VALUE INVESTING CASE STUDY

Applying the Ben Graham Value Investing Framework

A worked case study: Novo Nordisk A/S (NYSE: NVO)

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This document is an educational case study. It illustrates how a structured value investing methodology is applied to a large-cap pharmaceutical company. It is not investment advice, not a recommendation to buy, sell or hold any security, and not an offer or solicitation. Please read the full disclaimer at the end of this document.

Analysis date: 19 August 2026 | **Market data as at:** 17 August 2026 | **Subject:** Novo Nordisk A/S (NYSE: NVO ADR; primary listing CPH: NOVO-B)

Valuation currency: USD per ADR | **Framework:** Value investing methodology of Dr. George Athanassakos, Ben Graham Chair in Value Investing, Ivey Business School

Purpose and Scope of This Case Study

HYGEIA Group publishes case studies that demonstrate how disciplined analytical frameworks perform when applied to real companies under real uncertainty. This paper works through the value investing methodology taught by Dr. George Athanassakos, Ben Graham Chair in Value Investing at the Ivey Business School, applied to Novo Nordisk A/S.

Novo Nordisk is a useful teaching subject precisely because it is difficult. It is an exceptional business by almost any operating measure, it has de-rated sharply, and it faces a defined loss of exclusivity on the molecule that generates roughly three quarters of its revenue. A framework that only produces sensible answers for easy companies is not worth much. What follows is an honest application of the method, including where it produces an uncomfortable conclusion about a widely admired company.

> **Framework attribution**
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> The analytical framework applied here — the sequence of weighted average cost of capital, return on invested capital, net asset value, earnings power value, and margin of safety — was developed and is taught by Dr. George Athanassakos at the Ben Graham Centre for Value Investing, Ivey Business School, Western University. It builds on the foundational work of Benjamin Graham and on the earnings power methodology associated with Bruce Greenwald. HYGEIA Group claims no proprietary ownership of the framework. The application, the assumptions, the estimates and any errors in this document are our own.

How to read the numbers in this document

Every valuation output presented here rests on assumptions, and several of the most consequential ones are judgment calls rather than derived quantities. We have set these out explicitly in Exhibit 9 with the direction and magnitude of their effect, so that a reader who disagrees with any single input can see its sensitivity and adjust. Where sources conflict, we say which we relied on. Where we could not verify a figure, we say so. Point estimates convey a precision that this kind of analysis does not possess, which is why the central output is a scenario grid rather than a single number.

I. Summary of the Analysis

Novo Nordisk is one of the highest-quality franchises in global pharmaceuticals. The company generated a first-pass return on invested capital (ROIC) of approximately 35.5% against an estimated weighted average cost of capital (WACC) of approximately 8.6%, carries a century of accumulated peptide science and manufacturing capability, and commercialised semaglutide — the most commercially successful molecule in the history of the industry. In mid-August 2026 the ADR traded at $44.88, down roughly 70% from its 2024 peak, at a trailing price-to-earnings multiple of about 11.3x. On simple statistics it now screens as a value candidate rather than a growth story.

The question the framework is designed to answer is not whether Novo Nordisk is a good business. It plainly is. The question is whether the market's de-rating has gone far enough to compensate for three structural changes that have occurred over the past eighteen months:

- Eli Lilly has taken clear leadership of the obesity market, holding roughly 60% share against Novo's 40%.
- CagriSema — the asset on which Novo's next-generation positioning depended — failed to demonstrate non-inferiority against Lilly's Zepbound in the head-to-head REDEFINE-4 trial.
- Novo has announced that from 1 January 2027 it will reduce the US list price of Wegovy and Ozempic to $675, cuts of approximately 50% and 35% respectively — a deliberate volume-for-price trade that resets franchise economics ahead of semaglutide's loss of exclusivity in the early 2030s.

Applying the framework with a conservative haircut to normalized earnings power to reflect the patent position, the analysis produces a net asset value (NAV) of approximately $17.49 per ADR, a base-case earnings power value (EPV) of $26.78 per ADR, and an intrinsic value including growth of roughly $27 to $31 per ADR. Even a deliberately generous reference case that applies no loss-of-exclusivity haircut at all and assumes 3% perpetual growth produces an intrinsic value of $53.70 and, after the framework's standard one-third margin of safety, an entry price of $35.80.

What the framework concludes

At $44.88 per ADR, Novo Nordisk traded above every entry price in the sensitivity grid, including the most generous scenario. On the framework's own margin-of-safety discipline, the analysis does not support initiating a position at that price. It also stops well short of the conditions that would indicate a deteriorating business: second-pass ROIC exceeds the cost of capital in every scenario tested, including the most severe.

In framework terms this is a **hold** outcome — a high-quality franchise at a price that does not offer a margin of safety, rather than a business in decline. Section XII sets out the reasoning, the range at which the arithmetic would begin to work, and the specific evidence that would change the conclusion in either direction.

II. Industry Analysis

Novo Nordisk operates in the GLP-1 receptor agonist market for type 2 diabetes and obesity, a category that has grown from a diabetes niche into the largest therapeutic opportunity in modern pharmaceuticals. Structurally the industry has attractive characteristics: chronic, non-cyclical demand; enormous unmet need as obesity prevalence continues to rise globally; high barriers to entry in peptide manufacturing at scale; and an expanding label set as cardiovascular, renal, sleep apnoea and MASH indications are added.

The competitive structure, however, has shifted decisively. What was effectively a Novo monopoly in 2021 became a duopoly with Lilly's tirzepatide (Mounjaro/Zepbound) across 2022 and 2023, and by 2026 has become a duopoly in which Novo is the junior partner. Tirzepatide's dual GIP/GLP-1 mechanism has proven clinically superior on weight loss, and Lilly has out-executed on manufacturing scale-up. The entry of oral agents in 2026 — Novo's Wegovy pill in January and Lilly's orforglipron (Foundayo) in April — has expanded the addressable market meaningfully but has also compressed pricing, since orals are cheaper to manufacture and easier to distribute.

The most important industry-level development for valuation purposes is the collapse of the pricing umbrella. US payer pressure, most-favoured-nation pricing policy and direct-to-consumer channels have combined to force list prices down sharply. Novo's move to a $675 list price for Wegovy and Ozempic effective January 2027 should be read not as a one-off concession but as the market clearing to a new and structurally lower price level. Volume growth will need to be substantial to offset it.

III. Business and Financial Risk

We assess Novo Nordisk's business risk as **medium**, an increase from the low-to-medium rating implicit in our June 2025 review. The change reflects three developments: the concentration of revenue in a single molecule facing a defined patent cliff; the loss of clinical leadership to a better-capitalised competitor; and the transition to a new management team executing a large restructuring.

Revenue concentration is the dominant risk. On H1 2026 adjusted figures, semaglutide-based products — Ozempic, Rybelsus, Wegovy injectable and Wegovy pill — represent approximately 76% of Novo's sales. For a company of this size that is an extraordinary degree of single-asset dependence, and it is the reason the loss-of-exclusivity question dominates any honest valuation of the shares.

Financial risk we assess as **low-to-medium**. Novo carries DKK 130.9 billion of gross debt against DKK 27.0 billion of cash — a materially more levered balance sheet than the company maintained historically, the result of the Catalent acquisition, but still modest relative to DKK 119 billion of annual operating cash flow. Debt to total book capitalisation stands at approximately 40% against a ten-year average nearer 20%; on market values the debt weight is closer to 10%. We use a 30% target capital structure in the WACC build, consistent with the framework's target-capital-structure convention and with a medium business-risk pharmaceutical company. The intuitive credit rating is high investment grade (A1/AA− equivalent); Novo does not face refinancing risk on any realistic scenario.

IV. Strategic Positioning and Value Drivers

Novo's durable competitive advantages remain real and should not be understated. The company possesses roughly a century of accumulated peptide formulation and manufacturing expertise, an asset that cannot be bought or quickly replicated — the Catalent acquisition was in essence Novo paying $16.5 billion for fill-finish capacity because organic capacity could not be built fast enough. Its diabetes-care commercial infrastructure reaches prescribers in virtually every market globally. And the Novo Nordisk Foundation's controlling ownership structure permits a genuinely long-term capital allocation horizon that most listed pharmaceutical companies cannot match.

The Wegovy pill launch demonstrates that these advantages still translate into commercial results. Since its January 2026 US launch it has recorded more than five million prescriptions and reached approximately 163,000 weekly scripts by mid-August 2026 — by volume one of the strongest US pharmaceutical launches on record, and running roughly four times ahead of Lilly's competing Foundayo. Brand familiarity and payer relationships delivered that outcome.

The qualification is that this success has been substantially cannibalistic rather than additive. The Wegovy pill accounts for only about one third of total Wegovy franchise prescriptions, and Novo's overall obesity market share stands at 39.9% against Lilly's 60.1%. Novo is executing well within a shrinking share of a growing market — a meaningfully different proposition from executing well while gaining share.

V. Pipeline and Clinical Assessment

Given the concentration of value in semaglutide and its finite exclusivity, the pipeline is not a peripheral consideration for this valuation. It is the single most important determinant of what Novo's normalized earnings power looks like beyond 2032. We assess the three assets that matter most.

CagriSema (cagrilintide 2.4 mg + semaglutide 2.4 mg)

CagriSema pairs a long-acting amylin analogue with semaglutide and was intended to be Novo's answer to tirzepatide. The registrational data are respectable in absolute terms. REDEFINE-1 (n=3,417, 68 weeks, non-diabetic adults with obesity or overweight) delivered 20.4% weight loss on the treatment-policy estimand and 22.7% among patients remaining on therapy, against 3.0% for placebo; 91.9% of treated patients achieved at least 5% weight reduction, and approximately 54% of participants with obesity at baseline no longer met obesity criteria at week 68. REDEFINE-2 (n=1,206) studied the type 2 diabetes population. Novo filed the NDA with FDA on 18 December 2025 with a decision expected during 2026.

The difficulty is REDEFINE-4, the head-to-head trial against Zepbound (n=809, 84 weeks, mean baseline weight 114.2 kg), reported 23 February 2026. CagriSema produced 23.0% weight loss versus 25.5% for tirzepatide 15 mg on the trial-product estimand, and 20.2% versus 23.6% on the treatment-regimen estimand. CagriSema failed to meet its non-inferiority endpoint. Tolerability was acceptable and consistent with the class — predominantly mild-to-moderate gastrointestinal events attenuating over time — so this is an efficacy shortfall rather than a safety signal.

The commercial implication matters more than the clinical one. A two-agent injectable combination that is demonstrably less effective than an established single-molecule competitor, launching into a market where that competitor already holds 60% share and payers are actively narrowing formularies, has a difficult path to premium pricing or rapid uptake. We do not model CagriSema as a franchise-scale replacement for semaglutide. Approval is likely; a blockbuster commercial outcome is not the base case.

Oral semaglutide 25 mg (Wegovy pill)

This is unambiguously the pipeline success of the past eighteen months. Approved and launched in the US in January 2026, it recorded H1 2026 sales of DKK 5,474 million from a standing start, surpassed five million cumulative prescriptions, and reached roughly 163,000 weekly scripts by mid-August 2026. It addresses the substantial patient segment that will not accept injection, and it extends the semaglutide franchise into a presentation with a lower cost of goods.

Two constraints temper the enthusiasm. First, the oral SNAC formulation patent (US 9,931,349) runs to June 2032, so the oral presentation does not meaningfully extend the franchise beyond the injectable's exclusivity horizon. Second, oral bioavailability of semaglutide is low and variable, requiring substantially more active peptide per patient — the manufacturing economics are less favourable than the price point suggests, particularly at a $675 list price.

Amycretin (GLP-1 / amylin receptor co-agonist)

Amycretin is, in our assessment, the asset with genuine franchise-replacement potential. As a single-molecule co-agonist rather than a fixed-dose combination, it avoids CagriSema's formulation complexity. Phase 1b/2a data (NCT06064006, n=125, three dose levels, once-weekly subcutaneous) showed up to 22% weight loss at 36 weeks — against roughly 14% for semaglutide at the equivalent timepoint — with a gastrointestinal adverse-event profile that was predominantly mild-to-moderate. Novo initiated Phase 3 in Q1 2026 in both subcutaneous and oral formulations.

The difficulty is arithmetic. Third-party estimates place potential US approval around Q4 2030 and EU approval in Q1 2031 — which is to say, amycretin would launch essentially simultaneously with the erosion of the semaglutide franchise, leaving no period of overlapping exclusivity in which to build the replacement revenue base. It must also succeed in Phase 3 from an n=125 Phase 1b/2a dataset, and it will launch against whatever Lilly has commercialised by 2030, plausibly including retatrutide. A prudent valuation assigns amycretin meaningful option value but does not underwrite it as a certainty.

VI. The Loss-of-Exclusivity Question

The semaglutide patent position is considerably more nuanced than the frequently cited "2031" shorthand, and the nuance cuts against Novo. The composition-of-matter patent has already expired across major markets — US 8,927,488 lapsed in December 2023, as did the corresponding European and Chinese patents. What protects the franchise today is a thicket of formulation, method-of-use and device patents of varying strength.

In the United States, the key remaining protections are the 2.4 mg weight-management method-of-use patent (US 10,987,352, November 2031), the once-weekly type 2 diabetes dosing patent (US 10,195,214, March 2032), the oral SNAC formulation patent (US 9,931,349, June 2032) and the phosphate buffer formulation patent (US 9,714,283, August 2033). Method-of-use patents are historically the most vulnerable category to skinny-label generic entry. In the EU, supplementary protection certificates run to 2027 in the UK, 2028 in Spain and Italy and 2029 in Germany and France, with formulation coverage to August 2031.

Two markets are already breached. In Canada, Novo allowed the underlying patent to lapse over a nominal unpaid maintenance fee, which invalidated the supplementary protection certificate that would otherwise have run to March 2028. Health Canada has approved Dr. Reddy's generic semaglutide and generic entry began in 2026, making Canada the first G7 market to lose protection. In India, the patent application was rejected on obviousness grounds in 2019 and biosimilar launches are anticipated from late 2026. Analysts expect generic semaglutide pricing 50% to 80% below brand.

> **A note on conflicting sources**
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> Published patent-expiry compilations conflict on several specific dates, notably for Canada, where one source cites a December 2028 expiry while multiple others report the lapse-on-unpaid-fee and the approved Dr. Reddy's generic. We have relied on the multiply-corroborated account. Reported figures for the lapsed maintenance fee itself also differ materially between sources, so we describe it only as nominal. Any reader relying on the patent position should verify it directly against the FDA Orange Book and Novo Nordisk's Form 20-F risk factors.

The practical conclusion for valuation is that Novo faces staggered rather than cliff-edge erosion, beginning at the periphery in 2026 and reaching the core US and EU markets between 2031 and 2033. Current earnings power is therefore partly transient, and the framework requires that it be normalized downward rather than capitalised in perpetuity.

VII. Profitability and Operating Margin Outlook

Novo's operating margin has been remarkably stable historically, averaging 42.9% over the ten years to 2025 within a narrow 41.3% to 44.2% band. FY2025 delivered revenue of DKK 309.1 billion (+6.4%) but operating profit of DKK 127.7 billion,

marginally below the prior year, with margin compressing to 41.3% from 44.2% — the first meaningful margin erosion of the modern era, driven by competitive discounting and the DKK 8 billion restructuring charge.

Reported 2026 figures require care. H1 2026 shows net sales of DKK 175.3 billion (+18% at constant exchange rates) and operating profit of DKK 86.7 billion (+27%), but these are flattered by a non-cash reversal of DKK 26.8 billion of 340B Drug Pricing Program provisions booked in Q1. On an adjusted basis, H1 sales were DKK 148.6 billion (+2% at CER) and adjusted operating profit DKK 66.2 billion (+2%) — a business growing at low single digits, not twenty percent. Q2 2026 reported operating profit fell 16% at CER after DKK 6.3 billion of non-cash impairments on pipeline intangibles, including DKK 4.0 billion on monlunabant.

Management raised FY2026 guidance on 4 August 2026 to adjusted sales and adjusted operating profit growth of 0% to −6% at constant exchange rates, improved from −4% to −12% previously, citing stronger GLP-1 expectations. This is a genuine improvement and the shares responded positively. It nonetheless describes a business guided to flat-to-declining sales and profit, which is why we treat the growth-adjusted extension of the framework as a sensitivity rather than as the base case.

Looking beyond 2026, the January 2027 US list price reset to $675 is the dominant margin variable. Because net realised prices already sit far below list after rebates, the realised revenue impact will be smaller than the headline 35% to 50% reductions imply, but the direction is unambiguous and the DKK 8 billion of annualised restructuring savings targeted by the end of 2026 will not fully offset it. Our conservative normalization assumes a sustainable operating margin of 38%, some 4.9 percentage points below the ten-year average.

VIII. Management Quality

Maziar "Mike" Doustdar became President and Chief Executive Officer in August 2025, succeeding Lars Fruergaard Jørgensen. Doustdar is a three-decade Novo veteran who ran International Operations, and his appointment followed a period in which the board and the Novo Nordisk Foundation concluded that the company had lost competitive ground. Within roughly a month of taking office he announced the elimination of approximately 9,000 positions from a workforce of 78,400 — around 5,000 of them in Denmark — targeting DKK 8 billion of annualised savings by the end of 2026 against a DKK 8 billion one-time charge.

We regard the decisiveness as appropriate and the diagnosis as correct: Novo had accumulated organisational complexity during the growth years and needed to redirect resources toward science, commercial execution and manufacturing. The execution risk, however, is real, and the Q2 2026 impairments on pipeline intangibles suggest a portfolio being pruned under pressure rather than from strength.

Capital allocation over the period under review has been mixed. The Catalent acquisition secured badly needed fill-finish capacity but at a high price and with substantial balance-sheet consequences. Dividends have continued to grow, with DKK 51.8 billion paid in FY2025. Management guides to FY2026 capital expenditure of approximately DKK 55 billion against free cash flow of DKK 45 to 55 billion — a company still investing heavily into a period of flat revenue, which constrains buyback capacity and is a legitimate concern for shareholders looking for capital returns during the de-rating.

IX. Catalysts and Risks

Potential positive catalysts

- FDA approval of CagriSema during 2026, which would provide a differentiated combination option even if not a best-in-class one.
- Continued Wegovy pill momentum and international expansion of the oral presentation beyond the United States.
- Delivery of the DKK 8 billion of restructuring savings ahead of schedule, supporting margin through the 2027 price reset.
- Medicare and Medicaid coverage expansion for obesity indications, which would enlarge the reimbursed population materially.
- Positive Phase 3 signals from amycretin, which would begin to de-risk the post-2032 earnings base.

Key risks

- Realised revenue impact from the January 2027 list price reset exceeding expectations, particularly if net-to-gross compression is greater than modelled.
- Further share loss to Lilly, especially if retatrutide data are strong or orforglipron supply scales faster than anticipated.
- Faster or broader generic semaglutide entry than the patent thicket implies — the Canadian and Indian breaches are precedents, and method-of-use patents are historically vulnerable.
- Amycretin Phase 3 failure or delay, which would leave no credible franchise replacement for the 2032 cliff.
- Execution disruption from the restructuring, including loss of key scientific and commercial talent.

X. Valuation

Novo's first-pass ROIC of approximately 35.5% comfortably exceeds our estimated WACC of 8.55%. Under the framework this directs the valuation toward the *franchise* branch rather than the *asset* branch, and implies that earnings power value should exceed net asset value — which our calculations confirm. Because EPV must be built on normalized and sustainable earnings, we apply a conservative haircut to reflect the loss-of-exclusivity horizon rather than capitalising current earnings in perpetuity.

Cost of capital

Using a US 10-year Treasury yield of 4.71% as the risk-free rate, a 0.70% credit spread appropriate to a high investment-grade issuer, the framework's convention of Ke = Kd + ERP with a 5% equity risk premium, an effective tax rate of 22% (consistent with management's 21% to 23% guidance), and a 30% target debt weight, we derive a WACC of 8.55%. Weighting by current market values rather than the target structure would produce a higher WACC and therefore lower values throughout.

Return on invested capital

First-pass ROIC on book invested capital was 35.5% in FY2025, down from 49.2% in FY2024. This remains exceptional, but the trajectory is the point: the decline reflects the Catalent-driven expansion of the asset base combined with flat operating profit. Second-pass ROIC, calculated on replacement-value invested capital including capitalised hidden assets,

ranges from 9.6% in the severe scenario to 17.9% with no loss-of-exclusivity haircut. Even the most severe case clears the cost of capital, which is a genuine testament to the quality of the underlying franchise.

Net asset value

NAV comes to DKK 105.46 per share, or approximately $17.49 per ADR, comprising the replacement value of tangible assets plus two capitalised hidden assets: a product portfolio of DKK 210.5 billion (ten-year average R&D to sales of 13.62% applied to normalized sales at a 5x multiplier) and customer relations of DKK 64.0 billion (half of SG&A at 13.81% of sales, 1.5x multiplier). We apply a 5x rather than the conventional 10x R&D multiplier because Novo already carries DKK 130.1 billion of acquired intangibles on balance sheet and a 10x multiplier would double-count. This is the single largest soft input in the NAV calculation: at 10x, NAV would rise to approximately $25.34 per ADR.

Earnings power value with a conservative loss-of-exclusivity haircut

Our base case assumes a 25% reduction in normalized sales relative to FY2025 and a sustainable operating margin of 38%. The sales haircut is constructed from the semaglutide franchise representing approximately 76% of revenue, subject to roughly 55% post-exclusivity erosion, with about half of the lost revenue replaced by pipeline and geographic expansion, plus an incremental allowance for the 2027 US price reset.

On these assumptions, base-case EPV is $26.78 per ADR. The full scenario range is set out below, together with a no-haircut reference case that capitalises current normalized earnings in perpetuity — an assumption we regard as unrealistic given the patent position, but instructive as an upper bound.

Scenario range — earnings power value

Scenario	Sales haircut	Operating margin	NOPLAT (DKK m)	ROIC-2	EPV per ADR
Severe erosion	35%	35.0%	56,403	9.6%	$20.73
Conservative (base case)	**25%**	**38.0%**	**70,265**	**12.0%**	**$26.78**
Mild erosion	15%	41.0%	85,573	14.6%	$33.46
No haircut (reference only)	0%	42.9%	104,895	17.9%	$41.90

Value with growth and entry price

Because second-pass ROIC exceeds WACC in every scenario, the framework permits proceeding to the value-with-growth-multiplier step. We present this as a sensitivity rather than a base case for a specific reason: management guides FY2026 adjusted sales and operating profit to 0% to −6% at constant exchange rates. Adding a growth premium to a business guided to contract would not be intellectually honest, so the g = 0% column should be read as the primary result and the growth columns as scenarios requiring evidence that has not yet arrived.

Intrinsic value and entry price by growth assumption (USD per ADR)

Scenario	g = 0%: IV / Entry	g = 2%: IV / Entry	g = 3%: IV / Entry
Severe erosion	$20.73 / $13.82	$21.43 / $14.29	$21.97 / $14.64
Conservative (base case)	**$26.78 / $17.85**	**$29.12 / $19.41**	**$30.92 / $20.61**
Mild erosion	$33.46 / $22.31	$37.69 / $25.12	$40.94 / $27.29
No haircut (reference only)	$41.90 / $27.93	$48.56 / $32.38	$53.70 / $35.80

Entry prices apply the framework's standard one-third margin of safety, so that entry price equals two-thirds of intrinsic value. The price of $44.88 exceeds every entry price in the grid. It exceeds the base-case intrinsic value range of $26.78 to $30.92 by roughly 45% to 68%. Even the deliberately generous reference case — no exclusivity haircut whatsoever and 3% perpetual growth — yields an entry price of $35.80, some 20% below the prevailing quotation.

One observation is worth recording. The 52-week low of $35.12, reached in November 2025, came within a dollar of that most generous entry price without breaching it. The shares have been cheap relative to optimistic assumptions; they have not yet been cheap relative to conservative ones.

XI. Reconciliation to Our June 2025 Review

Our June 2025 review of Novo Nordisk was conducted at $74.63 per ADR and produced a NAV of $45.80, an EPV of $73.50, a 75% catalyst probability, an intrinsic value of $55.23 and an entry price of $36.82, concluding that the shares did not offer a margin of safety at that price. That conclusion has proven directionally correct: the shares have fallen approximately 40% since, and declining to buy at $74.63 avoided material loss.

Our updated figures are substantially lower across every line, and the differences are worth attributing explicitly. NAV falls from $45.80 to $17.49, driven principally by the more conservative 5x R&D multiplier and by working from FY2025 rather than FY2024 balances. EPV falls from $73.50 to $26.78, driven almost entirely by the loss-of-exclusivity haircut to normalized earnings that the earlier review did not apply. WACC rises modestly from 8.13% to 8.55% on a higher risk-free rate.

> **A methodological correction to our own prior work**
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> We publish this correction because a framework is only useful if its users are willing to audit their own application of it. In the June 2025 review, EPV of $73.50 exceeded NAV of $45.80, which places the company on the franchise branch of the framework — where intrinsic value derives from earnings power adjusted for franchise sustainability. The catalyst-probability formula applied in that review belongs to the asset branch, which is used when NAV exceeds EPV. The stated intrinsic value of $55.23 does not reconcile cleanly to either formula on the inputs given. The conclusion reached at the time was sound; the derivation was not, and we have used the correct branch throughout the present analysis.

The substantive continuity is straightforward. At $74.63 the earlier review indicated waiting for $36.82. The shares reached $35.12 in November 2025 and have since recovered to $44.88. On the updated and more conservative figures, the equivalent level at which the framework would begin to find value is lower still.

XII. What the Framework Concludes

At $44.88 per ADR, Novo Nordisk traded above our base-case intrinsic value of $26.78 to $30.92 and above every entry price in the sensitivity grid, including the reference case that applies no loss-of-exclusivity haircut at all. On the framework's own margin-of-safety discipline the answer is unambiguous: the analysis does not support initiating a position at this price.

The framework stops short of indicating a deteriorating business, for three reasons. First, the scenario range is genuinely wide — the difference between the severe and mild cases is a factor of 1.6x, and reasonable analysts can disagree about post-exclusivity erosion. Second, second-pass ROIC exceeds WACC even in the severe scenario, which means Novo remains a value-creating business rather than a melting ice cube. Third, the option value in amycretin and in Medicare obesity coverage is real, asymmetric to the upside, and difficult to capture within a steady-state earnings power framework.

The band at which the framework would begin to find genuine value is approximately $27 to $36 per ADR, depending on how the exclusivity question resolves. An analyst applying the conservative case strictly would find a defensible argument for reducing exposure into strength. An analyst weighting the mild-erosion scenario and the pipeline option value more heavily could reasonably reach a different conclusion at current levels. That divergence is not a weakness of the method — it is the method making its assumptions visible enough to be argued with.

Evidence that would change the conclusion

Amycretin Phase 3 interim data; realised net pricing outcomes in the first two quarters after the January 2027 reset; CagriSema launch uptake if approved; and any adverse development in the US method-of-use patent litigation, which would pull the erosion timeline forward and argue for the severe scenario.

The broader lesson

The most common failure in applying a value framework is quietly relaxing assumptions until a well-known, high-quality company clears the entry price. Novo Nordisk is a superb business trading at eleven times trailing earnings after a 70% drawdown, and the temptation to make the arithmetic work is considerable. The discipline of the framework is that it does not permit this. A great business at a price that offers no margin of safety is a great business at the wrong price, and saying so plainly is the entire point of the exercise.

Exhibits

Exhibit 1 — Market data and screening metrics

Metric	Value	Note
Share price (ADR)	$44.88	as at 17 August 2026
Market capitalisation	$200.4 billion	
Trailing P/E	11.26x	below the framework's 14x screen
Forward P/E	14.81x	implies expected earnings decline
Price to book	~6.2x	far above the 1.3–1.4x Graham screen
Dividend yield	2.85%	
52-week range	$35.12 – $64.16	
Shares outstanding	~4.44 billion	FY2025 weighted average basic
USD/DKK assumed	6.03	derived — see Exhibit 9

Exhibit 2 — FY2024 vs FY2025 results (DKK millions)

Metric	FY2024	FY2025	Change
Revenue	290,403	309,064	+6.4%
Gross profit	245,881	250,276	+1.8%
Research and development	48,062	52,039	+8.3%
Selling, general and administrative	67,377	70,279	+4.3%
Operating income	128,339	127,658	−0.5%
Operating margin	44.2%	41.3%	−290 bps
Net income	100,988	102,434	+1.4%
Basic EPS (DKK)	22.67	23.06	+1.7%
Capital expenditure	47,164	60,140	+27.5%
Free cash flow	73,804	58,962	−20.1%
Dividends paid	44,140	51,763	+17.3%

Exhibit 3 — Weighted average cost of capital

Component	Value
Risk-free rate (10-year US Treasury)	4.71%
Credit spread (A1/AA− equivalent)	0.70%
Pre-tax cost of debt (Kd)	5.41%
Effective tax rate	22.0%
After-tax cost of debt	4.22%
Equity risk premium	5.00%
Cost of equity (Ke = Kd + ERP)	10.41%
Target debt weight	30.0%
Target equity weight	70.0%
Weighted average cost of capital	**8.55%**

Exhibit 4 — First-pass ROIC (book values, DKK millions)

Metric	FY2024	FY2025
EBIT	128,339	127,658
NOPLAT (at 22% tax)	100,104	99,573
Net working capital	(69,021)	(58,153)
Property, plant and equipment	161,680	208,378
Goodwill and intangibles	110,821	130,053
Invested capital	203,480	280,278
First-pass ROIC	**49.20%**	**35.53%**
WACC	—	8.55%

Exhibit 5 — Net asset value (DKK millions, FY2025)

Item	Amount
Cash and marketable securities	26,962
Receivables	70,856
Inventories	49,623
Other current assets	25,012
Property, plant and equipment	208,378
Goodwill and intangible assets	130,053
Other non-current assets	32,018
Hidden asset — product portfolio (13.62% R&D/sales × 5x)	210,496
Hidden asset — customer relations (13.81% × 1.5x)	64,014
Total assets at replacement value	817,412
Less: total liabilities (book)	(348,855)
Net asset value	468,557
NAV per share (DKK)	105.46
NAV per ADR (USD)	**$17.49**

Exhibit 6 — Base-case EPV build (DKK millions)

Line item	Amount
FY2025 reported sales	309,064
Less: conservative loss-of-exclusivity haircut (25%)	(77,266)
Normalized sales	231,798
Normalized operating margin	38.0%
Normalized operating profit	88,083
Add: stock option expense (estimated)	2,000
Normalized EBIT	90,083
Less: tax at 22%	(19,818)
NOPLAT	70,265
Add D&A / less maintenance capex (assumed equal)	—
Zero-growth free cash flow	70,265
EPV of the firm (÷ WACC 8.55%)	821,813
Add: cash and securities	26,962
Less: total debt	(130,958)
Equity value	717,817
EPV per share (DKK)	161.56
EPV per ADR (USD)	**$26.78**

Exhibit 7 — Semaglutide patent position by market

Market	Status / key expiry	Reference
US — composition of matter	Expired December 2023	US 8,927,488
US — 2.4 mg weight management (use)	November 2031	US 10,987,352
US — once-weekly T2D dosing	March 2032	US 10,195,214
US — oral SNAC formulation	June 2032	US 9,931,349
US — phosphate buffer formulation	August 2033	US 9,714,283
EU — core patent	Expired December 2023	SPCs: UK 2027, ES/IT 2028, DE/FR 2029
EU — formulation	August 2031	EP 2 586 456
Canada	Breached 2026	Patent lapsed on unpaid fee; Dr. Reddy's generic approved
India	Breached	Application rejected 2019; biosimilars from late 2026
China	Expired December 2023	SNAC formulation access extends to 2028+

Exhibit 8 — Pipeline summary

Asset	Stage	Key data	Assessment
CagriSema	NDA filed Dec 2025	REDEFINE-1: 20.4% (22.7% on-treatment) vs 3.0% placebo, n=3,417. REDEFINE-4 vs Zepbound: 23.0% vs 25.5%, failed non-inferiority	Approval likely; blockbuster outcome not the base case
Wegovy pill (oral semaglutide 25 mg)	Launched Jan 2026	>5M US scripts; ~163k weekly by Aug 2026; H1 2026 sales DKK 5,474m	Commercial success but largely cannibalistic; SNAC patent only to 2032
Amycretin	Phase 3 from Q1 2026	Ph1b/2a: up to 22% at 36 weeks (n=125) vs ~14% semaglutide	Genuine replacement potential; estimated approval ~Q4 2030 — no overlap with LOE
Monlunabant	Impaired Q2 2026	DKK 4.0bn of DKK 6.3bn impairment charge	Written down

Exhibit 9 — Assumptions, estimates and data limitations

The framework's output is only as reliable as the honesty applied to its inputs. The following are the judgment calls and known gaps in this analysis, with the direction and magnitude of their effect where quantifiable.

- **Exchange rate.** A USD/DKK rate of 6.03 was derived from internal consistency across the market data reviewed rather than a live quoted rate, which we were unable to obtain from a source current as at the analysis date. All USD figures should be verified against a current rate before use.

- **Hidden asset multipliers.** The 5x multiplier on capitalised R&D and the 1.5x multiplier on customer relations are judgment calls, not derived quantities, and together they are the largest soft input in NAV. At the conventional 10x R&D multiplier, NAV rises from $17.49 to approximately $25.34 per ADR.
- **Loss-of-exclusivity haircut.** The 25% sales haircut and 38% normalized margin in the base case are our constructions, built from the semaglutide franchise representing approximately 76% of H1 2026 adjusted sales, assumed post-exclusivity erosion of approximately 55%, and roughly half replacement from pipeline and geography. They are transparent but not precise. The scenario grid exists because a point estimate would convey false confidence.
- **Maintenance capital expenditure.** Assumed equal to depreciation and amortisation (DKK 21,982m), the standard zero-growth simplification. Novo's FY2025 capital expenditure of DKK 60,140m is overwhelmingly growth and capacity investment and is not representative of a steady state.
- **Stock option expense.** The DKK 2,000m figure is an estimate; share-based compensation was not separately disclosed in the data reviewed. It is immaterial relative to a DKK 70–105 billion NOPLAT base.
- **Target capital structure.** The 30% target debt weight follows the framework's target-capital-structure convention. Novo's current market-value debt weight is approximately 10%, which would produce a higher WACC and lower values throughout. Book debt to total capitalisation is approximately 40%.
- **Source data.** Financial data are drawn from third-party market data covering FY2016 to FY2025 together with Novo Nordisk's H1 2026 interim report of 4 August 2026 and FY2025 results. We have not line-by-line verified the third-party data against the statutory Annual Report or Form 20-F. Novo Nordisk is a foreign private issuer and files Form 20-F with the SEC, not Form 10-K; it does not file on SEDAR.
- **Patent data.** Published patent-expiry compilations conflict on several dates, notably for Canada. We relied on the multiply-corroborated account. Verify against the FDA Orange Book and Novo Nordisk's Form 20-F risk factors.
- **Pipeline timing.** Third-party approval-timing estimates for amycretin (US Q4 2030, EU Q1 2031) are analyst projections, not company guidance.
- **Point-in-time data.** Market prices, multiples and share counts are a snapshot as at 17 August 2026 and will have moved. This document is not updated after publication.
- **Preparation.** This analysis was prepared using AI-assisted research and financial modelling, reviewed, edited and approved by the named author, who retains full editorial responsibility for its contents.

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