916449b847cfbe4a5a3bf`.

The bridge's `operating` classification on the add-back lines is the validator's mechanical directional-reversal classification. It does not recharacterize tax or Other-net expense as accounting operating costs. The same issuer-labelled items are then presented with their actual below-operating-income classifications.

## FY2025 ended 2025-12-31

| Bridge line | Classification | Value | Source ID | Running subtotal |
|---|---|---|---|---|
| Human pharmaceutical products | segment profit | 20,640 | FY2025_10K | 20,640 |
| Sum of reportable segment profit | segment profit | 20,640 | FY2025_10K | 20,640 |
| Consolidated segment profit metric | subtotal | 20,640 | FY2025_10K | 20,640 |
| Income taxes | operating | 5,091 | FY2025_10K | 25,731 |
| Other-net, (income) expense | operating | 571 | FY2025_10K | 26,302 |
| Statutory operating income | statutory subtotal | 26,302 | FY2025_10K | 26,302 |
| Other-net, (income) expense | other_non_operating | (571) | FY2025_10K | 25,731 |
| Pretax income | statutory subtotal | 25,731 | FY2025_10K | 25,731 |
| Income taxes | tax | (5,091) | FY2025_10K | 20,640 |
| Net income | statutory subtotal | 20,640 | FY2025_10K | 20,640 |

There are no corporate/unallocated adjustment rows in the sealed packet. Every one of the five validator residuals is zero; tolerance is USD 13.151 million.

## TTM ended 2026-03-31, FY2025 less Q1 2025 plus Q1 2026

| Bridge line | Classification | Value | Source ID | Running subtotal |
|---|---|---|---|---|
| Human pharmaceutical products | segment profit | 25,277 | QF_TTM_RECON | 25,277 |
| Sum of reportable segment profit | segment profit | 25,277 | QF_TTM_RECON | 25,277 |
| Consolidated segment profit metric | subtotal | 25,277 | QF_TTM_RECON | 25,277 |
| Income taxes | operating | 5,848 | QF_TTM_RECON | 31,125 |
| Other-net, (income) expense | operating | 397 | QF_TTM_RECON | 31,522 |
| Statutory operating income | statutory subtotal | 31,522 | QF_TTM_RECON | 31,522 |
| Other-net, (income) expense | other_non_operating | (397) | QF_TTM_RECON | 31,125 |
| Pretax income | statutory subtotal | 31,125 | QF_TTM_RECON | 31,125 |
| Income taxes | tax | (5,848) | QF_TTM_RECON | 25,277 |
| Net income | statutory subtotal | 25,277 | QF_TTM_RECON | 25,277 |

There are no corporate/unallocated adjustment rows. Every validator residual is zero; tolerance is USD 15.761 million.

| Historical bridge line | FY2025 value | TTM value | Forecast treatment | Driver and source | Bear / base / bull rule |
|---|---|---|---|---|---|
| Income taxes, directional reversal | 5,091 | 5,848 | Mechanical add-back only | Must equal the tax schedule amount being reversed | Scenario tax expense added back exactly; never forecast independently |
| Other-net, (income) expense, directional reversal | 571 | 397 | Mechanical add-back only | Must equal the below-line Other-net schedule with opposite sign | Scenario below-line amount added back exactly; never forecast independently |
| Other-net, (income) expense, below line | (571) | (397) | Independent non-operating schedule | Interest/debt, investment, and other disclosed non-operating drivers | Bear uses higher debt cost or adverse other items; base normalized debt schedule; bull lower financing drag |

| Historical bridge line | FY2025 value | TTM value | Forecast treatment | Driver and source | Bear / base / bull rule |
|---|---|---|---|---|---|
| Income taxes, tax line | (5,091) | (5,848) | Tax-rate schedule | Pretax income times explicit effective cash/statutory tax assumption | Bear high end of supported range; base normalized rate; bull low end, with no permanent unsupported holiday |

Downstream modeling must project the exact CODM net-income metric, reverse only the scenario's own tax and Other-net lines to reach statutory operating income, then apply those same lines below operating income. This prevents double counting and prohibits a plug.

STATUTORY_BRIDGE_STATUS: VERIFIED — CLEARED FOR FORECASTING

## 4. Product and sub-segment historicals

The FY2025 10-K separately discloses six major medicines for three full years. These are reported dollars, not back-solves.

| Segment | Product | What it is | Dollar disclosure? | FY2023 / FY2024 / FY2025 revenue, USD B and source |
|---|---|---|---|---|
| Human pharmaceutical products | Mounjaro | Tirzepatide for type 2 diabetes; ex-U.S. labels also cover obesity in some markets | Yes | 5.163 / 11.540 / 22.965; FY2025 10-K selected-products total |
| Human pharmaceutical products | Zepbound | Tirzepatide for chronic weight management and obstructive sleep apnea | Yes | 0.176 / 4.926 / 13.542; FY2025 10-K |
| Human pharmaceutical products | Trulicity | Dulaglutide GLP-1 for type 2 diabetes and cardiovascular-risk reduction | Yes | 7.132 / 5.254 / 4.276; FY2025 10-K |
| Human pharmaceutical products | Jardiance | Empagliflozin collaboration revenue across diabetes, heart failure, and CKD | Yes | 2.744 / 3.341 / 3.431; FY2025 10-K |
| Human pharmaceutical products | Verzenio | Abemaciclib oncology medicine | Yes | 3.863 / 5.307 / 5.723; FY2025 10-K |
| Human pharmaceutical products | Taltz | Ixekizumab immunology medicine | Yes | 2.760 / 3.260 / 3.563; FY2025 10-K |
| Human pharmaceutical products | Jaypirca | Pirtobrutinib oncology medicine | Yes, short history | Q1 2025 0.092 / Q1 2026 0.165; REL_Q126 |
| Human pharmaceutical products | Ebglyss | Lebrikizumab immunology medicine | Yes, short history | Q1 2025 0.060 / Q1 2026 0.145; REL_Q126 |
| Human pharmaceutical products | Kisunla | Donanemab Alzheimer's medicine | Yes, short history | Q1 2025 0.022 / Q1 2026 0.124; REL_Q126 |
| Human pharmaceutical products | Omvoh | Mirikizumab inflammatory bowel disease medicine | Yes, short history | Q1 2025 0.037 / Q1 2026 0.080; REL_Q126 |
| Human pharmaceutical products | Inluriyo | Imlunestrant breast-cancer medicine | Yes, launch history | Q1 2025 nil / Q1 2026 0.035; REL_Q126 |

No historical medicine dollar figure in this table is estimated. The apparent FY2025 therapeutic-area sum of USD 65.178 billion versus consolidated USD 65.179 billion is official rounding and is retained.

| Segment | Product | Disclosure method | Last four quarters YoY growth | Source |
|---|---|---|---|---|
| Human pharmaceutical products | Growth-only products used in this package | None | None | All material product growth figures used below were accompanied by disclosed dollars |

## 5. Most recent quarterly trend

*Lilly FY ends December 31. Most recently completed fiscal quarter at time of writing: FY26 Q1, covering January-March 2026, reported on 2026-04-30 via the [SEC earnings exhibit](https://www.sec.gov/Archives/edgar/data/59478/000005947826000043/q126lillysalesandearningsp.htm).*

Because the single reportable segment is the consolidated company, its revenue equals consolidated revenue. Operating margin below is derived statutory operating income divided by revenue; it is not the CODM segment-profit margin.

| Quarter | Human pharmaceutical products revenue, USD B | YoY growth | Statutory operating margin | Source |
|---|---|---|---|---|
| Q2 2025 | 15.558 | 38% | 44.14% | REL_Q225; Q2 2025 10-Q |
| Q3 2025 | 17.601 | 54% | 41.85% | REL_Q325; Q3 2025 10-Q |
| Q4 2025 | 19.292 | 43% | 43.41% | REL_Q425; FY2025 less official nine months |
| Q1 2026 | 19.799 | 56% | 45.03% | REL_Q126; Q1_2026_10Q |

The largest segment's most recent headline growth rate, 56%, was self-verified against REL_Q126; the phrase `Revenue in Q1 2026 increased 56% to $19.8 billion` appears in the live-fetched official exhibit.

| Quarter | Mounjaro revenue / YoY | Zepbound revenue / YoY | Verzenio revenue / YoY | Source |
|---|---|---|---|---|
| Q2 2025 | USD 5.199B / 68% | USD 3.381B / 172% | USD 1.489B / 12% | REL_Q225 |
| Q3 2025 | USD 6.515B / 109% | USD 3.588B / 185% | USD 1.470B / 7% | REL_Q325 |
| Q4 2025 | USD 7.409B / 110% | USD 4.261B / 123% | USD 1.604B / 3% | REL_Q425 |
| Q1 2026 | USD 8.662B / 125% | USD 4.160B / 80% | USD 1.302B / 12% | Q1_2026_10Q; REL_Q126 for selected products |

Mounjaro and Zepbound produced USD 12.822 billion in Q1 2026, 64.8% of consolidated revenue. This concentration is a central forecast and moat fact. Price was a partial offset to volume in every recent headline release; volume, payer access, self-pay elasticity, and capacity must be modeled rather than assuming the recent growth rate persists.

## 6. Management commentary on forward growth

All transcript dates were validated against the requested fiscal period and fall on the actual earnings-call date. Quotes are verbatim excerpts from the archived transcripts; short interpretations are modeling instructions, not management statements.

| Fiscal period / date | Speaker | Verbatim quote | Topic | Modeling interpretation |
|---|---|---|---|---|
| Q1 FY26 / 2026-04-30 | Lucas Montarce, CFO | “We have increased the top and the bottom end of the revenue range by $2 billion and now expect full year revenue to be between $82 billion and $85 billion.” | Current guidance | Supersedes Q4 guidance; implies 25.8%-30.4% FY2026 growth from FY2025 |
| Q1 FY26 / 2026-04-30 | Lucas Montarce, CFO | “The midpoint of the new revenue range represents 28% growth compared to 2025.” | Current growth anchor | Use as current-year bridge only, not a five-year CAGR |
| Q1 FY26 / 2026-04-30 | Lucas Montarce, CFO | “R&D expenses increased 28%, driven by continued investments in our pipeline, including 42 active Phase III programs.” | Pipeline spending | R&D remains structurally high even as revenue scales |
| Q1 FY26 / 2026-04-30 | Patrik Jonsson, Lilly International president | “And now we have fully launched in more than 55 countries, and we have seen a very strong speed of uptake and also a rapid market share gain.” | International Mounjaro | Supports international volume growth but raises execution and price-mix sensitivity |
| Q4 FY25 / 2026-02-04 | Lucas Montarce, CFO | “As market penetration within the population of people with obesity is only mid-single digits, we believe there is room for market expansion and sustained market growth in the quarters and years to come.” | Obesity market | Supports long runway; not a guarantee of Lilly share or price |
| Q4 FY25 / 2026-02-04 | David Ricks, chair and CEO | “We increased our manufacturing capacity and began making medicine at our new sites in Wisconsin and North Carolina.” | Supply | Capacity has moved from promise to production; capex and ramp risk remain |

| Fiscal period / date | Speaker | Verbatim quote | Topic | Modeling interpretation |
|---|---|---|---|---|
| Q4 FY25 / 2026-02-04 | Patrik Jonsson, Lilly International president | “As I think we shared in the prepared remarks, outside the US, it's mainly going to be a matter of launching in 2027, with a few exceptions.” | Foundayo international | The oral GLP-1 international ramp is later than the U.S. launch |
| Q3 FY25 / 2025-10-30 | David Ricks, chair and CEO | “Lilly medicines account for nearly 6 out of 10 prescriptions within this large and growing class.” | Incretin share | Evidence of current franchise strength; monitor for share mean reversion |
| Q3 FY25 / 2025-10-30 | David Ricks, chair and CEO | “But we're focused on speed here and we're ready to launch.” | Orforglipron readiness | Supports rapid launch scenario, subject to regulatory and supply evidence |
| Q2 FY25 / 2025-08-07 | David Ricks, chair and CEO | “We will continue to bring more capacity online in the second half of 2025 and expect our production capabilities to increase further.” | Manufacturing | Supports volume availability while reinforcing capital-intensity risk |
| Q2 FY25 / 2025-08-07 | Kenneth Custer, Cardiometabolic Health president | “Now you're getting that all from a single oral pill, but we can manufacture at scale.” | Oral GLP-1 | Oral modality may broaden demand and ease device constraints; commercial scale still must be evidenced |
| Q2 FY25 / 2025-08-07 | David Ricks, chair and CEO | “We're investing in the next wave of medicines that we expect will drive growth in the near and more distant future.” | Portfolio durability | Justifies explicit pipeline spending and probability-adjusted launch assumptions |

The most recent investor event available at the cutoff was Lilly's 2026 ADA event on 2026-06-06, not the planned December 2026 Investment Community Meeting. Its presentation disclosed that participants on retatrutide 12 mg in the TRIUMPH-1 extension subset lost an average 85 pounds, or 30.3%, and that five Phase 3 eloralintide obesity trials had been initiated in 2026. These are clinical/pipeline indicators, not revenue guidance. Source: ADA_2026, slides 19 and 27 in PDF pagination.

The management quote selected for self-verification was the current USD 82-85 billion revenue range from Lucas Montarce. It appears in TR_Q126, whose API `date` is 2026-04-30, the Q1 FY26 call date and within the required window.

## 7. Capital allocation history

Capex is cash purchases of property and equipment, not FMP's broader `capitalExpenditure` field. M&A is cash paid for acquisitions net of cash acquired and excludes separately expensed acquired IPR&D. Negative FMP cash-flow signs are shown as positive uses of cash.

| Year | Capex, USD B | Capex / revenue | R&D, USD B | R&D / revenue | Buybacks, USD B | Dividends, USD B | Cash acquisitions, USD B | Source |
|---|---|---|---|---|---|---|---|---|
| FY2021 | 1.310 | 4.63% | 6.931 | 24.47% | 1.250 | 3.087 | 0.747 | FMP_CF_A; FY2023 10-K |
| FY2022 | 1.854 | 6.50% | 7.191 | 25.19% | 1.500 | 3.536 | 0.327 | FMP_CF_A; FY2023 10-K |
| FY2023 | 3.448 | 10.10% | 9.313 | 27.29% | 0.750 | 4.069 | 1.044 | FMP_CF_A; FY2025 10-K |
| FY2024 | 5.058 | 11.23% | 10.991 | 24.40% | 2.500 | 4.680 | 0.948 | FMP_CF_A; FY2025 10-K |
| FY2025 | 7.841 | 12.03% | 13.338 | 20.46% | 4.108 | 5.384 | 0.661 | FMP_CF_A; FY2025 10-K |

Capex rose sixfold from FY2021 to FY2025 and reached 12.0% of revenue, consistent with Lilly's manufacturing expansion. Repurchases accelerated despite heavy capacity investment, reducing diluted shares from 904.1 million in FY2024 to 899.3 million in FY2025. Downstream cash-flow forecasts should not normalize capex immediately while announced sites are ramping.

## 8. Balance-sheet snapshot

FY2025 official cash and cash equivalents of USD 7.268 billion controls over FMP's USD 7.163 billion decomposition. FMP separately labels USD 0.105 billion as short-term investments, but that amount is already included in the SEC-controlled USD

7.268 billion cash total and is not deducted twice. Other balance fields are live FMP values tied to the filing. EBITDA is FMP's FY2025 USD 27.936 billion cross-check; net debt/EBITDA is a leverage diagnostic, not the segment profit basis.

| Item | USD B | Source |
|---|---|---|
| Cash and equivalents | 7.268 | FY2025_10K official override |
| Short-term investments, separately deductible | 0.000 | FMP_BS_A's 0.105 is included in the SEC cash total |
| Total debt, current plus long-term | 42.503 | FMP_BS_A; FY2025 10-K tie |
| Net debt | 35.235 | 42.503 less 7.268; no double-counted cash |
| Net debt / EBITDA | 1.26x | 35.235 / 27.936 |
| Goodwill plus intangibles | 12.419 | FMP_BS_A |
| Tangible book value | 14.116 | Equity 26.535 less goodwill 5.898 less intangibles 6.521 |

At Q1 2026, point-in-time cash was USD 5.282 billion and gross debt USD 43.370 billion, producing net debt before short-term investments of USD 38.088 billion. TTM FCF was USD 11.823 billion, from OCF USD 20.480 billion less cash capex USD 8.657 billion. The balance sheet can fund continued expansion, but the absolute debt load and acquisition cadence require an explicit interest schedule.

## 9. Recent corporate actions

- **2025-08-07:** Lilly reported completed acquisitions of SiteOne Therapeutics and Verve Therapeutics. Source: REL_Q225.
- **2025-10-30:** Lilly announced two new manufacturing facilities in Virginia and Texas and expansion of its Puerto Rico site. Source: REL_Q325.
- **2026-02-04:** Lilly said production had begun at new Wisconsin and North Carolina sites and disclosed a U.S. government agreement intended to expand obesity-medicine access. Source: REL_Q425 and TR_Q425.
- **2026-04-30:** Lilly disclosed agreements to acquire Orna Therapeutics, Centessa Pharmaceuticals, Kelonia Therapeutics, and Ajax Therapeutics. Source: REL_Q126.
- **2026-04-30:** FY2026 revenue guidance increased to USD 82-85 billion and non-GAAP EPS guidance to USD 35.50-37.00; the performance-margin range rose to 47.0%-48.5%. Source: REL_Q126.
- **2026-04-30:** Q1 diluted shares were 895.9 million, below FY2025's 899.3 million average; the sealed quote-unit bridge confirms no intervening stock split. Source: Q1_2026_10Q and QFR.
- **2026-06-06:** The ADA investor event presented retatrutide and eloralintide clinical and development updates, including the TRIUMPH-1 extension and five initiated Phase 3 eloralintide obesity trials. Source: ADA_2026.
- **2026-07-23:** Lilly reported positive TRIUMPH-2 and TRIUMPH-3 Phase 3 retatrutide topline results: highest-dose average weight loss was 20.8% at 80 weeks in adults with type 2 diabetes and obesity or overweight, and 22.6% at 80 weeks in adults with severe obesity and established cardiovascular disease. Lilly said it planned a U.S. retatrutide submission in Q1 2027. Source: IR_RT723.

## 10. Open data gaps and evidence classification

- **True non-disclosure:** Lilly does not disclose revenue, assets, invested capital, or profit by therapeutic area. Sources checked: FY2025 10-K segment note and product tables, Q1 2026 10-Q, and search terms `segment assets`, `therapeutic area profit`, `operating profit`, `invested capital`, and `CODM`. Therapeutic areas must remain revenue context, not synthetic profit segments.
- **True non-disclosure:** Plant-level capacity, utilization, unit cost, and return on invested manufacturing capital were not quantified in the FY2025 10-K, four releases, four calls, or ADA presentation. Management gives directional capacity commentary only.
- **True non-disclosure:** Product-level gross margin and operating profit are not disclosed. Search terms included each major medicine plus `gross margin`, `operating income`, and `profit` in the FY2025 10-K and Q1 2026 10-Q.

- **Estimated:** TTM therapeutic-area revenue is a transparent FY2025 less Q1 2025 plus Q1 2026 derivation from official tables. It is not a back-solved product estimate; the USD 1 million category rounding difference remains visible.
- **Estimated:** ROIC is an analyst calculation using statutory NOPAT and average debt-plus-equity-less-cash invested capital. The formula and inputs are fully shown in Section 2.
- **Not fetched / omitted:** No transcript was available for the June 2026 ADA investor event. The official 31-page presentation was fetched, archived, and used; no Q&A statement from that event is quoted.
- **Not applicable:** A multi-segment corporate/unallocated profit bridge is not applicable because Lilly has one reportable segment and the sealed bridge contains no corporate/unallocated rows.
- **Taxonomy flag:** FMP annual product segmentation (`Product`, `Collaboration and Other Revenue`) is not comparable with FMP quarterly therapeutic-area categories, and FMP omits Q4 2025 quarterly product detail. Official annual and quarterly filing tables control. Current therapeutic-area history begins in FY2023; pre-FY2023 values are not spliced.
- **Classification flag:** FMP FY2025 operating income is USD 3.394 billion above statutory operating income because its field omits acquired IPR&D and special charges. Official statutory operating lines and the sealed bridge control.
- **No statutory bridge gap:** Both periods contain the exact issuer-disclosed CODM net-income basis, directional reversal, statutory operating income, below-line Other-net expense, pretax income, tax, and net income. There are no unresolved items or plugs.

The most recent full-year revenue self-check passed: live FMP annual income statement reports FY2025 revenue of USD 65.179 billion, exactly tying the FY2025 10-K. The most recent segment growth self-check and the selected management quote self-check also passed against live official/FMP evidence archived in this run.