promontory
investment research

Applied Optoelectronics
Hercules Capital
Diageo
Ensign

Spring 2026 Equity Report

Foreword

Promontory Investment Research is proud to present its twenty-fourth equity research report. This spring, our Research Analysts produced high-quality work in six industry coverage pods, and we've selected four reports to share with you: Applied Optoelectronics, a fiber optic cable manufacturing company; Hercules Capital, a BDC; Diageo, a British alcoholic beverages company; and Ensign, a nursing and senior living provider.

As with all of Promontory's previous equity research publications, we take immense pride in the thoroughness and dedication demonstrated by our Research Analysts this quarter. This report represents the culmination of their hard work, and we hope you find it as insightful and enjoyable to read as they found it rewarding to create.

Since Promontory's winter recruiting cycle, our newest members have quickly put their training into practice, stepping into their roles as Research Analysts and applying their newly acquired skills. Throughout this process, the Research Committee has played a key role in guiding their development, providing support and mentorship to ensure a strong foundation in financial analysis. This collaborative effort has strengthened our research process, resulting in the rigorous, original equity analyses presented in this report.

Alongside our research, we are committed to fostering a strong and engaged community. This spring's equity research report, led by the Research Committee, has produced a new set of highly quality fundamental equity research reports that discussed and argued views on a variety of key debates, from shifting consumer preferences to changing technological needs of the AI data center build out. To support our members, we continue to host speaker series, fireside chats, and exclusive Promontory recruiting events, ensuring that Promontory remains not only a place for original investment research but also a thriving network of individuals distinguished through traits of discipline, curiosity, motivation, judgment, and candor. Thank you for your continued support—we look forward to sharing even more with you in the future.

Promontory Investment Research Board

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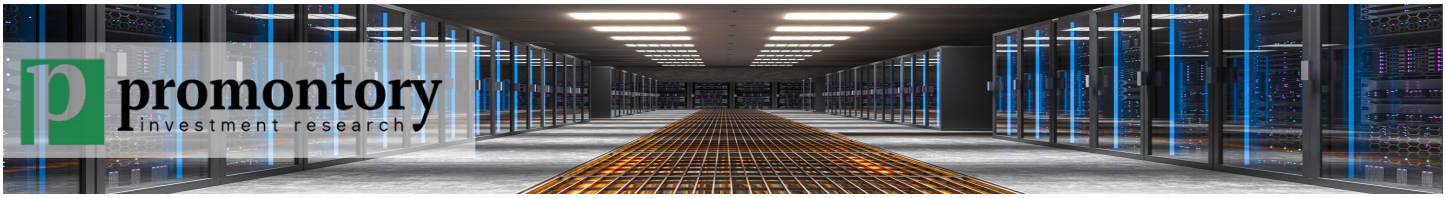


Applied Optoelectronics

Industrials
Spring 2026

Investment Overview

Our sell thesis rests on the view that AAOI is being valued as a structural AI infrastructure winner when its underlying business still resembles a cyclical, customer-concentrated optical hardware supplier. The company is attempting to scale 800G and 1.6T production at unprecedented speed, while simultaneously undertaking a major U.S. manufacturing expansion and navigating a technology roadmap that may eventually shift away from pluggable optics toward co-packaged optics. This creates a narrow execution window: AAOI must ramp capacity quickly enough to harvest elevated 800G and early 1.6T pricing before more competitors qualify, ASPs decline, and hyperscalers regain procurement leverage. In our view, the market is underwriting flawless execution in a business where flawless execution is unlikely, especially given AAOI's history of operational misses during prior datacenter transceiver cycles.

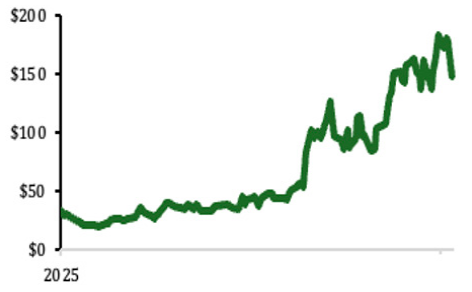
At the business-model level, we see vertical integration as a double-edged sword. AAOI's in-house laser manufacturing and module assembly give it tighter control over quality, performance, and customization, which is valuable during early-stage LPO adoption. Yet the same structure also creates a high fixed-cost base that can magnify downside when utilization falls or pricing normalizes. AAOI is adding significant capacity precisely as 800G is moving from scarcity toward broader supply and as 1.6T remains dependent on customer, ecosystem readiness, and hyperscaler deployment timing. If the company finishes its factory expansion into a market with lower ASPs or slower-than-expected 1.6T deployment, operating leverage could work sharply in reverse. The sell case therefore does not require AI optics demand to collapse. It only requires margins and valuation multiples to normalize as the market recognizes that AAOI is a cyclical optical supplier benefiting from a temporary imbalance, not a permanent AI monopoly.

NASAQ: AAOI

Rating:	Sell
Price: (at close, 05/18/26)	$184.90
Recommendation	$14.08

52 week range	$	15.06 - 208.00
Shares outstanding	mn	80.24
Diluted equity value	$mn	15,108
EPS (LTM)	$	0.65
Consensus	$	79.80
Sector		AI Infra / Data Center
Market Cap		$15.05 billion

Price performance



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Company Overview

History

Applied Optoelectronics was founded in 1997 by Dr. Thompson Lin and built its identity around vertically integrated optical communication technology. Over time, the company expanded from telecom and broadband-related optical components into datacenter transceivers, eventually becoming most visible during the 100G hyperscale upgrade cycle in 2016 and 2017. That period is highly relevant to the current sell case because it shows that AAOI has previously had a strong technology position in a major datacenter speed transition, yet failed to convert early traction into durable profitability. During the 100G cycle, AAOI supplied major hyperscale customers including Amazon and Facebook and promoted its vertically integrated manufacturing model as a major competitive advantage. However, the company later faced manufacturing delays, quality problems, and customer forecast reductions. AAOI failed to fully capitalize on the 2017 100G boom, and the stock ultimately declined more than 90% from its highs. The same founder-led management team remains central to the company today, which makes this history more than a distant anecdote. For the current 800G and 1.6T cycle, the concern is that the market may be repeating the same mistake: rewarding early hyperscaler demand and a vertical integration narrative before the company has proven it can execute consistently at scale.

Business Overview

AAOI designs and manufactures optical communications products, with the current investment story centered on high-speed datacenter optical transceivers used in AI infrastructure. These transceivers convert electrical signals into optical signals, so data can move efficiently

between switches, servers, and GPU clusters. The company also serves legacy broadband and CATV markets, but the market focus has shifted decisively toward AI datacenter growth.

AAOI's business model is differentiated by vertical integration. Rather than simply assembling modules from purchased components, AAOI manufactures key optical components internally, especially indium phosphide lasers. This matters because LPO architectures remove the DSP and therefore require cleaner underlying optical performance. In a traditional DSP-based module, electronics can be corrected for signal degradation. In LPO, more of the burden shifts to laser quality, analog design, and system-level tuning. AAOI's in-house laser manufacturing gives it more control over those variables and allows it to customize products for large hyperscaler customers. This is the central reason the company has become relevant in the AI optics cycle.

The company's sales process is qualification driven. Hyperscalers do not simply buy optical modules off the shelf for mission-critical AI clusters. Products must go through lengthy testing for reliability, thermal performance, firmware compatibility, interoperability, and failure rates in customer-specific environments. This creates a major barrier for new entrants and gives early qualified suppliers near-term revenue visibility. However, it also creates risk: a delayed qualification, firmware issue, or product failure can push revenue out by quarters and damage customer relationships. AAOI's current business model is therefore highly sensitive not just to end-market demand, but to production timing, yields, qualification outcomes, and hyperscaler procurement schedules.

Revenue and Cost Structure

Applied Optoelectronics breaks its revenue into three main segments: Data Center, Cable Television, and a small Telecom piece, and the mix has been volatile, as AI demand and a big cable upgrade cycle collided in the last couple of years. In FY2025, the company delivered record revenue of about $456 million up 83% YoY, with CATV accounting for 54% of revenue, datacenter accounting for 43%, and telecom at around 3%.

Datacenters: AAOI designs and build high-speed optical transceivers and lasers for hyperscalers. They mainly produce 400G and 800G transceivers right now, with 1.6T on the horizon.

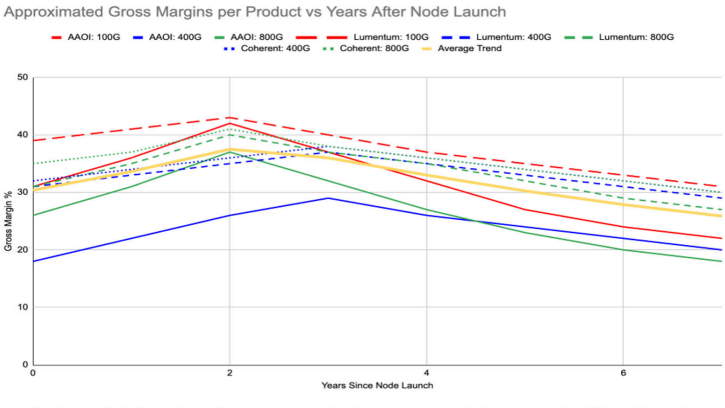
CATV: AAOI's cable television segment sells amplifiers, nodes, transmitters, and related equipment for cable TV operator networks. The big driver here has been a once-in-a-decade upgrade cycle to 1.8 GHz equipment as major operators (led by Charter Communications) push toward DOCSIS 4.0 and multi-gigabit broadband speeds. After being relatively flat for several years while operators prepared for the transition, CATV revenue nearly tripled in 2025 and stayed strong into Q1 2026.

Telecom: The telecom segment is the legacy leftover: traditional optical components for telecom networks.

AAOI's most important revenue drivers are hyperscaler capex, customer concentration, and transceiver ASP. AAOI's growth depends heavily on whether large customers continue accelerating 800G and 1.6T deployments and whether AAOI remains qualified as a preferred supplier. Microsoft is believed to be the company's most important datacenter customer, and Microsoft represents 28.8% of 2025 revenue. That concentration gives AAOI significant upside when a customer ramps orders, but it also creates meaningful volatility if a customer delays deployments or qualifies an alternate supplier.

On the cost side, AAOI's vertical integration creates high operating leverage. The company owns or controls expensive manufacturing processes, including laser fabrication, wafer processing, automation, module assembly, testing, and quality control. When demand is strong and utilization is high, this model can expand gross margins because fixed costs are spread across more units and the company captures more of the component value chain. However, when volumes disappoint or ASPs fall, the same structure becomes a liability.

Recent Developments



Margins are illustrative estimates based on company-level gross margins, product mix commentary, historical transceiver pricing cycles, and assumed margin compression as supplier qualification broadens.

AAOI remains led by founder and CEO Thompson Lin. On the positive side, Lin gives the company technical continuity and experience in optical manufacturing. On the negative side, the same leadership team is closely associated with the prior 100G cycle, when AAOI failed to sustain its early hyperscale momentum, making it difficult to argue that the company has undergone a major cultural or operational reset. For investors, this makes execution risk more severe than it might appear in a normal growth story.

The most important recent development is AAOI's major manufacturing expansion in Sugar Land, Texas. In October 2025, the company announced a $150 million U.S. expansion including a new 210,000 square foot manufacturing facility focused on AI datacenter optical transceivers, expected to be completed by summer 2026 with additional adjacent buildings totaling roughly 900,000 square feet. This expansion is designed to support the company's 800G and 1.6T ramp, but it also concentrates on the investment debate around execution.

If the facility comes online late, ramps slowly, or suffers yield issues, AAOI may miss the high-margin window it is trying to capture. AAOI has also announced a major 1.6T order from a long-time hyperscaler customer totaling more than $200 million, with shipments expected to begin following qualification in the third quarter of 2026 and complete by the fourth quarter.

Finally, AAOI has begun positioning itself for the CPO era through new laser products, including high-power narrow-linewidth pump lasers and ELSFP offerings. These developments are strategically necessary because the optical interconnect roadmap is moving closer to the switch ASIC over time. However, they do not fully solve the economic issue. If AAOI's role shifts from selling complete transceivers to supplying external lasers or components, its revenue per link and margin structure may be lower than what the market currently implies. The company may remain relevant in next-generation photonics while still earning less attractive economics than investors expect.

Industry Overview

Trends

The optical transceiver market is being reshaped by the rapid buildout of AI datacenters. Large-scale AI training and inference workloads require thousands of GPUs to communicate across racks and data halls, creating intense demand for high-bandwidth, low-latency networking. As bandwidth requirements increase, copper becomes less effective outside very short intra-rack links because signal loss, heat, and power draw rise sharply at higher speeds. Optical interconnects therefore become increasingly important as datacenters scale from 400G to 800G and eventually 1.6T links. This trend provides the foundation for AAOI's current growth story: the company's high-speed datacenter transceivers sit directly in the path of hyperscaler AI infrastructure spending.

The most important near-term technology trend supporting AAOI is the rise of Linear Pluggable Optics, or LPO. Traditional optical modules include a digital signal processor that cleans and reshapes degraded high-speed signals before optical transmission. LPO removes this DSP, which can reduce power consumption and latency, but only works if the underlying laser and analog signal quality are strong enough. AAOI's core differentiation is that it manufactures its own indium phosphide lasers and controls key parts of the wafer and module process internally. AAOI's advantage is the ability to grow its own crystals, control purity and linearity at the atomic level, and customize wafer fabrication to the requirements of specific hyperscaler switch platforms.

The second major industry trend is commoditization. Optical transceiver markets have historically followed a repeatable pattern: a new speed node launches with limited qualified supply, early vendors earn attractive pricing, competitors scale production, hyperscalers qualify multiple vendors, and pricing shifts toward cost per bit. The key point for the sell case is that commoditization does not require the product to become technologically simple. It only requires multiple vendors to meet hyperscaler performance thresholds. Once several suppliers are "good enough" on reliability, thermals, firmware, and interoperability, hyperscalers can use multi-sourcing to regain pricing leverage. This process has repeated itself for all of these speed generations of 10G, 40G, 100G, 200G, and 400G.

The third major trend is the eventual migration from pluggable optics toward and co-packaged optics (CPOs). In today's pluggable architecture, the electrical signal travels from the switch ASIC across the circuit board to a front-panel optical module, creating signal degradation and requiring additional power for signal correction. Co-packaged optics moves the optical engine much closer to the switch chip, reducing the electrical path from centimeters to millimeters. Nvidia has accelerated its CPO roadmap by roughly five years, with CPO technologies now expected to appear in upcoming generations, specifically in the Feynman GPU architecture.

There are three key advantages of CPO in AI infrastructure:

1. **Power efficiency: CPOs allow of DSPs and LR SerDes (serializer/deserializer)**
2. **Bandwidth and density: switches can now pack in higher radix designs, like 144 ports running at 800G or faster. That means you can connect bigger GPU clusters with fewer network layers and noticeably lower latency**
3. **Scalability: When no longer limited by the physical size of pluggable modules, it is much easier to use multi-fiber connections and more advanced modulation schemes**
4. **System-level gains: Reduced component count means fewer failure points**

For AAOI, CPO is not an immediate existential threat, but it does create long-term TAM compression risk for full pluggable transceivers. AAOI is attempting to remain relevant through ELSFP and high-power external laser products, but this shifts the company toward being a component supplier rather than a full-module provider. That distinction matters economically because the ASP of a laser is much lower than the ASP of a complete optical transceiver. AAOI is not a full CPO system provider, but rather a key component supplier for laser and optical sources. This weakens the market's apparent assumption that today's LPO transceiver economics can be extended deep into the CPO era.

Geographic Footprint

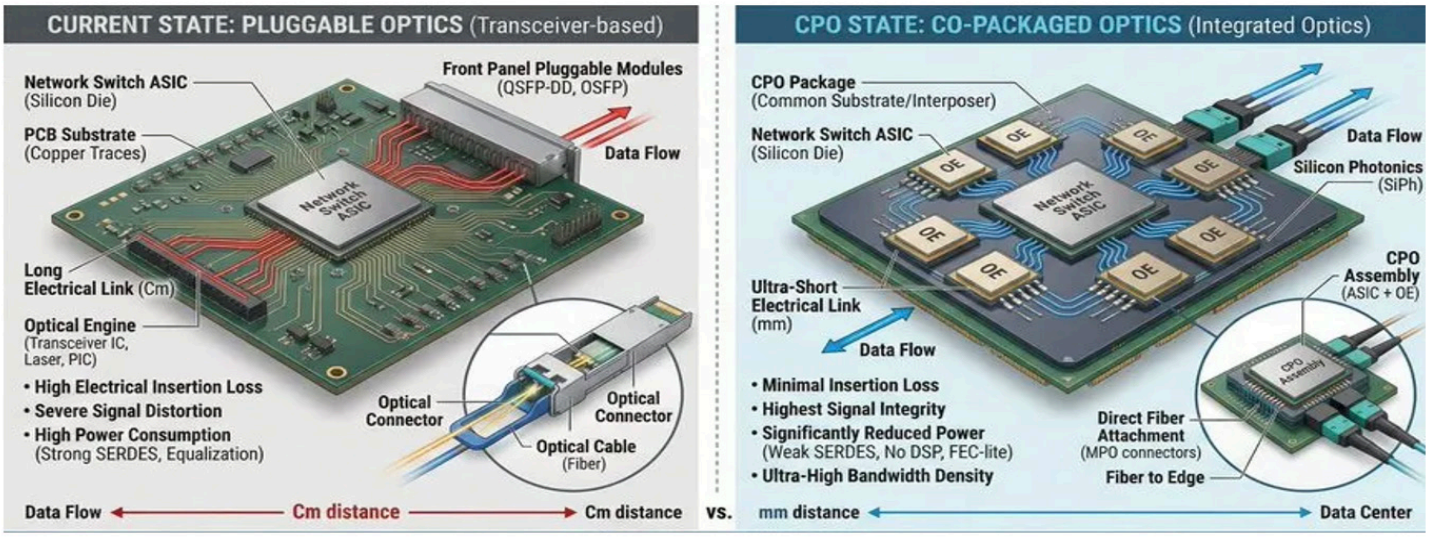
AAOI competes in a market where technical differentiation matters early in a speed transition, but scale, customer trust, manufacturing execution, and price matter more as the node matures. The company's most important advantages are focus, vertical integration, and speed-to-market. AAOI is smaller than its largest competitors, which can allow it to customize quickly for hyperscaler customers and move faster through early product iterations. Its MBE-based laser manufacturing process and in-house indium phosphide platform give it a real technical angle in LPO, where signal quality is essential because the DSP has been removed. This is why AAOI can credibly claim a differentiated position in early 800G and 1.6T deployments.

The problem is that AAOI's advantage is narrow rather than structural. It is not a cloud platform, software ecosystem, or system-level architecture owner. It is a hardware supplier operating inside standards-based optical markets where hyperscalers actively avoid single-vendor dependence. Once competitors meet qualification thresholds, AAOI's early lead can compress quickly. This is especially important because hyperscaler qualification both protects early revenue and sets up later commoditization: the more suppliers that pass reliability and interoperability testing, the easier it becomes for customers to push down price. The company's own risk disclosures emphasize that customer qualification is lengthy and important, but also that qualification delays or failures can materially affect revenue.

Lumentum is the most direct competitive threat. It has deep laser expertise, strong telecom and datacenter relationships, and far greater scale than AAOI. Historically, Lumentum may have been slower to adopt the specific LPO architecture that AAOI exploited, creating AAOI's first-mover window. However, that gap is unlikely to remain open indefinitely. Lumentum is dominant in EML laser components and NVIDIA's strategic partnership and investment is a major unfavorable development for AAOI. NVIDIA's $2 billion backing gives Lumentum capital to expand U.S. laser capacity, strengthens its credibility as a safe supplier, and signals that the largest AI infrastructure ecosystem player is willing to anchor Lumentum's role in next-generation photonics.

Coherent is another significant competitor because of its size, manufacturing scale, and broader photonics portfolio. Unlike AAOI, Coherent is not dependent on a narrow set of pluggable transceiver ramps. Its exposure spans industrial, communications, defense, and other photonics markets, giving it more flexibility to absorb optical-cycle volatility. Coherent's diversification may make it slower and less nimble than AAOI in a narrow LPO window, but it also makes it structurally safer through downturns. AAOI, by contrast, has less room for error because a miss in 800G or 1.6T cannot easily be offset by unrelated business lines.

Asian suppliers also represent a major long-term risk. Companies such as Innolight, Eoptolink, and Source Photonics have historically contributed to optical module ASP pressure as new speed generations mature. Once a node standardizes and yields improve, Asian manufacturers can scale aggressively and compete on price. This is particularly dangerous for AAOI because its vertically integrated model requires utilization to remain high. If Chinese and other lower-cost suppliers pressure pricing while hyperscalers diversify supply, AAOI could face simultaneous ASP compression and order volatility.



Investment Theses

Thesis 1: Optical Transceivers Will Follow a Standard Commoditization Cycle, and AAOI's Vertical Integration Amplifies Downside Once Pricing Normalizes

Applied Optoelectronics operates in a technically sophisticated part of the AI infrastructure stack through its high-speed optical transceivers and vertically integrated laser manufacturing platform. However, this technical sophistication alone does not prevent commoditization of their optical transceivers. In these optical interconnect markets, commoditization does not require products to become technologically simple, rather it only requires that multiple vendors can meet hyperscaler qualification standards. Once enough suppliers satisfy performance, reliability, thermal, and interoperability thresholds, purchasing decisions shift toward price-per-bit rather than engineering differentiation. The current 800G to 1.6T transition appears to be in the early scarcity phase of this cycle, where limited qualified supply, difficult yield ramps, and constrained manufacturing capacity support elevated pricing and margins. Historically, however, these conditions have proven temporary. As additional vendors qualify and scale production, optical markets have consistently transitioned from supply-constrained environments to price-competitive markets, leading to substantial ASP compression even while unit volumes continue growing.

Across prior optical interconnect generations, the pattern has been constant: a new speed node launches with high technical difficulty and limited supplier breadth, before gradually commoditizing as standards mature, manufacturing yields improve, and more vendors qualify. 10G and 40G modules initially carried premium economics but eventually evolved into standardized, cost-driven markets. 100G created a major hyperscale upgrade cycle, yet over time hyperscalers shifted toward multi-sourcing strategies as larger Western suppliers and lower-cost Asian manufacturers scaled production. 400G followed the same pattern despite higher technical difficulty due to PAM4 signaling complexity, thermal constraints, and early yield challenges. The point is that technical complexity delays commoditization but does not actually prevent. Once multiple vendors can reliably meet customer specifications, pricing pressure inevitably emerges as hyperscalers regain bargaining power. The current 800G cycle appears to be undergoing this same process. 400G and 800G datacom optical module shipments grew nearly fourfold over twelve months and were expected to exceed 20 million units in 2024. This demonstrates how rapidly these optical nodes can scale once hyperscaler adoption begins. At the same time, reports expect blended pricing per gigabit to continue declining even as the total market size expands. This highlights the dynamic of optical hardware markets, where unit growth does not necessarily protect margins. The industry can experience simultaneous rising shipment volumes and declining profitability as pricing pressure accelerates. Market research already suggests that 800G QSFP-DD ASPs declined materially between 2023 and 2025, with further declines expected as silicon photonics manufacturing improves and additional suppliers expand capacity.

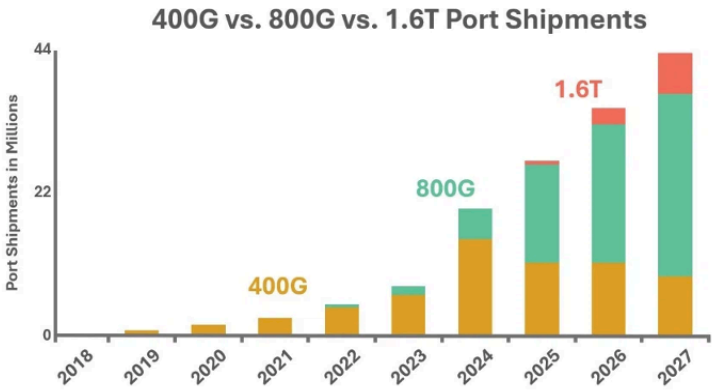
800G and 1.6T optical modules are standards-based technologies rather than proprietary platforms. Competitors are ultimately converging toward the exact same hyperscaler-defined specifications for thermals, interoperability, latency, and power efficiency. Once customers have several suppliers that meet all of the minimum thresholds, purchasing shifts away from technical differentiation and toward cost optimization, supply diversification, and negotiating leverage. Hyperscalers do not require every vendor to be identical. Transition changes the market from qualification-constrained to economically commoditized. Price-per-bit becomes the dominant purchasing metric, and ASP compression accelerates as suppliers compete for share. Historically, these transitions have resulted in rapid pricing declines within one to two years of volume inflection. Hyperscaler qualification delays commoditization but it also eventually enables it. New optical nodes begin with only a limited number of vendors capable of meeting demanding reliability, firmware, and interoperability standards at scale. This scarcity supports elevated pricing early in the cycle. Over time, however, hyperscalers intentionally qualify second and third suppliers in order to reduce dependence on any single vendor and improve negotiating leverage. AAOI itself acknowledges that customer qualification requires extensive sampling, reliability testing, and engineering collaboration. While this process protects early-cycle economics, it simultaneously creates the pathway for future multi-sourcing and pricing pressure. Once qualification barriers are crossed, customers gain flexibility to allocate volumes dynamically across suppliers, increasing price competition and utilization volatility.

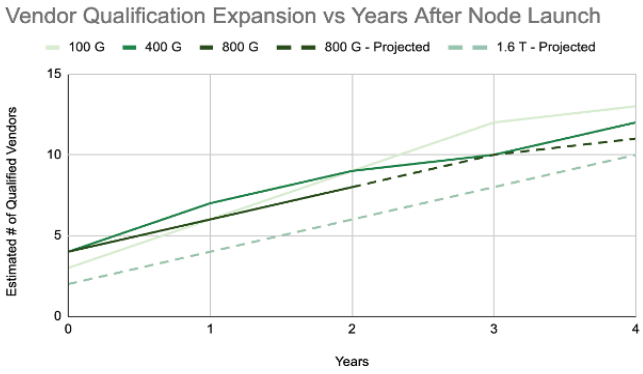
AAOI's vertically integrated manufacturing model provides meaningful advantages during the early scarcity phase. The company controls laser fabrication, epitaxy, and module assembly internally, allowing tighter supply-chain coordination, potentially lower component costs, and deeper optimization across the optical link. These benefits matter most when supply is constrained and technical execution differentiates vendors. However, the value of vertical integration changes materially once the industry matures. As optical modules commoditize, hyperscalers increasingly prioritize total system economics rather than supplier-specific engineering advantages. In that environment, vertical integration becomes less of a strategic differentiator and more of a fixed-cost burden.

This transition creates the core downside risk in the thesis. AAOI's vertically integrated model introduces a significantly larger fixed-cost structure through internal laser fabs, specialized equipment, automation infrastructure, and manufacturing expansion. That structure creates substantial operating leverage. Margins can expand rapidly when pricing remains elevated and factory utilization is high, but they can also compress sharply once pricing declines or utilization weakens. In a commoditizing environment, both pressures tend to emerge simultaneously. ASPs decline as more vendors compete for hyperscaler business, while utilization becomes more volatile as customers shift orders between suppliers. Unlike partially outsourced competitors, AAOI cannot easily scale down its manufacturing cost base when market conditions soften. As a result, even moderate pricing pressure can produce disproportionate margin compression.

The timing of the current industry cycle amplifies this risk. AI-related optics demand has triggered aggressive industry-wide capacity expansion, including major investments by competitors such as Lumentum and Coherent alongside AAOI's own manufacturing ramp. This creates a classic optical-cycle setup: demand spikes first, suppliers aggressively expand capacity second, and pricing pressure emerges once enough qualified supply reaches the market. The danger for AAOI is that it may complete substantial manufacturing expansion precisely as the market transitions from scarcity economics to competitive pricing dynamics. If that occurs, the company could enter a declining pricing environment with a materially larger fixed-cost structure and heightened sensitivity to utilization changes.

This risk does not require AI demand to collapse. The sell thesis is fundamentally about margin normalization rather than revenue contraction. Optical hardware markets have historically demonstrated that shipment growth can remain extremely strong even while ASPs and margins compress. LightCounting estimates that 1.6T optical modules could reach mass adoption materially faster than prior optical generations, potentially reaching 10 million annual shipments within roughly four years. Stronger demand has the potential to accelerate the commoditization process because faster growth increases supplier incentives to invest aggressively and gives hyperscalers greater urgency to qualify multiple vendors. The result is that volume growth and deteriorating economics can coexist simultaneously.





The market increasingly values AAOI as a structurally scarce AI infrastructure company with durable pricing power. However, the underlying business still resembles a cyclical optical hardware supplier operating within a historically commoditizing industry structure. Importantly, commoditization does not require margins to collapse to zero for the investment thesis to break. Current valuation levels implicitly assume sustained scarcity-level economics and elevated profitability. If margins normalize toward more traditional hardware economics due to ASP compression and intensified competition, the impact on earnings power and valuation could be substantial even if revenue continues growing.

The central insight is that AAOI's products can remain technologically advanced while still becoming economically commoditized. Optical interconnect history suggests that complexity extends the scarcity window but rarely creates permanent pricing power. Once multiple suppliers satisfy hyperscaler requirements and supply constraints ease, pricing - not technical nuance - becomes the primary competitive variable. In that environment, AAOI's vertically integrated model, which enhances performance and supply control during the early cycle, may ultimately become a source of rigidity and downside risk as the market matures and scarcity economics normalize.

Thesis 2: AAOI Is Priced for Flawless Execution and CPO Capture Despite History of Operational Failures and Competitive Weakness

2.1 Execution Risk Is Real, Quantifiable, and Repeating History

For AAOI, execution risk is the central thesis. The company is attempting to scale a complex, yield-sensitive hardware business at unprecedented velocity while simultaneously building out its largest-ever manufacturing footprint, all under the leadership of the same team that failed to deliver on a far smaller opportunity of the same sort a decade ago. The market is currently pricing in perfection in an industry where yield issues, supply-chain hiccups, and firmware delays make perfection virtually impossible.

2.11 History is More Than Likely to Repeat

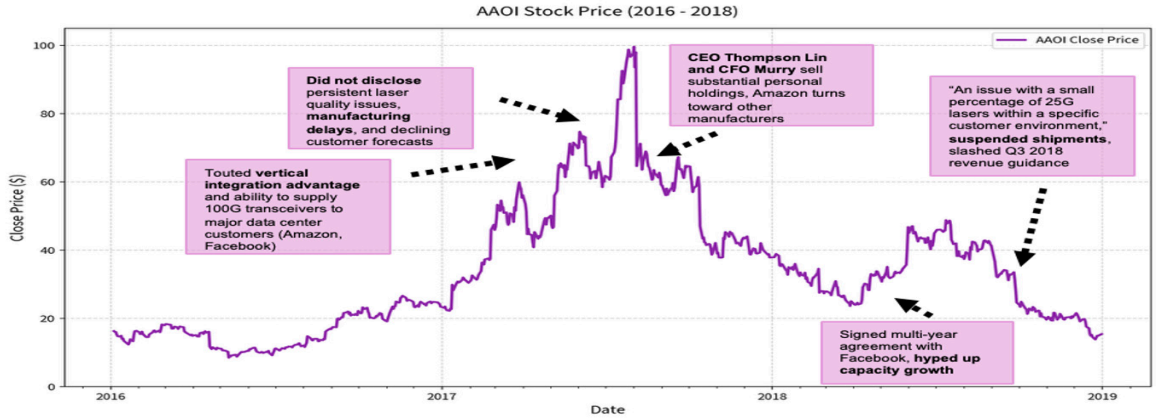
While the market has rewarded AAOI's recent revenue acceleration and guidance now pointing toward more than $1 billion in FY2026 revenue, the setup is a near-perfect replay of their major operational blunder in 2017. Throughout 2016 and early 2017, Applied Optoelectronics aggressively promoted its ability to supply 100G transceivers to major data-center customers, most notably Amazon and Facebook. Management touted its vertically integrated manufacturing as a decisive competitive advantage and projected meaningful revenue growth from "all three of our customers."

In reality, the company was encountering serious delays in transitioning manufacturing to the new 100G platform, persistent quality-assurance problems with its lasers (including premature failures after only thousands of hours of operation), and declining customer forecasts, particularly from Amazon as it shifted toward merchant suppliers.

Rather than disclosing these issues, executives continued to paint a false picture. Securities litigation later summarized the alleged misconduct: despite "delays in transitioning to 100G manufacturing, quality assurance issues, and declining forecasted Amazon demand caused by production problems," defendants "nevertheless continued to paint a false rosy picture of AOI's vertically integrated manufacturing operations and its expectations for a recovery in sales." Both CEO Thompson Lin and then-CFO Murry had clear incentives to maintain the narrative. They sold substantial personal holdings during the class period, with Lin generating approximately $729,000 in proceeds and Murry generating approximately $630,000.

The story continues with more dishonesty and execution failures. In November 2017, months after it had already lost significant Amazon volume, AAOI signed a supply agreement with Facebook that the company hyped as a multi-year commitment. On the subsequent February 2018 earnings call, the CFO described the deal as representing "a 3-year timeframe with a minimum commitment for the first year that represents, at a minimum $125 million for one product family." Yet in September 2018, immediately after an independent research report highlighted risk to the Facebook relationship, the company disclosed "an issue with a small percentage of 25G lasers within a specific customer environment," suspended shipments, and slashed its Q3 2018 revenue guidance from a midpoint of $85.5 million down to only $56.5 million.

By the end of 2018, the stock had already fallen more than 80 percent from its highs and ultimately declined more than 90 percent. During this upgrade cycle, AAOI never fully capitalized on the 100G opportunity despite early design wins. It is important to note that the management team at the helm today is largely the same team that guided the company through that collapse. Founder and CEO Thompson Lin remains in place, so with the management team being the same management team, it is hard to believe in a culture shift or an operational miracle.



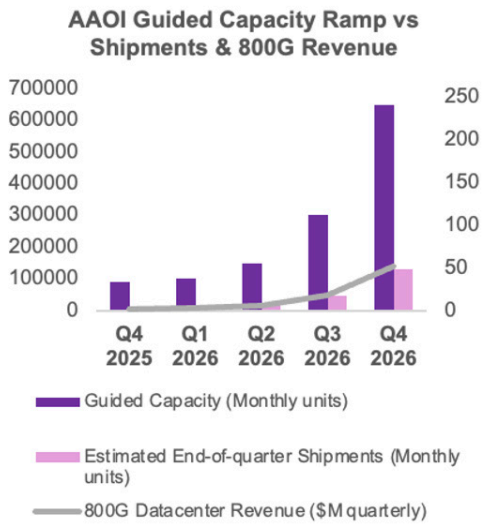
2.12 Timeline Discrepancy: Production Ramp Projections vs. Actual Capex Spending Signals Repeat of Past Failures

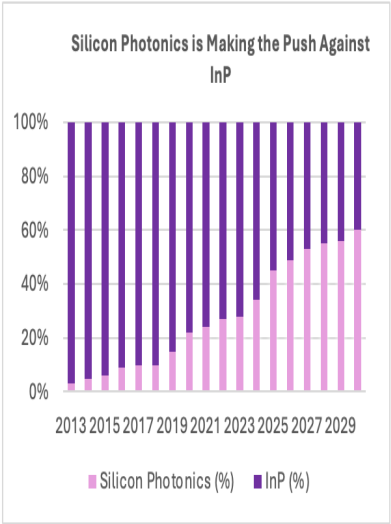
To remove ourselves from pure speculation based on company history, we can turn to AAOI's current gap between management's stated quarterly transceiver production targets and the actual pace and timing of their capital expenditures. AAOI exited 2025 with roughly 90,000 units per month of 800G/1.6T capacity and reached only about 100,000 units per month by the end of Q1 2026. Yet the company is now guiding for 150,000 units per month by the end of Q2 2026, a 50% jump in one quarter, and more than 650,000 units per month by December 2026, a roughly 6.5 times increase from current numbers.

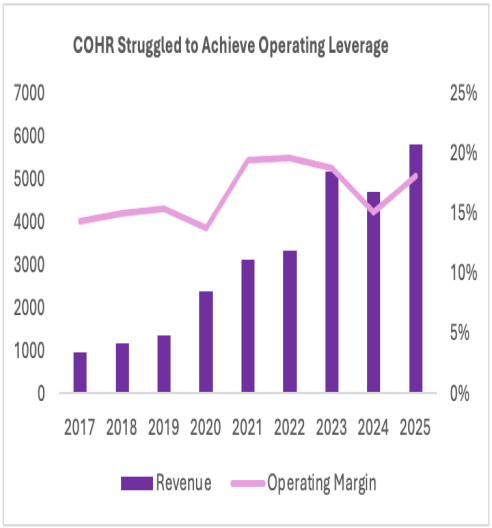
	Q2- 2026	Q4-2026	Q2-2027	Q4-2027
100G QSFP28 NRZ Optics	140K/ Month	140K/ Month	140K/ Month	140K/ Month
400G QSFP-DD PAM4 Optics	140K/ Month	210K/ Month	310K/ Month	310K/ Month
400G/ 200G /100G Active Optic Cable	35K/ Month	35K/ Month	45K/ Month	70K/ Month
800G OSFP PAM4 Optics	138K/ Month	420K/ Month	550K/ Month	550K/ Month
1.6T OSFP PAM4 Optics	10K/ Month	230K/ Month	230K/ Month	380K/ Month
ELSFP Module 300mW/ 400mW		5K/ Month	50K/ Month	400K/ Month

The reality is that the pace of money being spent is just not keeping pace with the narrative. AAOI spent a record $209 million in capex in FY2025 and another $68.7 million in just Q1 2026, almost entirely on land, construction-in-progress, and long-lead-time equipment for their factory buildout. Management explicitly said quarterly capex will run above the Q1 level for the rest of 2026 and that full-year 2026 spending will be "materially higher" than the already-elevated FY2025 level. It can be reasonably inferred that the factory buildout is still in its early stages, with the bulk of the progress still under way. Management knows this as well; initial meaningful production is not expected until Q3 2026 or later. This means the promised Q2 capacity surge of 50% must come almost entirely from tweaks to existing, mostly international lines, while the bulk of the new U.S. capacity that investors are paying for stays unavailable.

The revenue numbers reflect the lag as well: despite the higher exit-rate capacity, 800G contributed only $4.6 million in Q1. This represented only 5.6% of the $81.4 million total data-center revenue for the quarter. While unit economics are not disclosed, management noted they completed the "first volume shipment" of 800G single-mode transceivers in Q1 and shipped the first 10,000 units of one specific order. Based on their track record, we can only imagine how little outside of this shipment they have accomplished. So they exited Q1 with capacity of around 100,000 units per month, yet shipped volume has remained very low.







The production volume and shipment pose a two-fold risk to AAOI's revenue going forward. It has already been established that AAOI's production ramp timeline is unrealistic and subject to significant risk of delays. But under the extreme circumstance that AAOI delivers on its promise and ramps up production to their projected levels, there still exists a considerable interim between production and shipping, as evidenced by their historic failures with quality control and insufficient testing. The stretched timelines and modest output match the exact pattern that led to their 100G collapse: massive capital spending with delayed, lower-than-expected results.

2.13 Inconsistencies in Earnings Calls Forward Confirmatory Signals

AAOI's recent earnings calls reveal a pattern of timeline softening and narrative building that mirrors the 2017 100G failure under the same management team led by CEO Thompson Lin and CFO Stefan Murry.

Over the past year, the phrase "demand outpaces capacity" has become one of management's branded refrains. In their most recent Q1 2026 earnings call, CFO Murry states that "forecast demand for 800G and 1.6T are projected to exceed our production capacity through mid 2027." The same rhetoric overshadowed Q4 2025, where they state, "we made solid progress on the production capacity ramp we outlined last year." While the demand-exceeds-capacity narrative is undeniable, management intentionally obscures what is actually at stake: the "solid progress on the production capacity ramp" was largely due to "software investment" and increased efficiency behind automation, rather than their factory buildout, which they have yet to provide a stringent timeline for. While the statement is far from untrue, the oversaturation of the "capacity-constrained rather than demand-constrained" narrative gives an obvious sense of formulaic optimism.

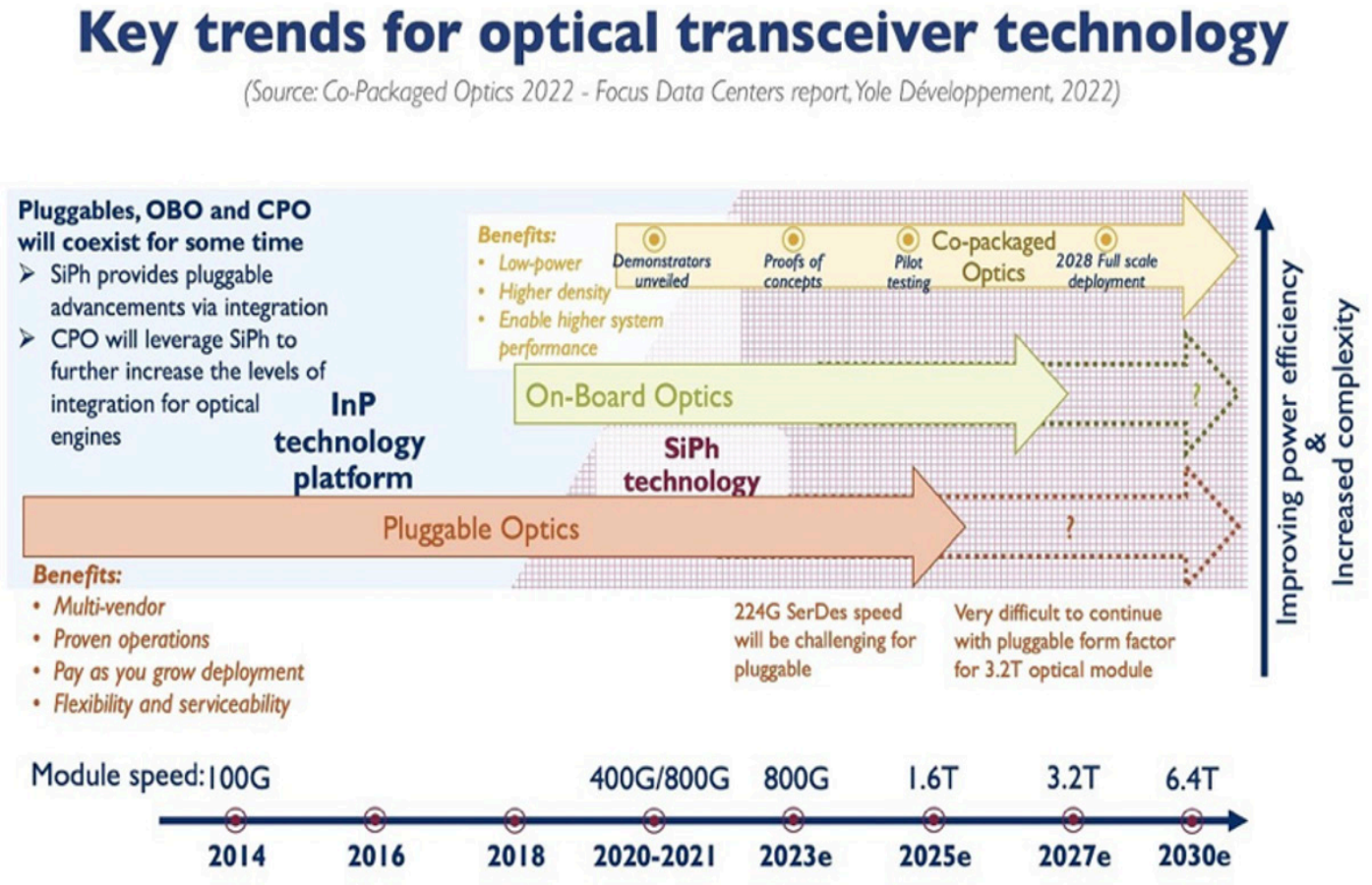
Looking deeper into the language used by management across the past few quarters, there is clear obfuscation of timeline that points towards possible execution slips. On the Texas facility, they stated on the Q4 2025 call that construction began "earlier this month" and will "scale our production towards the middle to end of this year to achieve our 2026 targets." On the most recent Q1 2026 call, they now say that they "expect to begin initial production in this facility in the third quarter." Possibly to address this timeline shift, Thompson Lin explains, "From the day you order equipment, qualification, installation, everything and sometimes billability, in Asia it will take 5 to 7 months. In the US it's adding another two months because of shipping.

That's why the ramping [is] from Q3, not Q2. Even though we've got some equipment already, [we] still need to go through a lot of processes which will take several months." A lot of apparent inconsistencies are attributed to timing. There were questions raised about the disconnect between the Q1 capacity of 100,000 800G units per month and the very modest $18-20 million revenue guide for the quarter. To this, Murry responds, "It's just timing on how long it takes to do the manufacturing process... Not all that 100,000 was online in the middle of the quarter." Gross margin targets have been locked at 35-40% by the end of FY2026, despite the Q4 2025 firmware glitch that left 800G revenue "a lot below $4 million" and the repeated reliance on 1.6T transceivers for any meaningful margin increase.

2.2 Market Overrates AAOI as a Potential Winner in the Shift Towards CPO, Imminent CPO Boom Further Closes the Window for AAOI to Execute

On top of the immense execution risk AAOI faces, the industry's accelerating shift to co-packaged optics (CPO) is rapidly compressing the addressable market for pluggable transceivers and exposing how disadvantaged the company is relative to what the market currently assumes. Management and investors are treating the current pluggable/LPO cycle as a multi-year harvesting opportunity that can drive the company toward 10% net margins by 2030, which is the highest margin rate that vertically integrated competitor Coherent has reached in the past five years at a scale that AAOI is aiming for by 2030. In reality, CPO is not a distant future risk, but the inevitable next-generation architecture that NVIDIA is actively pushing, with the broad industry direction moving from pluggable modules to near-package optics (NPO) and then to full CPO.

The reason for this is that beyond 1.6T speeds, pluggable form factors become obsolete. At 3.2T, pluggables primarily face signal integrity problems due to the long electrical path that exists in any pluggable form factor. The window for AAOI to capitalize on surging demand in LPO transceivers is thus sandwiched between their factory buildout timeline and the imminent shift to CPO architecture. AAOI itself acknowledges the transition is "only a matter of time" and has attempted to position itself as a winner of the CPO boom, yet it remains far less prepared than the market believes. Historically, speed generations in data center networking have lasted 3-4 years, but this timeline has shortened to approximately 2 years for recent transitions from 400G to 800G, and from 800G to 1.6T. With 800G currently being the ramping industry standard and significant volume of 1.6T projected by 2027, the reasonable harvesting window of LPO transceivers ends when they face obsolescence at 3.2T, which is likely to happen around 2029-2030. For AAOI, the duration of this window depends more on when they begin shipping at volume with 1.6T, as the imminent shift towards CPO is much more of a fixed timeline.



AAOI's strategy to defend against the shift to CPO is twofold, but its approach seems contrived when viewed in the context of the broader competitive and technological landscape.

Firstly, AAOI is attempting to position itself as a component supplier of indium-phosphide lasers and optical sources, as they do not develop full CPO systems. Its main attempt to stay relevant is the External Laser Small Form-Factor Pluggable (ELSFP) product slated for 2027, essentially a pluggable laser rather than a complete transceiver. The economics of this pivot are weaker because the average selling price of a laser is far lower than that of a full optical module, thus a significant TAM compression. There are also questions about how much they will be able to differentiate: the company's laser products face intense competition from better-capitalized rivals. Lumentum and Coherent have made strategic acquisitions that strengthen their CPO supply chain position, and Chinese suppliers continue to drive commoditization and average-selling-price erosion across the pluggable and laser markets.

Secondly, there is still room for LPOs in data centers after CPO becomes mainstream architecture; they do not become entirely obsolete. The reasoning is that even though co-packaged optics is the ultimate solution for power efficiency, having some modules run on LPO does improve serviceability. If a single optical channel fails in a CPO setup, the entire rack will need to be taken down to be serviced. With LPO, the plug can be swapped out seamlessly. Thus, a CPO-pluggable hybrid approach seems to be the most realistic. The idea is that despite compressed TAM, pluggables could still contribute to AAOI's revenue growth in the CPO era. However, AAOI's continued viability nevertheless is challenged by their more established peers. In March 2026, NVIDIA announced a massive $4 billion investment and strategic partnership with Lumentum and Coherent, investing $2 billion in each to accelerate the development of CPO. CPOs require a complex supply chain, and NVIDIA looks for key suppliers for laser sources, ELS Modules, FAU, FAU Alight Tools, FAU Assembly, Shuffle Box, MPO Connectors, MT Ferrules, Fibers, and E/O Testing. NVIDIA made the call to shift to CPO, and they continue to make the call of who they will partner with for this shift. Under these circumstances, there is only more reason to believe in the already-established industry leaders that they are partnering with.

Catalyst Pathway

Q2-Q4 2026	800G ramp execution risk: production shortfalls and yield issues as Texas factory contribution remains minimal
2027	800G ASP compression, delayed 1.6T adoption colliding with higher fixed costs from new Texas capacity
2028-30	Accelerated CPO shift, pluggable/LPO TAM compression; 3.2T pluggables become obsolete; AAOI pivots to lower-ASP laser components with structurally thinner margins

Valuation

** Numbers in Millions of USD unless stated otherwise*

Applied Optoelectronics Inc. *(NASDAQ: AAOI)*

Discounted Cash Flow

	Historical					Projected									
Year	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
EBIT	(56.80)	(59.00)	(41.30)	(70.90)	(46.70)	39.30	202.96	415.31	515.60	730.69	666.37	839.91	1,027.27	1,185.97	1,325.31	1,475.72
% Change YoY		*3.87%*	*-30.00%*	*71.67%*	*-34.13%*	*-184.15%*	*416.46%*	*104.63%*	*24.15%*	*41.72%*	*-8.80%*	*26.04%*	*22.31%*	*15.45%*	*11.75%*	*11.35%*
D&A	25.37	23.20	20.43	20.65	27.70	91.32	82.74	92.22	101.76	104.86	108.91	109.78	83.48	47.08	42.60	40.89
%Change YoY		*-8.55%*	*-11.96%*	*1.09%*	*34.13%*	*229.73%*	*-9.40%*	*11.46%*	*10.34%*	*3.05%*	*3.86%*	*0.80%*	*-23.96%*	*-43.61%*	*-9.51%*	*-4.03%*
Less: Capex	14.70	(24.65)	6.13	33.95	225.28	217.60	82.48	81.10	66.74	27.87	30.07	35.83	41.17	45.27	49.77	54.72
% Change YoY		*-267.66%*		*453.57%*	*563.52%*	*-3.41%*	*-62.10%*	*-1.68%*	*-17.70%*	*-58.24%*	*7.90%*	*19.16%*	*14.89%*	*9.95%*	*9.95%*	*9.95%*
Net Working Capital	142.34	111.74	125.60	221.84	375.50	567.20	888.81	1,217.25	1,776.64	2,256.65	2,724.07	3,301.78	3,311.31	3,620.47	3,968.63	4,352.29
Less: Change in Net Working Capital		(30.60)	13.86	96.24	153.66	191.71	321.60	328.44	559.39	480.01	467.43	577.71	9.53	309.16	348.16	383.66
Free Cash Flow		19.46	(40.86)	(180.45)	(397.94)	(278.69)	(118.38)	98.00	(8.78)	327.67	277.77	336.16	1,060.05	878.63	969.98	1,078.22
Discounted Free Cash Flow						(227.16)	(78.66)	53.07	(3.87)	117.90	81.47	80.36	206.57	139.56	125.58	113.79

WACC	
Risk Free Rate	4.40%
Levered Beta	3.76
ERP	4.96%
Effective Tax Rate	18%
Cost of Equity	23.04%
Cost of Debt	1.41%
Current Share Price	$182.00
Shares Outstanding	80.12
Market Cap	14,581.84
Total Debt	248.082
Net Debt	41.942
Market Cap	14,581.84
Percent Equity	98.33%
Percent Debt	1.67%
WACC	22.68%

Terminal Value: Gordon Growth	
Terminal Growth Rate	2%
Terminal Value	5,317.43
PV of TV	561.16
PV of Near Term Cash	608.61
Implied EV	1,169.77
Implied EqV	1,127.83
Implied Share Price	$14.08
Up/Downside	-92%

TV Exit Multiple	
Terminal Growth Rate	30
Terminal Value	45,498.15
PV of TV	4,801.50
PV of Near Term Cash	608.61
Implied EV	5,410.12
Implied EqV	5,368.17
Implied Share Price	67.00
Up/Downside	-63%

Hercules Capital, Inc.

Financials
Spring 2026

Investment Overview

Hercules Capital (NYSE: HTGC) is a publicly traded Business Development Company (BDC) that provides senior secured, floating-rate loans to venture capital-backed technology and life sciences companies, and is the largest dedicated venture lender in the United States. Despite this scale, Hercules trades at a 25.6% premium to net asset value while every other BDC in its peer set trades at a discount, a divergence the underlying business no longer supports. We initiate coverage with a SELL rating built on three reinforcing dynamics. First, Hercules' loan portfolio is heavily concentrated in software borrowers at a moment of acute sector deterioration, yet management continues to carry the book at par. Second, the dividend's headline coverage ratio is propped up by rapidly growing non-cash PIK income, while the historical credit cushion from warrant and equity gains has eroded with the IPO window closed. Finally, the premium-to-NAV flywheel funding Hercules' growth is already compressing, and a supplemental dividend cut would likely trigger a re-rating toward the discounted multiples at which software exposed BDC peers trade.

Company Overview

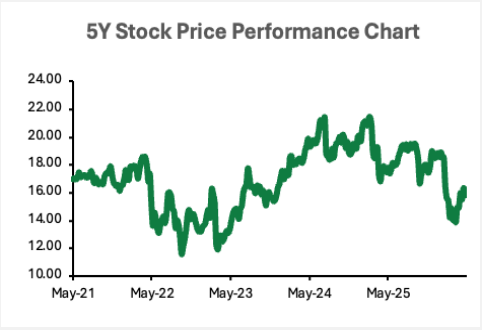
Hercules Capital is a specialty finance company focused on providing senior secured loans to high-growth, venture capital-backed, and institutional-backed companies in a variety of technology and life sciences industries. As a Business Development Company (BDC), Hercules Capital is a publicly traded investment firm that lends ownership stakes in small- and mid-sized private companies that often cannot access traditional bank financing. As such, Hercules operates within the private credit asset class, which refers to non-bank lending through direct loans negotiated privately between a lender and borrower, typically at floating rates and above investment-grade yields. As a BDC, Hercules Capital benefits from a pass-through tax treatment like that of REITs, distributing at least 90% of its taxable income to shareholders and paying no corporate tax at the entity level, making it an attractive income vehicle for investors. Since its founding in 2003, Hercules has grown to become one of the largest and most active venture lenders in the United States, having originated billions of dollars in commitments to hundreds of companies throughout its history.

NYSE: HTGC

Rating:	Sell
Price: (at close, 05/08/26)	$16.15
Recommendation	$5.82

52 week range	$	13.70 - 19.67
DSO	mn	180.71
Market capitalization	$bn	3.02
FY25 Dividend	$	1.60
FY30 Dividend	$	0.89
Sector	Specialty Industrial Machinery	
Revenue	$38.07 billion	

Price performance



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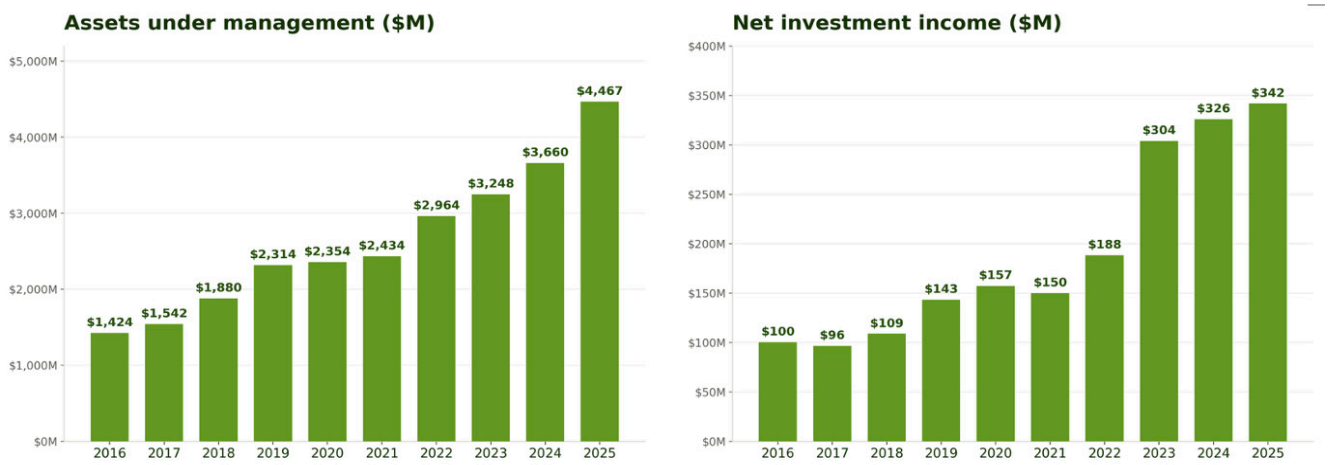
Approximately 98% of Hercules' portfolio is in senior secured, floating-rate loans.

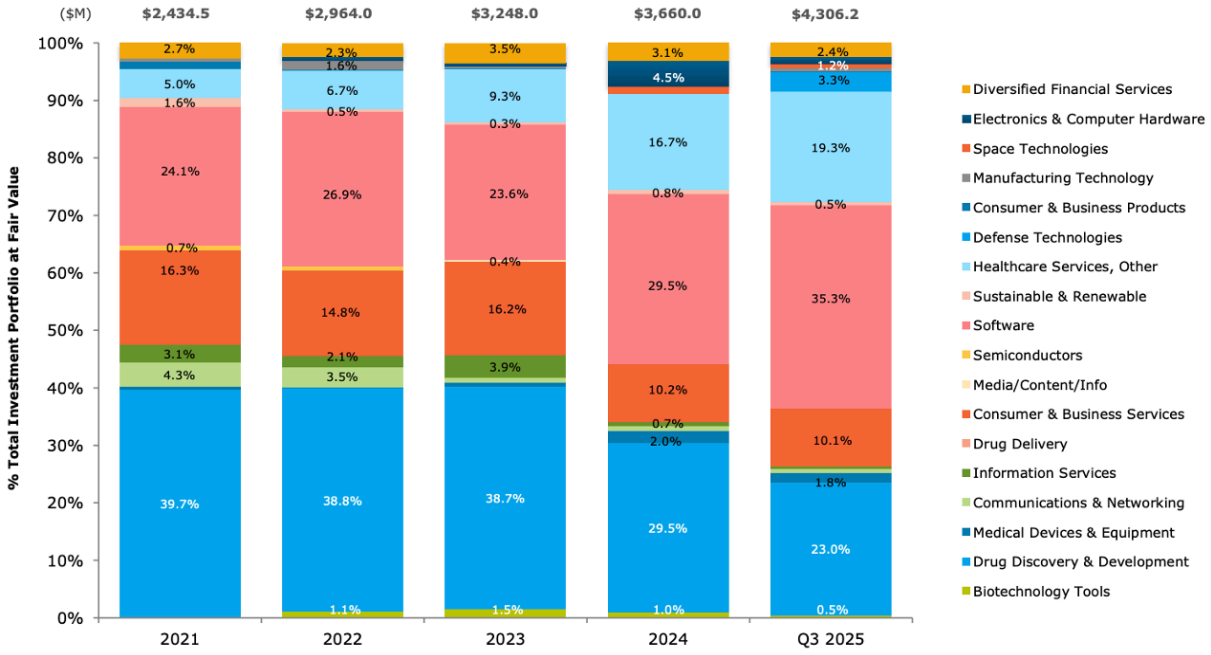
A key structural distinction for Hercules Capital is that it is internally managed, meaning its investment and portfolio management functions are conducted by its own employees rather than outsourced to a third-party investment adviser. Hercules generates revenue primarily through interest income on its loan portfolio. Because its loans are predominantly floating-rate instruments tied to benchmarks such as the Secured Overnight Financing Rate (SOFR), interest income is sensitive to prevailing interest rate conditions. In addition to interest, Hercules earns fee income through origination fees, commitment fees, and prepayment fees, which supplement recurring interest revenue and are recognized at various points in the loan lifecycle. Hercules' borrowers are typically pre-profitability or early-profitability companies operating in technology and life sciences sectors, including software, drug discovery, medical devices, and hardware. These companies are generally backed by institutional venture capital or growth equity sponsors and have demonstrated sufficient revenue traction or clinical progress to support debt service but are not yet eligible for conventional bank lending. The typical Hercules loan is structured as a senior secured term loan, meaning Hercules holds a first-priority claim on the borrower's assets in the event of default.

Loan sizes generally range from the tens of millions to over one hundred million dollars, and facilities may include delayed draw features that allow borrowers to access capital in tranches as they meet operational milestones. Loan maturities are typically three to four years.



The fair value of these loans, as marked on Hercules' balance sheet, forms the basis of its net asset value (NAV) per share — a key metric for BDC investors that represents the per-share value of the company's assets net of its liabilities. Because Hercules' loans are not publicly traded, their valuations are determined through an internal fair value process reviewed by the board each quarter, meaning NAV is sensitive to changes in credit quality, market conditions, and sector-specific sentiment rather than observable market prices. The interest income generated by the loan portfolio, supplemented by origination, commitment, and prepayment fees, flows through to net investment income (NII) — the primary measure of Hercules' recurring earnings power and the principal source from which dividends are funded. Maintaining NII at or above the dividend level is a central focus of portfolio management, as a sustained gap between the two would require the company to draw on capital gains or reduce distributions to shareholders.

On the liability side, Hercules funds its loan portfolio through a combination of unsecured notes, secured credit facilities, SBA-guaranteed debentures, and equity issued through its at-the-market (ATM) program. As a BDC, Hercules is subject to a statutory asset coverage ratio of 150%, which effectively caps debt-to-equity leverage at approximately 2:1, though the firm typically operates closer to 1:1 to preserve borrowing flexibility and investment-grade ratings from Moody's, S&P, and Fitch. Since 2024, Hercules has issued nearly $940 million in unsecured notes to extend duration and lock in fixed-rate funding ahead of expected rate volatility, while the ATM program serves as the primary mechanism for raising equity capital opportunistically — issuing shares directly into the market at prevailing prices. The ability to issue accretively above NAV is central to both balance sheet growth and per-share earnings accretion, making the relationship between share price and reported book value a structurally important driver of the business model rather than simply a valuation question.



Hercules organizes its portfolio across two principal verticals — technology and life sciences — with technology accounting for the majority of fair value exposure. Within technology, software is the single largest sub-category, supplemented by allocations to consumer and business services, communications, hardware, and energy technology. Life sciences exposure spans drug discovery and development, medical devices, diagnostics, and specialty pharmaceuticals, with most positions concentrated in clinical-stage biotech and FDA-cleared device makers. The portfolio is diversified across roughly one hundred active borrowers, with the largest single position typically representing three to four percent of total fair value and the top ten positions collectively accounting for approximately a quarter of the book. Geographically, originations skew toward California and the Northeast, mirroring the concentration of venture capital activity, with a smaller international book primarily in the United Kingdom and Western Europe.

The venture lending market is competitive but structurally narrow. Hercules' direct public BDC peers in venture-focused lending include TriplePoint Venture Growth (TPVG), Trinity Capital (TRIN), and Horizon Technology Finance (HRZN), though Hercules is meaningfully larger than each by both portfolio size and market capitalization. Beyond the public BDC universe, Hercules competes with the venture banking arm of First Citizens — which acquired the former Silicon Valley Bank loan portfolio in 2023 — as well as with private credit platforms such as Apollo, Ares, and Blackstone that have expanded selectively into venture-stage lending. Hercules' scale, internally managed cost structure, two-decade origination history, and relationships with top-tier venture capital sponsors are typically cited by management as durable competitive advantages, allowing the firm to source proprietary deal flow and command pricing power within its niche.

Industry Overview

Business Development Companies (BDCs) are a federally regulated class of closed-end investment funds created by Congress in 1980. Structured as both publicly traded and non-traded entities, BDCs play an essential role in US credit markets, channeling capital into small and mid-sized US businesses that are unable to access traditional bank financing. They function as direct lenders, making senior secured loans, subordinated debt, and equity co-investments in companies typically too large for community banks but too small or unprofitable to use the syndicated loan market. In 2025, total BDC AUM reached $451 billion, up from roughly $127 billion in 2020 (CAGR ~28%). Public BDCs alone account for ~$175 billion in AUM with the remainder held in non-traded and perpetual private structures accessible to institutional and high-net-worth investors.

Regulatory Environment

BDCs operate under the Investment Company Act of 1940 and are accordingly subject to oversight by the SEC. This affects their structure and defines the asset class's risk and return profile. For example, BDCs must invest at least 70% of their total assets in a set of qualifying assets: generally, debt or equity securities of US private or thinly traded public companies. BDCs are also subject to asset coverage requirements that limit leverage to an authorized limit. However recently, the 2018 Small Business Credit Availability Act reduced this requirement from 200% to 150%, allowing BDCs a maximum D/E ratio of approximately 2:1, though most BDCs still elect to operate more conservatively within the 1:1 to 1.5:1 range. BDCs also take advantage of Regulated Investment Company (RIC) status under the Internal Revenue Code, exempting them from corporate taxation on distributed income in exchange for distributing a minimum of 90% of taxable income annually to shareholders. This pass-through structure is the asset class's defining appeal: high, recurring dividend yields, but also simultaneously a structural constraint as BDCs cannot meaningfully retain earnings, rendering them permanently dependent on external capital markets to fund balance sheet growth.

The Rise of Private Credit

The explosive growth of BDC AUM corresponds to the broader rise of private credit. Global private credit AUM passed $3.5 trillion in 2025, up from $2 trillion in 2020. Morgan Stanely projects the market to reach $5 trillion by 2029. Regulatory tightening of bank balance sheets post-2008 sharply curtailed the business of banks in middle-market and leveraged lending. BDCs and other direct lenders filled this gap, offering borrowers certainty of execution, very flexible structures, and speed that the syndicated debt market could not match and with higher spreads. Private credit capital deployment reached $592.8 billion in 2024 (78% YoY growth) and BDCs, as the most accessible public vehicle for private credit exposure, have benefited greatly. Large managers like Ares Capital, Blue Owl Capital, and FS KKR Capital manage hundreds of billions in direct loans to the middle-market. Today, BDCs represent around 20% of total US private credit AUM and are expected to represent nearly a third of the market by 2030.

Venture Lending and BDC Economics

Venture lending, also known as growth lending or technology lending, is a distinct and considerably riskier sub-sector within BDC lending broadly. Rather than extending credit to established middle-market companies, venture lenders target high-growth, pre-profitability companies backed by venture capital or PE sponsors. The profile of these borrowers is characterized by rapid revenue growth, high cash burn, and limited hard-asset collateral, meaning they can't turn to conventional bank credit and must go to BDCs. In exchange for accepting this risk profile, BDC venture lenders price loans at high spreads, impose relatively short maturities (3-4 years), and negotiate significant warrant coverage for IPOs or acquisitions to generate returns. Loans to these borrowers are almost universally senior secured and floating rate, placing venture lenders senior in the capital stack despite the speculative nature of the underlying credits.

While smaller and more concentrated than the middle-market BDC space, venture lending has been on the rise, and HTGC is the largest non-bank venture lender in the US. Another important name in venture lending is Silicon Valley Bank who, despite being historically dominant in the space, created considerable opportunities for alternative and non-bank lenders like HTGC following its collapse and acquisition by First Citizens Bank in 2023. BDC earnings come from net investment income (NII), which is the spread between asset yields and the cost of liabilities. Portfolio yields on senior secured loans from venture lenders have historically ranged from 12% to 16%, funded by a mix of debt structures like unsecured notes and revolvers. The resulting NII, after management fees in externally managed structures, is distributed to shareholders as dividends. BDCs also generate income from debt origination fees, PIK interest, and dividend income from equity co-investments. PIK income is particularly relevant to HTGC and venture lending as it is commonly taken advantage of by the early-stage borrowers they serve. PIK allows lenders to recognize income and borrowers to preserve liquidity, but it creates a potentially burdensome discrepancy between NII and actual cash, which has direct implications for dividend coverage. Warrant structures and equity portfolios, though, provide a chance for outsized returns that can cover the risk of early-stage borrowers, but only meaningfully in strong exit environments. Ultimately, the goal for BDCs is to trade at a premium to NAV which, when sustained, enables accretive equity issuance and fuels loan growth.

Rate Environment and NII Sensitivity

Because BDC loan portfolios are predominantly floating rate, the interest rate cycle is the most important driver of NII. In 2022 and through 2023, the Fed's aggressive tightening was an unprecedented tailwind for the BDC industry by dramatically expanding asset yields with only moderate book NII margin compression. The reversal of the rate cycle in late 2024 and 2025 stymied this tailwind. For BDCs, each 25-bps reduction is a direct drag on portfolio yields that is only partially offset by lower funding costs. Accordingly, many BDC loans include SOFR floors that cushion an initial incremental rate decline, but in a sustained cutting cycle these floors do little to stop the adverse effects of yield compression on NII. In addition to rate headwinds, competitive spread compression has compounded structural challenges. As increasingly more capital has entered direct and venture lending markets, borrowers have gained negotiating leverage, driving spreads materially lower. For BDCs, these factors create meaningful risk that dividend coverage could deteriorate faster than management projections, particularly when reported income has a significant PIK non-cash component.

Recent Headlines and Developments

At the start of 2026, the private credit industry entered its first significant sector-wide test, particularly for venture lenders. A sharp deterioration in software company valuations, the largest and fastest in years, has exposed concentration risk across the venture lending complex. According to a Bloomberg index, $18 billion in broadly syndicated software loans had fallen below 80 cents on the dollar within weeks as of early 2026, and UBS estimated private credit default rates could reach 15% in a worst-case scenario. Blue Owl Capital halted quarterly redemptions at one of its retail-focused BDCs in February 2026 and KKR's BDC cut its dividend by 30%, among the first examples of software credit distress adversely affecting public BDC earnings. For venture lenders with significant software exposure, the central risk is the timing and magnitude of these fair value adjustments. Unlike broadly syndicated loans, which trade daily and reflect market stress in real time, private BDC portfolios are marked quarterly using internal models, meaning reported book values frequently lag behind the economic reality visible in public credit markets by one to two quarters. In a severe downside scenario, a forced wave of write-downs or liquidity stress at private BDCs could trigger a dangerous and self-reinforcing cycle of NAV erosion, capital flight, and asset fire sales, amplifying losses well beyond initial valuation declines.

Competitive Landscape

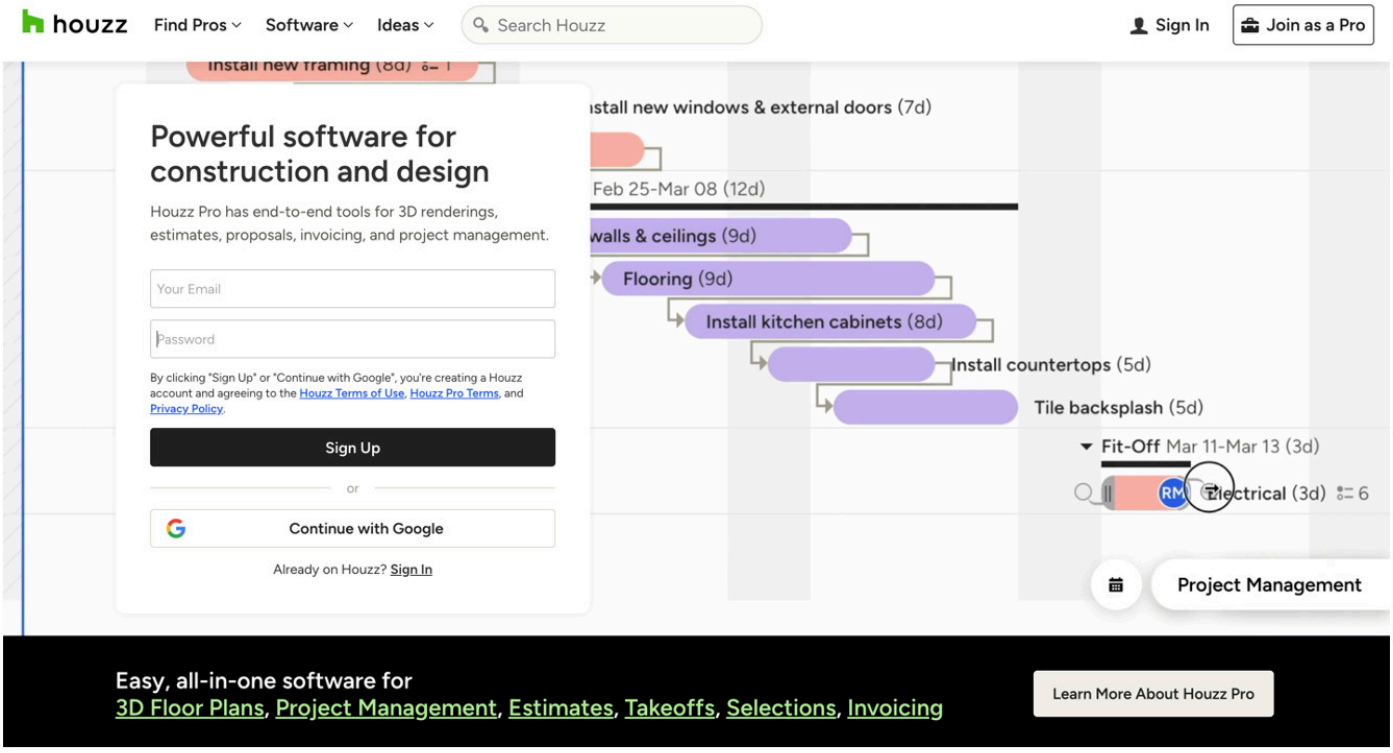
The BDC industry has both scale players and a smaller cohort of venture-focused lenders. Among the former, Ares Capital is the clear market leader with a portfolio nearly seven times the size of its closest venture-leading peer and an IG balance sheet that has created a cost-of-capital moat that is difficult for smaller competitors to replicate. Blue Owl Capital's BDC platform and FS KKR Capital comprise the next tier, each with diversified exposure across industries and geographies. In venture lending, competitive intensity increased following Silicon Valley Bank's collapse in 2023 attracting new entrants seeking elevated spreads, but that opportunity has since narrowed and the pricing advantage with it. The venture lending market, despite its growth, also remains sensitive to the health of the venture capital market, IPO market conditions, and M&A volume. When the VC cycle tightens, as it did from 2022 to 2024, borrowers struggle to refinance at maturity, extensions on loans increase, and the distinction between a loan performing well and one that is gradually deteriorating can become dangerously blurred.

Investment Theses

Thesis 1: Hercules' Software Portfolio Is Marked at Par While the Sector Deteriorates, Making Write-Downs Inevitable

Roughly 35% of Hercules' total loan portfolio, by fair value, is concentrated in software. Because the company runs approximately 1:1 leverage, the software book represents about 70 cents of every dollar of net asset value. Hercules' Net Asset Value is, in substance, a leveraged claim on software credit.

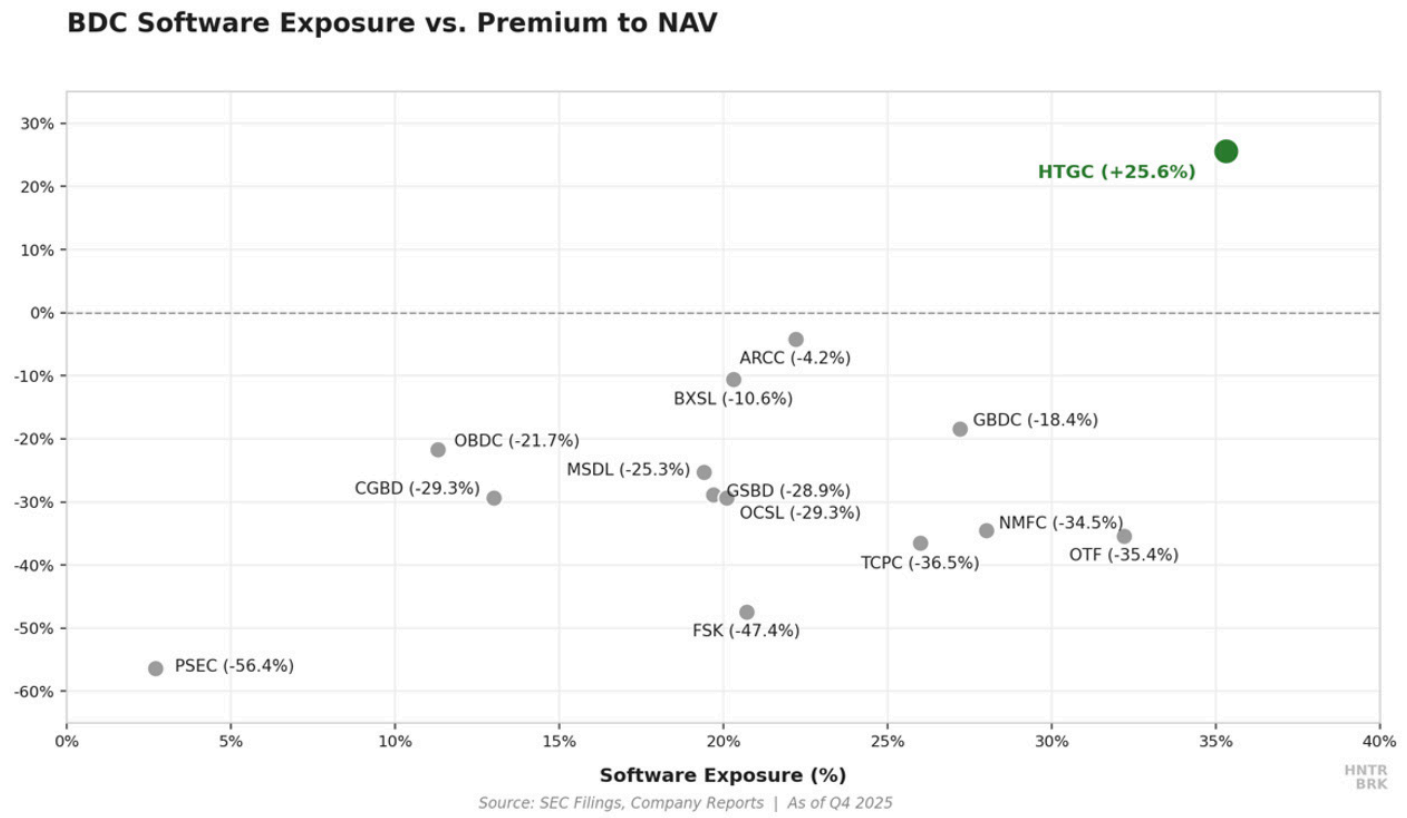
Furthermore, the 35% figure almost certainly understates true exposure. A review of Hercules' most recent annual report identified portfolio companies that describe themselves explicitly as software businesses but are classified under other categories. Houzz advertises "powerful software for construction and design" on its homepage. AppDirect describes itself as a platform for selling and managing recurring technology services: a software distribution business by any reasonable definition. Neither appears in the software-classified portfolio. Reclassifying these and similar names would push true software exposure meaningfully above the disclosed figure. In fact, Hercules' own investor materials show software exposure grew from 24% to 35% of the portfolio over four years, a nearly 50% increase in concentration timed almost precisely to the sector's deterioration.



Houzz Pro, a home design and remodeling platform with end-to-end software for 3D renderings, estimates, and project management, is one of many companies listed not classified as a software company.

Hercules values its entire software book at approximately par in its 10-K filed February 12, 2026. In writing, Hercules management has stated that their valuations "do not reflect any potential pricing volatility that may have occurred in 2026." Management is affirmatively informing investors that its marks are backward-looking at the exact moment the forward picture has deteriorated sharply. Consider what was already public at the time of filing: roughly $18 billion in broadly syndicated software loans had already fallen below 80 cents on the dollar per Bloomberg index data. UBS had projected private credit default rates could reach 15%. Blue Owl, one of the largest private credit managers in the world, had already halted redemptions at one of its retail BDCs. KKR's BDC had already cut its dividend. Hercules walked into that environment and told investors its software book was worth 100 cents. This produces a specific, dated, falsifiable claim: the Q1 2026 marks will be forced to reflect at least a portion of the deterioration already visible in adjacent markets.

A borrower-level review of Hercules' disclosed software positions reveals pockets of distress the current marks do not capture. Sisense, a business intelligence platform, has cut its workforce in half, suffered a major data breach, and has not raised external funding since early 2020, while operating in a legacy analytics segment facing direct AI disruption. Marigold Group is being carried as a PIK loan, meaning Hercules is collecting zero cash interest from a borrower that has already sold off its primary business unit — a company paying PIK after divesting its main revenue source is in acute distress by any standard. Ceros, a no-code content platform, sits directly in the path of AI disruption, and its publicly traded comparables, Wix and GoDaddy, are each down more than 50% over the past year, providing a real-time read on what the market thinks this software category is worth. Khoros shows what the downside looks like when impairment finally arrives: when that borrower deteriorated, Hercules was forced to write a $61 million loan down to $18 million, a 70% impairment. A critical structural point underlies all of these names. Software collateral has effectively no liquidation value. There is no factory to foreclose on. When customers leave, the collateral is worth nothing. Write-downs in software lending therefore behave less like secured-loan recoveries and more like equity impairments — sudden, large, and uncorrelated with stated loan-to-value ratios.

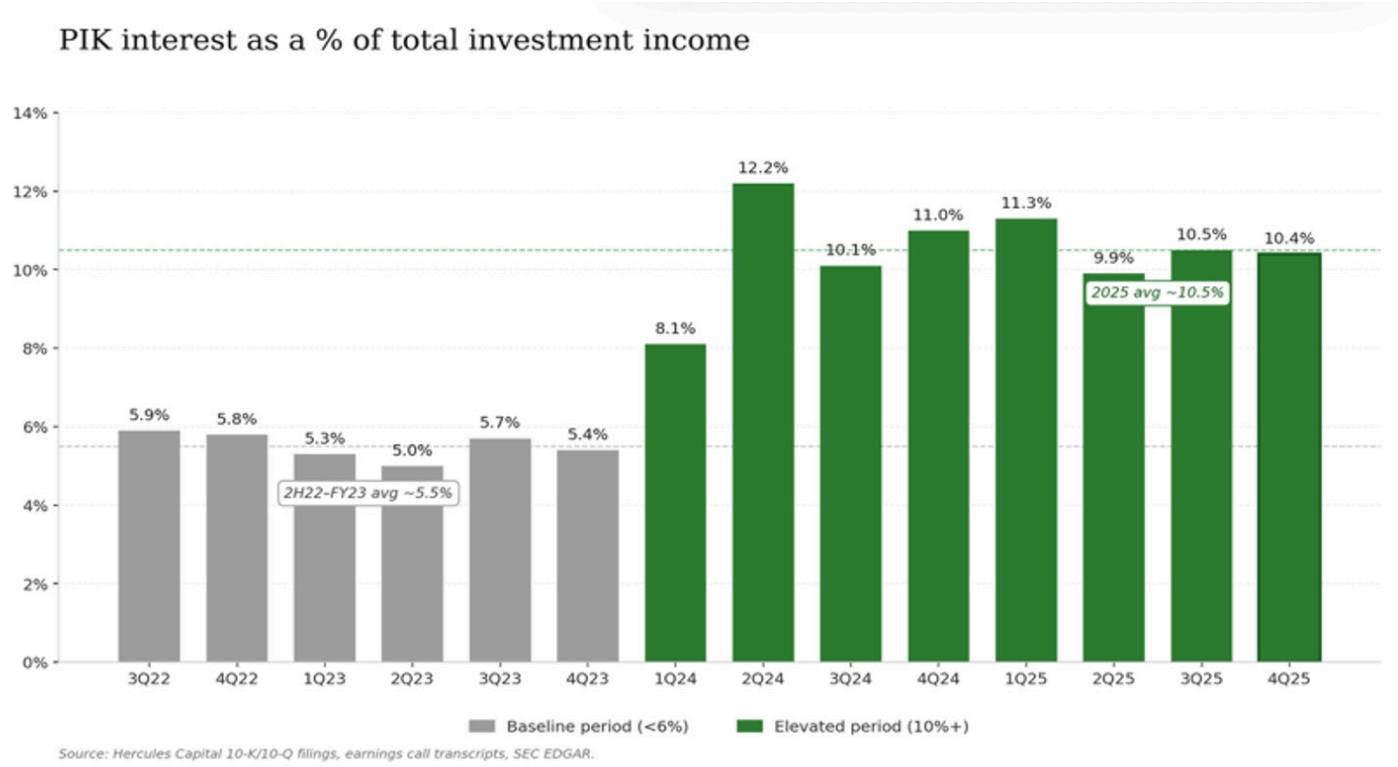


Hercules trades at a 25.6% premium to NAV while every other BDC in the peer set trades at a discount — in most cases a steep one. Historically, Hercules absorbed credit losses through equity and warrant gains, such as the windfall returns from early-stage stakes in companies like DocuSign, Palantir, and Pinterest that went public during the 2019–2021 IPO boom. Netting those gains against loan losses produced the firm's headline cumulative net realized loss rate of just 3 basis points, the centerpiece of its credit quality pitch. That cushion is gone. The equity and warrant portfolio has shrunk from 11% of total assets in 2020 to roughly 4% today, and the IPO window that generated those gains has been largely closed for two years. Going forward, loan losses flow directly to NAV with no offset. In past cycles, a marginal credit loss was offset by a marginal equity gain. In the current cycle, a marginal credit loss is just a loss, and the same underlying loan-book performance now produces a materially worse reported P&L.

Thesis 2: Phantom PIK Income and a Unique Accounting Method Mask a Dividend with Almost No Real Cash Coverage

Payment-in-kind income is the clearest symptom of deteriorating credit quality inside a venture lending portfolio, and at Hercules PIK has become increasingly treacherous. PIK income has more than doubled in two years, from $24.7 million in 2023 to $55.9 million in 2025. As a share of total interest and dividend income, PIK has grown from roughly 5.7% two years ago to 11% today, meaning one in nine dollars of Hercules' reported investment income was never paid in cash. In 2025, Hercules collected just $4.9 million in actual cash on PIK loans — a 73% collapse from the $18.3 million collected in 2024. The ratio of cash collected to PIK income booked fell from roughly 36% in 2024 to approximately 9% in 2025, meaning the company is booking income at six times the rate it is collecting cash.

As of FY 2025, the outstanding PIK receivable sits at $109.1 million, nearly triple the $38 million balance at year-end 2023. This receivable is not a separate asset class with independent collateral. It is owed by the same cash-burning software borrowers whose loans are marked at par, and if those borrowers deteriorate, the PIK receivable is impaired right alongside the principal.

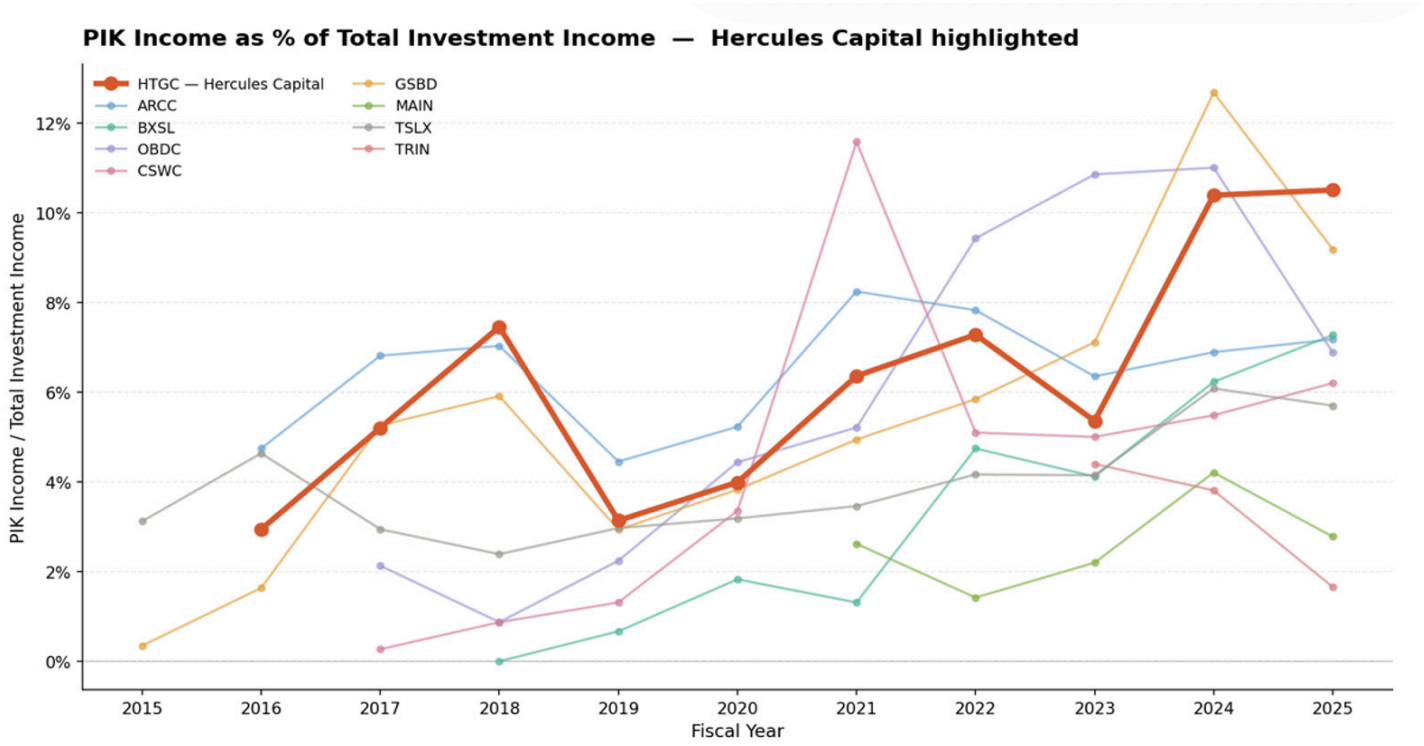


Hercules management has attempted to contextualize the PIK growth, noting on recent earnings calls that approximately 86% of Q4 PIK income was structured into original deal underwriting, and that 91% came from loans rated highly on the company's internal scale. While this may seem assuring, these claims reenforce a bear thesis. By having 86% of PIK structured into the original underwriting, Hercules is intentionally originating a growing share of loans where borrowers are not expected to pay cash interest from day one. By doing this, Hercules creates a competitive concession being made to win deals in a tightening origination environment, producing phantom income from inception on loans to borrowers who either cannot or will not pay cash on an ongoing basis. In short, the distinction between PIK-from-underwriting and PIK-from-amendment misses the first principle that both produce income that has never been paid in cash. The internal credit-rating defense is similarly hollow, because the internal rating is generated by the same valuation infrastructure that marks the software book at par. Citing favorable internal ratings as evidence of credit quality on PIK loans is circular: it is the same process being asked to validate itself. Hercules' own 10-K states that payments on PIK loans are normally received only in the event of payoffs, meaning the $109.1 million in accumulated receivables are contingent almost entirely on borrower exit events such as acquisitions, IPOs, or refinancings.

Hercules' 119% headline coverage ratio (Net Investment Income of $1.91 covering the $1.60 base distribution) is technically accurate and entirely misleading. Shareholders received total cash distributions of $1.88 per share in 2025, the $1.60 base plus $0.28 in supplemental payments, which against $1.91 of NII leaves just three cents of margin for the full year. Stripping out PIK and other non-cash income using Hercules' own figures, cash NII covers only the base distribution at 105.7%, meaning the supplemental dividend is entirely unsupported by current cash earnings and is being funded by drawing down the $149.9 million spillover reserve. The dilution dynamic compounds this further. Total NII dollars increased in 2025, but per-share NII declined from $2.00 in 2024 to $1.91 because share □□□□□ grew 9.5% year-over-year through the ATM program. The growth engine is literally diluting the income that supports the dividend, and if share issuance continues at pace while NII per share keeps declining, the coverage ratio deteriorates with no deterioration in the underlying credit portfolio required.

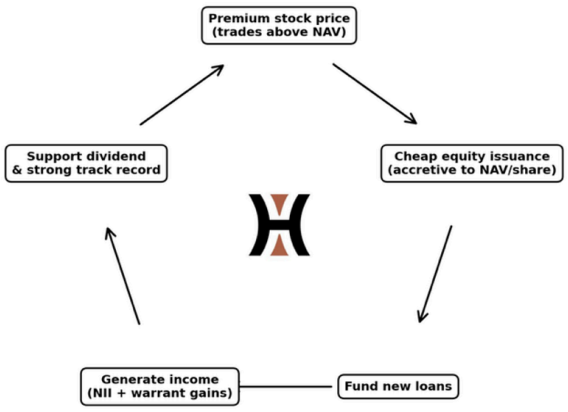
Against this, Hercules has built its credit quality narrative around a single number: 3 basis points of cumulative net realized losses across $21.6 billion in total commitments since inception. By using this, Hercules is subtly communicating an impressive track record— across two decades of venture lending, through multiple rate cycles and two major market dislocations, Hercules has lost almost nothing. It is the number management returns to on every earnings call, the anchor of every investor presentation, and the primary rebuttal to any concern about portfolio credit quality. For income-oriented retail investors evaluating a BDC yielding north of 10%, a 3 basis point loss rate is extraordinarily reassuring, implying that the dividend history and the NAV are both built on a foundation of genuine underwriting discipline. The problem is that the number is not what it appears to be.

The headline credit metric is the centerpiece of Hercules' quality pitch, and it is also, as far as Hunterbrook could determine, a methodology that exists nowhere else in the BDC universe. The calculation nets equity and warrant gains from positions like DocuSign, Palantir, and Pinterest against loan losses. A bank reporting its mortgage default rate after subtracting gains from its equity portfolio would not be taken seriously. Ares Capital, managing nearly seven times the AUM, does not do this. GAAP compliance does not make the calculation informative; it means Hercules has found a GAAP-compliant way to present a number that flatters its credit track record by blending two fundamentally different risk pools. Strip out the warrant gains and the cumulative net realized loss position is negative $134.7 million through Q3 2025. That is the credit-only track record, and going forward, with the equity and warrant book at 4% of assets and the IPO window closed, it is the only number that matters.



Across the public BDC universe in 2025, PIK-as-share-of-investment-income clusters tightly in the 6–7% range for established direct lenders. Hercules at 10.5% sits alone at the top of the cohort, with only Goldman Sachs BDC at 9.2% anywhere in the same neighborhood. However, GSBD has been the subject of its own well-documented credit deterioration and trades at a persistent discount to NAV precisely because the market has already priced in what Hercules' premium has not. Hercules' most similar comparison, Trinity Capital, reports PIK at just 1.6% of total investment income in 2025 despite operating in the same asset class, lending to similar venture-backed borrowers, and competing for many of the same deals. Hercules is ultimately not riding the same credit cycle as its peers.

Thesis 3: The Premium-to-NAV Flywheel that Drives Hercules' Growth Is Already Breaking, With a Dividend Cut as the Likely Trigger



Because Hercules trades at a premium to NAV, every share it issues raises capital above book value. That accretive equity funds new loan originations, which generate interest income, which supports and grows the dividend, which sustains the premium, which enables more accretive issuance. This flywheel is the engine of the entire business model. At 1.25x NAV, issuing $100 million of equity creates $25 million of immediate accretion to existing shareholders. Since FY22, Hercules has raised under $250 million annually through its at-the-market program, supplemented by nearly $940 million in unsecured debt since 2024, and basic shares outstanding grew from 165.1 million in Q4 2024 to 180.8 million in Q4 2025 — a 9.5% increase in a single year — with 18.8 million shares still available under the ATM program at year-end. The model works only as long as the premium holds. The first two theses describe the deterioration in the underlying assets and reported numbers.

The premium to NAV has already compressed from roughly 60% in mid-2024 to approximately 25% today, cut in half in under a year, driven by three overlapping forces: deterioration in the software sector, rising PIK income, and growing investor skepticism about the dividend's true earnings coverage. Critically, the premium does not need to reach zero to cause real damage. At 1.10x NAV the model still works, but weakly. At 1.05x, dilution costs begin to offset issuance benefits. At par, the growth model effectively stops. Below par, equity issuance becomes destructive to existing shareholders, and regulations would further constrain it at that point. This is a sensitivity that compounds itself: as the premium falls, growth slows; as growth slows, the premium falls further. The chain is reflexive.

TriplePoint Venture Growth ran an identical model in the same market — venture lending to software and technology startups — and its collapse followed almost an identical sequence. It lost its premium, which slowed equity issuance, constraining loan growth, pressuring NII, and eventually cutting the dividend and leading to a further re-rating. TPVG now trades at roughly a 35% discount to NAV, and the full arc from premium to deep discount played out in about 18 months. Hercules is a larger and more established franchise, which provides some buffer, but the structural dynamics are the same. And notably, Hercules' software exposure is higher, its portfolio marks are more aggressive, and its PIK buildup is more acute than TriplePoint's was at the comparable stage of deterioration. The base-rate comparison is unfavorable along every dimension that matters.

The specific catalyst that can turn multiple compression into a full sell-off is a cut to the supplemental dividend. Total 2025 distributions were $1.88 per share — $1.60 base plus $0.28 supplemental — and with full-year NII at $1.91, the firm has just three cents of annual coverage. The supplemental dividend is funded entirely from a spillover reserve of prior undistributed earnings, which stood at $149.9 million, or $0.82 per share, at year-end 2025. At the current supplemental run rate, that reserve lasts roughly three years assuming no further NII deterioration, but if NII falls even 10% due to spread compression, rising non-accruals, or slower deployment, the timeline shortens considerably. Management has already acknowledged spreads have been falling quarter after quarter for two years. When management signals a supplemental cut, two things happen at once: income-oriented retail investors, who dominate the BDC shareholder base, sell on the yield drop, and the stock re-rates toward pure credit vehicle multiples, which for software-exposed BDCs without Hercules' specific growth narrative means 0.85–0.95x NAV at best. That re-rating alone, from 1.25x to 0.90x, implies a 28% decline from current prices before any NAV impairment occurs. The short thesis does not require a credit blow-up. It requires only that the market stop paying a growth premium for a company whose growth engine is structurally impaired.

Risks and Mitigants

Risk 1: A Fed pivot and renewed venture funding cycle could reignite software valuations and let borrowers refinance their way out of distress before the marks are forced to correct.

Our thesis does not depend on a particular rate path. The deterioration already visible in Bloomberg's broadly syndicated software loan index, the redemption halts at Blue Owl's retail BDC, and the dividend cut at KKR's BDC all occurred against a backdrop in which rate-cut expectations were already priced into the curve. More fundamentally, the issues facing legacy software borrowers are structural rather than cyclical. Even a meaningful easing cycle would not restore the unit economics of a Sisense or a Ceros, nor would it reopen the IPO window in time to absorb Hercules' aged inventory of pre-IPO borrowers. By the time any refinancing tailwind materializes, the Q1 and Q2 2026 marks will have been forced to reflect the deterioration already visible in adjacent public and syndicated markets, and the re-rating will already have occurred.

Risk 2: Hercules' two-decade track record and internally managed structure may reflect genuine underwriting discipline that justifies its premium to peers.

The track record cited by Hercules' bulls is precisely the artifact our thesis disputes. The headline three basis point cumulative loss rate is a blended figure that nets equity and warrant gains from IPO winners like DocuSign, Palantir, and Pinterest against actual loan losses — a presentation no other BDC in the peer group uses, and one that would not survive scrutiny at any commercial bank. Stripped of warrant gains, Hercules' cumulative net realized loss position is negative $134.7 million through Q3 2025. The internally managed structure is genuinely a positive for cost ratios and management-shareholder alignment, but it does not transform asset quality, and it does not explain a 25.6% premium to NAV at a moment when the equity-and-warrant cushion that historically absorbed credit losses has shrunk from 11% of total assets to roughly 4%. The premium reflects what the credit book used to look like with an IPO tailwind, not what it looks like today.

Risk 3: A handful of large positive exits via IPOs or strategic acquisitions among Hercules' top borrowers could validate the current marks and convert the PIK receivable to cash, neutralizing the credit concern overnight.

Software exposure runs above 35% on a reclassified basis, and the AI disruption hitting legacy analytics, content, and no-code platforms is not a narrative that one or two good exits can rebut. Critically, Hercules' own 10-K acknowledges that PIK income is normally only paid in cash at exit, meaning the $109.1 million PIK receivable depends on exits happening before borrower deterioration forces an impairment. The asymmetry runs against the bulls: a few good exits produce incremental gains, but a few credit blow-ups produce step-function NAV impairments with no warrant offset to dampen them.

Valuation

Dividend Discount Model - Hercules Capital, Inc.

($ USD in 000s Except Per Share Amounts in USD as Stated)

Hercules Capital, Inc. - DDM Assumptions & Output:		Units:
Company Name:	Name	Hercules Capital, Inc.
	Name	HTGC
	Date	2026-05-10
	$ / Share	$ 16.15
	M	187.14
	%	21.00%
	%	4.36%
	%	6.00%
	#	0.67
Discount Rate (Cost of Equity):	%	8.37%
Conversion Units:	#	1,000
Last Fiscal Year:	Date	2025-12-31

Terminal Value - Multiples Method:	
Median Forward P / E of Comps:	9.6 x
Forward P / E of Target:	8.1 x
Baseline Terminal P / E Multiple:	8.0 x
Baseline Terminal Value:	$ 1,536,018.3
Implied Terminal NI Growth Rate:	(16.2%)
(+) PV of Terminal Value:	1,027,826.5
(+) PV of Dividends:	61,024.1
Implied Equity Value:	**1,088,850.6**
% of Implied Eq. Val. From TV:	*94.4%*
Diluted Shares Outstanding:	187.140
Implied Share Price from DDM:	**$ 5.82**
Premium / (Discount) to Current:	**(64.0%)**

Terminal Value - Perpetuity Growth Method:	
Expected Long-Term GDP Growth:	2.0%
Baseline Terminal Net Income Growth:	1.3%
Baseline Terminal Value:	$ 2,767,249.2
Implied Terminal P / E Multiple:	14.4 x
(+) PV of Terminal Value:	1,851,704.6
(+) PV of Dividends:	59,804.3
Implied Equity Value:	**1,911,508.9**
% of Implied Eq. Val. From TV:	*96.9%*
Diluted Shares Outstanding:	187.140
Implied Share Price from DDM:	**$ 10.21**
Premium / (Discount) to Current:	**(58.1%)**

	Historicals			Projected				
Assumptions and Drivers:	**FY23**	**FY24**	**FY25**	**FY26E**	**FY27E**	**FY28E**	**FY29E**	**FY30E**
Investment Income								
Interest and Dividend Income:	$ 434,425	$ 467,195	$ 507,887	$ (52,632.6)	$ 197,672.7	$ 252,428.8	$ 404,832.4	$ 410,572.9
Fee Income:	26,243	26,396	24,606	26,020.9	29,428.3	33,185.1	36,316.6	39,448.1
Total Investment Income	**460,668**	**493,591**	**532,493**	**(26,612)**	**227,101**	**285,614**	**441,149**	**450,021**
Annual Growth Rate:		*7.1%*	*7.9%*	*(105.0%)*	*(953.4%)*	*25.8%*	*54.5%*	*2.0%*

	Historicals			Projected				
Hercules Capital, Inc. - Dividend Projections	**FY23**	**FY24**	**FY25**	**FY26E**	**FY27E**	**FY28E**	**FY29E**	**FY30E**
Revenue	**$ 460,668**	**$ 493,591**	**$ 532,493**	**$ (26,612)**	**$ 227,101**	**$ 285,614**	**$ 441,149**	**$ 450,021**
(-) Interest Expense	(67,620)	(77,151)	(92,176)	(107,990)	(120,256)	(124,787)	(126,306)	(125,069)
(-) Loan Fees	(9,845)	(8,807)	(11,009)	(11,200)	(11,000)	(10,500)	(10,000)	(9,800)
(-) General and Administrative	(18,696)	(19,672)	(19,029)	(21,044)	(23,492)	(24,957)	(25,261)	(25,524)
(-) Tax Expenses	(6,071)	(5,835)	(5,805)	(5,900)	(6,100)	(6,300)	(6,400)	(6,500)
(-) Compensation and Benefits	(50,258)	(54,233)	(63,349)	(67,563)	(72,713)	(75,957)	(77,889)	(79,125)
(-) Stock-based Compensation	(13,242)	(12,841)	(14,649)	(15,000)	(14,500)	(13,500)	(12,500)	(12,000)
(-) Expenses allocated to the Adviser Subsidiary	9,101	10,780	15,244	16,000	17,000	18,000	18,500	19,000
Net Investment Income	**$ 304,037**	**$ 315,052**	**$ 326,476**	**$ (255,308)**	**$ (20,960)**	**$ 29,613**	**$ 182,793**	**$ 192,002**
Distributable Cash Flow:								
(-) Net change in unrealised (appreciation) depreciation	(25,010)	31,209	(38,812)	22,000	39,000	47,000	39,000	31,500
(+) Net realised (gain) loss	(8,437)	31,486	40,611	8,000	12,000	15,000	12,000	10,000
(-) Payments for derivative instruments	-	(849)	(1,551)	-	-	-	-	-
(-) Accretion of paid-in-kind interest	(24,670)	(51,270)	(55,923)	(41,300)	(40,100)	(40,500)	(44,800)	(45,000)
PIK income as a % of revenue	*8%*	*16%*	*17%*	*-16%*	*-191%*	*137%*	*25%*	*23%*
(-) Accretion of loan discounts	(6,939)	(4,636)	(7,172)	(6,200)	(6,000)	(6,100)	(6,700)	(6,800)
Loan discount accretion as a % of revenue	*-2%*	*-1%*	*-2%*	*2%*	*29%*	*-21%*	*-4%*	*-4%*
(+) Loss on extinguishment of debt	-	-	1,000	-	-	-	-	-
(-) Accretion of loan exit fees	(24,961)	(26,655)	(33,109)	(26,900)	(26,100)	(26,300)	(29,100)	(29,300)
Loan exit fees as a % of revenue	*-8%*	*-8%*	*-10%*	*11%*	*125%*	*-89%*	*-16%*	*-15%*
(+/-) Change in loan income, net of collections	23,796	23,509	27,552	25,000	20,000	15,000	12,000	12,000
(+/-) Unearned fees related to unfunded commitments	(2,650)	(400)	(965)	-	-	-	-	-
(+) Amortisation of debt fees and issuance cossts	6,980	6,956	8,503	7,000	6,800	6,900	7,600	7,700
(+) Depreciation and amortisation	190	466	337	400	425	425	425	425
(+) Stock-based compensation and amortisation of restricted stock	11,927	12,485	14,791	15,000	14,500	13,500	12,500	12,000
(+/-) Interest receivable	(1,050)	62	(5,337)	-	-	-	-	-
(+/-) Other assets	(22,466)	1,672	3,193	-	-	-	-	-
(+/-) Accrued liabilities	6,347	13,688	8,043	-	-	-	-	-
Distributable Cash Flow:	**237,094**	**353,624**	**288,188**	**(252,308)**	**(435)**	**54,538**	**185,718**	**184,527**
Dividends:								0.887529723
Stock Count (000s)	**157,758**	**170,575**	**182,695**	**187,120**	**187,120**	**187,120**	**187,120**	**187,120**
RIC Minimum Distribution Requirement	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**	**90%**
Minimum Dividend to Maintain RIC Status	**213,385**	**318,262**	**259,369**	**(227,077)**	**(391)**	**49,084**	**167,147**	**166,075**
Target Payout Ratio	**126%**	**93%**	**119%**	**90%**	**90%**	**90%**	**90%**	**90%**
Distributions Paid:	**299,740**	**327,504**	**343,467**	**(227,077)**	**(391)**	**49,084**	**167,147**	**166,075**
% Growth Rate:		9.3%	4.9%	(166.1%)	(99.8%)	(12638.2%)	240.5%	(0.6%)

Hercules Capital, Inc. (HTGC)

Portfolio Breakdown — Schedule of Investments as of Dec 31, 2025

Loan-level rate decomposition wired to Revenue Build

Portfolio summary by section

Section	# Companies	# Positions	Cost ($000s)	Fair Value ($000s)	% of Total FV
Debt Investments	127	138	4,263,950	4,279,412	95.8%
Equity Investments	74	84	165,928	139,010	3.1%
Warrant Investments	108	114	33,450	41,162	0.9%
Investment Funds & Vehicles	3	3	4,640	7,063	0.2%
Total portfolio	**312**	**339**	**4,467,968**	**4,466,647**	**100.0%**

Debt portfolio by industry

Sector	# Companies	# Positions	Cost ($000s)	Fair Value ($000s)	% of Debt FV
Distressed Companies	16	16	323,430	318,900	7.5%
Application Software	41	45	1,066,058	1,606,137	37.5%
Biotechnology Tools	23	24	987,270	1,018,000	23.8%
Healthcare Services, Other	16	17	828,803	736,861	17.2%
Defense Technologies	2	2	137,509	138,080	3.2%
Medical Devices & Equipment	3	3	74,875	74,771	1.7%
Space Technologies	3	3	43,693	43,792	1.0%
Sustainable and Renewable Technology	2	3	35,032	34,937	0.8%
Communications & Networking	1	1	28,536	101,270	2.4%
Manufacturing Technology	1	1	20,088	85,484	2.0%
Consumer & Business Products	1	1	7,472	121,180	2.8%
Total debt	**93**	**100**	**3,229,336**	**4,279,412**	**92.5%**

Year	Portfolio Yield
2024	9.85%
2025	9.66%
2026	9.53%
2027	9.46%
2028	9.46%
2029	9.46%
2030	9.45%

2026E							2027E							2028E						
Gross Income	Expected Default Rate	Expected Non-Accrual	Recovery Rate	Credit Loss	Non-Accrual Adj	ACTUAL INV. INCOME	Gross Income	Expected Default Rate	Expected Non-Accrual	Recovery Rate	Credit Loss	Non-Accrual Adj	ACTUAL INV. INCOME	Gross Income	Expected Default Rate	Expected Non-Accrual	Recovery Rate	Credit Loss	Non-Accrual Adj	ACTUAL INV. INCOME
3,141	90.0%	15.0%	5.0%	(272,660)	(4,712)	(274,230)	3,080	10.0%	10.0%	10.0%	(20,701)	(3,018)	(28,639)	28,971	4.0%	5.0%	42.0%	(7,398)	(1,660)	19,913
142,384	10.0%	8.0%	35.0%	(104,399)	(12,656)	25,329	139,614	10.0%	7.0%	38.0%	(99,580)	(10,639)	29,394	136,792	10.0%	5.0%	42.0%	(93,156)	(8,359)	35,276
96,262	4.0%	5.0%	75.0%	(10,180)	(5,014)	81,068	94,881	3.5%	4.5%	77.0%	(8,195)	(4,335)	82,351	93,445	3.0%	3.8%	78.0%	(6,719)	(3,661)	83,065
70,403	3.0%	3.8%	80.0%	(4,421)	(2,758)	63,224	69,176	2.8%	3.5%	80.0%	(4,126)	(2,441)	62,609	67,987	2.5%	3.0%	82.0%	(3,316)	(2,092)	62,579
13,356	1.8%	2.2%	85.0%	(373)	(299)	12,684	13,136	1.5%	2.0%	85.0%	(311)	(261)	12,564	12,897	1.3%	1.8%	87.0%	(233)	(235)	12,428
7,129	3.2%	4.0%	78.0%	(526)	(295)	6,308	7,019	2.8%	3.5%	80.0%	(419)	(248)	6,353	6,899	2.5%	3.0%	80.0%	(374)	(212)	6,313
4,132	4.2%	5.3%	72.0%	(515)	(229)	3,389	4,069	3.8%	4.8%	74.0%	(433)	(199)	3,437	4,007	3.3%	4.2%	75.0%	(361)	(174)	3,472
3,321	3.5%	4.5%	74.0%	(318)	(155)	2,848	3,273	3.0%	4.0%	76.0%	(252)	(132)	2,889	3,217	2.7%	3.5%	77.0%	(217)	(116)	2,884
9,696	2.8%	3.5%	80.0%	(567)	(349)	8,780	9,536	2.5%	3.0%	80.0%	(506)	(287)	8,743	9,372	2.2%	2.8%	82.0%	(401)	(268)	8,703
8,210	2.5%	3.0%	80.0%	(427)	(253)	7,530	8,075	2.2%	2.8%	82.0%	(339)	(227)	7,510	7,928	2.0%	2.5%	83.0%	(291)	(202)	7,435
11,602	2.8%	3.5%	78.0%	(746)	(418)	10,438	11,411	2.5%	3.0%	80.0%	(606)	(344)	10,461	11,215	2.2%	2.8%	80.0%	(533)	(321)	10,361
369,637				**(395,133)**	**(27,137)**	**(52,633)**	**363,271**				**(143,467)**	**(22,131)**	**197,673**	**382,729**				**(112,999)**	**(17,301)**	**252,429**

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Diageo PLC (NYSE: DEO)

Consumer & Retail
Spring 2026

Investment Overview

We recommend an investment in Diageo PLC (NYSE: DEO) as the current valuation overstates structural headwinds in North America and misprices Diageo's strength in emerging markets. Diageo's U.S.-listed shares have faced significant downward pressure since 2022, reaching a new 52-week low of $72.45 in March 2026, due to headwinds in North America, China, and Latin America. However, the market fails to extrapolate that these headwinds are cyclical, fearing a structural decline in alcohol consumption in North America and overstating non-recurring inventory mishaps and macroeconomic headwinds.

We see Diageo as extremely undervalued at its current valuation. Contrary to the market's current sentiment, we believe that alcohol will remain a resilient category in the long term and that the current trough in alcohol consumption in North America is a cyclical phenomenon rather than a permanent shift in consumer behavior. Diageo's recent weakness in North America has also been overblown due to destocking following the post-COVID "revenge consumption" period, the long-term strength of premiumization in alcohol, the resilience of the spirits category, and tequila/agave category normalization.

The current valuation also fails to reflect Diageo's strength outside of North America. Diageo's strength in Africa, visible in H1 2026 results, is a structural growth story powered by high investment in the region and distribution infrastructure that creates high barriers for entry, and premiumization-backed demand growth. India has also been underestimated as a mere counterbalance to the decline in Chinese spirits and a weak market, with the market failing to realize how India's large, less price-sensitive population is a strong match for Diageo's premium portfolio. The market perception of the Latin American market is also heavily anchored to underperformance in 2023, a period characterized by inventory destocking and macroeconomic headwinds in various countries within the region.

NYSE: DEO

Rating:	Buy
Price: (at close, 05/15/26)	$81.69
Recommendation	$170.72

52 week range	$	72.45 -116.69
DSO	mn	49.0
Market capitalization	$bn	44.86
EPS (FY 2025)	$	4.23
Consensus	$	101.29
Sector		Alcohol and Spirits
Revenue		$20245.7million

Price performance

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Company Overview

History

Diageo PLC ("Diageo") is a London, England based spirits company distributing more than 200 brands. The company was founded through the 1997 merger of UK-based leisure and F&B conglomerate Grand Metropolitan PLC and stout brewery Guinness PLC. Soon after the merger, in 2000, Diageo sold off its food assets including Burger King and Pillsbury in order to focus on premium drinks.

While divesting from non-core industries as such, Diageo has acquired many companies in their core category, alcoholic beverages. Key acquisitions include Don Julio (2015) and Casamigos (2017) in the tequila and agave industry, Chase Distillery (2017), Aviation Gin LLC, and Davos Brands LLC (2020) in the gin and vodka industry, and United Spirits Limited (2013) and Sichuan Sujingfang (2019)

in the global alcoholic beverage industry. The company has expanded outside of their traditional focus on alcoholic beverages into non-alcoholic beverages to meet rising consumer demand. Today, the company trades on the London Stock Exchange (DGE) and as an American Depositary Receipt (ADR) on the New York Stock Exchange (DEO), with one DEO representing four DGE shares.

Management

Diageo is led by Sir Dave Lewis, the company's CEO. He was appointed to his current management position November 10, 2025 and became CEO on January 1, 2026. He has served as Group CEO of Tesco PLC from 2014 to 2020 and has spent three decades at Unilever, primarily in various Executive Committee roles. He currently serves external roles as a non-executive director at PepsiCo, non-executive director andchair at WWF-UK, and trustee at The Royal Foundation of the Prince and Princess of Wales. In February 2026, Sir Dave Lewis announced his plans to restructure the company's executive committee.

Business Model

Diageo's business model focuses on producing, marketing, and distributing its products across around 180 countries and territories globally, generating revenue through a portfolio of acquired brands that cover multiple price tiers and categories. The company, although it relies on third-party distributors, has an efficient supply chain in which the company itself operates across the entire production process, from distillation and maturation to bottling, marketing, and distribution. Such an efficient supply chain model allows Diageo to become more capital-efficient as its business model does not require a significant amount of capital as fully vertically integrated retail companies do. At the same time, the company's ownership over its production infrastructure such as distilleries and bottling facilities ensures high product quality and supply chain stability.

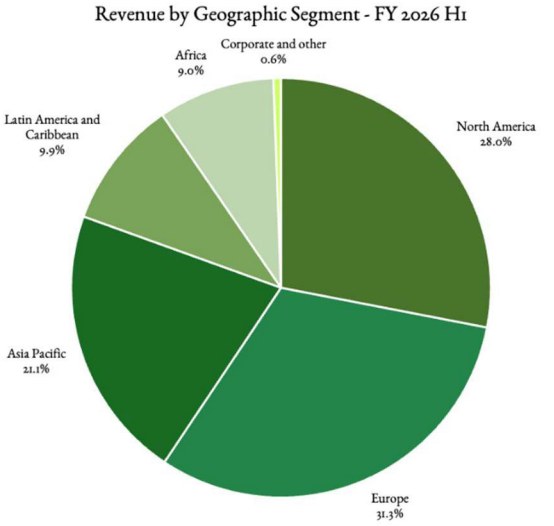
Spirits constitute 76% of Diageo's revenue, including scotch, tequila, vodka, Canadian whisky, rum, liqueur, and other spirits. Beer constitutes 18% of revenue and is dominated by Guinness, which is the fastest-growing beer brand in North America with a growth rate of 15%. Ready to drink (RTD) products constitute 4% of revenue, comprising canned cocktail drinks based on core spirit brands and products.

Segmentation

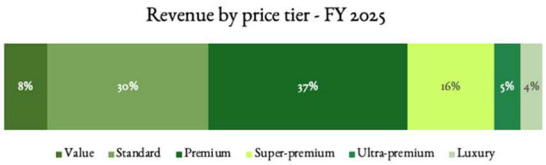
The company reports in geographical segmentation for the consolidated income statement: North America, Europe, Asia Pacific, Latin America and Caribbean, Africa, and Corporate and other.

Recent Developments

In May 2025, Diageo launched its Accelerate Programme, a three-year-long initiative focused on cost savings with the goal of reaching $625 million in annualized savings by reducing overhead costs, enhancing operational efficiency through restructuring, and optimizing spendings on trade investment. More specific plans for the initial phases of the initiative includes reorganizing the North American market to mitigate the impact of high tariffs on imported products like tequila. The company intends to reinvest its savings into brand growth through innovation and expand its brand portfolio further.



(Figure 1)



Alongside the launch of the cost restructuring plan, Diageo has been shedding non-core assets of the company in order to pay down debt and focus more on the core assets of its brand portfolio. The company sold its 65% stake in East African Breweries Limited (EABL) for approximately $2.3 billion to Asahi Group, marking the end of Diageo's direct production and brewing in the African region. Diageo-owned company United Spirits Limited also sold its entire stake in the Royal Challengers Bangalore for $1.78 billion.

In order to generate demand amidst shifting consumer preferences, Diageo is focusing on flavor innovation, particularly within its whisky product portfolio where it has been historically proven that consumer engagement with new profiles drives premiumization and trial. Recent launches include the blackberry and chocolate flavor of their Canadian whisky Crown Royal and Johnnie Walker Black Ruby.

Industry Overview

Industry Health and Conditions for Positive Performance

The alcohol industry is experiencing different trends across developed and emerging markets. Developed markets appear relatively stagnant. The United Kingdom's alcohol spending declined 5% between 2004 and 2014 due to lower per-capita consumption and increasing popularity of off-trade alcohol spending (cheaper than on-trade) (Institute of Alcohol Studies, 2020). Following a similar pattern, the US spirits market saw organic net sales fall 9.3% and volumes decline 6.8% in H1 FY26. Tequila, a past growth engine, took an especially large hit as it declined 23.1% in the same period. This is also present in China as volumes of Chinese white spirits fell over 50% due to policy changes that shifted the gifting and banquets culture (Diageo H1 FY26 filings). The alcohol industry generally performs well under the conditions of rising disposable income and an expanding urban middle class. Those factors are present in some emerging markets, especially India and Africa. India is the only market globally where consumer sentiment, recalled volume, and recalled spend are all positive, and the IWSR projects a 12.4% CAGR for Indian alcoholic beverages through 2035. The premium segment of the industry has its own notable features. It demonstrated resilience to recessions as consumers tend to resume normal alcohol spending patterns relatively quickly. Also, the trend of premiumization has continued even during volume declines such as the UK from 2004 to 2014 and the US from 2010 to 2019.

Key Industry Trends

Trend #1: Premiumization - Consumers have been drinking "less but better," purchasing higher quality, more expensive products but less volume in developed markets. This strategy developed in response to lower per-capita volume consumption. It has been a large reason why the industry has maintained revenue growth despite stagnated volumes. In the UK, premiumization and price increases offset a 13% reduction in per-capita consumption between 2004 and 2014. This contributed to a 19% increase in overall market value during the same period (Institute of Alcohol Studies, 2020). In the US spirits market, premium and high-end price categories grew roughly 7% annually in 2010 to 2019 despite the value tier remaining stagnant (Institute of Alcohol Studies). Premium-and-above international spirits have grown globally from 26% to 35% of the international spirits category over the last decade. The super-premium-plus tier is also growing over 50% faster than other price tiers and gained 6% value share since 2014 (Diageo 2025 20-F).

Trend #2: E-shaped Consumer Economy - Current value growth is driven primarily by high-earners while middle and lower-income consumers are purchasing lower volumes. This has marked a shift from a K-shaped alcohol economy to an "E-shaped" one. India exemplifies this: the top 10% of consumers by volume generate 42% of total net profit for the spirits industry. However, the super-premium and luxury segment account for 3% of volume but 21% of net profit. Value is intensely concentrated towards the upper income segment. Furthermore, the upper-middle income segment in India saw its alcohol consumption triple, rising from 7% to 21% and is projected to reach 44% by 2030 based on ICRIER estimates as disposable incomes rise (Allied Blenders and Distillers). The same pattern applies to the US as super premium spirits are projected to grow at a 5.3% CAGR through 2028, while value spirits are expected to decline at -1.1% CAGR (Fevertree US Limited). This split benefits companies with premium options, which explains recent weakness in mid-tier brands like Casamigos and Johnnie Walker in the US market.

Trend #3: Wellness Trends Inhibiting Demand - Wellness trends promoting alcohol moderation, increasingly popular GLP-1 weight-loss drugs, and the legalization of cannabis have sparked conversation regarding their possible negative impacts on alcohol demand. However, this risk is currently limited to developed markets and long-term implications are uncertain. Gallup 2025 data showed that for the first time a majority of Americans (53%) believe that moderate drinking is unhealthy, which is a dramatic increase from 28% in 2018. This speaks to a larger cultural shift largely sparked by the US Surgeon General's January 2025 advisory. However, consumers who drink less tend to trade up to purchase a lower volume but higher quality products. This suggests that moderation can somewhat complement premiumization. Clinical research on GLP-1 drugs shows medications including semaglutide can reduce alcohol cravings in patients with Alcohol Use Disorder. The risk to the overall population is largely speculative, though the approximate $350 monthly cost of GLP-1s may reduce demand (JAMA Psychiatry). As for cannabis, Diageo's US research suggests it has not yet significantly disrupted spirits consumption, though it is a possible substitute for alcohol (Diageo 2025 20-F). These GLP-1 and cannabis risks are lower in emerging markets due to the cost of GLP1 adoption and cannabis remains illegal in many emerging markets.

Competitive Landscape

The global spirits industry is moderately concentrated. The top five companies are Diageo, Pernod Ricard, Brown-Forman, Bacardi, and LVMH (Moët Hennesy). These companies together hold roughly 14% of the total market by revenue. The remaining share is fragmented across regional producers, craft distillers, and domestic players like China's Kweichow Moutai and Wuliangye. By volume, Diageo leads with approximately 7.6% global share, followed by Pernod Ricard at 4.6% and Suntory Holdings at 3.0%.

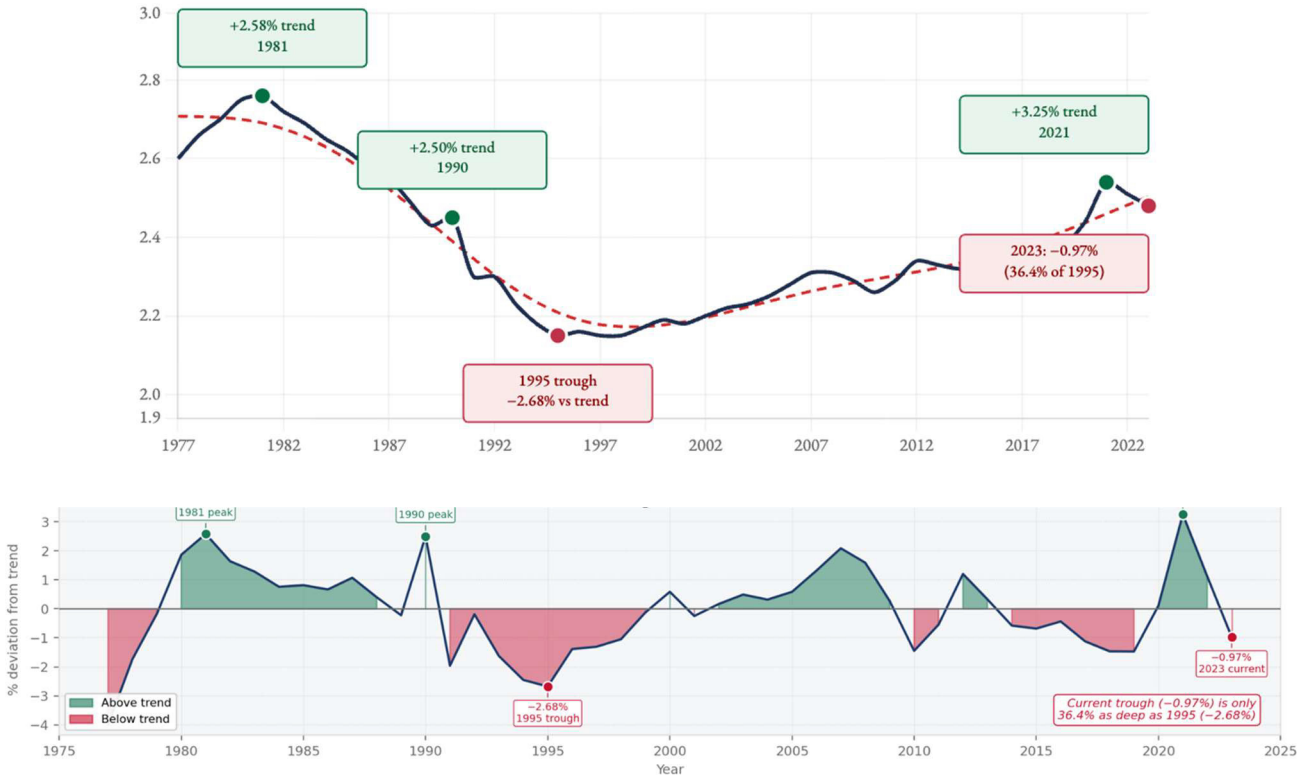
In value terms, Diageo leads both the whiskies and white spirits categories globally and is also the leading stout player through Guinness. However, despite years of dealmaking and geographic expansion, Diageo lost its title as the world's most valuable alcoholic beverage company in 2017 when China's Kweichow Moutai surpassed it in market capitalization. This shift underscores how domestic Chinese spirits producers, though less internationally diversified, can command enormous valuations driven by concentrated home-market demand.

The competitive dynamics of the industry increasingly favor companies with diversified geographic footprints and portfolios weighted toward premium-and-above price tiers. In fiscal 2025, approximately 62% of Diageo's reported net sales came from premium-and-above price tiers, with roughly 25% from super-premium and higher. This positioning is relevant because, as noted above, value growth is disproportionately concentrated in the upper end of the price spectrum, and companies with luxury and ultra-premium portfolios are better insulated from the volume declines affecting mid-tier and value brands in developed markets. Diageo has further sharpened this focus through the creation of the Diageo Luxury Group in late 2024, a new division uniting brands that retail at $100 and above. This segment has been the fastest-growing price tier in international spirits since 2020 in both volume and value terms.

Investment Theses

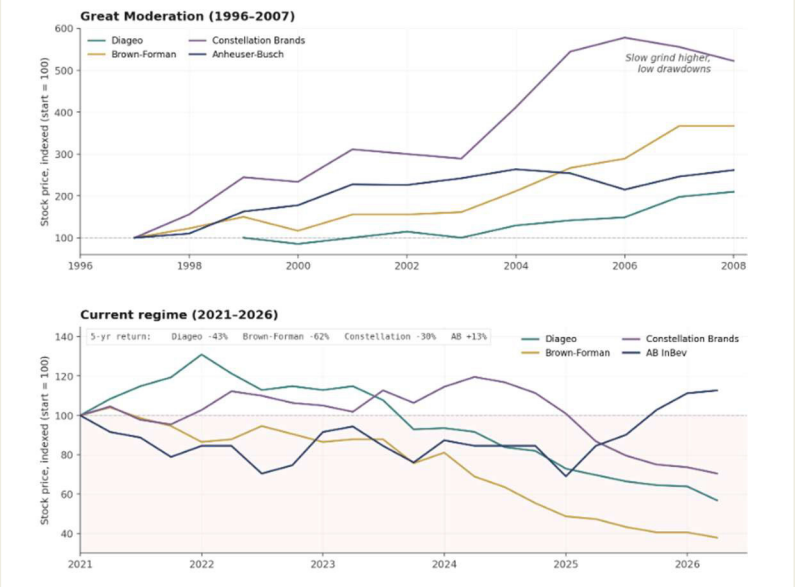
Thesis 1A: Overexaggerated moderation in consumption extrapolated by street

Every time the U.S. faced a trough in alcohol consumption within the past 80 years, a narrative arguing that the decline is permanent and structural. For instance, the popular theory explaining the 1995 trough was vastly structural, arguing that the Drug Abuse Resistance Education (DARE) had changed youth perception towards substances, turning Generation X into a more health-conscious group of individuals that reject the drinking culture of their Boomer generation parents and that the increase in minimum drinking age in 1984 was producing a new culture of abstinence. Despite the fact that this narrative was supported by researchers publishing



(Figure 2b: HP filter cyclical component: deviation from trend)

The Hodrick-Prescott (HP) filter decomposition of the NIAAA per-capita ethanol consumption series (1977-2023, NIAAA Surveillance Report #122) separates the data into two components: a slowly-moving long-run trendline that captures secular influences like demographic, income growth, and regulation, and a cyclical trendline that captures other miscellaneous influences including shifts in attitude and taste. Panel A (Fig 1.) plots these two components together.



(Figure 3)

Panel B (Fig 2.) isolates this cyclical component and provides a more precise visual representation of the relative magnitude of the past and present moderation episodes based on the deviation from trend. First, the peaks in 1981 and 1990, at +2.58% and 2.50% above trend respectively correspond to Boomer and late Boomer generations' consumption peaks. Second, the trough in 1995 at -2.68% is the deepest cyclical deviation. This resulted in a prevailing narrative that DARE, minimum age drinking legislation, and Generation X temperance created a permanent decline in demand for alcohol. However, after a decade, in 2007, alcohol consumption recovered back to trend, proving such a narrative to be false. Third, the peak in 2021, at +3.25% was the largest above-cyclical deviation within the given timeframe, exceeding even the two Boomer peaks. Fourth and most importantly, the most recent trough in 2023 at -0.97%, which is only approximately 36.4% as deep as the trough in 1995.

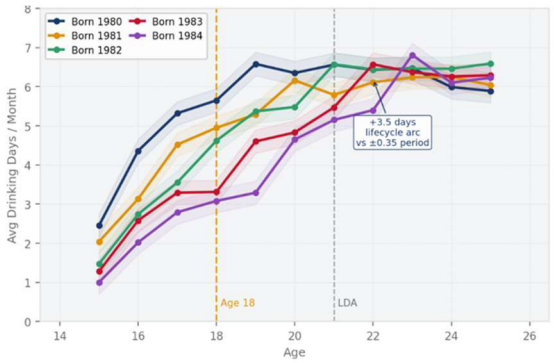
Year	Phase	Cycle %	Vs. 1995	Prevailing narrative at the time
1981	Peak	+2.58%		
1990	Peak	+2.50%		
1995	Trough	-2.68%	100%	DARE generating Generation X sentiment towards sobriety; change in minimum drinking age
2007	Peak	+2.08%		Full reversal after the deepest trough in 1995; Millennial adulthood entry
2019	Trough	-1.47%	54.9%	Early moderation
2021	Peak	+3.25%		Spike in at-home consumption during COVID-19

(Table 1)

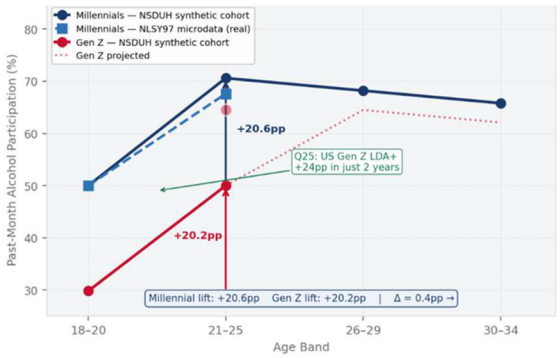
The HP filter identifies four major above-trend peaks within the timeframe: 1981 (2.58%), 1990 (2.50%), 2007 (+2.08%), and 2021 (+3.25%). The peak-to-peak intervals are respectively 9 years, 17 years, and 14 years, averaging 13.3 years. While the peaks at 1981, 1990, and 2007 represent times when particular generations entered their time of peak consumption i n adulthood, the peak in 2021, with the largest deviation, was driven not by a new demographic entry but by COVID-19 at-home consumption. The Generation Z moderation narrative that has prevailed not much later in 2023 is partly contributed by a mean reversion from a pandemic shock, not from permanent abstinence.

Generation Z Alcohol Moderation is a Lifecycle Pattern, Not a Structural Decline

The market now identifies the pattern of younger Generation Z consumers having less alcohol consumption as a result of alcohol moderation, which they view as a proxy for a structural decline in demand for Diageo's alcoholic products. While the market believes that Generation Z has fundamentally changed their relationship with alcohol as a result of wellness culture and mental health awareness, we believe that the lower alcohol consumption level is a result of Generation Z being a younger cohort.

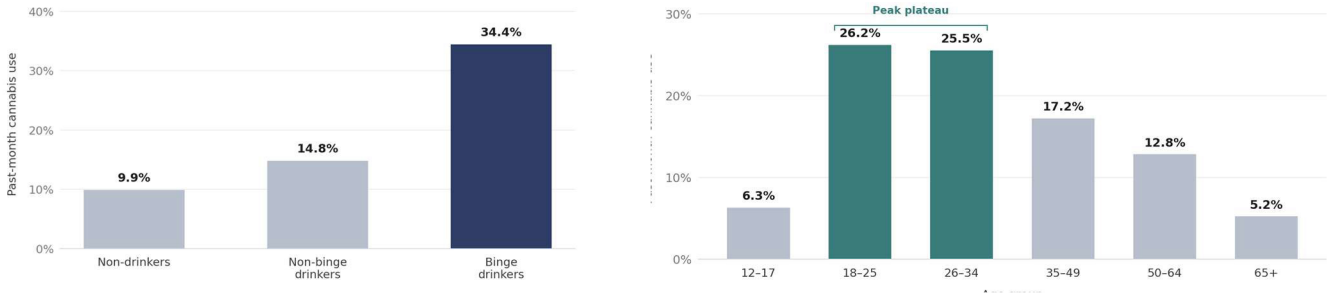


(Fig 4a: Lifecycle trajectory by Birth Year)



(Fig 4b: Gen Z mirrors millennial lifecycle arc)

The narrative on Generation Z sobriety relies on a real observation. Gallup survey data shows that 18-34-year-old alcohol consumption participation has fallen 10 percent over the two decades, from 72% in 2001-2003 to 62% in 2021-2023. Although the market is correct in identifying such trends and expressing concerns, they are wrong in interpreting the trend as generationally permanent rather than agedistributional. The 18-34 year age bracket set by Gallup spans Generation Z to Millennials, who showed a strong moderation pattern before their alcohol consumption escalated with age. Furthermore, over the 20 years, drinking among Americans 55 and older went up from 49% to 59%, showing that the trend can be more accurately explained as a demographic redistribution where younger cohorts (Generation Z) are moderating before they age into the peak consumption age while older cohorts (Millennials) continue to drink as they get older and enter late adulthood. Panel A (Fig 2.) shows that regardless of how low the average drinking days per month was when people were adolescence, all five birth-year sub-cohorts (born in 1980, 1981, 1982, 1983, 1984) converged to approximately 6.0-6.8 drinking days per month by the age of 22-23. It is important to understand that Generation Z is defined as those born between 1997 and 2012, meaning that the majority of the cohort is currently 25 or under, with a large proportion of the generation still in their teens. Most of Generation Z has not entered the 22-23 age window where drinking habits start converging.



(Figure 5A and 5B)

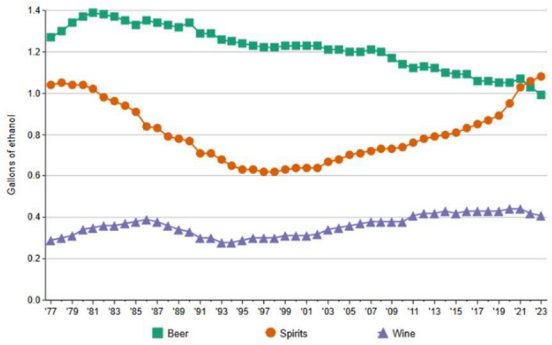
Cannabis is a Complement, Not a Substitute, to Alcohol

The market argues that as recreational cannabis legalizes across multiple states in the U.S., people substitute cannabis for alcohol, resulting in a structural decline in demand for alcohol. However, data supports the exact opposite argument that states that cannabis and alcohol are complements, not substitutes. Panel A (Fig 5.) indicates the percentage of people currently using cannabis among three groups of drinkers: non-drinkers, non-binge drinkers, and binge drinkers. If cannabis consumption was, as the market argues, substituting for alcohol consumption, it would be expected for the heaviest drinkers to use cannabis the least. However, the graph shows that binge drinkers have the highest percentage of current cannabis users and non-drinkers have the lowest. In fact, the % of binge drinkers currently using cannabis is at 3.5x of the % of non-drinkers currently using cannabis (34.4% vs. 9.9%), with the % of non-binge drinkers currently using cannabis falling at 14.8%. Although there may be other factors contributing to the relationship, it is clear that there is a direct relationship between alcohol consumption and cannabis consumption.

This mirrors the alcohol consumption lifecycle pattern that shows alcohol consumption escalating through early adulthood (Fig 2.), showing that both substances are driven by the same underlying force of the age lifecycle. As young adults slowly enter their peak social and recreational years, they tend to consume more of both, not choosing one of the two.

Thesis 1B:
The market has overpenalized Diageo, especially recently, for its seemingly lackluster performance in North America, particularly the United States. As of H1 Fiscal 2026, North America comprised 36.20% of Diageo's total net sales, with the U.S. making up 26.10% of Diageo's total group sales. Thus, the market has extrapolated a long-term weakness in North America, failing to contextualize recent weakness in the region.

(i) Destocking cycle distortion: The onset of the COVID-19 pandemic led to supply chain volatility in the U.S., with Diageo reporting during 2021 interim results (for the half year ended December 31, 2020) that "shipments to distributors were about 3 percentage points ahead of depletions," indicating that distributors were aggressively stocking up to hedge against supply chain disruptions. However, in the years following the pandemic (2021 and 2022), a period of "revenge consumption" began as restrictions were lifted, which was characterized by increased premiumization and demand for premium brands rather than volume growth. The International Wine and Spirit Record (IWSR) found that consumers increased their per-bottle spending, highlighting that 33.00% of Americans reported they spent $50.00 or more on a single bottle of alcohol in 2022, up from 24.00% in 2021. In contrast, a report from the National Institute on Alcohol Abuse and Alcoholism, which compiled sales data from the alcoholic beverage sales data collected by the Alcohol Epidemiologic Data System, highlighted that alcohol consumption remained mostly flat (with strong growth in spirits consumption).

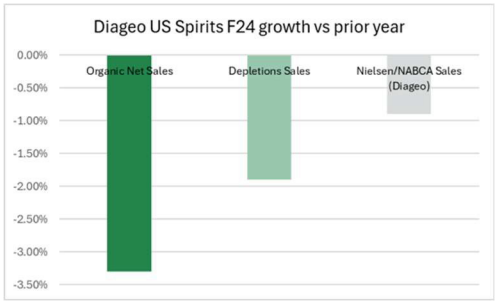


(Figure 6: Per Capita ethanol consumption by beverage type in the U.S.)

However, going into 2022, distributors overcommit on inventory assuming this period of revenge consumption would continue, which was evident in Diageo's reported results for the 2022 fiscal year (ended June 30, 2022), where "US Spirits shipments were ahead of depletions, with a benefit of approximately three percentage points from the replenishment of stock levels by distributors, recovering from lower levels during Covid 19." This "bullwhip effect" was an industry-wide phenomenon, with experts highlighting that "the forecast days out of those two years saw a huge price at the end of the tunnel" and that "there's a high proportion of COVID overstock." Due to this overstock, distributors shifted to a period of destocking in 2023. Diageo noted in its 2023 interim results that the recovery of the on-trade channel, which contributed to the revenge consumption period, led to a replenishment of brands and stock. As a result, "the impact of lapping this replenishment resulted in depletions being significantly ahead of shipments across some brands in the first half of fiscal 23," with depletions in North America overall growing 1% ahead of shipments as distributors continued destocking.

(Figure 7: Diageo US Spirits Distributor Historical Days Sales of Inventory (DSI) levels (from Preliminary results FY 2023 presentation)

This trend continued through 2024, where Diageo's interim 2024 fiscal results showed that "depletion growth was approximately one percentage point ahead of shipment growth in the first half of fiscal 24." However, investors anchor onto the fact that 2024 U.S. spirits net sales fell 3.3%, without failing to realize that this is a period of continued destocking (where shipments to distributors would decrease).

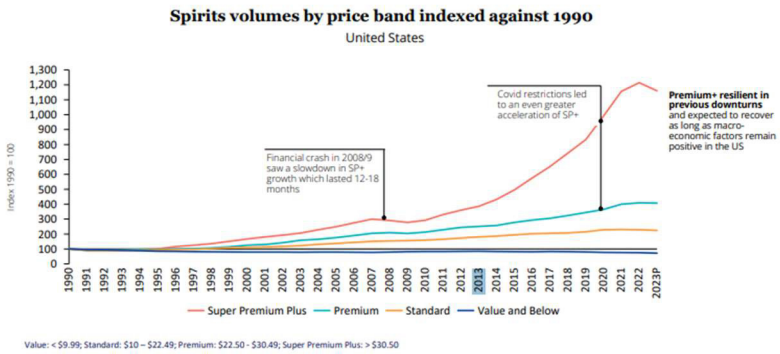


(Figure 8: Comparison of Diageo U.S. Spirits net sales growth in 2024 (YoY) compared to depletions and Nielsen/NABCA estimates)

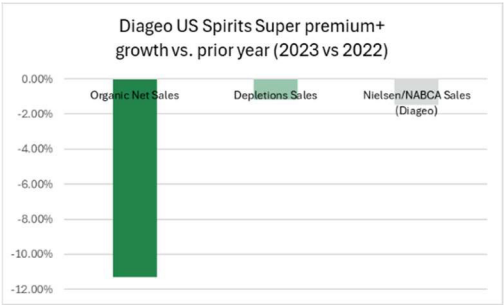
Looking into the Fiscal 25 Preliminary results, "shipment growth was 1.6 percentage points ahead of depletions growth, with some variations across brands," particularly in Don Julio and Crown Royal, indicating a bounce back in demand as orders come in from distributors, highlighting that 2023 and 2024 were not indicators of prolonged weakness.

(ii) Consumer down-trading is cyclical

When comparing the current state of alcoholic consumption, which is characterized by down-trading that contrasts the period of rampant premiumization during the revenge consumption period, the market has extrapolated a structural weakness in the premium alcohol segment. This has led to an overly negative perception of Diageo, given that its portfolio is skewed to premium brands. However, premium spirits have proven to be stable during periods of economic downturn. Data from the Distilled Spirits Council of the United States (DISCUS) reveals that premiumization has thrived as a long-term trend in U.S. spirits. The slight downturn in 2023 for "Super Premium Plus" spirits can be attributed to a "hangover" of the revenge consumption period from the years prior.



(Figure 9: Data from the Distilled Spirits Council of the United States (DISCUS) displaying spirit volumes by price band indexed against



(Figure 10: Diageo Estimates of U.S. Spirits Super Premium+ Tier Net Sales vs. Nielsen+NABCA data and depletions data (from Interim results FY 2024 presentation)

(iii) NA spirits share-of-throat is still gaining: Spirits have gained considerable share in the U.S. Total Beverage Alcohol (TBA) market, making up 42.4% of U.S. supplier revenue in 2025, compared to 28.7% of supplier revenue in 2000.

(Figure 11: U.S. Market Share by Supplier Revenue Across Beer, Wine, and Spirits (derived from DISCUS data)

Similarly, consumption of spirits has increased in recent years (data limited beyond 2023), while beer and wine have remained relatively stagnant. Stable and increasing revenue from spirits through economic cycles indicates that spirits is a consistently growing category. This can be indicative of either steady premiumization, steady volume growth as implied by the second graph, or a combination of both. All of these cases would benefit Diageo as it is the largest spirits player in the world, with spirits accounting for roughly 75% of its total revenue (and roughly 85% of U.S. revenue). Thus, it is clear that Diageo is not suffering from a brand crisis, but is still navigating a period coming out of destocking in a burgeoning category.

(iv) Tequila/agave normalization is masking underlying

Tequila brands, particularly Don Julio and Casamigos, served as a key growth engine for Diageo in the U.S, where Diageo has a much higher share of the premium tequila category compared to the overall market.

U.S. Spirits			
$/unit	Market	Diageo	(vs Mkt)
$50+	15%	22%	7%
$45-50	6%	9%	3%
$40-45	4%	3%	-1%
$35-40	8%	5%	-4%
$30-35	10%	9%	0%
$25-30	15%	18%	4%
$20-25	14%	14%	0%
$15-20	11%	8%	-3%
$10-15	9%	6%	-3%
$6-10	3%	2%	-1%
$3-6	2%	1%	-1%
Under $3	4%	2%	-2%

Tequila			
$/unit	Market	Diageo	(vs Mkt)
$50+	25%	53%	29%
$45-50	10%	17%	6%
$40-45	9%	8%	0%
$35-40	6%	1%	-5%
$30-35	10%	9%	-2%
$25-30	14%	6%	-8%
$20-25	12%	2%	-9%
$15-20	6%	2%	-5%
$10-15	5%	0%	-5%
$6-10	2%	1%	-1%
$3-6	1%	1%	1%
Under $3	1%	0%	-1%

(Figure 12: Diageo % Share of RSV for Market based on ASP per Unit (from Fiscal 26 Interim results)

Prior to the current softening, Diageo's tequila brands grew strongly in the U.S. In H1 Fiscal 2023, the tequila portfolio grew 28% overall, with Don Julio showing 60% growth in net sales. Similarly, in fiscal 2023, tequila became Diageo's third-largest category globally, with Don Julio net sales showing 20% growth in fiscal 2023 and Casamigos net sales growing 16%. However, shipments started to grow ahead of depletions in fiscal 2024, with Don Julio net sales growing 13% YoY and Casamigos net sales growing 14% YoY.

However, tequila is currently in a supply glut, with Mexico sitting on a 500-million liter "tequila lake," resulting from overplanting of agave (following its normal peak-trough cycle, as seen in 2006/2007) along with tequila downtrading in the U.S., leading to the dominance of lowerend brands like Astral Tequila as a more accessible alternative. Yet, longitudinal IWSR data of the last pricing trough in 2006/2007 indicates that premium-plus volumes of agave spirits grew at a CAGR of 7%, outperforming standard-and-below (which had a CAGR of 2%) and overall global spirits (which grew at a CAGR of 3%), indicating that Diageo's premium-skewed portfolio is not

Interim Fiscal 2026 results displayed a complete reversal of Diageo's tequila portfolio's ascent, with Casamigos net sales declining 30.90% and Don Julio's net sales plunging 20.90%. This was due to downtrading in the U.S. along with a large supply glut, yet it does not fully invalidate premium-tier tequila, as the market seemed to price in.

We project North America volume declining in the medium to long term (-3.23% in FY 2026), with a slight uptick in 2031. These projections are driven by a panel OLS regression linking Diageo North America organic volume growth largely to US spirits market volume growth (DISCUS YoY). US Spirits market volume (from DISCUS data) was derived as the sole significant predictor of Diageo's North America volume, which we forecast as slowly growing in the medium term, from a 1.2% YoY growth rate to a 2.8% YoY growth rate in 2030. However, this is coupled with a cyclical drag Diageo faced over the last 5 years due to destocking pressures that resulted in a negative intercept for the regression. From an industry context, this volume projection is supported by the current K-shaped economy and strain on consumer wallets (towards the short-term), coupled with the long–term strength of lower-volume RTDs.

For North American ASP, we use a three-company panel regression model (including data from Diageo, Pernod Ricard, and Brown-Forman Americas), where NSV organic growth is modelled as a function of DISCUS YoY data and super-premium market share (which is the most dominant driver). We project super-premium market share growing from 8.8% in 2026 to 10.4% in 2033, continuing the apparent premiumization trend in line with pre-COVID levels (~9.2% in 2017).

Thesis 2: Topline Anchored to NA overstated. Meanwhile EM takes the win.

(A) US-centric earnings narrative is distorting the multiple:

The market applies a North American risk discount to the entire stock, though EM has been contributing a gradually higher share of profit while North America's share has been decreasing. Sell-side models and earnings call dynamics condition sentiment on North America but underweight the earnings momentum of EM regions, including Africa, Latin America & Caribbean (LAC), and Asia Pacific. Despite an 820bps shift in the operating profit mix toward EM and consensus forecasts attribute most near-term growth to EM regions, the valuation remains conditioned on North America.

The historical justification for North America's disproportionate weighting has been its outsized share of profit. In H1 FY26, EM generated a collective $3,824M in revenue. With that, EM revenue surpassed North America's $3,790M revenue. This indicates a reversal of the trend where North American revenue has exceeded EM, specifically by 28% in FY24 and 6% in FY25. North America's share of operating profit has declined by 790bps in less than two years, while the EM bloc's expanded by 820bps. EM's share of operating profit in the Diageo portfolio rose from 25.9% in FY24 to 34.1% in H1 FY26, while North America's portion simultaneously declined from 49.4% to 41.5%. FY24's compressed EM share was driven by a LAC inventory destocking issue and Africa route-to-market disruption. Both have since been resolved, and the H1 FY26 data indicates an EM business that operates at a healthier baseline. LAC's margin is now within 320bps of North America, despite LAC lagging about 1,050bps behind North America in FY24. Another place where EM margins have expanded is Africa, where business is transitioning to an asset-light brand licensing model. Diageo Africa experienced an H1 FY26 operating margin of 25.4%, up from 17.3% in FY25. However, consensus projects these margins to fade over the next few years. Yet, that prediction seems inconsistent with the higher-margin nature of Diageo Africa's asset-light brand licensing model.

The stock currently trades at approximately 11.7x forward earnings, a 22% discount to EU consumer staples peers, largely because analysts price Diageo as a US spirits proxy. A re-rating closer to 13-14x forward PE would be more consistent with peers that have a more balanced geographic earnings mix, where EM growth is appropriately weighted alongside North American business. After Diageo's February 2026 results, multiple sell-side firms cut their price targets due to North American tequila performance and management's explicit focus on margin reinvestment. Simultaneously, Africa delivered 23% organic operating profit growth. Yet, consensus suggests the stock will likely struggle until the US stabilizes, which fails to capitalize EM performance into valuation despite its standalone strength. Consensus projects continued EM outperformance through FY28, with North America in negative growth territory (-7.3% in FY26E, -2.0% in FY27E), while Africa, LAC, and India are all projected to compound positively.

(B) The Africa Story:

Africa is being priced in a way that applies manufacturing margin logic to a licensing business and overstates FX sensitivity. Consensus projects Diageo Africa's reported net sales to decline by 8.4% in FY27, from $1,744M to $1,598M. The $2.3B disposal of Diageo's 65% stake in East African Breweries Limited (EABL) to Asahi, completed H1 FY26, removes consolidated beer revenue from Diageo's P&L, decreasing reported net sales by approximately $400M to $450M. Importantly, this does not indicate a reduction in economic activity, but rather Diageo Africa's shift towards Royalty and Brand Licensing income. In H1 FY26, Diageo Africa reported a 7.5% decline in net sales due to disposals, yet organic net sales revenue growth was 10.9%, the strongest of any Diageo segment globally.

Now, Asahi pays Diageo Royalty and Brand Licensing fees for the right to manufacture and distribute Guinness, Smirnoff, and associated brands across East Africa. This revenue does not come with COGS or capex. Still, consensus models a 500bps margin compression to 20.4% by FY27, citing loss of operating leverage as beer volumes exit the P&L. This framing assumes that the distribution and administrative cost base is tied to beer volume rather than the retained spirits and licensing business. The observed 240bps EBIT margin expansion in H1 FY26, achieved while still carrying partial disposal-related overhead, indicates that the revenue mix shift is already sufficient

to support highermargins. Beer revenue previously carried both variable production costs and capital intensity, while licensing income carries neither. As royalty income becomes further engrained, the margin is likely to expand further from current levels.

A second source of mispricing is an outdated understanding of FX risk. During the FY23 to FY25 Naira devaluation cycle, the NGN/USD moved from about 450 to 1,600, creating large swings in reported earnings due to mismatches between local currency revenues and imported costs. Under the Royalty and Brand Licensing model, Asahi absorbs the transactional component of FX exposure, leaving Diageo with primarily translational exposure. A 30% Naira devaluation that previously resulted in a negative 40% to 60% EBIT impact now translates into approximately a negative 30% impact on royalty income alone. This represents a roughly 5 to 7 times reduction in P&L sensitivity per unit of FX shock. The persistence of an FX discount in consensus valuation frameworks an overinflated application of a largely historical risk,

A third mispricing arises from the application of a generalized emerging market consumer pressure narrative to a portfolio that is largely insulated from it. Sell-side applies a broad cost-of-living discount to Diageo Africa's IPS portfolio. Premium-tier elasticity is negative 0.176 compared to negative 0.709 for value-tier consumers, implying that premium demand is approximately four times less price-sensitive. At an 8% ASP increase, the premium portfolio experiences only about a 1.4% volume decline, producing 6.4% net sales growth from solely pricing. South Africa, a proxy for Sub-Saharan Africa, validates this. In 2025, the market recorded 10% value growth against only 3% volume growth, which supports a price-inelastic premium group absorbing pricing increases.

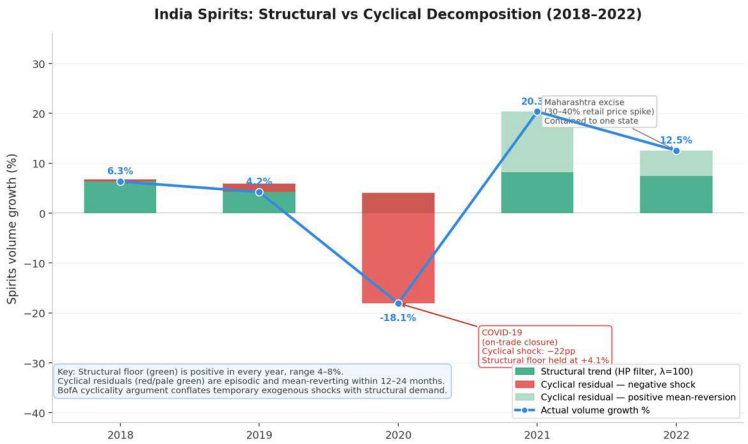
Premiumization drives value growth through a price-inelastic consumer base. The persistence of declining sales, margin compression, and elevated FX risk in consensus estimates indicates a misinterpretation of this transition.

(C) India is the single most important long-term volume story in global spirits

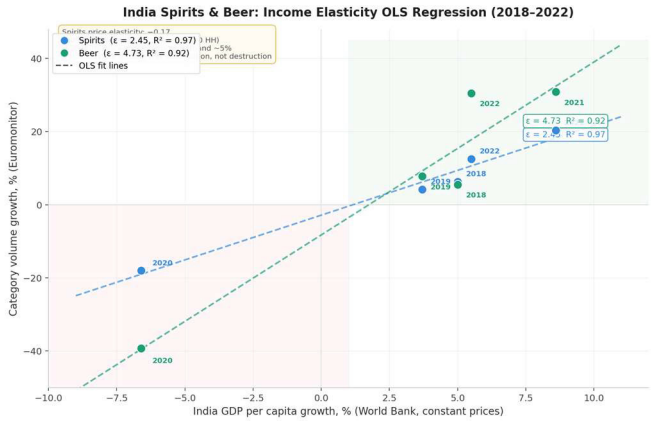
Sell-side's primary concern is that India's 15-18% margins are below former China premium Scotch margins of 30-35%. Furthermore, that spread is being treated as a long-term consequence instead of recognizing India's structural growth and China's modest

China's Baijiu margins have approached 20% following the anti-extravagance policy, which has permanently impaired the gifting channel that supported premium pricing. India's margins are rising toward 20-22% as United Spirits exits low-margin Popular brands and concentrates on Prestige & Above. By FY29-FY30, this analysis implies that the margin difference compresses to roughly 200-600bps, versus the 1,500-1,700bps embedded in current consensus assumptions. While Baijiu is impaired, the imported premium spirits segment, particularly Scotch, remains resilient. Scotch penetration in major Chinese cities has surpassed Cognac. In addition, the reduction in import tariffs from 10% to 5% represents a direct cost benefit of approximately $15M in annual EBIT on an estimated $300M net sales revenue base.

The 7.3% decrease in FY26 APAC net sales decline is largely attributable to Chinese White Spirits (CWS), which account for 22% of regional net sales revenue and declined 50.4% in H1 FY26. Excluding CWS, APAC delivered approximately 3-4% organic growth. As a result, the FY27 recovery does not require a China rebound. India, at 22% weight and 10% growth, contributes approximately 2.2pp, while the rest of APAC contributes an additional 1.0-1.5pp. Consensus at 4.1% therefore sits at the low end of a no-recovery base case, which suggests conservative assumptions around Diageo's growth in India.



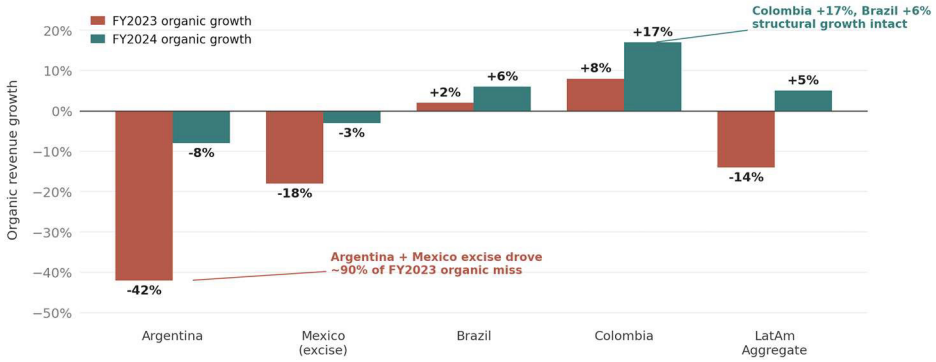
(Figure 13)



(Figure 14)

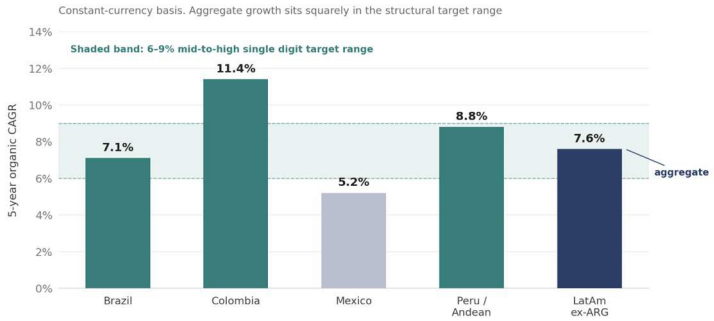
(D) LatAM is recovering and underpenetrated

The market's read on Diageo's Latin American segment is anchored to the 2023 headline. It was the combination of Argentina's hyperinflation, Mexico's excise tax shock, and the post-COVID channel destocking that compressed reported LatAm revenues by double digits. We argue this is a classic case of over-indexing on a single disruptive year and extrapolating it as a new structural baseline. The 2024 data already disproves that reading. Colombia posted +16.9% organic growth and Brazil +6.5%, both materially above the LatAm category average and representing the two largest and most structurally important markets in the region by volume and premiumization potential.



(Figure 15)

The correct analytical frame is the three-to-five-year CAGR strip, not the 2023 snapshot. Argentina's IAS 29 hyperinflation accounting distorted the entire LatAm aggregate in FY2022 and FY2023 in both directions, inflating reported revenue during the 2021–22 USD-pricing boom and then collapsing it as the official exchange rate adjusted. Stripping Argentina from the LatAm aggregate, the remaining portfolio grew at approximately mid-to-high single digits on a constant-currency basis over 2019-2024. The 2023 blowup was Argentina-driven in a market where Diageo's revenue exposure is structurally declining as a share of total LatAm. The market is still pricing the 2023 print as if it were a demand signal. It was a macro accident in a single market.



(Figure 16)

We constructed a blended Macro Stress Index to test whether the 2023 weakness is attributable to macro inputs or genuine demand deterioration. The composite, weighted across Brazil GDP (30%), Colombia GDP (20%), Argentina CPI inverted (25%), Mexico excise inverted (15%), and DXY change inverted (10%), explains 65% of the variance in LatAm organic growth over the 2018-2024 period. The 2023 residual is large and negative: the macro model under-predicts the magnitude of the miss, confirming that channel destocking and the Mexico excise shock were over-and-above what the macro environment alone would have generated. These are non-recurring. The macro index has already materially recovered in FY2024 and is tracking further improvement into FY2025.

The structural case rests on penetration math. Per-capita spirits consumption in Brazil runs at approximately 4-5 liters versus 8-9 in the United States and 12+ in South Korea and Australia. Mexico sits in the early stages of the brown spirits premiumization cycle that the U.S. completed over 2010-2022. Colombia and Peru are at even earlier inflection points. Johnnie Walker Black occupies the same cultural position in LatAm today that Jack Daniel's held in the U.S. in 1995, a brand with enormous headroom as the middle class expands and formal employment rises. The premiumization ladder is not hypothetical; it is already underway, and the 2023 data masked it rather than disproved it.

(Figure 17)

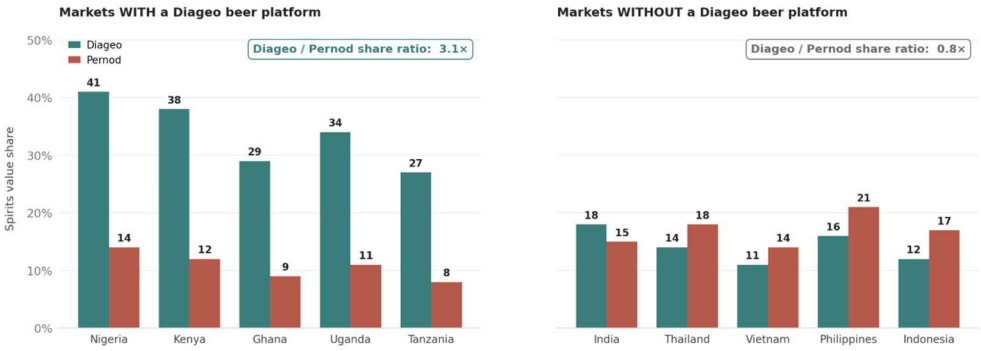
(E) Their dual beer and spirits portfolio is an EM advantage

The standard bull case on Diageo in emerging markets begins and ends with Johnnie Walker, the premiumization narrative, the aspiring middle class, the brand equity compounding over decades. That framing is correct but incomplete, and the incompleteness is precisely where the market is leaving value on the table. What the consensus misses is the structural architecture that makes Diageo's EM business categorically different from every other major spirits company operating in the same markets. Pernod Ricard, Brown-Forman, and Beam Suntory are running the same playbook: identify markets where income growth is creating a premium spirits consumer, build distribution, market aggressively, and take share. Diageo is running a different playbook that begins with the consumer a decade before any competitor enters the conversation.

The mechanism is the beer-to-spirits premiumization ladder that governs alcohol consumption in virtually every developing market. Entrylevel consumers begin their alcohol journey with affordable local beer, migrate upward to international beer brands as income rises and social aspirations develop, and then in their late twenties and early thirties begin trading into spirits as a mark of status and sophistication. The crossover from beer dominant to spirits dominant spending occurs around age 28 in most EM consumer panels. Every major spirits company targets the consumer at that crossover point. Diageo alone targets them at 20.

In sub-Saharan Africa, Diageo's ownership of the full ladder is not theoretical; it is the operating model. Senator Keg is a sachet-format affordable beer positioned toward base-of-pyramid consumers in Kenya and Uganda, retailing at a price point accessible to daily-wage workers. Tusker is a mainstream premium lager with dominant share across East Africa, serving as the beer of record at the barbecue, the football match, and the Friday evening. Guinness is the aspirational international tier, brewed locally in Nigeria since 1963, with a level of cultural legitimacy that no imported brand can replicate. Above all of these sits the Diageo spirits portfolio: Bell's, Johnnie Walker, Baileys, and Tanqueray. The consumer who comes of age drinking Senator Keg, graduates to Guinness, and arrives at Johnnie Walker Black Label at 35 has never once left the Diageo ecosystem. Pernod enters the conversation at the spirits crossover and presents itself as a stranger. Diageo presents itself as a brand family the consumer has known for fifteen years.

The cross-sell flywheel has a compounding quality that does not appear in any standard segment model. Trade investment made to support Tusker creates distribution density, including relationships with wholesalers, placement in informal retail outlets, and cold chain infrastructure, which simultaneously lowers the marginal cost of placing Johnnie Walker in the same channel. The fixed cost of that distribution network is amortized across the entire portfolio, meaning Diageo's effective cost of spirits distribution in its beer-platform markets is structurally lower than Pernod's. This is not just a marketing advantage. It is an infrastructure advantage, and infrastructure advantages compound over time rather than erode as competitors increase spend.



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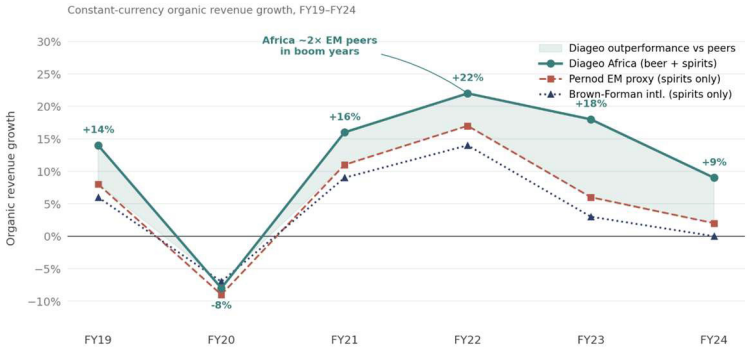
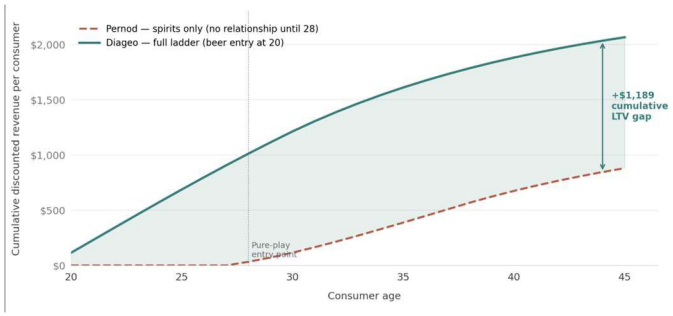


(Figure 19)

The key empirical test passes. Diageo holds 35-40% spirits value share in markets like Nigeria and Kenya, where Guinness and Tusker have built the distribution and brand infrastructure, versus 12-18% in comparable Asian markets where it competes as a pure-play spirits company alongside Pernod. That 2-3x share premium is not explained by product quality or pricing. Johnnie Walker Black is Johnnie Walker Black everywhere. It is explained by the distribution and brand infrastructure the beer platform built. The Diageo Africa segment has consistently outgrown the rest of the portfolio on organic revenue, roughly 2x the group rate in boom years, which is the empirical fingerprint of the cross-sell engine generating compounding EM returns.



(Figure 20)

The competitive moat becomes clearest when you ask what it would cost a pure-play spirits company to replicate the position. Pernod or Beam Suntory could attempt to enter the EM beer market tomorrow. They would face thirty to fifty years of Diageo brand equity with local consumers, established distributor relationships they would need to dislodge rather than build, and the economics of a capital-intensive beer business with thin margins that their investor base would not tolerate for the decade or more required to reach Diageo's scale. The barrier is not technical, but it is temporal and economic. Diageo built this position by being early and staying consistent. The resulting moat does not appear in a sum-of-parts valuation model, but it is worth several turns of terminal multiple to any investor who understands what they are looking at.

Investment Risks

Risk #1: US demand decline is structural
The thesis assumes recent US weakness reflects a temporary reset. However, that may not happen if consumer behavior shifts towards viewing even moderate drinking as unhealthy, an opinion that gained popularity recently. At the same time, GLP-1 medications show evidence of reducing alcohol consumption and cravings. If these trends persist, premium spirits demand may not recover to prior levels, and North America earnings could remain lower.

Risk #2: The market is right to focus on North America
The market may be rightfully emphasizing North America in valuation. North America still drives a large share of operating profit and offers more stable and visible cash flows than emerging markets. That earnings quality and predictability may outweigh faster but less certain growth, leaving EM outperformance to not justify a higher multiple.

Risk #3: EM earnings quality is overstated
EM earnings quality may not improve due to unpredictable FX risk that dilutes margins. Currency volatility still affects reported earnings, even if the cost structure has improved for Diageo under the licensing model. Also, the mix is shifting toward India, where margins remain below historical China levels. If FX pressure continues or margin expansion does improve as expected, EM may not deliver as high earnings quality as we expect.

Investment Setup:

Diageo presents a value-reset opportunity directly analogous to the Rolls-Royce turnaround initiated in 2023. Three structural changes have reshaped the catalyst calendar: the appointment of Sir Dave Lewis as CEO in January 2026, a kitchen-sink H1 FY26 print (dividend cut fifty percent, guidance lowered, FY26 operating profit guided flat to low single digits), and Lewis's public characterisation of customer service in North America, Latin America, and the United Kingdom as below acceptable standards. As a consumer-goods executive without prior tenure in spirits, Lewis carries no attachment to the legacy regional structure, the post-COVID inventory build, or the Crew-era Latin America strategy. The reset establishes a sufficiently low bar for beat-and-raise to

The catalyst path comprises four phases.

1. Phase one, the burning-platform reset, is complete: dividend rebased, guidance reduced, regional management layers being removed, and the Accelerate cost program initiated. This phase has absorbed the dividend-cut and guidance-cut tail risks; a short position from current levels implicitly requires operations to deteriorate beyond the new conservative bar.
2. Phase two, the Capital Markets Day expected in Q3 2026, is the principal dated catalyst. The Rolls-Royce precedent is direct: the November 2023 CMD set mid-term targets of £2.5–2.8 billion in operating profit, thirteen-to-fifteen percent margins, and £2.8– 3.1 billion in free cash flow by 2027, and the equity rerated through the event. Lewis is expected to announce a multi-year organic net sales algorithm of three-to-five percent, a margin trajectory anchored on Accelerate, a multi-year FCF target above the FY26 commitment of approximately three billion dollars, a capital allocation framework with the rebased dividend as floor, and decisions on portfolio actions including the Guinness separation and the China white-spirits write-down. The reverse-DCF currently solves to an implied terminal growth rate inconsistent with a business generating operating margins above fifty percent on premium spirits with a multi-decade EM convergence runway. CMD targets, even if conservatively set, will exceed the trajectory implied by the current share price.
3. Phase three is the confirming-data flywheel through FY27–FY28. Leading indicators are: NielsenIQ and NABCA US depletion data stabilising; premium-and-above mix gaining share, with Don Julio having delivered double-digit growth in FY25 across regions representing more than ninety percent of net sales, Guinness having gained share in its three largest markets, and Johnnie Walker gaining share in international whisky and scotch; IWSR Bevtrac data on Gen Z LDA+ participation, where the June 2025 print recorded a twenty-four-percentage-point increase over two years, consistent with the lifecycle reversion predicted by the APC analysis; non-alcoholic growth above forty percent within Diageo's portfolio, indicating incumbent capture rather than substitution; and Accelerate savings flowing to margin. Each confirming print compels sell-side revisions — the mechanism by which Rolls-Royce achieved its 2027 targets two years early.
4. Phase four is multiple expansion. Diageo trades at seventeen-to-eighteen times forward earnings against a long-run band of twenty-two-to-twenty-five times. EPS appreciation of fifteen-to-twenty-five percent over two years, combined with multiple expansion to approximately twenty-two times, produces a total return of fifty-to-eighty percent without outsized assumptions on either leg.

Valuation:

The base case valuation forecasts revenue at an organic CAGR of 3.0% with a -1.9% contraction in FY26 and inflection to 2.4% in FY27. and accelerating to 4.3% by FY2030 as Latin America normalizes, Asia Pacific re-accelerates on tequila and Scotch premiumization, and North America stabilizes against a recovering DISCUS market. Core EBITA margin is held conservatively at 22.1% in FY2026, drifting modestly to 21.6% by FY2030 which remains meaningfully below the FY2023 high of 27.1% and below management's prior 30% aspiration. On a 13.25x exit EV/EBITA in FY2030 (in line with the comp-set median of 13.25x and a discount to Diageo's own historical TTM of 15.0x), the model yields a FY2030 price target of $140 per share, equivalent to a four-year IRR of 15.4% from the current $79 price. The DCF cross-checks this: a WACC of 6.01% and Gordon Growth terminal rate of 0.25% produce a fair value of $171 per share (116% upside), while the exit-multiple DCF yields $165 per share (109% upside).

Solving for the assumptions embedded in the current $79 share price requires a forward revenue CAGR of -5.0% paired with a 4.5x exit EV/EBITA, which is inconsistent for a business generating mid-twenties EBITDA margins on premium spirits with a multi-decade emerging-markets convergence runway. -5% revenue CAGR has no historical precedent at Diageo outside of the FY2020 COVID shock; sustained negative-five revenue compounding implies terminal volume collapse across all five regions simultaneously, which neither the APC analysis on Gen Z lifecycle reversion, the spectral decomposition of long-run NIAAA consumption, nor the within-portfolio capture of non-alcoholic categories supports. A 4.5x exit multiple is below every comparable

Operating Build:

US$ and shares outstanding in millions	2020A	2021A	2022A	2023A	2024A	2025A	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Total Net Sales	14,816	17,160	20,570	20,555	20,269	20,245	19,862	20,346	21,006	21,824	22,757	23,420	24,084	24,683
Growth Rate		15.8%	19.9%	-0.1%	-1.4%	-0.1%	-1.9%	2.4%	3.2%	3.9%	4.3%	2.9%	2.8%	2.5%
North America														
Gross Sales	$6,583	$7,820	$8,896	$8,859	$8,514	$8,636	$8,392.10	$8,319.01	$8,376.38	$8,557.33	$8,834.59	$8,885.00	$8,933.46	$8,983.40
Excise Duties	($755)	($800)	($782)	($750)	($606)	($663)	($644)	($639)	($643)	($657)	($678)	($682)	($686)	($690)
Net Sales	$5,828	$7,020	$8,114	$8,109	$7,908	$7,973	$7,747.83	$7,680.35	$7,733.31	$7,900.37	$8,156.35	$8,202.88	$8,247.62	$8,293.73
Excise as % of Gross Sales	11%	10%	9%	8%	7%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Volume (mm 9L cases)	48.4	53.2	54.8	52.4	50.1	49.5	47.9	46.8	46.07	45.53	45.14	45.39	45.63	45.88
ASP ($ / 9L cases)	$120.41	$131.95	$148.07	$154.75	$157.84	$161.07	$161.75	$164.11	$167.86	$173.52	$180.69	$180.72	$180.75	$180.77
Volume Growth		9.92%	3.01%	-4.38%	-4.39%	-1.20%	-3.23%	-2.30%	-1.59%	-1.17%	-0.86%	0.53%	0.53%	0.53%
ASP Growth		9.59%	12.21%	4.52%	2.00%	2.04%	0.42%	1.46%	2.29%	3.37%	4.13%	0.02%	0.02%	0.01%
Europe														
Gross Sales	$5,921	$6,462	$7,642	$7,245	$8,024	$8,037	$8,033.79	$8,030.57	$8,027.36	$8,024.15	$8,020.94	$7,976.82	$7,932.95	$7,810.39
Excise Duties	($2,685)	($3,015)	($3,366)	($2,942)	($3,220)	($3,216)	($3,215)	($3,213)	($3,212)	($3,211)	($3,210)	($3,192)	($3,174)	($3,125)
Net Sales	$3,236	$3,447	$4,276	$4,303	$4,804	$4,821	$4,819.07	$4,817.14	$4,815.22	$4,813.29	$4,811.37	$4,784.90	$4,758.59	$4,685.07
Excise as % of Gross Sales	45%	47%	44%	41%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Volume (mm 9L cases)	40.2	42.7	51.2	51.3	51.3	48.9	47.922	46.964	46.024	45.104	44.202	43.097	42.019	40.759
ASP ($ / 9L cases)	147.29	151.33	149.26	141.23	156.41	164.36	167.643	170.996	174.416	177.904	181.462	185.091	188.793	191.625
Volume Growth		6.2%	19.9%	0.2%	0.0%	-4.7%	-2.00%	-2.00%	-2.00%	-2.00%	-2.00%	-2.50%	-2.50%	-3.00%
ASP Growth		2.7%	-1.4%	-5.4%	10.8%	5.1%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	1.50%
Latin America and Carribean														
Gross Sales	$1,493	$1,845	$2,589	$2,714	$2,432	$2,390	2660.07	3002.82	3389.73	3790.57	4198.81	4606.94	5006.59	5388.84
Excise Duties	(348)	(435)	(559)	(555)	(593)	(543)	(612)	(691)	(780)	(872)	(966)	(1,060)	(1,152)	(1,239)
Net Sales	$1,145	$1,410	$2,030	$2,159	$1,839	$1,847	2048.25	2312.17	2610.09	2918.74	3233.09	3547.34	3855.07	4149.41
Excise as % of Gross Sales	23%	24%	22%	20%	24%	23%	23%	23%	23%	23%	23%	23%	23%	23%
Volume (mm 9L cases)	19.0	23.1	27.1	26.2	22.1	22.9	24.0	25.4	26.8	28.1	29.4	30.5	31.6	32.6
ASP ($ / 9L cases)	78.58	79.87	95.54	103.59	110.05	104.37	110.63	118.37	126.66	134.89	142.99	150.85	158.39	165.52
Volume Growth		21.6%	17.3%	-3.3%	-15.6%	3.6%	5.0%	5.5%	5.5%	5.0%	4.5%	4.0%	3.5%	3.0%
ASP Growth		1.6%	19.6%	8.4%	6.2%	-5.2%	6.0%	7.0%	7.0%	6.5%	6.0%	5.5%	5.0%	4.5%
Asia Pacific														
Gross Sales	$5,855	$6,935	$7,487	$6,484	$6,320	$6,082	$5,781.55	$6,050.09	$6,411.04	$6,793.33	$7,163.59	$7,510.36	$7,850.96	$8,167.35
Excise Duties	(2,933)	(3,582)	(3,648)	(2,643)	(2,503)	(2,447)	(2,326)	(2,434)	(2,579)	(2,733)	(2,882)	(3,022)	(3,159)	(3,286)
Net Sales	$2,862	$3,353	$3,839	$3,841	$3,817	$3,635	$3,455.43	$3,615.93	$3,831.66	$4,060.14	$4,281.43	$4,488.68	$4,692.24	$4,881.34
Excise as % of Gross Sales	51%	52%	49%	41%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Volume (mm 9L cases)	80.6	87.6	94.2	80.8	74.9	77.7	75.37	76.42	77.57	78.66	79.60	80.48	81.28	82.09
ASP ($ / 9L cases)	72.64	79.17	79.48	80.25	84.38	78.28	76.71	79.16	82.65	86.37	89.99	93.32	96.59	99.49
Volume Growth		9%	8%	-14%	-7%	4%	-3.00%	1.40%	1.50%	1.40%	1.20%	1.10%	1.00%	1.00%
ASP Growth		9%	0%	1%	5%	-7%	-2.00%	3.20%	4.40%	4.50%	4.20%	3.70%	4%	3%
Africa														
Gross Sales	$2,409	$2,722	$3,199	$2,864	$2,478	$2,684	$2,420.11	$2,604.81	$2,739.83	$2,904.98	$3,110.72	$3,283.68	$3,476.49	$3,680.63
Excise Duties	($712)	($819)	($960)	($825)	($700)	($850)	($766)	($825)	($868)	($920)	($985)	($1,040)	($1,101)	($1,166)
Net Sales	$1,697	$1,903	$2,239	$2,039	$1,778	$1,834	$1,653.68	$1,779.89	$1,872.15	$1,984.99	$2,125.58	$2,243.76	$2,375.52	$2,515.01
Excise as % of Gross Sales	30%	30%	30%	29%	28%	32%	32%	32%	32%	32%	32%	32%	32%	32%
Volume (mm 9L cases)	28.8	31.8	35.7	32.7	32.1	31.1	26.96	26.75	26.67	26.80	27.20	27.61	28.11	28.61
ASP ($ / 9L cases)	83.65	85.60	89.61	87.58	77.20	86.30	89.75	97.38	102.74	108.39	114.35	118.93	123.68	128.63
Volume Growth		10.4%	12.3%	-8.4%	-1.8%	-3.1%	-13.30%	-1%	-0.30%	0.50%	1.50%	1.50%	1.80%	1.80%
ASP Growth		2.3%	4.7%	-2.3%	-11.9%	11.8%	4.00%	8.50%	6%	5.50%	6%	4.00%	4.00%	4.00%
Corporate														
Net Sales	$48	$27	$72	$104	$123	$135	137.70	140.45	143.26	146.13	149.05	152.03	155.07	158.17

Discounted Cash Flow

US$ and shares outstanding in millions	2021A	2022A	2023A	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
FCFF Projections													
NOPAT	3,997.4	5,022.0	5,039.3	4,647.8	5,878.5	5,353.5	5,504.2	5,681.3	5,902.9	6,150.9	6,332.5	6,516.8	6,679.8
D&A	601.0	1,064.0	1,297.0	493.0	1,718.0	822.8	844.4	872.6	906.5	944.3	972.4	1,000.7	1,025.7
CAPEX	(824.2)	(1,434.0)	(1,401.0)	(1,496.0)	(1,549.0)	(1,600.0)	(1,688.9)	(1,745.3)	(1,813.0)	(1,573.9)	(1,620.7)	(1,667.8)	(1,709.4)
NWC Change	445.1	(241.0)	(1,414.0)	(798.0)	(77.0)	1,202.6	(55.5)	(75.5)	(40.9)	(24.8)	(197.3)	(190.7)	(173.4)
FCFF	**4,219.3**	**4,411.0**	**3,521.3**	**2,876.8**	**5,970.5**	**5,778.8**	**4,604.3**	**4,733.1**	**4,955.5**	**5,496.6**	**5,487.0**	**5,659.0**	**5,822.6**
Discount Factor			1.00	0.94	0.89	1.00	0.94	0.89	0.84	0.79	0.75	0.70	0.66
Discounted FCFF				**2,713.7**	**5,312.8**	**5,778.8**	**4,343.3**	**4,211.7**	**4,159.6**	**4,352.3**	**4,098.4**	**3,987.3**	**3,870.0**

WACC Selection	
WACC	**6.01%**

GGM	
Terminal growth (%)	0.25%
Terminal value	101,353.7
PV of terminal value	67,364.9
PV of near-term CF	42,827.9
EV	110,192.8
Less: Non-equity claims	24,777.0
More: Non-operating assets	9,829.7
Implied Equity Value	95,245.5
Shares outstanding	556.0
Fair Value per Share	171.30
Implied Upside	**116.84%**

Terminal Multiple	
Exit EV/EBITA	13.3x
Terminal value	96,642.4
PV of terminal value	64,233.5
PV of near-term CF	42,827.9
EV	107,061.5
Less: Non-equity claims	24,777.0
More: Non-operating assets	9,829.7
Implied Equity Value	92,114.2
Shares outstanding	556.0
Fair Value per Share	165.67
Implied Upside	**109.71%**

Back Bake in Multiple using TGR	
Multiple	13.3x

RDCF Results	
Multiple	4.5x
Revenue CAGR	-5%

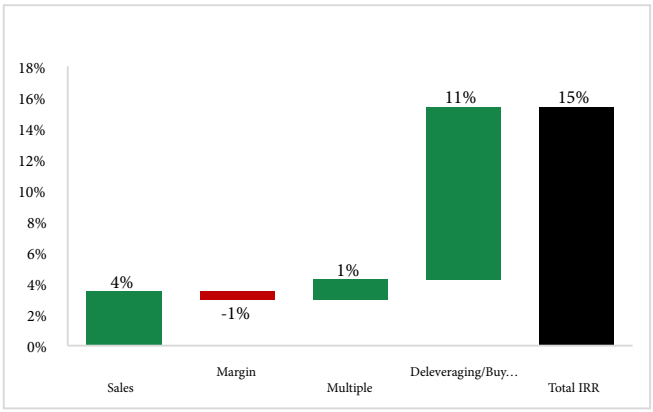
Gordon Growth Rate						
WACC	116.84%	-1.50%	-1%	0.50%	1%	1.5%
	8.00%	38.5%	43.4%	61.9%	69.9%	79.1%
	7.00%	56.5%	63.0%	88.5%	99.8%	113.2%
	6.01%	79.0%	87.9%	124.2%	141.1%	161.8%
	5.00%	109.1%	121.8%	176.7%	204.2%	238.5%
	4.00%	149.7%	168.7%	258.5%	308.4%	378.3%

Exit Multiple						
WACC	109.71%	11.5x	12.5x	13.5x	14.5x	15.5x
	8.00%	69.72%	79.41%	89.10%	98.78%	108.48%
	7.00%	79.75%	90.09%	100.44%	110.78%	121.12%
	6.01%	90.39%	101.43%	112.46%	123.50%	134.53%
	5.00%	102.03%	113.83%	125.63%	137.43%	149.23%
	4.00%	114.40%	127.02%	139.64%	152.25%	164.87%

Return Profile and Comps Analysis

US$ and shares outstanding in millions	2023A	2024A	2025A	2026A	2030 E
Total Revenue	**28,270.0**	**27,891.0**	**27,964.0**	**27,425.3**	**31,477.7**
PF (Core) EBITA	**7,662.0**	**6,878.0**	**6,121.0**	**6,059.7**	**6,792.3**
Margin (%)	*27.1%*	*24.7%*	*21.9%*	*22.1%*	*21.6%*
EV/EBITA	**14.6x**	**12.9x**	**12.6x**	**10.3x**	**13.3x**
EV	**111,912.0**	**89,041.0**	**76,839.0**	**62,535.1**	**89,998.3**
(+) Non-operating assets	6,833.0	6,548.0	8,094.0	9,501.9	12,655.6
(-) Non-equity claims	22,185.0	22,789.0	24,777.0	24,777.0	24,777.0
Equity Value	**96,560.0**	**72,800.0**	**60,156.0**	**47,260.0**	**77,876.9**
DSO	568.0	560.0	557.0	556.0	556.0
Price/Share	**$170.00**	**$130.00**	**$108.00**	**$85.00**	**$140.07**

IRR Calculation	
89.00	12.0%
84.00	13.6%
79.00	15.4%
74.00	17.3%
69.00	19.4%



Company	Ticker	EV	EV/EBITDA 2019	EV/EBITDA TTM	P/E TTM	Cons. Ann. F-3Y EBITDA growth %	Cons. Ann. F-3Y EPS growth %	Cons. NTM EBITDA margin %
Diageo ADR	**DEO-US**	66,351.7	15.00x	10.30x	20.43x	0.66%	20.51%	28.5%
Constellation Brands A	STZ-US	37,303.3	16.00x	9.75x	24.78x	1.63%	15.00%	35.7%
Brown-Forman B	BF.B-US	14,120.5	22.00x	12.40x	16.01x	(0.53%)	18.13%	32.0%
Heineken	HEIA-NL	62,620.2	12.00x	9.20x	23.27x	5.07%	27.04%	61.6%
Anheuser-Busch InBev	ABI-BE	213,785.9	11.00x	9.80x	21.80x	2.43%	13.09%	35.9%
Pernod Ricard	RI-FR	32,780.8	14.50x	10.70x	12.25x	(0.98%)	2.08%	35.7%
Molson Coors Beverage B	TAP-US	13,746.7	9.50x	6.50x	7.94x	4.68%	9.13%	29.5%
Carlsberg B	CARL.B-DK	28,135.0	11.50x	9.00x	17.94x	8.28%	8.10%	46.7%
1st Quartile		17,624.09	11.13	9.05x	13.19x	(0.2%)	8.4%	30.1%
Median		**35,042.05**	**13.25**	**9.78x**	**19.19x**	**2.0%**	**14.0%**	35.7%
Average		58,605.52	13.94	9.71x	18.05x	2.7%	14.1%	38.2%
3rd Quartile		65,418.86	15.75	10.60x	22.90x	5.0%	19.9%	44.0%

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Ensign Group

Healthcare
Spring 2026

Investment Overview

We highlight a bearish outlook for Ensign. We estimate a 9.56% downside with moderate assumptions, with a HOLD.

Company Overview

The Ensign Group (NASDAQ: ENSG) was founded in 1999 and is a holding company with independent subsidiaries that provide skilled nursing, senior living, and rehabilitative services across 17 states. The company also acquires leases and owns healthcare real estate. The company has the ability to currently serve 42,000 patients.

Company History

1999: Ensign Group was founded in Mission Viejo, California as a holding company for independently operated skilled nursing and senior care facilities. The company begins with a small cluster of acquired SNFs in the Southwest of United States

2002-2006: Ensign adopts its signature “local autonomy” model, acquiring underperforming Class B/C facilities and improving operations through decentralized management, establishes “new CEO” program in 2006

2007: Ensign completes its IPO

2010: Ensign enters in home health industry

2011: Ensign’s portfolio significantly expanded to include 99 healthcare facilities and several hospice and home health businesses across 10 states

2014: The company strategically spun off CareTrust REIT (CTRE), separating real estate assets to create a pure-play operations company and a healthcare REIT

2015–2019: Continued vertical integration and expansion

2019: Formed The Pennant Group

Business Model:

The company has two main segments: skilled services (skilled nursing facilities and rehabilitation therapy services) and Standard Bearer (acquisition and leasing of skilled nursing and senior living properties, REIT lease revenue). In FY25, 95.6% of revenue was from the skilled nursing facilities. The company also has other revenue from senior living and ancillary services that comprise ~4.6% of annual revenue. The first arrangement is where Standard Bearer owns and leases to an Ensign operating subsidiary (120 affiliated properties). In this relationship, the rent payment is an intercompany transaction that gets eliminated on consolidation. Furthermore, Ensign bears all the upside and downside of both the real estate and the operations. The distinction here is that Ensign bears 0 legal exposure: a creditor of the operating subsidiary generally cannot come after Ensign the parent or Standard Bearer directly, so the subsidiary structure creates a genuine legal firewall. If one facility goes bankrupt, it doesn’t take down the whole enterprise. This accounts for 32% of total facilities.

NASAQ: ENSG

Rating:	HOLD
Price: (at close, 05/18/26)	$176.66
Recommendation	$160.69

52 week range	$	134.79 - 218.00
Shares outstanding	mn	58.45
Diluted equity value	$mn	10,615
EPS (LTM)	$	5.84
Beta		0.82
Sector		Medical Care Facilities
Market Cap		$10.477 billion

Price performance

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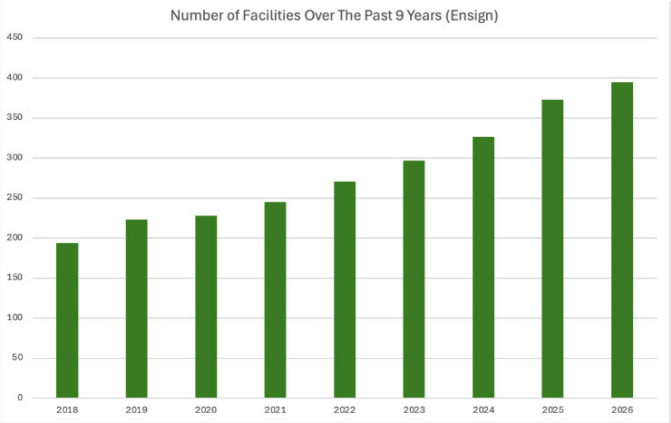
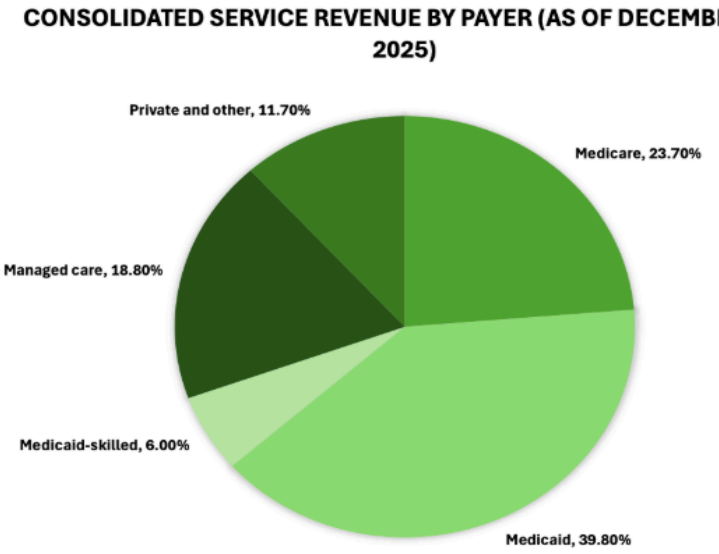


Ensign's business model differentiation comes from its localized approach to operations, where, instead of focusing on top-down corporate branding, it focuses on letting the local leadership of each facility adjust branding and operations to the unique needs and priorities of their local communities. Notably, Ensign operates a unique CEO training program, where they push decision-making authority directly to the people running each location. Local administrators and clinical leaders are given autonomy over how they operate their facility, and their compensation is tied directly to the financial performance of that facility. Through this model, the operational, compliance, and regulatory burden fall into the hands of the tenants; Ensign isolates regulatory risk.

Revenue and Cost Structure

Ensign derives revenue primarily from Medicaid and Medicare programs, managed care, and commercial insurance payers and private pay patients. The majority of their revenue comes from skilled nursing facilities (95.6%), which is highly dependent on Medicaid and Medicare programs. Ensign's Standard-Bearer-owned properties are leased pursuant to non-cancelable operating leases, generally with an initial term of 15-20 years. Under their current business model, Ensign has three types of property-leasing arrangements.



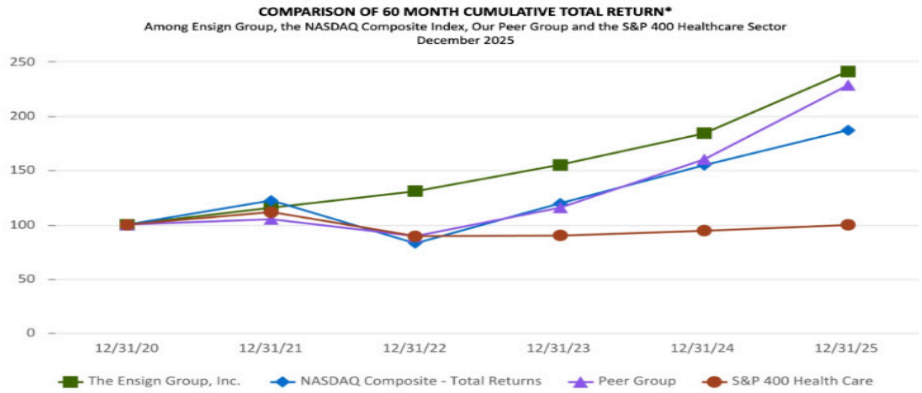
The first arrangement is where Standard Bearer owns and leases to an Ensign operating subsidiary (120 affiliated properties). In this relationship, the rent payment is an intercompany transaction that gets eliminated on consolidation. Furthermore, Ensign bears all the upside and downside of both the real estate and the operations. The distinction here is that Ensign bears 0 legal exposure: a creditor of the operating subsidiary generally cannot come after Ensign the parent or Standard Bearer directly, so the subsidiary structure creates a genuine legal firewall. If one facility goes bankrupt, it doesn't take down the whole enterprise. This accounts for 32% of total facilities.

The second arrangement is one in which Standard Bearer owns the property and leases to a third party. Here, Standard Bearer acts as a genuine landlord to an outside operator. The rent coming in is real external revenue; it does not get eliminated on consolidation because it's not an intercompany transaction. This is a smaller part of the business (only 30 properties), but it's the purest REIT income. These properties under this arrangement are not included in the 373 operated facilities.

The third and final arrangement (35 unaffiliated properties) is where a third party owns the property and leases it out to an Ensign operating subsidiary. In this relationship, Ensign has no real estate exposure; they are purely a tenant. The rent paid goes to an outside landlord and shows up as a real operating expense on the consolidated statements. This arrangement appears on the balance sheet as an operating lease of liability under accounting rules, with a corresponding right-of-use asset. Ensign takes on operational risk but not real estate ownership risk. This accounts for 68% of total facilities. Each of these leasing arrangements (whether Standard Bearer leases to an Ensign operating subsidiary or otherwise), is negotiated through long-term, triple-net lease agreements. Under the triple-net structure, the local operating subsidiary (the tenant) is solely responsible for all property-related costs. This means that in addition to base rent, the local facility must pay all real estate taxes, property insurance, routine maintenance, and any necessary capital expenditures or repairs.

Competitive Positioning and Legal / Financial Exposure

In a fragmented industry where the performance gap between stronger and weaker operators is widening, Ensign distinguishes itself through a decentralized operational model. The decentralized operational model also gives each location the ability to best adapt and adjust to the market they are serving. While the independent subsidiary model heavily insulates the parent company from localized bankruptcies and standard liability claims, it is not an absolute shield. Plaintiffs frequently attempt to disregard the corporate form to hold the parent company liable for a subsidiary's alleged wrongdoing, as seen in a recent four-week medical negligence trial in Arizona where a jury returned a verdict against an independent subsidiary. According to CMS data, same-store Ensign-affiliated facilities outperformed their peers in annual survey results by 24% at the state level and 33% at the county level. Furthermore, Ensign maintains a 10% advantage in overall 4- and 5-star rated buildings compared to peers, successfully elevating quality of care in communities that were predominantly 1- and 2-star rated at the time of acquisition. This clinical superiority is what fundamentally protects the company's margins, strengthens operational execution, and mitigates catastrophic legal exposure.

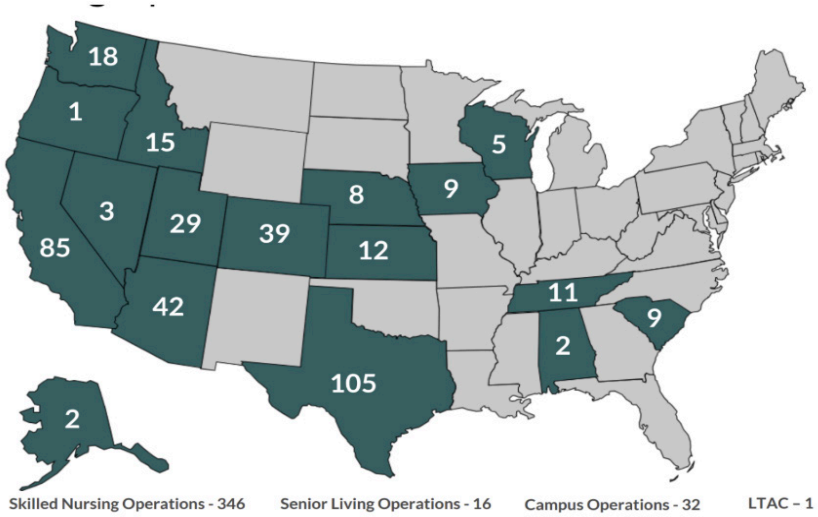


2025-26 Property Acquisition Trends:

1. Standard Bearer grew from 129 to 158 owned properties in a single year. That's 29 new acquisitions, worth $314M of real estate purchased in 2025 alone. This is the fastest single-year growth in Standard Bearer's history.

2. The third-party operated properties within Standard Bearer grew from 33 to 38. Ensign is deliberately acquiring buildings and leasing them to outside operators, not just to its own subsidiaries which validates Standard Bearer as a genuine standalone REIT business, not just an internal accounting structure.

3. The total number of facilities that Ensign operates but doesn't own grew from 231 to 253 because Ensign added 46 new facilities in 2025, most of which came in initially as third-party leases. The 253 number represents years of future Standard Bearer acquisition runway already embedded in the operating portfolio.



Industry Overview

The Ensign Group operates in the skilled nursing facility (SNF) and senior housing industries. These industries serve as essential, lower-cost settings for patients who have been discharged from acute care hospitals but still require 24-hour medical supervision, rehabilitation, or custodial care. The global skilled nursing facility market is estimated to be valued at USD 453.31 Billion in 2026 and is expected to reach USD 844.77 Billion by 2033, exhibiting a compound annual growth rate (CAGR) of 9.3%.

The post-acute and senior housing landscape is characterized by severe market fragmentation. According to data from the Centers for Medicare & Medicaid Services (CMS), the top 10 skilled nursing operators control only about 11% of the total number of SNFs in the United States. The remainder of the market is highly dispersed among approximately 5,000 smaller, independent, and regional operators who typically manage fewer than 100 facilities. This fragmentation is largely a byproduct of the localized nature of healthcare delivery.

The Role of REITs

A defining feature of the senior housing and SNF competitive landscape is the heavy involvement of Healthcare Real Estate Investment Trusts (REITs). Capital-intensive healthcare facilities are frequently owned by large institutional REITs, such as Ventas, Welltower, CareTrust REIT, and National Health Investors, who then partner with operating companies to manage the actual healthcare delivery. The availability of REIT capital acts as a massive catalyst for industry consolidation, as operators frequently partner with REITs to fund real estate acquisitions while retaining the operational mandate.

Key Competitors

1. PACS Group (NYSE PACS): Utah-based post-acute care company that operates skilled nursing facilities (SNFs) and assisted living communities. The firm went public in 2024 and invests & operates in more than 300 affiliated post-acute facilities across 17 states. PACS has been embroiled in scandal over alleged Medicare scams.

2. Genesis Healthcare (Bankrupt): Pennsylvania-based post-acute care company that was once the largest skilled nursing facility operator in the United States, operating approximately 175 skilled nursing facilities across 18 states with roughly 27,000 employees and over 15,000 residents. The firm is still operational, but submitted a Chapter 11 bankruptcy filing in July 2025, citing post-pandemic challenges, legacy liabilities from prior expansion, and inadequate Medicaid reimbursement.

3. Life Care Centers of America (Private): Tennessee-based, privately held SNF operator in the U.S., operating 254 nursing homes with approximately 32,966 beds across 27 states. Includes Alzheimer's and dementia care within the scope of focus.

Trends and Tailwinds

Aging U.S. Population

There are approximately 38.9 million Americans aged 65 or older in the US, who constitute approximately 12.8% of the total US population. By 2030, the number of elderly is expected to climb to 72.1 million, or 19.3% of the total population and by 2040 roughly one in five Americans will be 65 or older. Additionally, the average life expectancy in the United States is currently 79.0 but is projected to increase to 79.9 years in 2035 and to 80.4 years in 2050 (accounting for all genders). While advances in healthcare have reduced early deaths, older Americans are now spending more years living with chronic conditions such as diabetes, hypertension, heart disease, and arthritis. These chronic conditions necessitate increasing amounts of external care with roughly 70% of Americans over age 65 requiring long-term care services. Compounded with demographic shifts, there is a clear societal move away from caregivers within family units. Current social dynamics in the US point towards smaller family sizes and increased geographic mobility, indicating that there are fewer caregivers available within families.

Sporadicity in Medicare payments impact healthcare services segments

Government reimbursement is the backbone of the nursing industry. Recent trends with Medicare and Medicaid payment policy impacts revenue. For instance, Medicaid is the primary payer for 63% of nursing facility residents; Medicare for 14% of residents; and the remaining 23% of residents have another primary payer. The Ensign Group is heavily dependent on reimbursement from third party payers such as Medicare and Medicaid. In FY2024, Ensign earned 70.9% of its revenue from the Medicare and Medicaid programs.

However, Medicaid funding is expected to grow only 3–4% in many states, while Medicare Part A payments will rise 4.2% in FY2025. These increases are below the rate of labor cost inflation, which remains the dominant cost driver. Medicare Advantage penetration continues to rise, and MA plans to reimburse meaningfully below traditional Medicare while imposing more restrictive prior authorization. The Senate has already scrutinized MA denial rates, confirming that operators face systematic downward pressure on reimbursement. For Ensign (which earns 70.9% of revenue from Medicare/Medicaid), this creates a widening mismatch between revenue growth and cost growth. Additionally, direct care nursing expenses reached $49.2 billion in 2023, driven by persistent labor shortages and elevated contract labor usage. Contract labor usage has risen 12.2% since 2019 among financially stressed facilities.

Industry-wide, workforce shortages remain the top concern for 2025 and beyond. Operators must pay higher wages to attract staff, but reimbursement does not adjust accordingly. With this dynamic, facilities with weaker payer mixes (i.e., Medicaid-heavy) face the steepest margin compression. This is especially problematic for Ensign because its acquisition strategy skews toward distressed, labor-intensive Class B/C facilities, which are the most exposed to staffing volatility.

This trend is seen on the national level as well and is projected to continue into at least 2034. Based on this data, we can expect ENSG to continue to experience a weakening revenue payer mix into 2034. As ENSG's payer mix has been shifting from Medicare to Medicare-Advantage (Managed Care), gross margins for ENSG's service segment have been falling, showing how continued weakening of ENSG's revenue payer mix will continue to lead to compressing margins.

Other main expenses of the company have stayed roughly constant in terms of percentage of total revenue, so if gross margin decreases and operational expenses stay a roughly constant proportion of total revenue, earnings will decrease, decreasing EPS. With EPS decreasing, ENSG will be less able to raise EPS guidance, experience lower year-over-year EPS growth, and be less likely to beat EPS, resulting in downward pressure on the stock price.

Investment Theses

Investment Thesis 1: Overlooked Skilled Labour Shortage Conveniently Ignored by Consensus

The market is too bullish on Ensign's acquisition strategy, as it is treating Ensign's growth as continuous and scalable regardless of industry headwind. The market is resting almost entirely on the assumption that aggressive facility roll-ups will compound NOI indefinitely, but labor shortages turn this into per-unit problem where scaling compounds the structural underlying issue, contrary to the market's belief that Ensign's acquisition strategy serves as a competitive moat.

First, the labor shortage in skilled nursing is not cyclical. The skilled nursing sector has already dealt with a severe labor shortage over the past 5 years. Additionally, average nursing care hours per resident have declined from 4.13 hours per day in 2015 to 3.85 hours in 2025, reflecting a 7% drop over the decade. Skilled nursing is a structurally labor-constrained business, not a capital-constrained one. Between 2020 and 2024, the industry lost 62,567 beds and saw 774 facility closures, driven almost entirely by staffing shortages rather than demand. Today, over 90% of nursing homes report open direct care positions. Ensign is being rewarded for its ability to keep buying assets, but that assumes each incremental property can be staffed, integrated, and operated on effectively when the opposite is true. Ensign also ended the quarter with 395 healthcare operations and 179 owned real estate assets, and it continues to expand through new deals. That growth is impressive, but it also increases exposure to a system where every new bed requires workers. At the industry level, this assumption is no longer safe. If labor supply tightens further, then growth in the asset base can dilute operating quality rather than enhance it. Scaling the asset base therefore scales the labor deficit on a one to one basis, turning growth into a per unit constraint rather than a compounding engine.

Compounded with the fact that CMS recently repealed its minimum staffing rule in 2026 (which initially mandated nurses to work a minimum number of hours), it's likely that Ensign will see fewer nurses working fewer hours. The market hasn't yet priced in CMS's repeal, which will likely lead to fewer nurses staffed across Ensign's portfolio over time, leading to a lower occupancy capability. This indicates that each facility will see lower revenues over time, and NOI will be compressed at the operating subsidiary level, which flows upwards into the general company. Any sustained pressure on subsidiary-level NOI flows directly into rent paid by Ensign. The operating subsidiaries only pay rent to the extent they generate enough cash to do so. If NOI goes down, the operating subsidiaries cannot front all the rent, leading to gradual decreases in rental revenue.

Second, we see that the labor shortage is supercharged by immigration enforcement. Immigration policies are exacerbating existing shortages of foreign workers, as 28% of direct-care workers at skilled-care facilities are immigrants, compared to 19% of the U.S. workforce overall. The labor headwind is compounded by Ensign's own track record as an employer. Publicly documented complaints from Ensign facility workers consistently point to poor benefits, low pay, no bonus or stock-based compensation, and the misuse of therapists for tasks outside their scope, potentially reducing incentives for new workers to join Ensign's subsidiaries.

Even if Ensign can keep occupancy relatively stable, external factors pose a significant risk, specifically reimbursement rates for Medicaid, as skilled nursing is heavily exposed to Medicaid, which typically reimburses below cost in many markets, and industry commentary continues to point to additional Medicaid-related pressure and margin compression as a major 2026 concern, with 65% of health finance leaders bracing for Medicaid cuts. For operators like Ensign, that matters because a large portion of patient days are still tied to government reimbursement, so there is limited flexibility to push through price increases when labor costs are rising.

The acquisition strategy that has been the core of the bull case is, ironically, the source of the emerging risk since each deal adds labor exposure without adding labor supply. The CMS staffing repeal, far from being the relief the industry might've initially celebrated, removes one of the few behavioral incentives pushing operators toward adequate staffing.

Even if Ensign manages to keep occupancy relatively stable, the company remains disproportionately exposed to the structural labor constraints defining the skilled nursing sector due to its large size. Ensign operates at almost 400 facilities, placing them at the greatest risk of experiencing a negative impact on recent policy changes. Uniquely, Ensign's acquisition strategy creates concentrated operational risk because the company's growth has been concentrated in two states facing particularly severe nursing shortages. Ensign now operates roughly 395 facilities with a large footprint in California (about 85 facilities, roughly 21–22% of the portfolio) and an even larger presence in Texas after Q12026 (around 100–105 facilities), meaning a substantial share of the company's beds and operating subsidiaries sit inside two of the nation's most stressed skilled nursing labor markets. Nationally, unmet nursing demand is estimated at roughly 8% in 2026, but states such as California (states experiencing a particularly high skilled nursing shortage) are expected to approach a ~16-17% shortage by the early 2030's with many counties facing deficits exceeding 25%, showcasing extremes. Texas also faces a severe deficit in absolute terms—the state projects a shortage of approximately 57,000 skilled nurses by around 2032 (roughly a mid teens percentage shortfall), and historic vacancy/turnover metrics that demonstrate intense competition for staff and upward wage pressure in the state's labor market.

Because Ensign's business model depends on operating subsidiaries generating sufficient NOI to pay rent to its real estate affiliates, any state level decline in staffed capacity or increase in wage pressure directly compresses rental cash flow and undermines the economics of additional roll ups. Specifically, because Ensign is one of the largest operators in California (the largest by scale) and among the top 2-3 operators in Texas, these state level shortages translate into a disproportionate hit to the company compared with more geographically diversified competitors. Each incremental facility added in California or Texas increases Ensign's absolute demand for nurses in markets where the supply is already short and worsening as expansion into Texas raises labor exposure in a state projected to need tens of thousands more RNs by 2032, meaning increasing acquisitions create greater marginal staffing risk and higher marginal costs than they would in less impacted states.

Investment Thesis 2: Weakening Payer Mix

Ensign Group's primary driver of stock price movement is EPS, as found using a correlation and R-squared analysis on the stock's reactions to quarterly earnings releases from 1Q22 to 1Q26. As shown in the analysis, stock price movement has the highest correlation, and its variance is best explained by EPS Guidance Midpoint (= 0.6, R-squared = 36.1%), followed by EPS year-over-year growth (= 0.35, R-squared = 12.2%) and EPS beat/miss of previous guidance (= 0.26, R-squared = 6.9%). Revenue-based metrics, on the other hand, show essentially no correlation with stock returns. Acquisition activity, both new operations and new real estate, also shows negligible correlation.

Metrics	Correlations	R-squared
EPS %Y/Y	**0.35**	**12.2%**
Revenue%Y/Y	(0.03)	0.1%
Revenue beat/miss	(0.25)	6.0%
EPS beat/miss	**0.26**	**6.9%**
New Acquisitions	(0.12)	1.4%
New Real Estate	(0.03)	0.1%
Revenue Guidance Midpoint	0.04	0.2%
EPS Guidance Midpoint	**0.60**	**36.1%**

Figure 6. Stock Price Driver Correlation and R-Squared Analysis

Because forward EPS guidance is the dominant driver of ENSG's stock returns, any compression in EPS expectations, whether through softer guidance flow-through, decelerating year-over-year growth, or smaller beats to prior guides, translates directly into negative stock performance. This holds even when revenue, acquisitions, or other operational metrics outperform consensus.

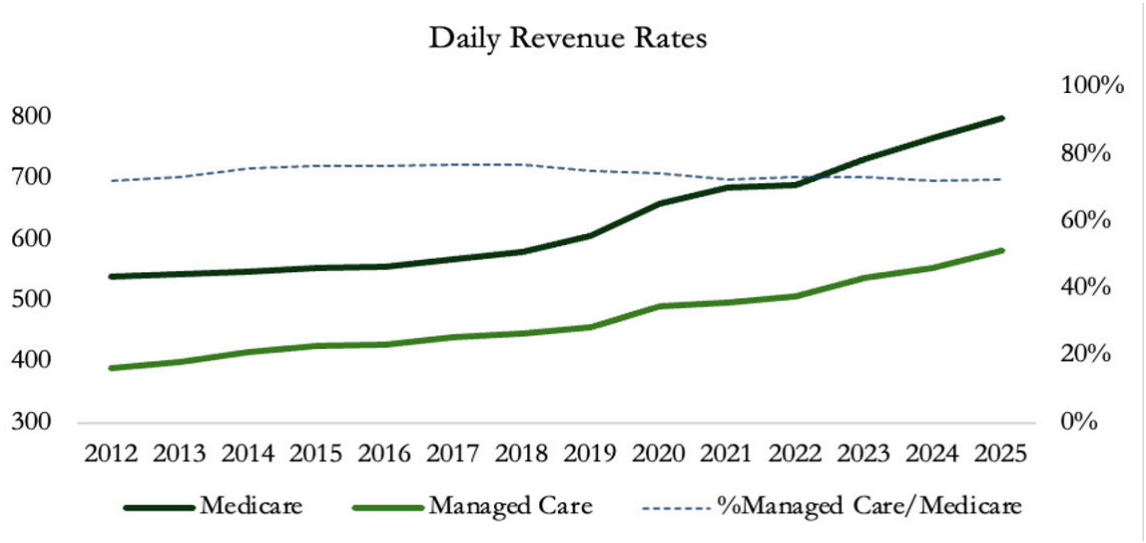


Figure 7. Medicare and Managed Care Average Daily Rates and Managed Care/Medicare Ratio

ENSG's revenue payer mix has been shifting from Traditional Medicare towards Medicare Advantage. With Traditional Medicare falling from 37.7% of total revenue in 2020 to 24.7% of revenue in 2025 and Managed Care (Medicare Advantage) jumping from 15.4% of total revenue in 2020 to 19.5% of total revenue in 2025. Ensign's sensitivity to EPS is compounded by a deteriorating revenue mix for their portfolio. Patients on Medicare Advantage generate ENSG facilities significantly less revenue than traditional Medicare: ENSG's average facility daily revenue rates for Medicare Advantage payers (Managed Care) ran at a 73% ratio of Traditional Medicare payers. This ratio does not represent a stable equilibrium but rather a trajectory that has peaked and is now in steady decline. The ratio expanded from 72.2% in 2012 to a peak of 77.3% in 2017 as ENSG captured rate gains from therapy-minute optimization under the RUG-IV Medicare reimbursement system and a less-concentrated MA market with weaker plan leverage. However, this expansion reversed after the 2019 PDPM Medicare reimbursement transition, and the ratio compressed back to 72.8% in 2021, where it has roughly stayed since.

Three structural forces argue that the prior peak is unrecoverable. PDPM permanently eliminated the therapy-minute arbitrage that drove the 2012-2017 rate gains, MA plan concentration has doubled, with UnitedHealth and Humana now controlling 47% of the market, and California, which represents roughly 35% of ENSG's facility footprint, has crossed 70% MA penetration, thereby eliminating SNF leverage in ENSG's largest market.

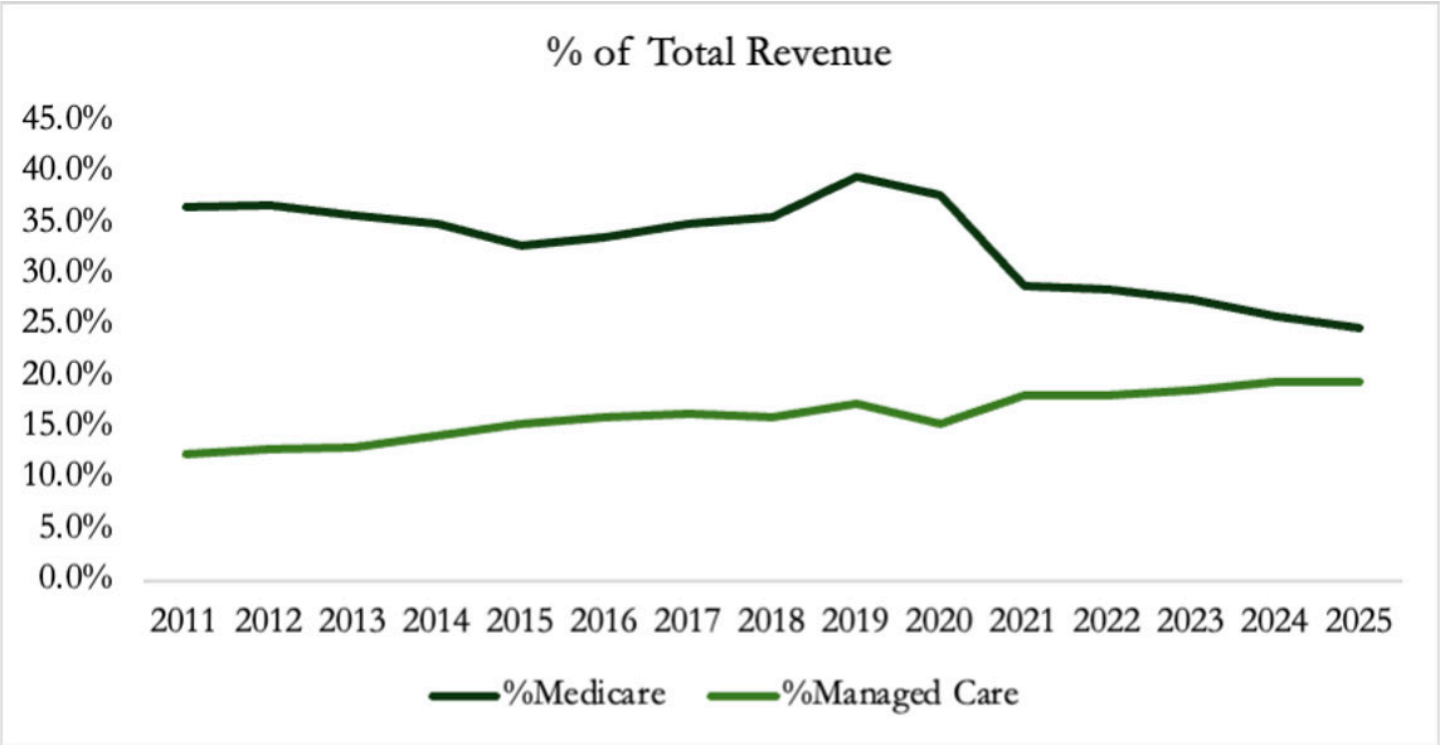
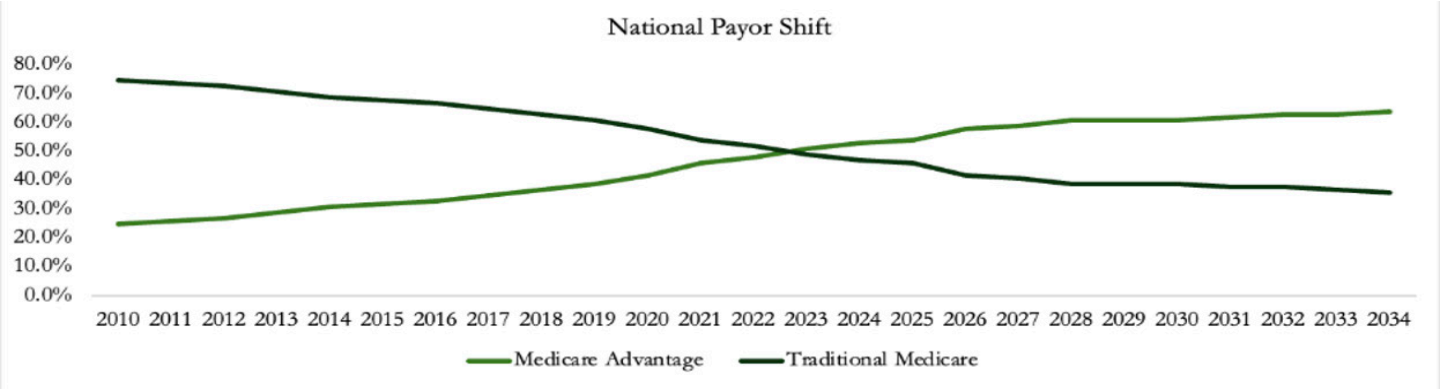


Figure 8. Medicare and Managed Care as a Percentage of Total Revenue

This trend is seen on the national level as well and is projected to continue into at least 2034. Based on this data, we can expect ENSG to continue to experience a weakening revenue payer mix into 2034.



As ENSG's payer mix has been shifting from Medicare to Medicare-Advantage (Managed Care), gross margins for ENSG's service segment have been falling, showing how continued weakening of ENSG's revenue payer mix will continue to lead to compressing margins.

	2020	2021	2022	2023	2024	2025
Service Revenue	2,387,439	2,611,476	3,008,711	3,708,071	4,237,525	5,032,118
Cost of Service	1,865,201	2,019,879	2,354,434	2,941,238	3,376,884	4,019,076
Gross Margin	***21.87%***	***22.65%***	***21.75%***	***20.68%***	***20.31%***	***20.13%***

Figure 10. Ensign Service Gross Margin

Other main expenses of the company have stayed roughly constant in terms of percentage of total revenue, so if gross margin decreases and operational expenses stay a roughly constant proportion of total revenue, earnings will decrease, decreasing EPS.

	2021	2022	2023	2024	2025
Total Revenue	2,627,461	3,025,468	3,729,355	4,260,485	5,057,841
General and administrative expense	151,761	158,805	263,005	225,143	269,820
%revenue	***5.8%***	***5.2%***	***7.1%***	***5.3%***	***5.3%***
Depreciation and amortization	55,985	62,355	72,387	84,138	104,327
%revenue	***2.1%***	***2.1%***	***1.9%***	***2.0%***	***2.1%***

Figure 11. Ensign Operating Expenses

With EPS decreasing, ENSG will be less able to raise EPS guidance, experience lower year-over-year EPS growth, and be less likely to beat EPS, resulting in downward pressure on the stock price.

Investment Risks

Risk 1: Cyclical Labor Shortages Compress Margins

Labor shortages are often presumed to be cyclical rather than structural and specific to Ensign. Ensign's core business (skilled nursing) is the most labor-intensive segment of post acute care, and the labor market deeply influences the success of Ensign.

Mitigant 1: The labor market weakness is not just cyclical – it's an ongoing obstacle that will disproportionately impact Ensign due to their demand for skilled workers. The supply of CNAs, LPNs, and RNs has been shrinking for years due to burnout, retirements, and declining program enrollment, while demand continues to rise as the population ages. This structural problem will continue developing and compounding over time, impacting Ensign's ability to scale.

Risk 2: Acquisition Driven Growth Masks True Weakness

Ensign's second major risk is that its acquisition driven growth strategy increasingly masks underlying structural weakness. The company relies heavily on a steady pipeline of distressed Class B and C skilled nursing assets to sustain its growth narrative. These distressed facilities frequently carry hidden liabilities, including deferred capex, compliance issues, and chronic staffing shortages, all of which increasingly influence operational volatility as Ensign expands into new states and markets, yet the market continues to treat these acquisitions as low risk (as given by Ensign's consensus cap rates indicating the market is pricing it as a primarily class A facility) despite the inherently high risk nature of SNF assets.

Mitigant 2: The M&A engine will show signs of diminishing returns. Acquisition volume has accelerated not because the core business is strengthening, but because true growth is slowing. The pool of high quality acquisition targets is shrinking, and cap rates on SNFs remain artificially low relative to their operational risk (as low as 7.4%) suggesting persistent market mispricing and an unwarranted belief that Ensign will continue to do well. At the same time, the NOI uplift historically achieved through turnarounds will slow as labor costs consume a larger share of operating margins. Higher interest rates further pressure the model by raising the cost of capital. Taken together, these dynamics indicate that Ensign's acquisition driven strategy is becoming less accretive, more volatile, and structurally less reliable as a long term growth engine.

Valuation

Base Case Operating Build

The Ensign Group
Healthcare, $ 000s

	Historical Period					Forecast Period				
Fiscal Year ended December 31	**FY2021A**	**FY2022A**	**FY2023A**	**FY2024A**	**FY2025A**	**FY2026E**	**FY2027E**	**FY2028E**	**FY2029E**	**FY2030E**
Revenue Build										
Skilled Services										
Total Facilities	**209**	**234**	**258**	**286**	**326**	**356**	**386**	**411**	**431**	**451**
Legacy Facilities	165	189	193	210	210	278	326	356	386	411
New Facilities Acquired	17	23	25	28	48	30	30	25	20	20
Transitioning Facilities	27	22	40	48	68	48	30	30	25	20
Historical Number of Beds	25,032	28,130	30,602	33,547	37,911					
Avg Beds / Facility	120	120	119	117	116	116	116	116	116	116
Total Beds (number of facilities *avg bed)	25,032	28,130	30,602	33,547	37,911	41,400	44,888	47,796	50,122	52,447
Total Patient Days (total beds *365)	8,895,949	9,614,460	10,940,320	11,710,297	13,134,528	15,110,906	16,384,297	17,445,456	18,294,383	19,143,311
Legacy occupancy rate	*73.9%*	*76.0%*	*79.2%*	*80.9%*	*82.9%*	*82.9%*	*80.8%*	*78.4%*	*75.7%*	*72.6%*
Y/Y		*3%*	*4%*	*2%*	*2%*	*0.0%*	*-2.5%*	*-3.0%*	*-3.5%*	*-4.0%*
Acquisition occupancy rate	*69.4%*	*72.9%*	*73.0%*	*80.8%*	*84.2%*	*84.2%*	*84.2%*	*84.2%*	*84.2%*	*84.2%*
Transitioning occupancy rate	*66.2%*	*67.9%*	*84.4%*	*73.9%*	*76.9%*	*76.9%*	*76.9%*	*76.9%*	*76.9%*	*76.9%*
Facility Mix										
%legacy	*78.9%*	*80.8%*	*74.8%*	*73.4%*	*64.4%*	*78.1%*	*84.5%*	*86.6%*	*89.6%*	*91.1%*
%acquisition	*8.1%*	*9.8%*	*9.7%*	*9.8%*	*14.7%*	*8.4%*	*7.8%*	*6.1%*	*4.6%*	*4.4%*
%transitioning	*12.9%*	*9.4%*	*15.5%*	*16.8%*	*20.9%*	*13.5%*	*7.8%*	*7.3%*	*5.8%*	*4.4%*
Blended Occupancy Rate	**72.8%**	**75.3%**	**78.5%**	**80.5%**	**82.2%**	**82.2%**	**80.8%**	**78.6%**	**76.1%**	**73.3%**
Actual Patient Days (000s) (occupancy rate *	6,476 days	7,240 days	8,588 days	9,427 days	10,797 days	**12,421 days**	**13,236 days**	**13,720 days**	**13,927 days**	**14,039 days**
Revenue by Payer										
Revenue Share										
%Medicare	*28.8%*	*28.6%*	*27.5%*	*25.9%*	*24.7%*	22.6%	22.0%	20.9%	20.9%	20.9%
%Medicaid	*39.9%*	*39.9%*	*39.9%*	*40.4%*	*40.4%*	40.4%	40.4%	40.4%	40.4%	40.4%
%Medicaid-skilled Value	*6.8%*	*6.9%*	*7.0%*	*6.5%*	*6.2%*	6.2%	6.2%	6.2%	6.2%	6.2%
%Managed Care	*18.1%*	*18.1%*	*18.6%*	*19.4%*	*19.5%*	20.9%	21.3%	22.0%	22.0%	22.0%
%Private	*6.4%*	*6.5%*	*7.0%*	*7.8%*	*9.2%*	10.0%	10.1%	10.5%	10.5%	10.5%
Working Days (000s)										
Medicare	1,865 days	2,071 days	2,362 days	2,442 days	2,667 days	2,801 days	2,915 days	2,873 days	2,916 days	2,940 days
Managed Care	1,172 days	1,310 days	1,597 days	1,829 days	2,105 days	5,018 days	5,347 days	5,543 days	5,626 days	5,672 days
Medicaid-Skilled	440 days	500 days	601 days	613 days	669 days	770 days	821 days	851 days	863 days	870 days
Medicaid	2,584 days	2,889 days	3,427 days	3,808 days	4,362 days	2,596 days	2,819 days	3,018 days	3,064 days	3,089 days
Private	414 days	471 days	601 days	735 days	993 days	1,236 days	1,334 days	1,435 days	1,457 days	1,468 days
Facility Revenue per Day										
Total										
Medicare	687	691	733	768	801	836	872	909	949	990
Managed Care	499	509	539	555	583	613	644	677	711	747
Medicaid-Skilled	534	564	575	620	648	676	706	737	769	803
Medicaid	248	258	272	295	308	322	337	353	369	386
Private	237	249	263	280	308	339	373	410	451	497
Skilled Services Revenue	2,842,152	3,240,430	4,030,140	4,598,938	5,448,684	5,617,269	6,766,521	7,486,476	8,255,549	8,898,401
Historical Skilled Services Revenue	2,523,234	2,906,215	3,578,855	4,076,825	4,837,809	-	-	-	-	-
Realization Rate	88.8%	89.7%	88.8%	88.6%	88.79%	88.7%	88.7%	88.8%	88.7%	88.7%
Skilled Service Revenue net contractual adju	2,523,234	2,906,215	3,578,855	4,076,825	4,837,809	4,985,100	6,003,746	6,644,541	7,326,170	7,896,545
Other Service Revenue	88,242	102,496	129,216	160,700	194,309	240,521	295,891	362,682	446,554	548,843
Y/Y		*16.15%*	*26.07%*	*24.37%*	*20.91%*	*23.8%*	*23.0%*	*22.6%*	*23.1%*	*22.9%*
Total Service Revenue	**$2,611,476.00**	**$3,008,711.00**	**$3,708,071.00**	**$4,237,525.00**	**$5,032,118.00**	**$5,225,621.03**	**$6,299,637.10**	**$7,007,222.49**	**$7,772,723.62**	**$8,445,387.70**

Cost Build

Cost Build										
Service Revenue	2,611,476	3,008,711	3,708,071	4,237,525	5,032,118	5,225,621	6,299,637	7,007,222	7,772,724	8,445,388
Cost of Services	2,019,879	2,354,434	2,941,238	3,376,884	4,019,076	4,180,497	5,039,710	5,675,850	6,295,906	6,840,764
Rent Cost of Services	139,371	153,049	197,358	216,016	239,312	287,409	314,982	350,361	349,773	380,042
G&A	151,761	158,805	263,005	225,143	269,820	309,493	337,784	375,724	416,770	452,838
D&A	55,985	62,355	72,387	84,138	104,327	104,703	127,303	142,426	156,931	170,945
Service Operating Profits (EBIT)	244,480	280,068	234,083	335,344	399,583	343,520	479,859	462,861	553,344	600,799
EBITDA	300,465	342,423	306,470	419,482	503,910	448,222	607,162	605,287	710,275	771,743

REIT NAV

The Ensign Group
STANDARD BEARER NAV ($K)

	Historical Period					Forecast Period				
	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	FY2026E	FY2027E	FY2028E	FY2029E	FY2030E
FROM SB OP BUILD										
Total SB Revenue			82,486	95,086	126,930	138,568	149,570	159,658	168,809	177,987
SB Opex			8,734	8,765	11,210	11,779	12,714	13,570	14,349	15,129
SB NOI			**73,752**	**86,321**	**115,720**	**126,789**	**136,856**	**146,088**	**154,460**	**162,858**
NOI Margin			89.4%	90.8%	91.2%	91.5%	91.5%	91.5%	91.5%	91.5%
SB D&A			25,205	29,297	37,599	44,116	56,764	68,228	78,003	87,067
SB FFO			**53,991**	**59,019**	**75,222**	80,963	86,233	91,468	96,643	101,844
NAV CALCULATION										
Reported Fair Value (10-K, third-party appraisal)					1,700,000					
Implied Cap Rate (FY25 NOI / FV)					6.8%					
Applied Cap Rate (input)	6.8%									
Gross Asset Value = NOI / Cap Rate					**1,700,000**	**1,864,547**	**2,012,590**	**2,148,354**	**2,271,475**	**2,394,976**
(-) SB External Mortgage Debt					-34,000	-32,980	-31,991	-31,031	-30,100	-29,197
STANDARD BEARER NAV					**1,666,000**	**1,831,567**	**1,980,599**	**2,117,323**	**2,241,375**	**2,365,779**
CROSS-CHECKS										
FFO Multiple (GAV/FFO)					22.6x	23.0x	23.3x	23.5x	23.5x	23.5x
$/Bed ($K)					113.2	109.7	107.2	106.1	105.9	105.9
Implied Cap Rate					6.8%	6.8%	6.8%	6.8%	6.8%	6.8%
Discounted NAV CALCULATION	1,656,920									

SB Operating Build

The Ensign Group
SB OP Build, $ 000s

	Historical Period					Forecast Period				
	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	FY2026E	FY2027E	FY2028E	FY2029E	FY2030E
Portfolio Operating Build										
Properties Owned (BoP)		93	103	108	124	152	172	190	205	217
Properties Acquired		10	5	17	28	20	18	15	12	12
Properties Owned (EoP)	**93**	**103**	**108**	**124**	**152**	**172**	**190**	**205**	**217**	**229**
Affiliated Properties (EoP)		74	78	91	116	132	146	158	168	177
New Affiliated Acquisitions		10	4	14	24	16	14	12	10	9
Third-Party Properties (EoP)	30	29	30	33	37	41	45	48	50	53
New Third-Party Acquisitions		0	1	3	4	4	4	3	2	3
Property Metrics										
Avg Beds / Property		98	98.6	99.6	98.8	98.8	98.8	98.8	98.8	98.8
Total SB Beds (EoP)		**10,094**	**10,649**	**12,350**	**15,018**	**16,994**	**18,772**	**20,254**	**21,440**	**22,625**
Affiliated Beds		7252	7690.8	9063.6	11460.8	13041.6	14424.8	15610.4	16598.4	17487.6
Third-Party Beds		2842	2958	3286.8	3655.6	4050.8	4446	4742.4	4940	5236.4
Acquisition Economics										
RE Assets Added ($K, 10-K Note 6)			65,899	131,927	314,189					
Avg Cost / Property ($K)			13,180	7,760	11,221	11,000	11,500	12,000	12,500	13,000
Total RE Acquisition Spend ($K)						**220,000**	**207,000**	**180,000**	**150,000**	**156,000**
Rental Revenue Build (Pre-Elimination, $K)										
Rent Escalator (per Note 6: lesser of CPI or 2.5%)						2.5%	2.5%	2.5%	2.5%	2.5%
Affiliated Rental Revenue		57,967	66,712	78,110	107,560	117,667	127,099	135,840	143,872	151,642
Implied Rev/Property ($K, FY25)					927					
Third-Party Rental Revenue		14,970	15,774	16,976	19,370	20,901	22,471	23,818	24,937	26,346
Implied Rev/Property ($K, FY25)					524					
Total SB Rental Revenue		**72,937**	**82,486**	**95,086**	**126,930**	**138,568**	**149,570**	**159,658**	**168,809**	**177,987**
Y/Y Growth			13.1%	15.3%	33.5%	9.2%	7.9%	6.7%	5.7%	5.4%
SB NOI BUILD										
Total Revenue		72,937	82,486	95,086	126,930	138,568	149,570	159,658	168,809	177,987
(-) Cost of Services (NNN, minimal)			2832	2104	2133	2356	2543	2714	2870	3026
(-) Rent Expense (sub-leases)			954	954	1057	1109	1197	1277	1350	1424
(-) G&A / Mgmt Fee (6% of rev, Note 6)			4948	5707	8020	8314	8974	9579	10129	10679
Total SB Opex			**8,734**	**8,765**	**11,210**	**11,779**	**12,714**	**13,570**	**14,349**	**15,129**
SB NOI			**73,752**	**86,321**	**115,720**	**126,789**	**136,856**	**146,088**	**154,460**	**162,858**
NOI Margin			89.4%	90.8%	91.2%	91.5%	91.5%	91.5%	91.5%	91.5%

SB D&A SCHEDULE										
SB D&A (historical from 10-K)		21,613	25,205	29,297	37,599	44,116	56,764	68,228	78,003	87,067
Depreciable % of Acq Cost	87.5%									
Blended Depr Rate	6.8%									
Incremental D&A from Acq (half-yr)						6,517	6,132	5,332	4,443	4,621
SB FFO BUILD										
SB Interest Expense (10-K)		15,707	19,761	27,302	40,498	45,827	50,623	54,620	57,817	61,014
Segment Income = NOI - D&A - Interest			**28,786**	**29,722**	**37,623**	**36,847**	**29,469**	**23,240**	**18,640**	**14,777**
FFO = Segment Income + D&A			**53,991**	**59,019**	**75,222**	**80,963**	**86,233**	**91,468**	**96,643**	**101,844**
10-K FFO (check)		*49,484*	*54,270*	*58,632*	*75,222*					

Valuation

The Ensign Group
Healthcare, $ 000s

Fiscal Year Ending Dec 31	2021A	2022A	2023A	2024A	2025A	2026E	2027E	2028E	2029E	2030E	EBITDAR Multiple	Perpetuity Growth
Total Service Revenue	**2,611,476**	**3,008,711**	**3,708,071**	**4,237,525**	**5,032,118**	**5,225,621**	**6,299,637**	**7,007,222**	**7,772,724**	**8,445,388**		
% Growth		15.21%	23.24%	14.28%	18.75%	3.85%	20.55%	11.23%	10.92%	8.65%		
EBITDAR	439,836	495,472	503,828	635,498	743,222	735,631	922,144	955,648	1,060,047	1,151,786	**1,151,785.61**	**1,151,785.61**
Less: Non-SB D&A (excl. Standard Bearer)	55,985	40,742	47,182	54,841	66,728	60,587	70,539	74,198	78,928	83,877		83,877.40
EBIT	**383,851**	**454,730**	**456,646**	**580,657**	**676,494**	**675,045**	**851,605**	**881,450**	**981,119**	**1,067,908**		1,067,908.21
Weighted Average Tax Rate	*21%*	*21%*	*21%*	*21%*	*21%*	*21%*	*21%*	*21%*	*21%*	*21%*		21%
Less: Taxes @ 21%												-
NOPAT	**303,242**	**359,237**	**360,750**	**458,719**	**534,430**	**533,285**	**672,768**	**696,346**	**775,084**	**843,647**		843,647.49
Plus: Non-SB D&A	55,985	40,742	47,182	54,841	66,728	60,587	70,539	74,198	78,928	83,877		83,877.40
Less: Maintenance CapEx (excl. SB acquisitions)	(69,550)	(87,545)	(106,180)	(158,240)	(193,557)	(182,897)	(188,989)	(175,181)	(155,454)	(168,908)		(168,907.75)
Less: (Increases) in Working Capital		28,466	(80,159)	147,185	(75,388)	7,227	15,988	(11,600)	23,940	(24,086)		(24,085.82)
Unlevered Free Cash Flow	289,677	283,968	381,911	208,135	482,989	403,748	538,330	606,963	674,618	782,703		**782,702.95**
EBITDAR Multiple / Perpetuity Growth Rate											10.0x	2.50%
Implied Terminal Value											**11,489,061.47**	**16,430,889.35**
PV of Terminal Value											**8,046,588.94**	**11,507,554.68**
Plus: PV of Forecasted Unlevered Free Cash Flow						375,989.64	466,852.01	490,183.65	507,363.96	548,181.32	**2,388,570.58**	**2,388,570.58**
Implied Enterprise Value											**10,435,159.52**	**13,896,125.27**
Less: Net Debt + Operating Lease Liabilities											3,594,213	3,594,213
Implied Equity Value (Operating Platform)											**6,840,946.52**	**10,301,912.27**
(+) Standard Bearer NAV											1,656,919.55	**1,656,919.55**
Shares Outstanding											58,873	58,873
Implied Price Per Share (SOTP)											**145.99**	**204.78**

WACC Calculation		
Total Debt		2,240
Total Equity		10,020
Cash & Cash Equivalents		595
Total Enterprise Value		$11,665
Debt to total capitalization		18.27%
Equity to total capitalization		81.73%
Net Debt		1,645
Cost of Debt		
Average Interest Expense		8.03
Long-Term Debt		141.756
Tax rate		**21.00%**
After-tax cost of debt		4.47%
Cost of Equity		
Risk-free rate	SNP - 10 YR	4.36%
Equity market risk premium		4.46%
Levered Beta		**0.82**
Cost of Equity		**8.03%**
WACC		**7.38%**

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