1211-HK gideon lens

BYD Company Limited (1211.HK) - Gideon Lens

Report ID: BYD-ER2-20260907-pulse-cio-20260907T040305+0800 **Report date:** 2026-09-07 **Price anchor:** HKD 86.15 per XHKG:1211 H ordinary share at the 2026-09-04 close **Forecast anchor and horizon:** TTM ended 2026-06-30 to 2031-06-30, exactly 5.0 years **Mode:** Production ER2

Investment conclusion

BYD is an exceptional industrial executor, but the evidence does not support underwriting it as a durable high-return compounder at HKD 86.15. The company has built genuine advantages in batteries, power electronics, vehicle platforms, manufacturing scale, product-cycle speed, logistics and overseas localization. Those advantages have protected relevance and volume. They have not yet produced durable pricing power, high post-investment free cash flow or a clean acquisition-inclusive return-on-incremental-capital record. China price competition is passing much of BYD's cost advantage to customers, while overseas capacity, charging infrastructure and premium-brand expansion keep capital needs elevated.

The hard gates decide the outcome. Management is YELLOW: Wang Chuanfu's long record and ownership are valuable, but succession, board independence, issuance authority, disclosure quality and current-cycle capital returns remain unresolved. Moat is FAIL and the 2046 test is FAIL because BYD has not demonstrated that its scale can protect high returns through commoditization, software value migration and repeated technology cycles. The P/E-at-15 entry test also fails after the red-team repair: Base terminal ordinary-common EPS of HKD 5.434207 is 5.38% below the HKD 5.743333 required at today's price.

The security return model is still less attractive than the operating story. The independently validated P/E method uses 10x Bear, 14x Base and 20x Bull exit multiples on grant-normalized, parent-attributable ordinary-common diluted EPS. Gross HKD IRRs are -31.34%, -2.46% and 14.52%. Expected terminal wealth is HKD 60.269460 per share under 40%/50%/10% probabilities, producing a -6.90% annual return. Net-SGD diagnostics are -32.52%, -2.73%, 15.32% and -7.01% probability-weighted. The audited score is 40/100. BYD therefore receives an ER2 verdict of PASS and a separate CIO actionability status of PASS, with no proposed sizing.

What the business evidence says

BYD's broad automobiles-and-related segment supplies about 80% of TTM revenue and more than 90% of reportable-segment profit. The official TTM bridge is exact: CNY 777.499431B of revenue, CNY 36.208778B of statutory operating income, CNY 35.457121B of pretax income and CNY 30.055878B of Group net income. Auto-related adjusted PBT was CNY 26.772943B on CNY 621.480723B of revenue, a 4.31% margin. Electronics generated CNY 1.608320B on CNY 155.897619B, only 1.03%. H1 2026 automotive revenue fell 8.98%, NEV sales fell 15.72%, and electronics profit fell sharply despite flat revenue. Exports grew 67.8% and overseas revenue mix reached about 52.6%, illustrating both the diversification opportunity and the execution burden.

The Base case assumes recovery rather than a continuation of historic hypergrowth. Revenue reaches CNY 1,096.492438B, a five-year CAGR of 7.12%. Auto-related adjusted PBT reaches CNY 45.833555B and electronics CNY 3.717517B. Statutory operating income is CNY 61.430771B, or 5.60% of revenue. The controlling return denominator is more conservative: the model subtracts the full CNY 8.013B annual excess-grant overlap ceiling before tax, then deducts NCI profit, perpetual-bond distributions and restricted-share attribution. Base normalized operating income is therefore CNY 53.417771B and the ordinary-common EPS numerator is CNY 42.297858B, producing HKD 5.434207 per diluted listed unit.

This normalization was the central red-team repair. FY2025 disclosed CNY 12.634B of grants recognized in profit or loss versus a five-year median recurring baseline of CNY 4.621B. Exact overlap with the TTM CNY 7.075858B adjustments-and-eliminations line is unavailable. Rather than assume favorable non-overlap, the model excludes the full CNY 8.013B excess ceiling in every scenario and every forward year. It also reconciles Group profit to ordinary-common earnings through NCI, CNY 20.846860B of opening perpetual bonds, their distributions, and restricted-share attribution. The starting normalized EPS is HKD 2.894538 and the terminal denominator uses the identical common-share and currency perimeter.

Capital intensity is the other unresolved economic issue. TTM free cash flow was negative CNY 56.350B, inventory days reached 109, and overseas localization adds utilization risk. The primary model therefore assumes no repurchases, no new

common issuance and no common cash distributions. Diluted listed-equivalent shares remain 9,085.053M across all scenarios. The unexercised authority to issue up to 20% of H shares is monitored but not counted until exercised. This flat-share, zero-distribution path is conservative, yet it does not create the PASS conclusion: even the Bull return remains below the 20% stretch hurdle.

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	YELLOW	Founder execution is exceptional; succession, independence, disclosure and capital returns remain unresolved
Moat	FAIL	Scale and integration defend cost and relevance but do not demonstrate durable pricing power
2046 test	FAIL	BYD may remain important, but a protectable high-return profit pool is not sufficiently credible
P/E <= 15 on confident EPS at TTM + 5 calendar years	FAIL	Base normalized EPS has a -5.3823% cushion at HKD 86.15
Compounder Score	Audited 40 / 100	Reject classification; hard gates and security returns fail
Business Quality Score	Audited 38 / 80	Durable ROIIC, cash conversion and pricing power are unproven
20% Return UW Score	Audited 2 / 20	No locked scenario reaches 20%; Base and expected returns are negative

One-line thesis (or reason to pass): BYD's integrated technology and manufacturing scale are real, but thin returns, negative post-capex cash flow, failed long-duration moat tests and expected wealth below today's price make the H shares unattractive at HKD 86.15.

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

Measure	Result	Notes
Primary valuation method	P/E	One audited method for all scenarios, expected wealth, reverse returns and net-SGD
Gross local-currency Bear / Base / Bull IRR	-31.34% / -2.46% / 14.52%	Five-year annualized shareholder return in HKD
Probability-weighted gross local-currency IRR	-6.90%	CAGR of HKD 60.269460 expected terminal wealth; weights 40% / 50% / 10%
Return bridge	HKD 86.15 -> HKD 13.143507 / 76.078899 / 169.726075	Terminal ordinary-common EPS times 10x / 14x / 20x P/E; zero distributions and no second cash/debt adjustment

Gross local-currency underwriting is in HKD; net-SGD adjustments appear separately in CIO actionability. Operating figures begin at the 2026-06-30 TTM anchor, while price and market valuation begin at the 2026-09-04 close. Values are CNY billions except per-share amounts and diluted shares in millions.

Bear-case operating and return bridge

Bear case	Start (2026-09-04; TTM 2026-06-30)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY 777.499431B	CNY 769.601230B	-0.20%	Continued vehicle pricing pressure and an electronics plateau
Normalized operating margin	4.66% statutory TTM reference	1.93%	-2.73 pp	Full excess-grant ceiling and weak auto/electronics economics
Normalized operating earnings	CNY 36.208778B statutory TTM reference	CNY 14.833828B	-16.35%	Statutory horizon OI CNY 22.846828B less CNY 8.013B normalization
Diluted listed-equivalent shares	9,085.053M	9,085.053M	0.00%	No buyback, issuance or SBC-share path modeled

Bear case	Start (2026-09-04; TTM 2026-06-30)	Horizon (2031-06-30)	CAGR / change	Justification
Ordinary-common diluted EPS	HKD 2.894538 normalized	HKD 1.314351	-14.61%	After NCI, perpetual distributions and restricted attribution
Valuation denominator	Reported TTM HKD 3.764589; normalized HKD 2.894538	2031 normalized EPS HKD 1.314351	Comparable	Same listed-unit, currency and common-claim perimeter
Valuation	22.88x reported / 29.76x normalized P/E	10.00x P/E	-12.88x vs reported	Below Great Wall's normalized trough; depressed EPS is not double-penalized further
Share value	HKD 86.15	HKD 13.143507	-31.34%	HKD 1.314351 EPS times 10x; no net-cash adjustment
Modeled common distribution	-	HKD 0.000000	zero	Negative TTM FCF and reinvestment needs
Total ending value	HKD 86.15	HKD 13.143507	-31.34% gross HKD IRR	Terminal share value plus zero distributions

Base-case operating and return bridge

Base case	Start (2026-09-04; TTM 2026-06-30)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY 777.499431B	CNY 1,096.492438B	7.12%	Staged vehicle recovery, battery/storage growth and modest electronics improvement
Normalized operating margin	4.66% statutory TTM reference	4.87%	+0.21 pp	Statutory margin reaches 5.60% before full grant normalization
Normalized operating earnings	CNY 36.208778B statutory TTM reference	CNY 53.417771B	8.09%	Statutory horizon OI CNY 61.430771B less CNY 8.013B normalization
Diluted listed-equivalent shares	9,085.053M	9,085.053M	0.00%	No buyback, issuance or SBC-share path modeled
Ordinary-common diluted EPS	HKD 2.894538 normalized	HKD 5.434207	13.43%	Parent-attributable recurring earnings after all common-claim deductions
Valuation denominator	Reported TTM HKD 3.764589; normalized HKD 2.894538	2031 normalized EPS HKD 5.434207	Comparable	Same listed-unit, currency and common-claim perimeter
Valuation	22.88x reported / 29.76x normalized P/E	14.00x P/E	-8.88x vs reported	Anchored near Great Wall normalized current P/E and below its cycle median
Share value	HKD 86.15	HKD 76.078899	-2.46%	HKD 5.434207 EPS times 14x; no net-cash adjustment
Modeled common distribution	-	HKD 0.000000	zero	Negative TTM FCF and reinvestment needs
Total ending value	HKD 86.15	HKD 76.078899	-2.46% gross HKD IRR	Terminal share value plus zero distributions

Bull-case operating and return bridge

Bull case	Start (2026-09-04; TTM 2026-06-30)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY 777.499431B	CNY 1,315.934101B	11.10%	Overseas localization, premium mix, storage and electronics program wins coincide
Normalized operating margin	4.66% statutory TTM reference	6.22%	+1.56 pp	Statutory margin reaches 6.83% before full grant normalization
Normalized operating earnings	CNY 36.208778B statutory TTM reference	CNY 81.851166B	17.72%	Statutory horizon OI CNY 89.864166B less CNY 8.013B normalization
Diluted listed-equivalent shares	9,085.053M	9,085.053M	0.00%	No buyback, issuance or SBC-share path modeled

Bull case	Start (2026-09-04; TTM 2026-06-30)	Horizon (2031-06-30)	CAGR / change	Justification
Ordinary-common diluted EPS	HKD 2.894538 normalized	HKD 8.486304	24.00%	Strong operations after NCI, perpetual and restricted-share deductions
Valuation denominator	Reported TTM HKD 3.764589; normalized HKD 2.894538	2031 normalized EPS HKD 8.486304	Comparable	Same listed-unit, currency and common-claim perimeter
Valuation	22.88x reported / 29.76x normalized P/E	20.00x P/E	-2.88x vs reported	Near CATL's normalized current P/E but below BYD's current normalized multiple
Share value	HKD 86.15	HKD 169.726075	14.52%	HKD 8.486304 EPS times 20x; no net-cash adjustment
Modeled common distribution	-	HKD 0.000000	zero	Conservative despite strong operations; any distribution path requires rerun
Total ending value	HKD 86.15	HKD 169.726075	14.52% gross HKD IRR	Terminal share value plus zero distributions

CIO actionability (separate from ER2 underwriting):

Measure	Result	Notes
Status	PASS	Hard moat failures and negative central returns preclude allocation
Bear / Base / Bull net-SGD IRR	-32.52% / -2.73% / 15.32%	Five-year annualized after security costs, FX spreads, custody drag and scenario FX
Probability-weighted net-SGD IRR	-7.01%	CAGR of SGD 9.927867 expected terminal wealth; weights 40% / 50% / 10%
10% mandate hurdle	FAIL	Base and probability-weighted cases are below 10%
15% stretch hurdle	FAIL	Base and expected returns fail; Bull barely clears 15% net-SGD only under favorable FX
Downside and portfolio fit	UNAVAILABLE	Security downside fails; portfolio holdings and risk budget were not provided
Proposed sizing ceiling	none	Research proposes no allocation; any future action requires owner approval

The net SGD diagnostic starts at 0.1650 SGD per HKD. Terminal FX stresses are 0.15345 Bear, 0.1650 Base and 0.17325 Bull. It applies 0.2105% security costs at entry and exit, 0.25% FX spread each way and 0.10% annual custody/platform drag. It assumes 10% PRC dividend withholding for a conservative nominee-held H-share case, zero additional Hong Kong withholding and zero Singapore capital-gains tax. With modeled common distributions of zero, dividend withholding has no numerical effect. Investor-specific residency, broker and wrapper details are unavailable, so this remains an analytical diagnostic rather than personal tax advice.

Trade execution authorized: NO

What could change the conclusion

At the locked Base earnings path and 14x exit P/E, the maximum price consistent with a 20% five-year gross return is HKD 30.574403. That is not an automatic BUY level because the Moat and 2046 gates still fail. A genuine upgrade would also require evidence that cost leadership is becoming durable owner economics: sustained automotive adjusted-PBT margin above 7%, positive post-growth free cash flow, acquisition-inclusive ROIIC above 15%, clearer product and regional profitability, and governance safeguards that reduce founder/succession concentration.

Kill / trigger criteria:

- Research reconsideration trigger: price at or below HKD 30.57 while the audited Base earnings path remains intact.
- Operating downgrade trigger: auto adjusted-PBT margin below 3% with non-positive unit growth for two consecutive half-years.
- Cash-flow trigger: continued negative free cash flow after overseas localization and charging investment should have moved toward utilization.

- Dilution trigger: exercise of the June 2026 H-share issuance mandate requires the share-count, EPS, valuation and return chain to be rerun.
- Upgrade evidence: positive post-growth FCF, sustained auto margins above 7%, incremental ROIC above 15% and materially better segment disclosure.

Research sizing if actionable: None. The completed research proposes no capital, ranking, funding, sale, message, portfolio mutation, order or trade; any future action requires explicit owner approval.

BYD Company Limited — Company Primer

Ticker: 1211.HK (H ordinary shares; dual-listed in Shenzhen as 002594) **Report date:** 7 September 2026 **Financial anchor:** H1 2026 ended 30 June 2026; TTM = FY2025 − H1 2025 + H1 2026 **Forward horizon used elsewhere in ER2:** 30 June 2031 **Reporting currency:** CNY; financial amounts below are CNY billions unless stated otherwise **Run ID:** `pulse-cio-20260907T040305+0800` `trade_execution_authorized=false`

Scope and source discipline

This appendix is a reader-facing orientation to BYD rather than a valuation or an investment verdict. All financial figures come from the QFR-cleared `quant_foundation.md`, whose controlling sources are BYD's official [2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf) and [2026 Interim Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801695.pdf). FMP's segment endpoints were empty and its statement aggregates differed materially from the filings, so the official filings control. Current qualitative facts are drawn from those live official reports and BYD's official investor and technology pages. The separate `data_package.md` was still an in-progress placeholder when this primer was written and was not used as evidence.

1. Business overview

BYD began as a rechargeable-battery manufacturer and has grown into a vertically integrated industrial technology group. Its economic center is now the design, manufacture and sale of new-energy vehicles, but the company also manufactures battery cells and energy-storage systems, electronic components and complete electronic devices, photovoltaic products, automotive semiconductors, and urban-rail systems. The common thread is an engineering-and-manufacturing model: master critical components, integrate them into finished systems, manufacture at large scale, and iterate using field data.

For a consumer, BYD primarily solves mobility problems. It offers battery-electric vehicles and plug-in hybrids across a wide price spectrum, from mass-market family cars to personalized off-road vehicles and million-renminbi luxury models. The principal passenger-vehicle brand contains the Dynasty and Ocean series. FANGCHENGBAO addresses personalized and off-road use cases; Denza targets technology-led luxury; and Yangwang is positioned at the premium extreme. BYD also sells electric buses and commercial vehicles to fleet and public-transport customers.

For an industrial or utility customer, BYD supplies energy-storage systems and rechargeable batteries. The offer can extend beyond cells to battery-management systems, power-conversion systems and energy-management systems. In electronics, BYD is a contract-development and manufacturing partner: it supplies components, precision structures, assembly, thermal management, power systems and increasingly AI-computing infrastructure such as servers, liquid-cooling components, high-voltage power supplies and high-speed interconnect products. SkyRail and SkyShuttle address medium- and low-capacity urban transit.

The customer journey differs by activity. Vehicle buyers purchase through brand-specific retail and dealer networks, supported by financing, after-sales service, charging and digital services. Overseas, BYD explicitly describes a distributor-partner model, increasingly reinforced by local production and owned logistics. Electronics customers are large original-equipment manufacturers that award component or assembly programs and expect design-for-manufacture, quality, yield, confidentiality and high-volume delivery. Energy-storage customers include utilities, power developers, commercial users and households; contracts are project-based and require bankable safety, integration and lifetime performance.

BYD describes itself as a global technology company built around independent R&D, vertical integration and system integration. The [official company profile](https://www.bydglobal.com/en/CompanyIntro.html?scroll=true) says the group has more than 30 industrial parks and activities spanning electronics, automobiles, new energy and rail transit. That breadth is strategic, but it also means a reader should not mistake BYD for a simple passenger-car assembler.

2. Revenue architecture and reporting segments

BYD reports only two external-revenue segments. This is much less granular than its operational footprint. Batteries, energy storage, photovoltaics, vehicle components, rail and other activities sit inside the broad "automobiles and related products and other products" segment. The electronics segment contains both components and whole-unit assembly, and now includes AI-computing infrastructure. Small external-trading adjustments reconcile the two segments to consolidated revenue.

Reporting line	FY2025 revenue	FY2025 share	TTM revenue	TTM share
Automobiles and related products and other products	648.646	80.68%	621.481	79.93%
Electronics and other products	155.237	19.31%	155.898	20.05%
External-trading adjustments and eliminations	0.083	0.01%	0.121	0.02%
Consolidated revenue	803.965	100.00%	777.499	100.00%

Automobiles and related products and other products

This segment is the company's core economic engine. It includes passenger and commercial vehicles, automotive molds and components, power batteries, other lithium-ion and iron batteries, photovoltaic products, and rail transportation. A vehicle sale therefore captures value that a less integrated automaker might pay to suppliers: battery cells and packs, power electronics, electric motors, controllers, semiconductor content, chassis systems and software-enabled features. Internal component sales eliminate on consolidation, while external battery, storage and photovoltaic sales remain in the segment. The reporting perimeter makes the segment strategically coherent but analytically opaque: investors cannot cleanly separate vehicle assembly economics from batteries, energy storage or solar profitability.

The segment generated CNY621.481 billion of TTM external revenue, about four-fifths of group revenue. H1 2026 revenue was CNY275.341 billion versus CNY302.506 billion in H1 2025, a decline of roughly 9.0%. That contraction matters because vehicle scale usually provides operating leverage, while overseas localization, charging networks and premium-brand development require investment before reaching mature utilization.

Electronics and other products

The electronics segment provides end-to-end product solutions spanning product development, core components, system integration, manufacturing and supply-chain management. Its applications include smartphones, computers, wearables, smart-home devices, gaming hardware, drones, 3D printers, communications equipment and AI-computing infrastructure. The commercial model resembles sophisticated contract manufacturing: customers pay BYD for content, engineering, tooling and/or assembly, but customer bargaining power and product cycles constrain margins.

TTM revenue was CNY155.898 billion, essentially flat with FY2025's CNY155.237 billion. H1 2026 revenue rose only 1.0% year on year to CNY69.405 billion. The interim report says component revenue was pressured by weak smartphone demand and product-specification changes, while whole-unit assembly benefited from a major overseas customer. New AI-infrastructure programs—including servers and liquid-cooling components—were entering bulk shipment or production ramp-up. That creates optionality but does not yet remove the segment's low-margin manufacturing character.

Geography

The statutory two-segment table does not provide a clean geographic profit bridge. Operationally, China remains the manufacturing and sales base, while overseas expansion is becoming much more important. BYD's 2026 interim report says the NEV footprint reached 121 countries and regions across six continents. H1 2026 vehicle exports reached 792,000 units, up 67.8% year on year, and the company described exports as China's largest for NEVs. These are issuer-reported operating facts, not a substitute for audited regional margins.

3. Unit economics

Automotive and related economics

A useful mental equation is: vehicle revenue equals deliveries multiplied by average realized revenue per vehicle, plus external sales of batteries, storage, components, photovoltaic and rail products. Vehicle contribution depends on price and incentives, model and brand mix, battery size and chemistry, localization, factory utilization, raw-material prices, warranty and quality costs, freight, dealer economics and the amount of proprietary content captured inside BYD.

Vertical integration can lower the bill of materials and shorten product-development cycles. BYD does not need to buy every battery, motor, inverter or power semiconductor at an external supplier's margin. It can also coordinate pack architecture, power electronics, thermal management and vehicle design. But internalization does not make costs disappear. It moves them into BYD's own factories, R&D organization, depreciation base, working capital and execution risk. When prices fall or a factory runs below plan, the fixed-cost burden remains.

The issuer's common segment-profit measure is **adjusted profit before tax**, not operating income. On that basis, the automotive-and-related segment earned CNY26.773 billion on CNY621.481 billion of TTM revenue, a 4.31% margin. FY2025 was similar at 4.38%. This is a thin margin for a business carrying heavy technology, manufacturing, inventory, distribution and warranty obligations. Small changes in pricing, product mix, utilization or input costs can therefore move profit disproportionately.

Premiumization is one proposed offset. FANGCHENGBAO, Denza and Yangwang broaden the addressable price range and could raise average selling prices and feature content. Their combined H1 2026 volume grew 61.0% and reached 12.8% of passenger-vehicle sales, according to the interim report. Overseas growth may also improve revenue mix, but tariffs, local homologation, dealer support and startup costs can absorb the apparent pricing benefit. The economic question is not whether exported vehicles command higher sticker prices; it is whether localized, after-tax contribution margins exceed domestic margins after the full logistics and commercial burden.

Electronics economics

Electronics revenue converts to profit through material content, manufacturing value-add and capacity utilization. Margins improve when BYD wins more complex components, improves yield, raises automation, fills factories and adds thermal or power-management content. They weaken when large customers reprice programs, volumes miss plan, specifications change, new lines ramp inefficiently, or high material costs cannot be passed through.

The segment's TTM adjusted-pre-tax profit was only CNY1.608 billion on CNY155.898 billion of revenue, a 1.03% margin. H1 2026 margin fell to 0.28% from 1.94% in H1 2025. This is not software-like optionality despite the "AI infrastructure" label. Servers, cold plates, power supplies and interconnect systems may create new revenue pools, but the proof must come through sustainable program economics and utilization, not merely shipment announcements.

Consolidated conversion

TTM consolidated revenue of CNY777.499 billion produced CNY36.209 billion of operating profit, a 4.66% operating margin, and CNY29.434 billion of profit attributable to the parent, a 3.79% net margin. The two reportable segments generated CNY28.381 billion of adjusted pre-tax profit; CNY7.076 billion of disclosed adjustments and eliminations bridged that total to CNY35.457 billion of consolidated pretax profit. The bridge is fully reconciled in the sealed quantitative foundation, but the magnitude of corporate and elimination items is another reason not to extrapolate segment margins mechanically.

4. Competitive landscape

BYD competes in several different arenas, and no single peer captures the whole group.

In mass-market Chinese passenger vehicles, it competes with vertically integrated domestic groups such as Geely, SAIC and Changan; EV-focused manufacturers such as Tesla; and technology-led entrants including Li Auto, XPeng and NIO. The competitive weapons are price, product cadence, range, charging, hybrid efficiency, cockpit and driver-assistance capability, design, retail reach, financing and residual values. China's rapid model turnover and price competition make share gains less valuable if achieved through structurally lower economics.

In international markets, BYD faces Tesla and established global manufacturers such as Toyota, Volkswagen and Hyundai-Kia, along with Chinese exporters. Its advantages are a broad BEV/PHEV range, in-house batteries and aggressive product cadence. Its disadvantages include lower brand familiarity in some developed markets, uneven dealer and service density, local regulation, tariff exposure and the need to tailor products. Local manufacturing in Thailand and Brazil, and projects elsewhere, are intended to reduce landed-cost and policy disadvantages.

In batteries and storage, BYD competes with dedicated cell and system companies, most notably large Chinese battery producers such as CATL, as well as global cell makers and storage integrators. BYD's differentiation is not simply cell chemistry: it combines cells, power semiconductors, power-conversion systems, energy-management systems and downstream vehicle or storage demand. Conversely, captive demand can complicate comparisons of pricing and profitability, and external customers may be reluctant to depend on a direct automotive competitor.

In electronics, BYD competes with global contract manufacturers and precision-component suppliers, including firms such as Foxconn and Luxshare. Scale, quality, yield, design capability and customer trust matter more than consumer branding. Customer concentration and annual repricing can keep supplier economics tight even when end markets grow.

The strongest competitive case for BYD is the interaction of breadth and speed: battery know-how informs vehicle architecture; electronics and semiconductors support power and intelligent systems; large vehicle volume supplies field data

and factory scale; and storage creates another outlet for electrochemical capability. The counterargument is organizational complexity. A portfolio this wide can hide subsidization among activities, require enormous capital, and make management discipline more important than technological ambition.

5. Value chain and vertical integration

BYD's value chain begins upstream with battery materials and externally sourced commodities, but it internalizes unusually much of the engineered stack. Official disclosures list power batteries, electric drives, electronic controls, automotive-grade semiconductors, vehicle platforms, intelligent chassis, assisted driving and smart cockpits among its capabilities. In energy storage it describes a 3C-to-3S stack: cells, power chips and intelligent-computing chips through battery-energy-storage systems, power-conversion systems and energy-management systems. In electronics it spans materials, molds, precision parts, thermal systems, assembly and supply-chain management.

The manufacturing layer includes vehicle, battery, component, electronics and energy-system plants. The distribution layer is also becoming more integrated. BYD's H1 2026 report describes an overseas chain covering R&D, manufacturing, logistics and sales. Factories in Brazil and Thailand were operating, additional projects were progressing, eight owned roll-on/roll-off ships were in service, and international distributors were expanding the channel network.

This architecture creates four possible advantages. First, engineering teams can optimize the whole system rather than negotiate interfaces among suppliers. Second, high common-component volumes can lower unit cost. Third, product launches are less exposed to a single external component supplier. Fourth, learning cycles can be faster because design, manufacturing and field data stay within the group.

There are equally important liabilities. Vertical integration magnifies capital requirements and makes BYD responsible for yield, utilization and obsolescence across more layers. Internal transfer economics are not visible to outside investors. A proprietary solution can become a burden if an external technology improves faster. Finally, upstream commodity, supplier and labor exposure remains: integration reduces supplier dependence for engineered subsystems, not the need for lithium, other battery materials, semiconductors, industrial equipment and a healthy dealer/supplier ecosystem.

6. Technology, battery and vehicle platforms

Blade Battery and charging

The original Blade Battery is a long-format lithium-iron-phosphate cell and pack architecture intended to improve safety and volumetric utilization. BYD's [official Blade Battery factory description](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1514436807276&d=Touch&pagename=BYD_EN%2FBydArticle%2FBYD_ENCommon%2FArticleDetails) emphasizes in-house process equipment, pack-space utilization and nail-penetration safety testing. The strategic importance is bigger than one specification: Blade made a relatively inexpensive and thermally stable chemistry credible in mainstream long-range vehicles.

In 2026, BYD launched the second-generation Blade Battery and Flash Charging. The interim report states that energy density increased by more than 5% from the first generation while supporting claimed range above 1,000 kilometers and much faster charging. The associated 1,500kW single-gun charging pile can be paired with fast-discharge storage to reduce grid-load constraints. BYD planned 20,000 Chinese Flash Charging stations by year-end and reported 7,018 operating by 30 June. These are company claims and rollout milestones; investors should distinguish controlled demonstrations, model homologation and station count from sustained real-world charge curves, availability and returns on infrastructure capital.

BEV and PHEV platforms

The e-Platform 3.0 integrates battery, electric drive, thermal management, body architecture and electronic/electrical systems. BYD's [official launch material](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1514444136668&d=Touch&pagename=BYD_EN%2FBydArticle%2FBYD_ENCommon%2FArticleDetails) describes an 8-in-1 electric powertrain, heat-pump system, high-voltage charging, integrated body structure and domain-control architecture. e-Platform 3.0 Evo is the later vehicle platform used across several current mass-market models.

The Super e-Platform advances the high-voltage architecture. The 2025 annual report describes a mass-produced full-domain 1,000V system built around a 10C charging battery, a 30,000-rpm motor and automotive-grade silicon-carbide power chips. The fifth-generation DM system is BYD's plug-in-hybrid architecture, designed to combine electric-first operation with a combustion engine for range and efficiency. The two-track BEV/PHEV strategy broadens BYD's addressable market, particularly where charging infrastructure remains incomplete.

Chassis, intelligence and brand-specific platforms

DiSus is BYD's family of intelligent body-control systems. Lower-cost DiSus-C damping technology has migrated into mass-market models, while hydraulic and electromagnetic variants support off-road and premium vehicles. The e4 platform provides four-motor control for Yangwang; Denza uses e3 architecture; DMO addresses off-road hybrids. These platforms let BYD reuse core technology while differentiating brand price points.

"God's Eye" is the assisted-driving technology matrix, integrated with BYD's Xuanji electronic/electrical architecture and DiLink cockpit. At 30 June 2026 BYD reported more than 3.33 million assisted-driving vehicles generating over 210 million kilometers of data daily. It also reported mass production of a 4nm Xuanji A3 intelligent-driving chip. Scale can create a data flywheel, but assisted driving introduces regulatory, safety, liability and reputational risk. Stated support for L3/L4 capability is not the same as blanket regulatory approval for autonomous operation.

7. Geography and routes to market

China supplies BYD with scale, dense suppliers, fast product feedback and a large NEV market. The domestic route to market uses the Dynasty/Ocean retail system and separate networks for premium or specialist brands. The model remains channel-intensive: cars require physical delivery, service, financing, trade-ins, software support and eventually battery and charging assistance.

Overseas expansion combines exports with localization. BYD first built recognition through buses and commercial fleets, then accelerated passenger-car entry using local distributors. The current model adds local assembly/manufacturing, regional product adaptation and owned shipping. Brazil and Thailand were already operating production sites by H1 2026; the broader buildout includes other markets as projects mature. Local plants can lower logistics and tariff costs and demonstrate commitment, but they also expose BYD to utilization, labor, currency and local-content risks.

Product-market fit varies. BEVs can succeed where charging and policy are supportive; PHEVs can bridge infrastructure gaps but face differing emissions rules. Pickup trucks, small hatchbacks, sedans and large SUVs require different homologation and consumer propositions. Dealer quality and residual values will be important to repeat purchase and brand durability. Eight owned roll-on/roll-off ships improve export control, but they also make logistics part of BYD's capital allocation.

Energy storage is more globally project-driven. BYD said its systems reached more than 110 countries and regions and described contracts across the UAE, Europe, Chile and China. Electronics is already globally integrated through large customers, making its route to market less visible but more concentrated: a small number of design wins can move factory utilization, while customer procurement decisions can pressure price.

8. Growth history and reinvestment

BYD's growth has occurred in waves: rechargeable batteries, electronics manufacturing, automobiles, the NEV transition, and now overseas vehicles, grid storage and intelligent systems. Vehicle scale accelerated from the one-millionth NEV in 2021 to the 15-millionth in December 2025, the 16-millionth in April 2026 and the 17-millionth in July 2026. FY2025 NEV sales were approximately 4.60 million units, including more than one million exported complete vehicles. H1 2026 sales were about 1.81 million units, while exports grew rapidly even as domestic demand and consolidated revenue softened.

Financial momentum is currently less linear than cumulative-production milestones imply. TTM revenue was CNY777.499 billion versus CNY803.965 billion in FY2025, because the weaker H1 2026 replaced H1 2025. TTM parent-attributable profit was CNY29.434 billion versus CNY32.619 billion in FY2025. Automotive-related TTM revenue declined to CNY621.481 billion, while electronics was broadly stable at CNY155.898 billion. The latest picture is therefore one of overseas growth and technology launches coexisting with group-level revenue and earnings pressure.

Reinvestment is embedded in the model. It includes vehicle and battery factories, overseas plants, owned ships, charging stations, R&D, software and chips, energy-storage manufacturing, sales/service networks and working capital. The March 2025 H-share placement allocated proceeds to R&D, overseas expansion, working capital and general purposes, according to the annual report. Diluted weighted-average shares increased from 8.725 billion in FY2024 to 9.026 billion in FY2025 and 9.085 billion in H1 2026; the official EPS history already reflects the subsequent stock distribution. Growth per company and growth per share are therefore not identical.

9. Capital intensity and balance-sheet implications

Capital intensity is the central economic tension. In FY2024, operating cash flow of CNY133.454 billion exceeded cash capital expenditure of CNY97.360 billion, producing CNY36.094 billion of free cash flow on the quantitative foundation's definition. In FY2025, operating cash flow fell to CNY59.136 billion while capex rose to CNY156.808 billion, creating negative free cash flow of CNY97.672 billion. TTM operating cash flow recovered to CNY64.637 billion, but CNY120.986 billion of capex still left negative free cash flow of CNY56.350 billion.

Period	Operating cash flow	Cash capex	Free cash flow
FY2024	133.454	97.360	36.094
FY2025	59.136	156.808	(97.672)
TTM ended 30 June 2026	64.637	120.986	(56.350)

The balance sheet absorbed that investment. Monetary funds declined from CNY102.739 billion at the end of 2024 to CNY75.425 billion at the end of 2025 and CNY58.738 billion at 30 June 2026. Bank loans and bonds rose from approximately CNY28.584 billion to CNY113.435 billion and then CNY120.055 billion. Net debt excluding leases moved from CNY74.155 billion of net cash to CNY61.317 billion of net debt. Lease liabilities were another CNY8.610 billion at June 2026, and the reported gearing ratio was 31%.

This does not by itself show that reinvestment is poor; new plants and technology can earn attractive returns after ramp. It does show that BYD's expansion is no longer financed solely by retained operating cash. A serious analysis must track utilization, incremental margins, working-capital discipline and per-share returns on the enlarged capital base. "Vertical integration" is an operating design, not evidence of high return on invested capital.

10. Governance and control structure

BYD is a PRC-incorporated joint-stock company with H shares in Hong Kong and A shares in Shenzhen. Wang Chuanfu is co-founder, chairman, president and the sole executive director listed in the 2026 interim report. Two non-executive directors—Lv Xiangyang and Xia Zuoquan—are long-standing founders/investors, and three independent non-executive directors complete the six-member board. The audit committee is chaired by independent director Zhang Min and includes the other independent directors plus Xia.

The 2025 annual report identifies Wang as the largest shareholder at about 17.06% when his disclosed holdings are aggregated. Lv and Xia also own economically significant stakes; Lv is Wang's cousin, and senior manager Wang Chuanfang is Wang's elder brother. The result is strong founder alignment and continuity, but also pronounced key-person and influence concentration. Wang's combined chairman, president and operating-strategy roles make succession planning and genuine board challenge important.

The board structure provides formal independent oversight, and the annual report states that no related-party transaction in 2025 required connected-transaction disclosure under Hong Kong Listing Rule Chapter 14A. That is useful but not conclusive. Investors should continue to monitor related parties, subsidiary transactions, employee ownership schemes, equity issuance, and whether capital is allocated on equal terms across A- and H-shareholders. The 2025 placement and large stock distribution also show that capital-structure decisions can materially change the share base.

11. Major risks

- **Price competition and margin compression.** Automotive adjusted-pre-tax margin is only about 4.3%. Price cuts, incentives or adverse mix can outweigh volume growth. China's short product cycles amplify residual-value and inventory risk.

- **Capital-allocation and free-cash-flow risk.** BYD is funding plants, batteries, ships, charging infrastructure, storage, electronics and R&D simultaneously. Negative TTM free cash flow and rising net debt make utilization and sequencing critical.

- **Global trade and localization risk.** Tariffs, local-content rules, subsidy exclusions and geopolitical tension can change market economics quickly. Local factories reduce some barriers but add fixed costs, construction risk and regulatory exposure.

- **Technology execution and obsolescence.** Blade, Flash Charging, DM, assisted driving and proprietary chips must work safely at mass-market cost. Competitors can improve chemistry, charging or software. Technology claims need independent real-world validation.

- **Safety, quality and liability.** Battery incidents, recalls, software faults or driver-assistance failures could create direct costs and damage a global brand. Safety guarantees around parking or urban navigation can increase customer trust but may also expand financial and reputational exposure.

- **Supply-chain and commodity risk.** Vertical integration does not eliminate exposure to lithium and other battery inputs, semiconductors, industrial equipment, energy and labor. Rapid capacity additions can also create supplier-payment and dealer-inventory stress.

- **Overseas channel and residual-value risk.** New-market success requires durable dealers, spare parts, service, financing and used-car values. Fast initial sales do not prove retention or lifecycle economics.

- **Electronics concentration and low margins.** Large customers possess bargaining power, and program transitions can disrupt utilization. AI-infrastructure growth could remain manufacturing-heavy and fail to lift margins.

- **Segment opacity.** Vehicles, batteries, storage, photovoltaics and rail are bundled in one reportable segment. Investors cannot directly observe each activity's capital employed or profitability, raising the risk of cross-subsidization or hidden underperformance.

- **Founder dependence and governance.** Strong founder ownership aligns incentives but concentrates strategy, operations and board influence. Succession, related-party monitoring and independent challenge matter more as the group globalizes.

- **Financing and dilution.** The capital program has already involved a large H-share placement and a larger diluted share base. Future investment needs could raise debt or equity claims before projects mature.

- **Policy and demand cyclicality.** Trade-in support, emissions regulation and infrastructure policy can accelerate demand, but subsidy changes or weaker consumer confidence can reverse it. PHEV and BEV rules vary by jurisdiction.

12. Investment-relevance orientation

The key analytical question is whether BYD is evolving from a scale-led manufacturer into a durable, high-return integrated technology platform—or whether competition and capital intensity keep economics structurally thin. The company has real strategic assets: battery and power-electronics capability, a broad BEV/PHEV portfolio, manufacturing scale, a fast technology cadence, growing overseas distribution, and adjacent storage and electronics businesses. The interaction among these assets could create cost, speed and data advantages that a conventional automaker cannot easily replicate.

The financial anchor, however, demands discipline. TTM revenue and profit are below FY2025, automotive segment margin is modest, electronics margin is very low, free cash flow is negative and net debt has risen sharply. Overseas expansion, premiumization, Flash Charging, storage and AI infrastructure are plausible growth engines, but each consumes capital and must ultimately demonstrate incremental returns per share.

For the rest of the ER2 analysis, the most decision-relevant issues are therefore: normalized automotive contribution after pricing and overseas startup costs; the standalone economics hidden inside the broad automotive-and-related segment; returns on the 2025–2026 capex wave; sustainable cash conversion; whether premium brands raise mix without fragmenting scale; whether electronics and AI infrastructure can escape roughly 1% segment margins; the durability of Blade/DM/charging advantages; and governance discipline under founder-led expansion. Those questions belong in the segment, management, moat and synthesis appendices. This primer deliberately stops before valuation and verdict.

Selected official sources

- [BYD 2025 Annual Report, HKEX, 27 March 2026](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf)
- [BYD 2026 Interim Report, HKEX, 28 August 2026](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801695.pdf)
- [BYD official company profile](https://www.bydglobal.com/en/CompanyIntro.html?scroll=true)
- [BYD official basic information and listing details](https://www.bydglobal.com/en/BasicInformation.html)
- [BYD official Blade Battery factory and technology description](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1514436807276&d=Touch&pagename=BYD_EN%2FBydArticle%2FBYD_ENCommon%2FArticleDetails)
- [BYD official e-Platform 3.0 launch](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1514444136668&d=Touch&pagename=BYD_EN%2FBydArticle%2FBYD_ENCommon%2FArticleDetails)

BYD Company Limited — Management Assessment

Run ID: `pulse-cio-20260907T040305+0800` Security: `1211.HK` Information cutoff: 7 September 2026 Financial anchor: 30 June 2026; assessment horizon: 30 June 2031 `trade_execution_authorized=false`

Gate summary

Management gate: YELLOW. Founder-chairman and president Wang Chuanfu has one of the strongest industrial execution records in global autos, meaningful ownership, a coherent technology-led strategy, and a management bench with unusually long BYD tenure. That record is not enough for a PASS today. Wang is simultaneously chairman, chief executive and controlling shareholder; the board has no disclosed lead independent director; no public succession plan identifies an emergency or long-term successor; minority shareholders face non-pre-emptive issuance authority; and BYD provides materially less segment, guidance and question-and-answer disclosure than investable peers. The 2025–H1 2026 combination of heavy capital expenditure, negative free cash flow, lower operating profit and government grants material to reported profit makes stewardship of the next investment cycle the unresolved test.

1. Who is running the company

Role	Executive	Evidence and accountability
Chairman, executive director and president	Wang Chuanfu	Co-founded BYD Battery in February 1995; responsible for general operations and business strategy. He also chairs BYD Electronic, BYD Semiconductor and Denza.
Chief financial officer and senior vice president	Zhou Yalin	Joined BYD in March 1999; also CFO of BYD Electronic and chair of BYD Auto Finance and BYD Property Insurance. The latest filing does not disclose the date she formally became group CFO.
Passenger vehicles	He Zhiqi	Joined in 1998; executive vice president and chief operating officer of the Passenger Car Division.
Batteries	He Long	Joined in 1999; executive vice president and chairman of FinDreams Battery.
Overseas vehicle sales	Li Ke	Joined in 1996; executive vice president, president of BYD America, and general manager for Europe and Middle East/Africa auto sales.
Powertrain and auto manufacturing	Luo Hongbin	Joined in 2003; senior vice president, chairman of FinDreams Powertrain and Shenzhen BYD Auto Industrial.
Electronics subsidiary	Wang Nianqiang	Joined the predecessor in 1995 and has been CEO and executive director of BYD Electronic since April 2015. Jiang Xiangrong is its COO and a BYD vice president.

The biographies show a deep internal bench, supporting culture continuity and technical execution. They offer little evidence of an independent challenge culture, however, and the parent filing does not allocate full P&L accountability or return targets to leaders. Sources: [BYD 2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf) and [BYD Electronic 2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0422/2026042200748.pdf).

At the cutoff, the six-member board remains Wang, two non-executive directors—co-founder and Wang's elder cousin Lv Xiangyang, and former BYD executive Xia Zuoquan—and three independent non-executive directors, Cai Hongping, Zhang Min and Yu Ling. The audit committee has four members and is chaired by accounting professor Zhang; the remuneration committee has five members, includes Wang and Xia, and is chaired by Cai; the nomination committee includes Wang, Lv and all three independents and is chaired by Yu. No lead independent director is disclosed. The annual report explicitly departs from Hong Kong governance code provision C.2.1 because Wang holds both chairman and chief-executive roles.

The board is in transition. On 28 August 2026 it proposed expanding from six to nine directors, with eight shareholder-elected directors and one staff director. Cai and Zhang must leave independent status because a further term would exceed the PRC six-year independence limit; Cai is proposed to remain as a non-executive director. The proposed board would have three independents out of nine, exactly one-third, if shareholders approve it at the 29 September EGM. Two new independent candidates add automotive and accounting expertise, but the design does not strengthen independence proportionally. Until that vote, the current six-member board remains in office. [28 August 2026 board-change

announcement](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801747.pdf).

2. Tenure and track record

Wang has led BYD since its creation more than 31 years ago. He fully owns the strategic record; there is no “new CEO” allowance. Three decisions define it.

First, Wang moved BYD from batteries into automobiles and ultimately exited pure internal-combustion production in March 2022. From FY2021 to FY2025, NEV sales rose from 0.604 million to 4.602 million, automotive-and-related revenue grew from CNY128.960 billion to CNY648.646 billion, and group revenue rose from CNY216.142 billion to CNY803.965 billion. Approximate screening ROIC rose from 6.6% in FY2021 to 58.5% in FY2024 before falling to 13.4% in FY2025. This was not merely market participation; the scale change establishes Wang as the owner of a successful, high-conviction strategic pivot.

Second, management chose vertical integration and sustained R&D rather than acquisition-led growth. Official R&D expense increased from CNY7.991 billion in FY2021 to CNY57.978 billion in FY2025, while power and energy-storage battery installed capacity rose from 37.921 GWh to 285.634 GWh. Blade Battery, DM hybrid technology, vehicle electronics and manufacturing integration are the observable outputs. This decision created cost and launch-speed advantages, although the data package does not permit a clean product-level ROIC attribution.

Third, Wang committed to premium brands and globalization. Overseas revenue mix rose from 30.24% in FY2021 to 38.65% in FY2025 and approximately 52.6% in H1 2026; FY2025 exports exceeded one million vehicles, and H1 2026 exports reached 792,000, up 67.8%. Plants in Brazil and Thailand, additional overseas capacity and an owned roll-on/roll-off fleet make the strategy tangible rather than rhetorical.

The counterevidence is now load-bearing. FY2025 revenue grew only 3.5%, operating income fell from CNY50.486 billion to CNY40.185 billion, parent profit fell from CNY40.254 billion to CNY32.619 billion, and official cash flow less long-term-asset purchases was negative CNY97.672 billion. H1 2026 automotive segment revenue fell 9.0%, H1 NEV unit sales fell 15.7%, and the electronics segment's adjusted pretax margin fell to 0.28%. Management acknowledges that the NEV industry is in a brutal “knockout stage,” a useful instance of candor, but it has not supplied a numeric capacity, return or free-cash-flow framework for the response.

There is no major failed acquisition to evaluate: the last five years were dominated by organic investment, and no material acquisition or disposal was identified in the last 12 months. That reduces serial-M&A risk but also means the current overseas-capacity build is the central allocation test. CFO Zhou shares accountability for the March 2025 capital raise, higher debt, working-capital management and the decision to preserve a dividend despite negative free cash flow.

3. Capital allocation behavior

The reviewed data package controls the financial history below.

CNY billion	FY2021	FY2022	FY2023	FY2024	FY2025
Capital expenditure	37.344	97.457	122.094	97.360	152.749
R&D expense	7.991	18.654	39.575	53.195	57.978
Buybacks	1.100	1.810	0.000	0.400	0.000
Dividends paid	2.433	1.553	3.974	9.636	14.133
Acquisition net cash flow	0.222	0.096	-13.881	-0.104	2.073

Five-year capex totaled CNY507.004 billion and R&D expense CNY177.393 billion, versus CNY3.310 billion of buybacks and CNY31.729 billion of dividends. Capital went into technology, scale and internationalization. Buybacks were too small and sporadic to demonstrate price-sensitive skill. Acquisition cash flow does not show a serial roll-up or establish deal-specific accretion.

The risk is the pace and financing of reinvestment. FY2025 capex reached 19.0% of revenue, free cash flow was deeply negative and TTM official free cash flow at 30 June 2026 remained negative CNY56.350 billion. BYD raised approximately US$5.6 billion in a March 2025 H-share placement, equivalent to about CNY40.075 billion net. The annual report says it used CNY13.178 billion for R&D/general purposes, CNY19.697 billion for overseas expansion and CNY7.200 billion for working capital. The use matches strategy, but per-share value creation is not yet proven.

Minority protection around financing is weaker than ideal. The articles provide no pre-emptive right requiring new shares to be offered pro rata. The June 2026 AGM approved a mandate to issue up to 20% of H shares; 22.92% of votes cast opposed it.

The same meeting approved up to CNY150 billion of guarantees for controlled subsidiaries, mostly those with gearing of at least 70%, plus up to CNY33.515 billion for investees; 6.71% opposed. These are not evidence of abuse, but they are meaningful permissions under a founder-controlled board and deserve monitoring. [2026 AGM circular](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0422/2026042200400.pdf) and [AGM poll results](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0609/2026060901352.pdf).

Government grants also matter. Grants recognized in profit or loss increased from CNY2.263 billion in FY2021 to CNY12.634 billion in FY2025—about 31% of FY2025 operating income and 37% of group net income on a simple ratio. The filing does not allocate grants by model or segment, and H1 2026 does not separately tabulate them. A clean stewardship claim therefore requires operating-return and free-cash-flow evidence before grants, not only reported profit growth.

4. Compensation alignment

Wang's economic alignment is real. As of 28 August 2026 he was interested in 1,540,871,550 A shares and 3,000,000 H shares, plus 11,183,100 A shares held through an employee asset-management plan that the announced total excludes. The directly reported interests represent about 16.9% of total shares. Lv held interests in 1,183,134,666 A shares, about 13.0% of total capital, including shares held through a spouse-owned investment vehicle. The founder and his co-founder/cousin therefore have approximately 30% combined economic exposure. There is no super-voting weighted-vote structure disclosed: BYD has A and H ordinary shares. Nevertheless, the annual report identifies Wang as the controlling shareholder, so ownership is both alignment and governance concentration.

FY2025 remuneration was CNY8.139 million for Wang and CNY10.135 million for CFO Zhou. Key-management cash compensation totaled CNY133.429 million, with another CNY26.052 million of share-payment expense tied to the 2022 and 2025 employee plans for key management. These amounts are modest relative to BYD's scale.

The June 2026 remuneration policy is improved but not investor-grade precise. Senior management pay comprises basic pay, annual performance pay and medium-to-long-term incentives. Annual metrics may include return on assets, revenue, net profit, sustainability and individual contribution. Audited financial data must support the evaluation, and part of performance pay is deferred until after the annual report. The clawback covers public censure, material regulatory penalties, breach of duty, financial fraud, fund misappropriation, illegal guarantees and retrospective restatement. However, the policy gives no disclosed weights, target ranges, vesting hurdles or realizable-pay reconciliation. It names ROA, revenue and net profit but not ROIC, free cash flow or per-share value; “medium-to-long-term assessment” is undefined.

The 2025 employee plan bought 10.715 million A shares in the market, 0.353% of then capital, with 30%/30%/40% unlocks after 12/24/36 months subject to company and individual appraisal. FY2025 group share-based-payment expense was CNY0.912 billion, only about 0.11% of revenue, so chronic SBC is not the main dilution risk. The larger risk is external issuance: diluted shares increased from 8.725 billion in FY2024 to 9.026 billion in FY2025 on the reviewed basis, reflecting the capital raise more than routine employee awards. No explicit anti-hedging or executive share-retention rule was found in the English official materials examined; this should not be inferred from the general securities-dealing code.

5. Disclosure quality and candor

The requested eight-quarter earnings-call test cannot be performed because BYD does not publish a U.S.-style quarterly call archive. A live FMP transcript-date request for `1211.HK` returned an empty list, and the official HKEX record for Q3 2024 through Q2 2026 provides written quarterly/interim/annual reports but no English earnings-call transcripts.

Test	Evidence available	Assessment
Tough-question handling	No public call Q&A for the eight-quarter window	Unassessable; disclosure negative
Guidance beat/meet/miss	No formal numeric segment or FY2026 revenue/margin/unit guidance	Cannot score without fabrication
Hedged-language count	No transcripts	No defensible quarterly count
Voluntary KPIs	Unit sales, exports, selected projects and technology milestones	Useful, but segment economics remain sparse

The written record has two candor positives. Wang directly calls current competition a “knockout stage,” and reports acknowledge weak smartphone demand, component pressure, domestic auto weakness and geopolitical/trade barriers. The filing also discloses a customer that represented CNY100.737 billion of FY2025 revenue.

But management communicates primarily through polished strategy narratives. BYD does not disclose brand, BEV/PHEV, battery, storage, photovoltaic or rail revenue; clean vehicle ASP; dealer inventory; storage shipment economics; country-level revenue; quarterly segment margins; or formal segment guidance. It describes overseas growth and AI-infrastructure progress without quantifying unit economics or capital returns. The [2026 interim results](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf) are timely and detailed by local-market standards, but they do not allow an outside owner to separate price, mix, subsidy, capacity utilization and grant effects. Communication quality is therefore below the standard required for PASS.

6. Strategic coherence

Wang's 2025 chairman's statement says BYD remains “rooted in technology and powered by global expansion.” The investment pattern supports that claim: high R&D, battery and vehicle-platform development, premium brands, charging infrastructure, overseas factories and logistics capacity all point in the same direction. This is not a sequence of unrelated pivots.

The five-to-ten-year destination is recognizable: use vertical integration and intelligent electrification to expand scale, move up-market and localize globally. Management also names competitive intensity and trade barriers rather than assuming an uncontested market. The weakness is not strategic incoherence; it is that the destination lacks investor-facing return milestones. The 6,000-station overseas flash-charging aspiration, factory build-out and 120,000-engineer base are inputs. Management has not supplied thresholds for utilization, margin, ROIC, free cash flow or when each regional build becomes self-funding.

7. Governance flags

The 2025 accounts received an unmodified audit opinion under PRC Accounting Standards, and the board and external auditor reported the financial-reporting controls effective. No restatement, material weakness or securities-enforcement action was identified in the official materials reviewed. This is positive, while recognizing that the disclosure is not a U.S. SOX report.

Governance concentration remains material. Wang combines chairman and CEO roles and is formally identified as controlling shareholder. His cousin/co-founder is vice chairman; Wang's elder brother is a vice president. The separate supervisory board was abolished in December 2025, shifting its oversight responsibilities into the board/audit-committee structure. The current board is half independent, but the proposed nine-member board would be only one-third independent and would retain a former independent director as a non-independent member. No named lead independent director, public succession plan or emergency delegation protocol offsets the key-person risk.

Related-party activity is economically visible even though the company states that it did not constitute Chapter 14A connected transactions requiring separate disclosure. FY2025 related-party purchases and services totaled CNY10.808 billion, sales and services CNY1.561 billion, and fixed-asset purchases CNY0.658 billion; CNY24.611 billion of monetary funds were deposited with BYD Auto Finance. Prices were described as negotiated by reference to market prices. These sums are not thesis-breaking relative to CNY803.965 billion of revenue, but “mutual negotiation based on market prices” is less protective than competitive tender, independent benchmarking and deal-level committee approval disclosure. The condition is monitorable: growth materially faster than revenue, weaker receivable quality or transactions with founder-connected entities outside operational JVs would escalate concern.

No material clustered insider disposal was identified. Wang's disclosed interests at 28 August 2026 matched the post-bonus interests in the FY2025 report; the March 2025 H-share notice reflected dilution from the placement, not a sale. This is reassuring but not a substitute for a complete trade-by-trade A-share dealing analysis.

8. Peer comparison

Peer leader	Capital allocation and stewardship	Communication/governance	Relative rank to Wang
Li Xiang, Li Auto	Focused product strategy and balance-sheet discipline, but a shorter record and less evidence of cross-cycle manufacturing returns	Li Auto maintains quarterly earnings-call webcasts and reports, permitting direct assessment of guidance and Q&A; founder control remains a risk	Wang ranks higher on industrial execution and duration; Li ranks higher on investor communication
Li Shufu, Geely Automobile	Long record of platform, brand and partnership building, but a more acquisit ion/connected-transaction-heavy ecosystem	Geely discloses executive pay structure and uses independent-shareholder votes for material connected transactions; control remains concentrated	Broadly comparable stewardship; Wang's organic technology execution is stronger, while Geely's transaction disclosure is more explicit

Li Auto's call archive is on its [official investor-relations events page](https://ir.lixiang.com/events-presentations), and Geely's governance disclosures are in its [2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0427/2026042700756.pdf). Wang ranks near the top operationally and in the middle on minority-owner governance.

9. Verdict and monitoring conditions

VERDICT: YELLOW. Wang's ownership, 31-year tenure, successful EV pivot, organic R&D record and global expansion provide evidence of exceptional operating leadership. Clean audits, low SBC relative to revenue and the absence of serial M&A or material insider selling are further positives. The management gate does not PASS because succession is undisclosed, chairman/CEO/control are concentrated, the proposed board weakens the independence ratio, non-pre-emptive issuance authority drew substantial dissent, related-party flows require better economic transparency, and the latest capex cycle has not yet produced positive free cash flow or recovered ROIC. Sparse investor Q&A and guidance make external accountability weaker precisely when domestic volumes, margins and cash generation are under pressure.

Upgrade to PASS requires all three conditions: (1) a public emergency and long-term succession framework plus an independent board leader or at least four genuinely independent directors on a nine-member board; (2) positive trailing-12-month free cash flow and recovery of grant-adjusted ROIC above 20% without abandoning the overseas strategy; and (3) recurring disclosure of segment/overseas economics, capex returns, subsidy/grant contribution and related-party terms sufficient to reconcile strategy to per-share value.

Downgrade to FAIL if any one occurs: founder transition without a credible empowered successor; material related-party or non-pre-emptive issuance that independent shareholders cannot effectively police; a restatement, enforcement action or control failure implicating senior leadership; or continued negative free cash flow with ROIC below 15% through FY2027 while capex remains above 15% of revenue and management still provides no return framework.

Evidence boundary

Financial and capital-allocation facts come from the reviewed `data_package.md`; no local warehouse or cache was used as evidence. Governance evidence was fetched live from BYD/HKEX official documents. The live FMP transcript-date response was archived and, because it was a new dataset, copied without overwrite to the investing data warehouse. BYD does not provide the U.S.-style proxy, quarterly call or compensation-target precision contemplated by the generic management rubric; this appendix states those limits instead of substituting estimates.

BYD Company Limited — Moat and 2046 Durability

Run ID: `pulse-cio-20260907T040305+0800` Ticker: `1211.HK` Information cutoff: 2026-09-07 Financial anchor: TTM ended 2026-06-30 Forward operating horizon: 2031-06-30 Explicit durability test date: 2046-09-07 `trade_execution_authorized=false`

Evidence boundary

This assessment uses the QFR/DR-reviewed `data_package.md` for historical and segment figures, the company primer for orientation, and Sections 4–5 of both segment appendices once they became available. Competitive context was fetched live from official BYD/HKEX, regulator and peer sources. The result is deliberately calibrated to the Gideon question: whether BYD owns a protectable profit pool capable of sustaining high returns for roughly twenty years, not whether it is a large, innovative or enduring manufacturer.

1. Moat taxonomy applied

Network effects — weak. A BYD owner does not make another BYD materially more useful in the way an additional user strengthens a communications or marketplace network. The installed base supplies driving data: BYD reported more than 3.33 million assisted-driving vehicles producing over 210 million kilometres of data daily by June 2026 in its [2026 Interim Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf). That can improve model training, validation and defect discovery, but competitors also possess large fleets and can buy foundation models, maps, compute and sensor stacks. The planned Flash Charging network could improve vehicle utility, yet BYD says the stations will be open to society, reducing exclusivity. This is a learning-scale benefit, not a proven winner-take-most network.

Switching costs — low for passenger vehicles, moderate in engineered systems. Consumers can switch brands at the next purchase; vehicle ownership cycles, residual values, financing and service familiarity create friction but not lock-in. Fleet buyers and grid-storage customers face higher homologation, safety-certification, integration, spare-parts and lifetime-maintenance costs. Electronics customers also incur tooling, yield qualification and program-transfer costs. Those costs can support repeat business, but sophisticated buyers multi-source and exert price pressure. BYD therefore has meaningful switching costs in project and procurement relationships, not in the largest consumer profit pool.

Scale economies — strong and observable, but not synonymous with pricing power. BYD sold 4.602 million NEVs in 2025, reached cumulative production of 17 million in July 2026, and spent CNY63.4 billion on R&D investment in 2025. The company's official July update records 1.81 million H1 2026 sales and roughly 789,000 overseas passenger vehicles and pickups, while describing intense competition ([BYD 17-million milestone](https://www.bydglobal.com/cn/news/2026-07-09/1617162816258)). Scale spreads platform engineering, tooling and validation, improves purchasing leverage, and lets BYD amortize proprietary battery, motor, inverter, semiconductor and chassis systems across many models. Yet the TTM automotive-related adjusted-pre-tax margin was only 4.31%. Scale currently shows up more clearly as the ability to offer more technology at a low price than as a structurally high-return profit pool.

Brand — strong in Chinese mass-market NEVs, developing rather than entrenched overseas and in luxury. Dynasty and Ocean provide broad awareness and distribution, while Denza, Fangchengbao and Yangwang give BYD price-ladder optionality. Premium-brand volume rose 61% in H1 2026 and reached 12.8% of passenger sales, a constructive mix signal in the interim filing. Overseas reach exceeded 120 countries and regions by April 2026 ([official BYD profile](https://www.byd.com/en/about-byd)), but reach is not yet proof of decades-long resale values, customer retention or premium pricing. BYD's brand presently means technology-for-money and electrification competence; it does not yet command the economic rent of a globally established luxury marque.

Regulatory advantage — limited and two-sided. BYD benefits from accumulated homologation, safety testing, local government relationships and the ability to build local factories. It does not own a scarce licence that excludes rivals. Subsidies and tax policy assist the entire NEV category, while tariffs, local-content rules and investigations can penalize Chinese imports. China's State Administration for Market Regulation issued a 28-article automotive pricing guide in February 2026, including below-cost-sale and deceptive-promotion risks ([SAMR pricing guide](https://www.samr.gov.cn/zw/zfxxgk/fdzdgknr/jjjzs/art/2026/art_10120651065444b5b3b070dcae41e98a.html)). Regulation may constrain destructive competition, but it cannot be capitalized as BYD-specific pricing power.

IP and engineering know-how — real, broad and perishable. Blade Battery, cell-to-body integration, DM hybrid systems, e-Platform, DiSus, high-voltage charging, electric drives and in-house power semiconductors form a systems-engineering

portfolio. The 2025 Super e-Platform paired a full-domain 1,000V architecture, 10C charging, a 30,000-rpm motor and mass-produced 1,500V SiC chips ([official Super e-Platform release](https://prod.byd.com/en/news-list/BYD-Unveils-Super-e-Platform-Megawatt-Flash-Charging-Electric-Vehicles-Matching-Refueling-Speeds.html)). In March 2026, BYD announced a second-generation Blade Battery capable, under company test conditions, of charging from 10% to 70% in five minutes and planned 20,000 domestic Flash Charging stations ([official launch](https://www.bydglobal.com/cn/news/2026-03-06/1617162762962)). These capabilities raise the replication burden because a rival must coordinate chemistry, pack, vehicle, thermal and charging design. They are not permanent patents on electrification: CATL reported 661 GWh of 2025 battery sales, 39.2% global power-battery share and 30.4% storage-battery shipment share, demonstrating a larger specialist innovation engine ([CATL 2025 results](https://www.catl.com/en/news/6773.html)). BYD's edge is iteration and integration, not an unassailable chemistry monopoly.

High-trust procurement — moderate in storage, commercial vehicles and electronics; weaker in mass-market cars. Long-lived batteries, buses, storage systems and electronic assemblies require quality, traceability, safety and dependable delivery. BYD's battery heritage, vertical control and installed base matter here. The electronics business can earn program renewal through engineering, yield and supply-chain execution. However, one customer represented CNY100.737 billion of FY2025 group revenue, and the electronics segment's H1 2026 adjusted-pre-tax margin was only 0.28%. Trust may win revenue without allowing the supplier to retain much value.

2. Per-segment moat

Automobiles and related products and other products

The segment's best moat is a **vertically integrated cost-and-speed system**. BYD coordinates LFP cells, packs, power semiconductors, motors, controllers, thermal management, vehicle platforms, chassis, software and increasingly charging. A challenger attacking on sticker price must either buy many components at supplier margins or replicate years of process integration, factory learning and field validation. BYD's fifth-generation DM technology also serves markets where charging remains incomplete, while BEV and PHEV commonality broadens utilization. The moat is strongest over five years and plausible over ten if product cadence and safety remain superior. It is not proven for twenty: battery chemistry, ADAS stacks and power electronics diffuse rapidly, and vertically integrated assets become liabilities when a proprietary design loses the technology race.

Within this segment, **batteries, power electronics and vehicle architecture** are stronger than the finished-car brand. Blade's safety-oriented LFP architecture and the integration of battery with body structure solve real engineering constraints. In-house SiC and system design improve availability, efficiency and development speed; BYD Semiconductor describes an IDM chain spanning chip design, wafer manufacturing, module packaging, testing and vehicle application ([official semiconductor history](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1514443780768&d=Touch&pagename=BYD_CN%2FBydArticle%2FCommon%2FArticleDetails)). Still, outside suppliers can innovate faster in specific generations, and external customers may hesitate to source from a vehicle competitor. The earliest moat-break signal is not a small share loss; it is two successive platform cycles in which rivals deliver equal charging, efficiency and safety at equal or lower cost while BYD's auto-segment margin and volume both fall.

Manufacturing scale and overseas localization increase resilience but consume capital. The Thailand plant was completed in 16 months with 150,000 units of annual capacity and integrated stamping, welding, painting, assembly and components ([BYD Thailand inauguration](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1617162479288&d=Touch&pagename=BYD_EN%2FBydArticle%2FBYD_ENCommon%2FArticleDetails&rendermode=preview)). Plants in Thailand and Brazil, local product adaptation, distributors and owned roll-on/roll-off vessels reduce tariff and logistics exposure. The European Commission's 17% definitive countervailing duty on BYD BEVs imported from China illustrates why localization is necessary ([EC decision](https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_24_5589/IP_24_5589_EN.pdf)). Local plants also fragment scale, introduce labour and local-content costs, and create utilization risk. Resilience is a moat only if localized plants earn attractive incremental returns; current reporting does not disclose regional profit or capital employed.

Brand, channel and software are the softer layers. Separate mass, premium, luxury and off-road brands extend price coverage, but the network is costly and residual values are unproven in many markets. "God's Eye" ADAS across lower-priced vehicles can produce data and accelerate adoption. BYD's 2025 strategy put higher-level assistance into models starting around CNY70,000 ([official ADAS release](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1617162592632&d=Touch&pagename=BYD_CN%2FBydArticle%2FCommon%2FArticleDetails)). That is strategically aggressive but economically revealing: advanced assistance is being used to defend vehicle value rather than sold as a high-margin software

layer. Software/ADAS is therefore an important competitive necessity, not yet a separately observable moat.

Mobile handset components, assembly and other products

This segment's moat is process capability, tooling, yield, customer qualification and supply-chain reliability. It benefits from BYD's materials, thermal, power and precision-manufacturing competencies and is adjacent to AI servers, liquid cooling and high-voltage power supplies. The moat is credible for three to five years at the program level, but weak at ten to twenty because customers can redesign, dual-source or shift assemblers. Economics validate the caution: the segment's adjusted-pre-tax margin fell from 3.66% in FY2023 to 1.77% in FY2025 and 0.28% in H1 2026. BYD Electronic's separate listed-company perimeter reported a 6% gross margin and 2% net margin in 2025, consistent with contract manufacturing rather than platform rents ([BYD Electronic 2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0422/2026042200748.pdf)). Foxconn reported a 6.15% gross margin and 3.20% operating margin in 2025 despite AI-server growth, illustrating the industry structure ([official Foxconn FY2025 results](https://www.honhai.com/en-us/press-center/press-releases/latest-news/1978)). The earliest failure signal is persistent sub-1% segment adjusted-pre-tax margin despite AI-infrastructure ramp, accompanied by further customer concentration.

Blended-company conclusion

The blended moat is weaker than the strongest battery/platform capability. Roughly four-fifths of FY2025 external revenue came from the auto-related segment, but this broad bucket mixes vehicles, batteries, storage, photovoltaics and rail, masking which activities earn the return. The other roughly one-fifth came from electronics with plainly thin margins. Investors cannot assume the best technology earns the segment's average return or that internal component savings constitute external pricing power. BYD has an unusually capable industrial system; disclosure does not isolate a durable, high-margin crown jewel.

3. Margin persistence evidence

The current taxonomy offers five comparable fiscal years, not a reliable ten-year segment series. TTM values use FY2025 less H1 2025 plus H1 2026. Segment margins are the issuer's adjusted profit-before-tax measure, not operating margin.

Margin	FY2021	FY2022	FY2023	FY2024	FY2025	TTM 2026-06-30 / H1 2026
Consolidated operating margin	2.14%	5.08%	6.33%	6.50%	5.00%	4.66% TTM
Auto-related adjusted PBT margin	2.43%	5.74%	6.43%	5.88%	4.38%	4.31% TTM; 4.05% H1
Electronics adjusted PBT margin	2.13%	1.92%	3.66%	2.66%	1.77%	1.03% TTM; 0.28% H1

The 2022–2024 expansion proves that scale and the NEV transition improved economics. The 2025–H1 2026 reversal proves those gains were not protected. Consolidated margin compressed 184 basis points from FY2024 to the TTM; the auto segment fell 238 basis points from its FY2023 peak to H1 2026; electronics nearly lost its entire margin. Meanwhile inventory days rose from 61 in FY2024 to 72 in FY2025 and 109 in H1 2026. This is evidence of cost leadership under pressure, not evidence of price-insensitive demand. TTM free cash flow was negative CNY56.35 billion while the group funded technology, factories, ships and charging. A durable moat may rationally require investment, but the current record does not demonstrate high returns after that investment.

4. AI disruption stress test

Vehicles, batteries and storage are chokepoint economics, not prompt-to-output workflows. A foundation model cannot synthesize cells at high yield, certify a pack, stamp a body, manufacture SiC modules, provide warranties or homologate a vehicle. AI should improve materials discovery, factory inspection, engineering simulation, demand planning and driver assistance. That strengthens scale players with proprietary manufacturing and field data. The most AI-protected activity is battery/vehicle system integration because failure costs are physical, regulated and reputational.

ADAS and cockpit software are more exposed. Perception, route planning, voice assistance and in-car agents increasingly rely on general-purpose architectures. A rival can procure compute, models, maps and sensors without reproducing BYD's battery plants. BYD's fleet data, closed-loop validation, electronic architecture and ability to deploy across millions of vehicles are real counterweights, but the company has not disclosed software revenue, retention or incremental margin. If third-party autonomy stacks become the customer-facing platform, BYD could remain a strong hardware manufacturer while paying

away software economics.

Electronics is platform-adjacent, not an AI platform. AI creates demand for servers, cooling, power supplies and interconnects, which BYD can manufacture. Yet customers own the chips, cloud platforms and application economics. AI can automate design and inspection, but it also standardizes workflows and makes capacity more contestable. The electronics segment is the most exposed to value capture shifting upstream to accelerators and downstream to cloud platforms. The segment most protected from AI disintermediation is electrochemical and power-electronics manufacturing; the most exposed profit pool is consumer-electronics and AI-server assembly.

5. The 2046 test

Specific 2046 description — test date 2046-09-07. BYD is a global manufacturer of electrified mobility and stationary-energy systems. It sells locally engineered passenger vehicles, commercial fleets, modular battery-storage systems, power-electronic modules and charging/energy-management equipment to consumers, transport operators, utilities and industrial customers. China remains the engineering and scale centre; regional factories in Asia, Europe and the Americas handle local assembly, supply chains and regulation. Batteries may use chemistries beyond today's LFP, but BYD still owns cell-to-system design, thermal/safety validation, power conversion and recycling integration. Passenger BEV and hybrid labels have blurred as architectures become energy-flexible; rail and photovoltaics remain minor. Electronics survives as a separate, low-margin manufacturing service and AI-hardware supplier. Consolidated operating margin is directionally 5–7%, modestly above the 4.66% TTM anchor but below software-like levels. The company still makes money because system integration, manufacturing learning, safety trust, purchasing scale and local service networks lower lifecycle cost.

That description is plausible, but it does **not** clear the Gideon bar. A 5–7% industrial margin can support a valuable company, yet high returns depend on disciplined capital turnover and stable working capital, neither of which is presently demonstrated through a full cycle. The moat can keep BYD relevant without allowing it to retain exceptional economics.

2046 erosion scenario. Battery cells become standardized across LFP, sodium-ion and later chemistries; independent suppliers lead each transition. Autonomy and cockpit interfaces consolidate around third-party compute/model platforms, making the software layer the customer relationship while automakers compete on financed monthly cost. Trade blocs require duplicated local capacity, leaving several BYD plants underutilized. China price competition persists, premium brands fail to establish superior residual values, and electronics remains a 1–3% margin supplier. BYD still sells millions of vehicles and storage systems, but consolidated operating margin falls to 2–4%, free cash flow is consumed by refresh capex, and shareholder returns approximate the cost of capital. I assign roughly **45% probability** that BYD's industrial advantages fail to produce a high-return 2046 profit pool, even though outright corporate failure is far less likely.

6. Competitive threat inventory

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Chinese price and feature war	Rivals match technology, cut price and accelerate launches; BYD responds with content rather than price	Vehicles, batteries	Auto adjusted-PBT margin below 3% for two half-years while unit growth is non-positive	High
Battery/platform leapfrogging	CATL or another supplier wins charging, safety, cost or chemistry cycle; proprietary BYD assets lag	Batteries, storage, vehicles, SiC	Two major BYD platform cycles trail peer charge curve/cost and external battery wins stagnate	Medium-high
Global fragmentation and software capture	Tariffs force subscale plants while third-party ADAS/cockpit platforms capture the data and service layer	Vehicles, ADAS, overseas	Overseas volume rises but regional contribution, utilization or group FCF fails to improve for three years	High

7. Pricing power verification

Observable pricing power is weak. There is no clean vehicle ASP series, no disclosed model-level churn/retention series, no multi-year vehicle price escalator and no evidence that BYD raised price while preserving demand. The broad auto-segment revenue-per-NEV diagnostic fell from CNY213.6 thousand in FY2021 to CNY140.9 thousand in FY2025; it is not an ASP because the numerator includes batteries, storage, PV and rail, but it does not support a price-rise thesis. BYD's own launches emphasize more capability at aggressive prices: fifth-generation DM models started at CNY99,800 in 2024 ([official launch](https://www.bydglobal.com/sites/Satellite?c=BydArticle&cid=1617162457630&d=Touch&pagename=BYD_CN%2FBydArticle%2FCommon%2FArticleDetails)), while ADAS was pushed down the range. In 2026 BYD offered one year of free

Flash Charging and said it would not charge above industry norms afterward. These moves deepen adoption and can reinforce scale, but they monetize innovation through market share and cost position rather than price.

Premium brands and overseas mix are the best counterevidence: premium-brand share reached 12.8% of H1 passenger sales, overseas revenue mix rose from 38.65% in FY2025 to about 52.6% in H1 2026, and exports grew 67.8%. Yet H1 auto-related revenue declined 8.98% and adjusted-pre-tax margin was 4.05%, so favourable mix has not yet produced visible aggregate pricing power. Storage contracts provide project backlog and qualification value, but disclosed GWh awards lack margins and price escalators. Electronics customers have qualification costs, but the 0.28% H1 margin shows bargaining power sits mainly with customers.

The sector evidence is unusually direct: Chinese authorities described disorderly price competition as damaging profitability and issued rules against below-cost conduct. A 2025 official account said more than 60 domestic models had cut prices in the first four months and industry profit margin was only 4.3% in 2024 ([SAMR-hosted industry account](https://www.samr.gov.cn/zt/ndzt/2025n/zhzznjsjzwhgpjzsczx/xwbd/art/2025/art_92bab2e481d041329e4e537099f51004.html)). Regulation may reduce the worst conduct, but a regulator intervening against price war is evidence that pricing power was absent, not that it has appeared.

8. Moat verdict and observable calibration

Decision signal	Upgrade evidence	Failure or deterioration evidence
Auto economics	Adjusted-PBT margin at or above 7% for eight consecutive half-years through a price and commodity cycle	Below 3% for two consecutive half-years with flat or falling volume
Capital returns	Positive FCF after full growth capex for three years and incremental ROIC above 15% on overseas/localized capacity	Cumulative three-year FCF negative while debt and shares rise
Pricing and brand	Premium/overseas mix lifts consolidated realization and auto margin without incentives; disclosed residual values and repeat rates improve	Premium mix rises but margins do not; inventory days remain above 100
Electronics	Adjusted-PBT margin above 5% for three years as AI infrastructure scales and customer concentration falls	Margin remains below 1% despite AI-server growth
Technology durability	Independent real-world charging/safety results and external battery/SiC design wins expand across two platform cycles	Peers match core specifications while BYD carries excess proprietary capacity

Moat gate: FAIL. BYD owns genuine near- and medium-term advantages in vertical integration, manufacturing scale, battery safety, power electronics, vehicle platforms and speed of commercialization. Those advantages currently defend relevance and cost position, but the observable economics—4.31% auto-related TTM adjusted-pre-tax margin, 1.03% electronics margin, margin compression, rising inventory days and negative TTM free cash flow—do not identify a durable high-return profit pool. Pricing power is unproven, and the strongest technologies are deployed to preserve value and volume in a price war rather than to earn sustained premium returns. Under the Gideon calibration, scale without demonstrated return retention is insufficient.

2046 test: FAIL. A specific 2046 BYD can be described credibly, and it is likely still a large mobility, battery and energy-systems manufacturer. The failure is economic rather than existential: there is no adequately evidenced reason that customers in 2046 must pay BYD a premium rather than select among competing batteries, vehicles, software platforms and contract manufacturers. The 45% erosion scenario is too plausible, and even the constructive 2046 description supports only mid-single-digit industrial margins. Reconsideration requires the quantitative upgrades above, especially sustained auto margin of at least 7%, positive post-growth free cash flow and greater than 15% incremental returns on localized capacity.

Live source set

- [BYD 2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf)
- [BYD 2026 Interim Results Announcement](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf)
- [BYD official company and technology profile](https://www.byd.com/en/about-byd)
- [BYD second-generation Blade Battery and Flash Charging launch](https://www.bydglobal.com/cn/news/2026-03-06/1617162762962)

- [CATL 2025 annual-results release](https://www.catl.com/en/news/6773.html)
- [China automotive pricing compliance guide](https://www.samr.gov.cn/zw/zfxxgk/fdzdgknr/jjjzs/art/2026/art_10120651065444b5b3b070dcae41e98a.html)
- [BYD Electronic 2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0422/2026042200748.pdf)
- [Foxconn FY2025 results](https://www.honhai.com/en-us/press-center/press-releases/latest-news/1978)

Automobiles and related products and other products — Segment Deep Dive

Company: BYD Company Limited **Ticker:** 1211.HK **TTM anchor:** 2026-06-30 **Forecast horizon:** 2031-06-30, exactly five calendar years **Currency:** CNY billions unless stated otherwise **Exact profit metric:** Adjusted profit before tax (reportable segment profit)

0. Segment boundary and taxonomy note

The current reportable segment combines vehicles, vehicle molds and components, vehicle leasing and after-sales services, power batteries, lithium-ion and iron batteries, photovoltaics, rail transportation, and related operations. The comparability boundary is FY2022: BYD's FY2021 report showed rechargeable batteries and photovoltaics separately, while the FY2022 report combined them with automobiles and related products and restated FY2021 to the current two-segment taxonomy. This appendix uses only that restated FY2021 figure and the comparable FY2022-H1 2026 series. It never compares the old three-business FY2021 dollars with the present perimeter. [data_package §1, Current reportable segments and Taxonomy investigation]

1. What this segment actually is

This is not merely an automaker segment. Its economic core is a vertically integrated new-energy mobility platform, with adjacent industrial businesses inside the same reporting perimeter. BYD designs and manufactures battery-electric vehicles, plug-in hybrid electric vehicles, commercial vehicles, drivetrains, semiconductors and many other components; distributes through domestic and overseas channels; earns after-sales and leasing revenue; sells batteries and energy-storage systems externally; participates in photovoltaics; and develops rail-transit systems. The result is unusually broad exposure to vehicle demand, battery manufacturing, stationary storage, power electronics, infrastructure, and project-oriented transport systems.

The vehicle customer set spans mass-market passenger buyers under the core Dynasty and Ocean families, higher-end consumers served by Denza, Fangchengbao and Yangwang, commercial fleets, and overseas distributors or end customers. Pricing is primarily per vehicle or system, with continuing parts, maintenance, leasing and service revenue. The company does not disclose a clean vehicle average selling price, and the reportable-segment numerator contains non-vehicle activities; therefore segment revenue divided by units is only a revenue-intensity diagnostic, not an ASP. It fell from CNY213.6 thousand per vehicle in FY2021 to CNY140.9 thousand in FY2025 before rising to CNY152.2 thousand in H1 2026. Perimeter change, product mix, non-vehicle revenue and timing all contaminate the comparison. [data_package §0a, Operating KPI history and paragraph following it]

Go-to-market differs by activity. Vehicles are sold through a wide domestic retail footprint and increasingly through local overseas distribution and production. Exports are supported by an owned roll-on/roll-off fleet, while plants in Brazil and Thailand and further capacity under construction move the overseas model from pure export toward localized manufacturing. Batteries and storage are sold through automotive supply relationships and large utility or project contracts. The interim report cited individual storage projects of 11.275 GWh for Masdar, 2.6 GWh for Grenergy, 3.5 GWh for Elena, and 1.2 GWh for CGN, showing that this adjacency is lumpy, contract-driven and potentially meaningful even though its revenue is not separately disclosed. Rail is project-led, long-cycle and policy-dependent rather than a recurring consumer product.

The segment's key strategic tension is that vertical integration lowers component cost and speeds product iteration, but its breadth consumes capital and obscures economics. Core auto, batteries, stationary storage, PV and rail do not share the same pricing cycles, customer concentration or asset turns. BYD discloses one segment revenue and one segment profit number across all of them. Any product-level forecast is therefore an analytical decomposition designed to explain the consolidated segment, not a claim about issuer-disclosed sub-segment revenue.

2. Current economics at the TTM anchor

TTM segment revenue is CNY621.481 billion, constructed exactly as FY2025 CNY648.646 billion less H1 2025 CNY302.506 billion plus H1 2026 CNY275.341 billion. TTM Adjusted profit before tax (reportable segment profit) is CNY26.773 billion on the same construction and sealed statutory bridge, for a 4.31% margin. H1 2026 revenue declined 8.98% year on year to CNY275.341 billion, while adjusted segment PBT declined from CNY12.805 billion to CNY11.161 billion and margin was 4.05%. The near-term picture is therefore contraction with modest margin compression, not a straight-line continuation of FY2022-FY2024 hypergrowth. [data_package §3, Automobiles table; §3, Latest interim segment update; §3a, TTM bridge]

Vehicle demand remains the largest observable operating driver. Official NEV sales rose from 0.604 million in FY2021 to 4.602 million in FY2025, but H1 2026 sales fell 15.72% to 1.809 million and August year-to-date sales remained 6.84% lower at 2.668 million. The mix is balanced between passenger BEVs and PHEVs: FY2025 passenger BEVs were 2.257 million, up 27.86%, while passenger PHEVs fell 7.91% to 2.289 million. In H1 2026, BEVs fell 15.23% and PHEVs fell 16.51%. This matters because the two powertrains have different battery content, bill of materials, usage cases and competitive sets. PHEVs provide range confidence and can widen addressable demand, but they retain dual-powertrain complexity; BEVs offer greater architectural simplicity but expose the consumer more directly to charging convenience and battery economics. [data_package §0a, Operating KPI history; §4, Operating disclosure rows 226-228]

Mix provides an important offset to domestic weakness. Premium-brand sales more than doubled in FY2025 and rose 61.0% in H1 2026 to 12.8% of passenger sales. Exports exceeded one million units in FY2025, rose 1.4 times year on year, and reached 792,000 in H1 2026, up 67.8% and equal to roughly 43.8% of H1 NEV sales. H1 2026 overseas revenue was about 52.6% of consolidated revenue by customer location, though that geography is group-wide and must not be mistaken for the automotive segment's export revenue. [data_package §1, Geography; §4, rows 229-230]

The battery platform is scaling faster than vehicle units. Power and energy-storage battery installed capacity rose from 37.921 GWh in FY2021 to 285.634 GWh in FY2025, including 46.7% growth in FY2025. BYD stopped reporting that KPI in the June and August 2026 monthly releases examined, creating a recency gap precisely when vehicle sales weakened. Storage projects demonstrate demand beyond captive automotive consumption, but no annual storage shipment series, external-versus-captive split, revenue or margin is disclosed. PV and rail are present in the statutory boundary yet have no separate dollars or current operating KPI. [data_package §0a, Operating KPI history; §4, rows 231-232; §10]

Capital intensity is high. FY2025 automotive-segment additions to long-term assets were CNY134.492 billion, 20.7% of segment revenue on the disclosed segment-note definition. Group cash capex was CNY152.749 billion, consolidated R&D expense was CNY57.978 billion, and FY2025 free cash flow was negative. H1 2026 R&D investment remained CNY28.9 billion. Overseas factories, battery capacity, model tooling, charging infrastructure and fleet logistics compete for capital simultaneously. A strong income-statement growth case can still destroy value if utilization is low or receivables and inventory absorb cash.

Working capital is the immediate warning signal. Consolidated inventory days increased from 61 in FY2024 to 72 in FY2025 and 109 in H1 2026. BYD does not disclose dealer count, dealer inventory, or a retail-to-wholesale bridge. Because reported vehicle sales are factory-level shipments, rising balance-sheet inventory and missing channel detail reduce confidence that volume alone captures end demand. Overseas exports can also sit in transit or local stock before registration. The IEA estimated that Chinese EV exports exceeded overseas sales by more than 25% in 2025 and noted above-normal destination-market inventory in 2026, making sell-through and receivable discipline central to the forecast rather than a footnote. [data_package §0a, Operating KPI history; §10; IEA Global EV Outlook 2026](https://www.iea.org/reports/global-ev-outlook-2026/executive-summary)

Government grants recognized in profit or loss rose from CNY2.263 billion in FY2021 to CNY12.634 billion in FY2025, but BYD does not allocate them by segment or model. The sealed segment metric also excludes specified other income and finance costs, so grants recognized through those lines should not be silently embedded in Adjusted profit before tax (reportable segment profit). Grants still matter to consolidated cash economics and the statutory bridge, and asset-related grants can affect future depreciation economics, but this segment model assigns no product-level grant subsidy and does not treat the FY2025 grant level as recurring margin. [data_package §0a, Operating KPI history and Subsidy context; §3a]

3. Unit economics

Vehicle revenue begins with units and revenue intensity. Units are driven by model breadth, product-cycle freshness, geographic distribution, financing affordability and charging or fueling convenience. Revenue per unit is then shaped by mass-market versus premium mix, BEV versus PHEV mix, export pricing, commercial-vehicle content, and the amount of components or services included in the segment. Because BYD does not disclose vehicle revenue, the model uses units as a demand signal and keeps segment revenue as the controlling base.

The largest cash cost pools are battery cells and materials, power electronics, vehicle electronics, steel and aluminum, purchased components, labor, freight, warranty, dealer support and manufacturing depreciation. Vertical integration can reduce purchased-component markups, improve procurement bargaining and allow faster redesign when input costs change. It can also concentrate fixed-cost risk: cells, packs, power electronics, vehicle plants, molds and ships must be filled with enough volume to absorb depreciation. A small price cut applied across millions of vehicles can overwhelm modest savings in lithium or manufacturing yield.

Mix is the most plausible margin lever. Premium-brand penetration can lift gross profit per unit even if premium volumes are smaller, provided launch costs, dealer buildout and warranty do not consume the gain. Exports can raise realized pricing in some markets, but freight, tariffs, homologation, local marketing, foreign-exchange and underutilized new plants offset part of the apparent premium. Localization initially duplicates capital and fixed cost before it reduces freight and tariff exposure. Therefore the base case gives exports and premium mix credit only gradually, not immediately.

BEV and PHEV mix is not unidirectionally positive or negative. BEV cost competitiveness benefits from falling cell prices and simpler drivetrains, but BEV competition in China is intense and charging speed is a key purchase criterion. PHEVs can command value for range flexibility and help penetrate infrastructure-constrained markets, yet their dual systems add cost and complexity. FY2025 PHEV unit contraction and H1 2026 weakness in both powertrains indicate that mix alone cannot offset an adverse market cycle. The forecast assumes both remain strategic; it does not make a binary bet on one architecture.

Battery and stationary-storage economics depend on GWh shipped, chemistry and system mix, raw-material costs, yield, utilization, warranty reserves and the external-versus-captive split. Captive battery transfers may improve automotive economics without creating separate external revenue after consolidation. Storage systems add power electronics, thermal management and project execution to cell economics. Large projects can raise growth and utilization but bring milestone timing, customer concentration and working-capital risk. CATL's 2025 report said lithium-ion battery sales grew 39% to 661 GWh and claimed a 39.2% global power-battery share, illustrating the scale of BYD's principal battery competitor and why rapid industry growth need not translate into pricing power. [CATL 2025 annual-report release](https://www.catl.com/en/news/6773.html)

PV and rail have different cost structures. PV is exposed to commodity-like module pricing, polysilicon cycles and manufacturing overcapacity. Rail requires engineering, local approvals, civil integration and long project cycles; utilization and milestone recognition can be uneven. With no disclosed revenue or profit, the model keeps both inside a small “rail and other” analytical cohort and gives it conservative economics. That avoids the false precision of standalone valuations while respecting the statutory boundary.

Operating expenses are structurally elevated. FY2025 group R&D expense was 7.21% of consolidated revenue, while management emphasized “high-level R&D investment.” Vehicle software, driver-assistance, batteries, flash charging, premium brands and overseas homologation all demand reinvestment. Selling expense also rises with new countries and premium channels. The base case assumes some manufacturing scale leverage but does not assume R&D falls materially as a share of the addressable product effort.

The segment's 4.31% TTM adjusted-PBT margin is thin relative to the number of favorable conditions required: high plant utilization, stable battery inputs, controlled price competition, successful model launches, export sell-through and working-capital discipline. For context, Tesla reported that nine-month 2025 automotive gross margin fell from 19.0% to 16.9%, citing mix, fixed-cost absorption, tariffs and regulatory credits. That is not directly comparable to BYD's adjusted segment PBT, but it is a useful causal benchmark: even scaled EV producers experience rapid margin compression when price and utilization turn. [Tesla Q3 2025 Form 10-Q, pp. 32-33](https://ir.tesla.com/_flysystem/s3/sec/000162828025045968/tsla-20250930-gen.pdf)

4. Competitive dynamics

China vehicle competition

BYD competes with Tesla, Geely and Zeekr, SAIC, Changan, Great Wall, Li Auto, XPeng, NIO, Xiaomi and a long tail of domestic brands, as well as global incumbents. Its scale and product breadth are strengths, but China is already a highly electrified market. The IEA reported that EVs were nearly 55% of Chinese car sales in 2025, that nearly 700 electric models were available, and that intense price competition is likely to persist. Seventy percent of BEVs sold in China in 2025 were cheaper than the average conventional vehicle. That is favorable for adoption but unfavorable for industry margins. [IEA Global EV Outlook 2026, China market discussion](https://www.iea.org/reports/global-ev-outlook-2026/trends-in-electric-cars)

Competition occurs on price, range, charging speed, software, intelligent-driving features, cabin electronics, model-refresh cadence, financing and dealer support. BYD's integrated battery and component cost base can let it profitably price below less-integrated rivals, but a cost advantage does not guarantee stable price. A leader may pass savings to customers to defend share. The base case assumes market growth resumes after 2026 weakness yet revenue growth stays well below the 35% three-year unit CAGR because penetration is high and price remains contested.

PHEVs widen the battlefield. They compete not only with BEVs but also with extended-range EVs, hybrids and efficient ICE vehicles. BYD's large PHEV base is an advantage in markets with limited charging, but rivals can target the same

range-anxiety niche. BEV product differentiation is also transient: faster charging or battery improvements invite rapid imitation. The advantage is therefore a system of cost, speed and distribution rather than a permanent monopoly on one feature.

Overseas competition and trade

Overseas growth is the clearest volume release valve. The IEA reported that China produced nearly 75% of global electric cars in 2025 and exported more than 2.5 million, while first-quarter 2026 exports more than doubled. It also projected strong longer-run electrification in Southeast Asia and other emerging markets. BYD's low-cost product portfolio, premium models, owned shipping and local manufacturing can build share where EV affordability matters. [IEA Global EV Outlook 2026](https://www.iea.org/reports/global-ev-outlook-2026/executive-summary)

The export opportunity is not frictionless. The European Commission imposed a 17.0% definitive countervailing duty on BYD BEVs imported from China for five years, in addition to normal trade arrangements. Brazil, Mexico and parts of Southeast Asia have also tightened import regimes. Local factories mitigate tariffs and freight, but require capital, supplier localization, management capacity and time to reach efficient utilization. A locally built vehicle may preserve market access while producing lower near-term returns than an export from a full Chinese plant. [European Commission definitive-duty release](https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_24_5589/IP_24_5589_EN.pdf); [IEA manufacturing and trade](https://www.iea.org/reports/global-ev-outlook-2026/manufacturing-and-trade)

Brand acceptance, residual values, service coverage and financing are additional barriers. Chinese brands can win on specification and price yet still need trust and repair infrastructure. Premium positioning is especially difficult because pricing power depends on brand and resale value, not only hardware. The bull case requires evidence that overseas volume translates into sustainable registrations and margins, not simply factory shipments or channel inventory.

Batteries, storage, PV and rail

In power batteries, CATL is the benchmark competitor, alongside LG Energy Solution, Panasonic, Samsung SDI, CALB and others. The IEA said China accounted for more than 80% of battery-cell production in 2025 and noted narrow margins for some manufacturers. Capacity and know-how are concentrated, but industry scale can coexist with surplus capacity and falling prices. BYD's Blade architecture, captive vehicle demand and cell-to-vehicle integration are advantages; external customers may nevertheless resist dependence on an automaker competitor. [IEA Global EV Outlook 2026](https://www.iea.org/reports/global-ev-outlook-2026/executive-summary)

Stationary storage competes on system cost, safety, cycle life, software, bankability and delivery. CATL, Tesla and many Chinese integrators are formidable. Tesla's nine-month 2025 energy-generation-and-storage revenue grew 27% and gross margin rose to 30.3%, showing that storage can be an attractive growth pool, but its product and accounting perimeter differ from BYD's and cannot be used as a direct margin proxy. BYD's cited multi-GWh contracts establish commercial relevance but not undisclosed profitability. [Tesla Q3 2025 Form 10-Q, p. 33](https://ir.tesla.com/_flysystem/s3/sec/000162828025045968/tsla-20250930-gen.pdf)

PV is highly competitive and exposed to price deflation. Rail competes against buses, conventional metro, other monorail systems and public-budget priorities. Rail's barriers include engineering references and regulatory approvals, but switching and tender cycles can make growth sporadic. Neither adjacency receives a large valuation assumption in the model without disclosure.

5. Moat at the segment level

The segment has a real but conditional cost-and-integration moat. BYD combines batteries, power electronics, vehicle engineering, manufacturing scale and a rapid product-development loop. Captive demand helps fill battery capacity; battery knowledge informs vehicle architecture; component integration can shorten redesign cycles; and a broad product ladder spreads engineering across many units. The 4.602 million FY2025 NEV sales base and 285.634 GWh battery-capacity KPI demonstrate scale that a new entrant cannot reproduce cheaply or quickly. [data_package §0a, Operating KPI history]

Manufacturing learning and supply-chain depth are more durable than individual models. Plants, tooling, yield data, procurement relationships, safety validation and quality systems accumulate over years. An owned shipping fleet and local overseas plants add a distribution and tariff-management layer. The moat is strongest when it produces lower cost at equal quality and fast launches while plants are full.

The moat is weaker in consumer-facing pricing power. China offers hundreds of EV models, features diffuse quickly, and competitors can subsidize price to preserve scale. Brand strength is improving, especially through premium marques, but has

not yet proven global premium durability through a full cycle. After-sales coverage and residual values remain locally specific. The segment should therefore be underwritten as a cost leader with execution advantages, not a luxury franchise able to raise price without volume loss.

Battery differentiation is also contested. Blade-battery safety, packaging and integration are valuable, but CATL's much larger external ecosystem and global share create countervailing scale. Falling chemistry costs can benefit BYD vehicles while compressing external battery pricing. Captive use protects utilization but makes external revenue economics harder to observe. Storage projects broaden the opportunity, yet project margins can be bid away.

Over five to ten years, the durable advantage depends on four tests: maintaining a cost gap after peers localize similar chemistries; converting export shipments into profitable local franchises; sustaining software and intelligent-driving competitiveness; and funding R&D and capacity without chronically negative free cash flow. Failure on any one does not destroy the company, but failure on several would turn vertical integration from moat into fixed-cost burden.

The moat rating for this segment is therefore **moderate, execution-dependent**. It supports above-industry share and survival odds, but not a perpetual high margin. The base forecast assumes a partial margin recovery to 5.15%, still modest for the capital employed. The bull case requires evidence of both product and capital productivity; the bear case assumes cost advantages are largely passed through to consumers.

6. Historical growth rates reproduced from the data package

The only dollar-disclosed product unit inside this perimeter is the reportable segment itself. BYD does not separately disclose revenue for BEVs, PHEVs, brands, power batteries, storage, PV or rail. No undisclosed dollars are back-solved. The true three-year CAGR uses FY2022 to FY2025, while all five comparable annual values are shown.

Product / sub-segment	FY2021 revenue	FY2022 revenue	FY2023 revenue	FY2024 revenue	FY2025 revenue	3-year CAGR FY2022-25	Most recent YoY	Data package cite
Automobiles and related products and other products	128.960 [§3 auto External revenue row]	324.691 [§3 auto External revenue row]	483.453 [§3 auto External revenue row]	617.382 [§3 auto External revenue row]	648.646 [§3 auto External revenue row]	25.94% [calculated from §3 auto External revenue row]	5.06% FY2025; -8.98% H1 2026 [§3 auto YoY row; Latest interim row]	[data_package §3, Automobiles table, External revenue and YoY rows]

Arithmetic checks: CNY128.960B × 2.5178 = CNY324.691B; CNY324.691B × 1.4890 = CNY483.454B; CNY483.453B × 1.2770 = CNY617.382B; and CNY617.382B × 1.0506 = CNY648.622B. Each rounds within 0.01% of the disclosed next-year value, well inside the 2% tolerance. The small final difference is rounding in the disclosed YoY percentage. No inconsistency is present.

Operating KPIs provide the only defensible product-level history. They are not revenue and are not added to the segment total.

KPI cohort	FY2022	FY2023	FY2024	FY2025	3-year CAGR FY2022-25	Latest disclosed trend	Data package cite
Total NEV sales, million units	1.863 [§0a KPI row]	3.024 [§0a KPI row]	4.272 [§0a KPI row]	4.602 [§0a KPI row]	35.2% [calculated from §0a KPI row]	H1 2026 1.809M, -15.72%; Aug YTD -6.84% [§4 row 226]	[data_package §0a, Operating KPI history, NEV sales row; §4 row 226]
Passenger BEV sales, million units	0.911 [§0a KPI row]	1.575 [§0a KPI row]	1.765 [§0a KPI row]	2.257 [§0a KPI row]	35.3% [calculated from §0a KPI row]	H1 2026 0.867M, -15.23% [§4 row 227]	[data_package §0a, Passenger BEV row; §4 row 227]
Passenger PHEV sales, million units	0.946 [§0a KPI row]	1.438 [§0a KPI row]	2.485 [§0a KPI row]	2.289 [§0a KPI row]	34.2% [calculated from §0a KPI row]	H1 2026 0.910M, -16.51% [§4 row 228]	[data_package §0a, Passenger PHEV row; §4 row 228]
Power and storage battery installed capacity, GWh	89.836 [§0a KPI row]	150.909 [§0a KPI row]	194.705 [§0a KPI row]	285.634 [§0a KPI row]	47.1% [calculated from §0a KPI row]	FY2025 +46.7%; no 2026 release value [§4 row 231]	[data_package §0a, Battery installed-capacity row; §4 row 231]
Premium-brand sales	Not disclosed [§4 row 229]	Not disclosed [§4 row 229]	Not disclosed [§4 row 229]	More than doubled [§4 row 229]	Not calculable [§4 row 229]	H1 2026 +61.0%; 12.8% of passenger sales [§4 row 229]	[data_package §4, row 229]
Exports	Not disclosed [§10 gap row]	Not disclosed [§10 gap row]	Not disclosed [§10 gap row]	More than 1M; up 1.4 times [§4 row 230]	Not calculable [§10 gap row]	H1 2026 0.792M, +67.8% [§4 row 230]	[data_package §4, row 230; §10 export-history gap]

The KPI arithmetic is internally coherent. For example, 1.863M × 1.352^3 = about 4.602M total NEV sales; 0.911M × 1.353^3 = about 2.257M BEVs; 0.946M × 1.342^3 = about 2.289M PHEVs; and 89.836 GWh × 1.471^3 = about 285.634 GWh. These are CAGR tie-outs, not claims that annual growth was constant.

7. Management guidance quoted from data-package Section 6

No formal numeric FY2026 automotive revenue, unit-sales or segment-margin guidance was found in the official source set, and the live FMP transcript route was empty. The complete relevant issuer snippets in the reviewed package are below. They are written MD&A excerpts, not speaker-attributed call remarks.

- **2026-03-27 FY2025 MD&A — "growth driven by technological innovation."** [data_package §6, Automobiles table row 1] Interpretation: innovation is the stated growth mechanism, so the forecast requires commercialization and sell-through rather than assigning growth to market beta alone.

- **2026-03-27 FY2025 MD&A — "high-level R&D investment."** [data_package §6, row 2] Interpretation: elevated R&D is structural. Base and bull cases do not manufacture margin by sharply cutting the technology budget.

- **2026-03-27 FY2025 MD&A — "premium pricing strategy."** [data_package §6, row 3] Interpretation: overseas and premium mix can improve revenue per unit, but the data package supplies no clean ASP series, so the benefit is scenario-based rather than historically calibrated.

- **2026-03-27 FY2025 MD&A — "new core growth engine."** [data_package §6, row 4] Interpretation: this refers to overseas development. It supports a higher export mix but is an aspiration, not quantified revenue guidance.

- **2026-08-28 H1 2026 MD&A — "FLASH Charging Planet."** [data_package §6, row 5] Interpretation: charging infrastructure may improve product appeal, but it requires site execution, partners and capital before generating a demand advantage.

- **2026-08-28 H1 2026 MD&A — "robust growth momentum."** [data_package §6, row 6] Interpretation: overseas demand is intended to offset domestic weakness. The claim is consistent with H1 2026 export growth but must be tested against registrations and inventory.

- **2026-08-28 H1 2026 MD&A — "localized manufacturing."** [data_package §6, row 7] Interpretation: localization is the strategic response to tariffs and trade barriers. Near-term duplicated fixed costs precede the potential medium-term freight and duty savings.

- **2026-08-28 H1 2026 MD&A — "scale up the deployment."** [data_package §6, row 8] Interpretation: management plans to expand charging deployment, including a stated aspiration for 6,000 overseas flash-charging stations. The model treats rollout as a capital and execution commitment, not direct revenue guidance.

[DATA GAP: BYD provides no numeric FY2026 segment revenue, margin, unit, battery-shipment, storage-revenue, PV or rail guidance.]

8. Forward growth assumptions

Analytical allocation discipline

The segment's CNY621.481 billion TTM revenue remains the controlling financial base. To build a reconstructable forecast without inventing issuer-disclosed product revenue, it is allocated analytically at the TTM anchor: 83% to the vehicle ecosystem, 15% to batteries, storage and PV, and 2% to rail and other. These are non-disclosed model weights, not reported figures or estimates supplied by BYD. Illustrative sensitivity bands are 78%-86%, 12%-20% and 1%-3%, respectively; they are analyst-imposed bounds, not disclosure-backed confidence intervals. No available issuer evidence can validate the 83%/15%/2% split because units, installed GWh and project capacities are not comparable revenue measures. The point weights sum to exactly 100% and are used consistently in every scenario. They reflect the dominance of 4.602 million FY2025 vehicle sales, the large but partly captive 285.634 GWh battery platform, disclosed storage projects, and the absence of evidence that rail is a major revenue contributor. Downstream use should treat the cohort forecasts as a mechanism and sensitivity test; only the controlling segment anchor and the requirement that cohort revenue sums to it are factual constraints.

The vehicle cohort includes vehicles, components, molds, leasing and after-sales. The battery/storage/PV cohort combines activities that cannot be separated from available disclosure and explicitly avoids counting captive battery transfers twice. Rail/other captures the remainder. No separate BEV, PHEV, brand, battery, storage, PV or rail revenue history is asserted.

Base case growth

Product / analytical cohort	3-year historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Vehicle ecosystem, 83% analytical TTM weight	NEV units 35.2%	H1 units -15.72%; Aug YTD -6.84%	No numeric guide; overseas called a growth engine	6.5%	Domestic recovery is gradual; exports and premium mix lift revenue intensity, while price competition and high EV penetration cap growth.
Batteries, storage and PV, 15% analytical TTM weight	Battery GWh 47.1%	FY2025 GWh +46.7%; 2026 KPI absent	No numeric guide; large storage projects disclosed	12.5%	Storage and external battery demand outgrow vehicles, but scale deceleration, pricing and captive eliminations make revenue growth far below GWh history.
Rail and other, 2% analytical TTM weight	Not disclosed	Not disclosed	No numeric guide	4.0%	Small project-driven growth is assumed; no backlog supports a more aggressive rate.

The base case is a recovery, not a continuation. Vehicle units fell sharply in H1 2026 even as exports and premium mix grew. An illustrative annual revenue-growth path consistent with the 6.5% five-year vehicle CAGR is -3.0%, +4.0%, +8.0%, +11.0% and +13.3%. That path first absorbs domestic weakness and channel inventory, then allows overseas-localized capacity to mature. It is materially below the 35.2% FY2022-FY2025 unit CAGR because China's EV penetration is already high and industry pricing is intense.

For batteries/storage/PV, an illustrative path of +10.0%, +11.0%, +12.0%, +14.0% and +15.6% produces approximately the 12.5% CAGR. The sharp step down from 46.7% FY2025 installed-capacity growth is defensible because installed GWh is not revenue, 2026 disclosure stopped, cell prices can decline, and captive transfers eliminate on consolidation. Storage contract conversion and external demand produce later acceleration. CATL's 39% battery-volume growth at much larger scale supports the existence of market growth, while the IEA's warning about narrow battery margins argues against equating volume with profit.

Bull case growth

Product / analytical cohort	3-year historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Vehicle ecosystem, 83% analytical TTM weight	NEV units 35.2%	H1 units -15.72%; Aug YTD -6.84%	No numeric guide; premium and overseas strategy	10.0%	Overseas localization scales quickly, premium mix holds, domestic share recovers and tariff costs are absorbed without broad price cuts.
Batteries, storage and PV, 15% analytical TTM weight	Battery GWh 47.1%	FY2025 GWh +46.7%; 2026 KPI absent	No numeric guide; project pipeline cited	17.0%	External storage wins, high utilization and falling system cost sustain growth despite lower per-kWh pricing.
Rail and other, 2% analytical TTM weight	Not disclosed	Not disclosed	No numeric guide	8.0%	Project awards and commercialization improve from a small base, still below a venture-style assumption.

The bull case does not restore the historical 26%-35% segment or unit growth rate. The addressable market remains large, but the base is now enormous. Ten percent vehicle-cohort growth compounds TTM analytical revenue by 61% over five years and requires strong overseas registration, healthy local-plant utilization, premium-brand acceptance and no extended domestic price war. Battery/storage/PV at 17% is the highest growth line because multi-GWh projects and external electrification can exceed vehicle growth, but the case still discounts the 47.1% historical GWh CAGR.

Bear case growth

Product / analytical cohort	3-year historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Vehicle ecosystem, 83% analytical TTM weight	NEV units 35.2%	H1 units -15.72%; Aug YTD -6.84%	No numeric guide	-1.0%	Domestic price competition persists, overseas inventories slow sell-through and local plants dilute returns; premium mix cannot offset pricing.
Batteries, storage and PV, 15% analytical TTM weight	Battery GWh 47.1%	FY2025 GWh +46.7%; 2026 KPI absent	No numeric guide	4.0%	Storage demand grows but cell and system price deflation, overcapacity and project delays suppress revenue.
Rail and other, 2% analytical TTM weight	Not disclosed	Not disclosed	No numeric guide	-2.0%	Public-project timing and weak disclosure justify contraction.

The bear vehicle assumption is not a collapse in units; it is a combination of muted unit recovery and lower revenue intensity. BYD can defend scale by cutting price, which protects factories but harms revenue and profit. Battery/storage/PV still grows modestly because electrification and grid storage have structural demand, though overcapacity transfers most cost reductions to customers. Rail and other contracts slightly because there is no disclosed backlog to anchor growth.

The scenario dispersion is intentionally non-uniform by cohort. Exports, localization and premium mix affect vehicles most; storage contracts and battery pricing affect the battery cohort; public awards affect rail. No line mechanically inherits the total segment CAGR.

9. Forward Adjusted profit before tax (reportable segment profit) margin assumptions

The current exact segment metric is **Adjusted profit before tax (reportable segment profit)**. TTM margin is 4.31%, based on CNY26.773 billion of sealed segment profit divided by CNY621.481 billion of TTM revenue. Corporate/unallocated adjustments, non-operating lines and tax remain outside this appendix and must be forecast once in the statutory bridge.

Because issuer product margins are not disclosed, the TTM cohort margins below are analytical assumptions: 4.05% for the vehicle ecosystem, 6.30% for batteries/storage/PV and 0.00% for rail/other. Their revenue-weighted average is 4.3065%, which rounds to the sealed 4.31% segment margin; the sealed full-precision margin is 4.30796%, leaving only a 0.15-basis-point display approximation. They are not claims about reported sub-segment profitability.

Case	Product / analytical cohort	TTM analytical margin	TTM+5y Adjusted profit before tax margin	Change	Specific mechanism
Bear	Vehicle ecosystem	4.05%	2.40%	-165 bps	Price cuts, weak utilization, duplicated overseas fixed costs, tariffs and elevated R&D outweigh input-cost relief.
Bear	Batteries, storage and PV	6.30%	5.00%	-130 bps	Cell and system price deflation plus storage-project competition exceed scale and raw-material savings.
Bear	Rail and other	0.00%	-2.00%	-200 bps	Low project absorption and bid timing create losses.
Base	Vehicle ecosystem	4.05%	4.80%	+75 bps	Export and premium mix plus utilization recovery offset competitive pricing and ongoing localization expense.
Base	Batteries, storage and PV	6.30%	7.00%	+70 bps	Storage mix, utilization and manufacturing yield modestly exceed price erosion.
Base	Rail and other	0.00%	1.00%	+100 bps	Select project delivery restores a small positive contribution.
Bull	Vehicle ecosystem	4.05%	6.00%	+195 bps	Strong premium mix, local-plant utilization, battery-cost leadership and service scale create operating leverage.

Case	Product / analytical cohort	TTM analytical margin	TTM+5y Adjusted profit before tax margin	Change	Specific mechanism
Bull	Batteries, storage and PV	6.30%	9.00%	+270 bps	Higher-value storage systems, strong external demand and full utilization expand profit faster than revenue.
Bull	Rail and other	0.00%	3.00%	+300 bps	Better project mix and absorption convert a small cohort to profit.

The bear segment margin falls roughly 151 basis points to 2.80%. The main mechanism is a price-utilization squeeze: manufacturers cut price to keep plants busy, but declining units and new overseas capacity prevent full fixed-cost absorption. Tariffs and logistics limit export relief, while R&D and dealer support cannot be cut proportionately. This case assumes vertical integration protects survival and share, not margin.

The base segment margin rises about 84 basis points to 5.15%, less than the 100-basis-point threshold but still requiring concrete execution. Vehicle margins recover as 2026 weakness fades and localization matures. Premium brands and exports raise mix; cell costs and manufacturing yield help; competitive pricing, duplicated capacity and high R&D retain most of the benefit. Battery/storage margins improve modestly with project scale. The result stays below BYD's FY2023 6.43% segment margin and FY2024 5.88%, which is appropriate given greater global complexity and competition.

The bull segment margin reaches 6.53%, about 222 basis points above TTM. This requires several mechanisms together: premium and overseas revenue grows faster than mass-market China revenue; local plants reach efficient utilization; tariffs are mitigated; battery and storage lines gain higher-value system mix; and R&D grows slower than revenue without damaging product cadence. It is only slightly above the FY2023 peak, so the endpoint is not historically unprecedented, but achieving it on a much larger capital base is demanding.

Government grants are deliberately not a segment margin lever. FY2025 grants recognized in profit or loss were material at the group level, yet they are not allocated to the segment and much of the relevant income or finance presentation is excluded from the exact adjusted-PBT definition. Scenario margins therefore reflect operating price, mix, cost, utilization and reinvestment. Any grants belong in the separate corporate/statutory and cash-flow analysis.

Capex and working capital constrain the quality of each margin outcome. The bull case still requires disciplined phasing of overseas plants, charging infrastructure and battery/storage capacity; otherwise accounting profit could coexist with poor free cash flow. The base case assumes inventory days normalize from the H1 2026 spike but do not return immediately to FY2024's 61 days. The bear case assumes inventory and receivables remain elevated, prompting incentives and creating impairments or underutilization risk not fully visible in the adjusted-PBT margin.

10. Segment rollup

The following tables make the analytical decomposition reconstructable. TTM cohort revenues are fixed percentages of the exact CNY621.481 billion segment anchor. Each case compounds those cohort revenues for exactly five years using Section 8 CAGRs, applies Section 9 endpoint margins, and sums profit. Rounding causes differences below CNY0.002 billion.

Product / analytical cohort	TTM revenue	TTM weight	Bear TTM+5y revenue	Base TTM+5y revenue	Bull TTM+5y revenue
Vehicle ecosystem	515.829	83.0%	490.548	706.731	830.748
Batteries, storage and PV	93.222	15.0%	113.419	167.989	204.385
Rail and other	12.430	2.0%	11.235	15.123	18.263
Segment total	621.481	100.0%	615.203	889.843	1,053.396

Revenue arithmetic: CNY515.829B × 0.99■ = CNY490.548B in bear, × 1.065■ = CNY706.731B in base, and × 1.10■ = CNY830.748B in bull. The battery/storage/PV and rail lines use their respective case CAGRs. All three case totals equal the sum of the product rows exactly within rounding.

Case	Product / analytical cohort	TTM+5y revenue	Adjusted profit before tax margin	TTM+5y Adjusted profit before tax
Bear	Vehicle ecosystem	490.548	2.40%	11.773
Bear	Batteries, storage and PV	113.419	5.00%	5.671
Bear	Rail and other	11.235	-2.00%	-0.225

Case	Product / analytical cohort	TTM+5y revenue	Adjusted profit before tax margin	TTM+5y Adjusted profit before tax
Bear	Segment total	615.203	2.80%	17.219
Base	Vehicle ecosystem	706.731	4.80%	33.923
Base	Batteries, storage and PV	167.989	7.00%	11.759
Base	Rail and other	15.123	1.00%	0.151
Base	Segment total	889.843	5.15%	45.834
Bull	Vehicle ecosystem	830.748	6.00%	49.845
Bull	Batteries, storage and PV	204.385	9.00%	18.395
Bull	Rail and other	18.263	3.00%	0.548
Bull	Segment total	1,053.396	6.53%	68.787

The blended margins are revenue-weighted, not simple averages. Bear profit is CNY11.773B + CNY5.671B - CNY0.225B = CNY17.219B, or 2.80% of CNY615.203B. Base profit is CNY33.923B + CNY11.759B + CNY0.151B = CNY45.834B, or 5.15% of CNY889.843B. Bull profit is CNY49.845B + CNY18.395B + CNY0.548B = CNY68.787B, or 6.53% of CNY1,053.396B. Every total reconciles within 1% by construction.

Relative to TTM, bear revenue declines 1.0% cumulatively and adjusted segment PBT declines 35.7%. Base revenue grows 43.2% and adjusted segment PBT grows 71.2%. Bull revenue grows 69.5% and adjusted segment PBT grows 156.9%. Profit dispersion is wider than revenue dispersion because price, mix and utilization are the decisive variables.

11. Key risks and wildcards

- **China price war and feature inflation — bear, with base drag.** High EV penetration and hundreds of models can force price cuts or expensive feature upgrades. BYD's cost advantage may be competed away through lower prices, leaving consumers rather than shareholders with the surplus.

- **BEV/PHEV mix and charging adoption — all cases.** Faster charging and lower battery costs can accelerate BEVs, while infrastructure limits or consumer range preference can favor PHEVs. A wrong product mix creates inventory, discounting and plant imbalance. The segment has exposure to both, which reduces binary risk but not pricing risk.

- **Export registrations versus shipments — bear.** H1 2026 export growth is strong, but the IEA identified a growing gap between Chinese exports and overseas sales. Shipping time explains part; channel inventory and discounting may explain the rest. The forecast should be updated with registrations, local inventory and receivable aging when available.

- **Localization and tariffs — bull opportunity, bear execution risk.** Local plants can protect market access and lower freight, but they duplicate capital before reaching scale. The EU's 17.0% countervailing duty on China-built BYD BEVs illustrates the need; Brazil, Mexico and Southeast Asian policies add uncertainty. Utilization, local sourcing and launch cadence will decide whether localization is a moat or a return drag.

- **Premium-brand durability — bull and base.** Premium brands grew rapidly, but early percentage growth comes from a small base. Sustaining 12.8% or more of passenger sales requires brand trust, residual values, software, service and quality. Volume bought through incentives would not deliver the modeled margin benefit.

- **Battery overcapacity and price deflation — bear.** Lower lithium and cell costs support vehicle affordability, yet external battery and storage revenue can fall per GWh. Captive transfers also disappear on consolidation. Capacity additions should be judged against external demand and total vehicle production, not headline GWh alone.

- **Stationary-storage execution — bull opportunity, bear working-capital risk.** The disclosed multi-GWh contracts can diversify growth and potentially raise system mix. Large projects create milestone, warranty, customer-credit and cash-conversion exposure. Lack of annual shipments and margins warrants a valuation discount until disclosure improves.

- **PV and rail opacity — bear.** Both activities sit inside the segment but lack revenue, backlog and margin disclosure. Commodity PV pricing and long rail project cycles could conceal losses or capital consumption. The model's 2% rail/other weight is analytical, not a claim of immateriality.

- **Dealer and inventory opacity — bear.** Consolidated inventory days reached 109 in H1 2026, yet dealer count and channel inventory are undisclosed. Factory shipments can overstate end demand. A sustained gap would require price support, production cuts or write-downs.

- **Capex and free-cash-flow burden — all cases.** FY2025 auto-segment long-term asset additions were CNY134.492B and TTM group FCF was deeply negative. Overseas factories, charging, batteries and models all require capital. Revenue and adjusted PBT growth without better asset turns would not justify a high valuation.

- **R&D productivity — bull or bear.** High R&D protects charging, battery, software and vehicle competitiveness. It becomes a risk if programs proliferate without pricing or market-share payoff. Cutting it to protect short-term margin can weaken the moat; spending without focus can depress returns.

- **Government grants and policy normalization — bear at statutory and cash level.** FY2025 grants recognized in profit or loss were CNY12.634B group-wide, up sharply from FY2021. This appendix does not allocate them to the segment or capitalize them in adjusted segment PBT. Lower grants, tighter purchase incentives or changed tax treatment can still weaken demand, cash economics and statutory profit.

- **Geopolitics, regulation and data rules — bear.** Tariffs, local-content requirements, security reviews, sanctions, rare-earth controls and cross-border data rules can delay plants or restrict features. Geographic diversification reduces single-market dependence but adds compliance complexity.

- **Technology discontinuity — both tails.** A decisive battery, charging, autonomous-driving or power-electronics breakthrough could strengthen BYD's system advantage. The same development at a competitor could shorten model lives and force extraordinary retooling. Five-year outcomes depend more on repeated execution than on one launch.

- **Government or municipal rail budgets — both tails.** Rail projects can provide optionality if reference deployments win follow-on orders. Budget tightening, permitting or civil-integration issues can cause long delays. With no disclosed backlog, neither upside nor downside should be extrapolated aggressively.

Summary

Case	Segment TTM+5y Revenue	Exact profit metric	Segment TTM+5y Profit Margin	Segment TTM+5y Profit	Probability
Bear	CNY615.203B	Adjusted profit before tax (reportable segment profit)	2.80%	CNY17.219B	30%
Base	CNY889.843B	Adjusted profit before tax (reportable segment profit)	5.15%	CNY45.834B	50%
Bull	CNY1,053.396B	Adjusted profit before tax (reportable segment profit)	6.53%	CNY68.787B	20%

The probability-weighted endpoint is CNY840.161 billion of segment revenue and CNY41.840 billion of Adjusted profit before tax (reportable segment profit), implying a 4.98% weighted margin if weighted profit is divided by weighted revenue. The revenue figure uses full-precision cohort rollups before rounding. Probabilities are deliberately non-uniform: base receives 50%, bear 30% because current contraction, inventory and price competition are observable, and bull 20% because it requires simultaneous localization, premium, storage and utilization success.

Data gaps carried forward

- [DATA GAP: No separately disclosed revenue or profit for BEV, PHEV, vehicle brands, batteries, storage, PV or rail. Analytical cohort weights are clearly labeled and tied to total segment revenue.]

- [DATA GAP: No clean vehicle ASP; broad segment revenue per NEV includes batteries, PV, rail and other operations and is only a diagnostic.]
- [DATA GAP: No quarterly segment financials; H1 2026 is the latest segment period.]
- [DATA GAP: No dealer count, dealer inventory or retail-to-wholesale bridge.]
- [DATA GAP: No 2026 power and storage battery installed-capacity KPI in the June or August monthly releases examined.]
- [DATA GAP: No formal numeric FY2026 automotive revenue, margin, unit-sales or sub-business guidance.]
- [DATA GAP: Government grants are not allocated by reportable segment or model.]

Mobile handset components, assembly and other products — Segment Deep Dive

Run ID: `pulse-cio-20260907T040305+0800` Ticker: `1211.HK` Information cutoff: `2026-09-07` Reporting currency: CNY; financial tables use CNY billions unless stated otherwise. TTM anchor: twelve months ended `2026-06-30` Forecast horizon: `2031-06-30`, exactly five calendar years after the TTM anchor. Exact profit metric: **Adjusted profit before tax (reportable segment profit)**. `trade_execution_authorized=false`

0. Segment boundary and taxonomy note

This appendix models BYD Company Limited's exact statutory reportable segment **Mobile handset components, assembly and other products**. The perimeter covers electronic components and assembly services, smart terminals, precision manufacturing and the emerging AI-computing-infrastructure and thermal-management activities described in the reviewed data package. The relevant taxonomy boundary is FY2022: the FY2022 Annual Report combined the formerly separate rechargeable-battery and photovoltaic business with automobiles and restated FY2021 on the current two-segment basis. Consequently, every historical dollar comparison here uses the reviewed, restated FY2021–FY2025 two-segment series. Later management discussion increasingly uses the shorthand "electronics business," but this appendix does not substitute that narrative label for the statutory segment perimeter. The two-segment basis is comparable from restated FY2021 through H1 2026 [data_package §1, lines 79–90].

1. What this segment actually is

The segment is a contract-manufacturing and precision-components platform rather than a consumer brand. Its customers are device and technology companies that specify products, qualify factories, approve materials and process changes, and place programs into mass production. BYD supplies some combination of structural components, precision parts, modules, full-device assembly, testing and manufacturing services. The segment's economics therefore depend less on retail brand equity than on program wins, yield, line utilization, procurement execution and the ability to take a design from engineering validation into stable high-volume production.

The legacy core is mobile. Components work can include metal, glass, plastic or composite structures, casings and other precision parts; assembly work integrates purchased and internally produced parts into a finished or near-finished device. In commercial terms, these are normally program businesses. A customer selects suppliers before a product launch, production ramps sharply around the launch window, and volume then decays or migrates when the next model arrives. Unit pricing is negotiated against a bill of materials, process route, target yield, tooling plan and expected volume. Price-down clauses and annual rebids are common features of electronics manufacturing, so the manufacturer must continuously lower conversion cost merely to defend margin.

The reviewed data package says components weakened while assembly grew with major overseas clients in FY2025 and H1 2026 [data_package §4, line 233]. This divergence matters. Components can earn more attractive economics when proprietary process know-how, high cosmetic yield or hard-to-replicate tooling creates differentiation. Assembly brings greater revenue scale but often contains a large pass-through content bill and therefore lower value added per revenue yuan. A mix shift from components toward assembly can make revenue appear resilient while **Adjusted profit before tax (reportable segment profit)** deteriorates. That is consistent with the segment's H1 2026 result: revenue edged up 0.96%, yet adjusted reportable-segment PBT fell from CNY1.335B to CNY0.194B [data_package §3, lines 147–152].

The growth option is broader electronics manufacturing. The package identifies smart terminals, several server models in bulk shipment, AI-computing infrastructure, liquid-cooling cold plates in a mass-production ramp and thermal management [data_package §1, lines 79–86; §4, line 234]. These opportunities use adjacent capabilities—precision metalworking, complex assembly, thermal design, automation, quality control and procurement—but they do not automatically carry software-like margins. A server or rack can have a high invoice value because it contains expensive processors, accelerators, memory and networking equipment. If the manufacturer does not own those critical components or the system architecture, high revenue can still produce only a thin conversion margin.

Go-to-market is direct and concentrated. The manufacturer wins business through customer engineering relationships, qualification, new-product-introduction performance, global delivery capability and commercial bidding. It does not create end-user demand; it serves the demand and product road maps of its customers. The data package reports that one unnamed customer generated CNY100.737B of BYD group revenue in FY2025 and CNY46.017B in H1 2026 [data_package §6, lines 270–283]. The filings do not identify that customer in the reviewed package, so this appendix does not name it. The

correct investment conclusion is about concentration, not identity: one platform can materially influence factory utilization, product mix, working capital and earnings.

2. Current economics

The TTM base is constructed only from reviewed segment disclosures: FY2025 revenue of CNY155.237B less H1 2025 revenue of CNY68.744B plus H1 2026 revenue of CNY69.405B, yielding **CNY155.898B** for the twelve months ended 2026-06-30 [data_package §3, lines 127–134 and 147–152]. The QFR-sealed statutory bridge reports TTM **Adjusted profit before tax (reportable segment profit)** of **CNY1.608320B**, equivalent to a **1.03%** margin [data_package §3a, lines 176–192]. This is the required forecasting anchor; it is not statutory operating income and it excludes the issuer-defined bridge items documented upstream.

The near-term direction is worse than the TTM average. H1 2026 revenue increased only 0.96% to CNY69.405B, while H1 adjusted reportable-segment PBT collapsed 85.5% to CNY0.194B and the exact-metric margin fell to 0.28% [data_package §3, lines 147–152]. FY2025 had already shown stress: revenue declined 2.74% to CNY155.237B, adjusted reportable-segment PBT declined to CNY2.750B and margin compressed to 1.77% from 2.66% in FY2024 [data_package §3, lines 127–134]. The last two observations make it unsafe to anchor on the FY2023 peak margin of 3.66% without a recovery mechanism.

Historically, the segment grew quickly but did not convert growth into steadily rising margin. Revenue increased from CNY86.454B in restated FY2021 to CNY155.237B in FY2025, a four-year CAGR of about 15.8%, while exact-metric margin moved from 2.13% to 1.77%. It reached 3.66% in FY2023, dropped to 2.66% in FY2024 and dropped again in FY2025 [data_package §3, lines 127–134]. This pattern is more consistent with volatile program and mix economics than with a structurally expanding-margin franchise.

Sub-product revenue is a true non-disclosure. The reviewed package does not separately disclose revenue for smart terminals, components, assembly, AI servers, liquid cooling or other electronics activities [data_package §4, lines 209–220; §10, lines 332–348]. It would therefore be fabricated precision to assign, for example, 10% of revenue to servers or a fixed share to Android chassis. This appendix instead forecasts the full reported segment and treats component, assembly and AI-infrastructure developments as drivers of the full-segment growth and margin cases.

Capital intensity is meaningful. FY2025 segment additions to long-term assets were CNY5.022B, equal to about 3.24% of FY2025 segment revenue [data_package §7, lines 285–301]. That figure is the official segment-note additions definition, not necessarily cash capex and not a TTM measure. It nevertheless demonstrates that the segment requires physical capacity, tooling, automation and engineering infrastructure. New lines can require cash before the associated program reaches full utilization; poor launch yields or a customer volume cut can strand that investment. The asset burden is lower than BYD’s automotive segment, but it is not trivial or asset-light.

3. Unit economics

Revenue is mainly the product of shipped units and recognized revenue per unit or program. Revenue per unit includes purchased materials, internally produced components and manufacturing conversion. For assembly-heavy programs, expensive customer-specified content can inflate revenue while contributing little incremental profit. For component-heavy work, the relevant drivers are process steps, material yield, cycle time, labor and automation, tool life, cosmetic rejection rates and the supplier’s ability to hold price through technical differentiation. The consolidated segment revenue number obscures these differences, which is why the exact-metric margin is more informative than revenue alone.

The first margin layer is procurement and material pass-through. Metals, resins, glass, semiconductors, memory, connectors and thermal materials may be bought by BYD, consigned by the customer or priced through contractual formulas. Commodity inflation can sometimes be passed through, but timing matters: a one-quarter mismatch between cost inflation and customer reimbursement is material in a segment earning roughly 1% adjusted PBT. The Xiaomi Q2 2026 presentation gives a relevant customer-side example. Global smartphone shipments fell 5.9% year over year, Xiaomi shipments fell 26.3%, and Xiaomi’s smartphone gross margin was only 8.5% because key component prices increased materially. This does not measure BYD’s margin, but it shows why smartphone OEMs intensify supplier price negotiations when volumes weaken and bills of materials rise ([Xiaomi Q2 2026 results presentation](https://ir.mi.com/static-files/bdeea0b9-246c-45be-8cb4-ab4faaddf80a), pages 14, 17 and 30).

The second layer is manufacturing conversion. A line’s labor, depreciation, utilities, maintenance, quality and engineering support are partly fixed over the product cycle. Utilization therefore matters enormously. At high volume and stable yield, more

units absorb fixed conversion cost and rework declines. At a launch, however, scrap, expedited freight, overtime and engineering changes can rise faster than revenue. At end of life, the line can become underutilized before the next program is qualified. The H1 2026 combination of flat revenue and an 85% profit decline is evidence that volume alone is not sufficient; specification changes, mix and conversion execution can overwhelm scale [data_package §6, lines 270–283].

The third layer is the value captured for engineering. Precision chassis and thermal products can command better economics than commodity assembly when tolerances, surface finish, strength-to-weight performance or thermal reliability are hard to reproduce at scale. However, the customer typically controls the system specification and can dual-source once competing suppliers qualify. Engineering advantage therefore earns temporary program-level rents, not a permanent royalty. The durability of those rents depends on continual reinvestment, rapid qualification and the willingness to cannibalize older processes.

AI servers change both the opportunity and the risk. Rack-scale accelerated systems require more complex power delivery, interconnects, mechanical integration and cooling than conventional servers. NVIDIA's Blackwell design explicitly uses a liquid-cooled 72-GPU rack, and NVIDIA has published parts of the electro-mechanical and liquid-cooling specifications into the Open Compute Project ecosystem ([NVIDIA OCP release](https://nvidianews.nvidia.com/news/nvidia-contributes-blackwell-platform-design-to-open-hardware-ecosystem-accelerating-ai-infrastructure-innovation/)). That creates addressable manufacturing work for cold plates, manifolds, trays, racks and system integration. It also standardizes parts of the design and attracts the world's largest ODM and EMS competitors, limiting bargaining power for an undifferentiated entrant.

The fourth layer is operating investment. Customer-specific engineering, tooling and line setup precede revenue. R&D and process development are necessary to win the next program, and customer audits impose ongoing quality, traceability, security and sustainability costs. These costs can be leveraged when a process platform serves multiple models, but they are not optional. Segment long-term-asset additions of CNY5.022B in FY2025 are a visible portion of this reinvestment burden [data_package §7, lines 285–301]. The group's broader R&D spending is not allocated to this segment, so this appendix does not assign a fabricated segment R&D amount.

The practical break-even equation is unforgiving. At a 1.03% TTM exact-metric margin, a one-percentage-point adverse move in cost or price is roughly equal to the segment's entire reported profit before tax. Margin improves if higher-value component and thermal content rises, line utilization normalizes, launch scrap falls, procurement recovers inflation, and newer server programs add enough conversion profit to cover engineering and capex. Margin deteriorates if low-value assembly mix expands, customers demand price-downs, volumes miss committed levels, input cost rises cannot be passed through, or AI-server content proves to be high-revenue but low-value-added pass-through.

4. Competitive dynamics

The competitive set spans several tiers. For high-volume consumer electronics assembly, Hon Hai/Foxconn is the scale benchmark, with Luxshare, Pegatron and other Asian manufacturers competing for major programs. For diversified engineering and manufacturing services, Jabil and Flex are relevant. In AI servers and racks, Hon Hai, Quanta/QCT, Wistron/Wiwynn, Inventec, Pegatron, Jabil, Supermicro and branded system vendors overlap. In precision structural components, specialists compete process by process. BYD is therefore entering AI infrastructure against incumbents that already have hyperscaler relationships, reference-platform experience and global production footprints.

Hon Hai's scale is the clearest external yardstick. Its 2025 annual report says Cloud and Networking products were 40% of revenue, Smart Consumer Electronics 38%, Computing 15%, and Components and Other 7%. It generated NT$8.103T of revenue at only a 6.15% gross margin and 3.20% operating margin, despite global scale and a favorable mix shift toward AI infrastructure ([Hon Hai 2025 Annual Report](https://image.honhai.com/upload/202605/financy_by_year/2025_Annual_Report_20260523_7728.pdf), pages 4–6). In H1 2026 Hon Hai revenue grew 35%, and Q2 operating margin reached 3.75%, with management attributing growth to AI-server racks and cloud/network products ([Hon Hai Q2 2026 results](https://www.honhai.com/en-us/press-center/press-releases/latest-news)). The comparison supports two conclusions. AI infrastructure can drive real growth, but even the largest, most vertically integrated EMS platform remains a low-single-digit operating-margin business.

Jabil provides a second profitability ceiling. Its Q3 FY2026 release reported US$8.751B of revenue and US$445M of GAAP operating income, approximately 5.1%, and lifted its FY2026 core operating-margin outlook to 5.8%. Management called AI infrastructure demand extremely strong while also emphasizing diversification, capital efficiency and higher-margin execution ([Jabil Q3 FY2026 release](https://investors.jabil.com/news/news-details/2026/Jabil-Posts-Third-Quarter-Results/default.aspx)). Jabil's portfolio,

accounting and non-GAAP adjustments are not comparable to BYD's reportable-segment adjusted PBT. Still, its results show that mid-single-digit manufacturing margins require portfolio quality and disciplined capital allocation; they are not an automatic consequence of server growth.

Smartphone demand is bifurcated rather than uniformly growing. Xiaomi's Q2 2026 peer presentation reports a 5.9% year-over-year decline in global industry shipments. Apple and Samsung shipments rose in the embedded Omdia table, while Xiaomi, OPPO, vivo and the "others" category fell. Xiaomi's own units declined 26.3%, but ASP increased 25.9% to a record RMB1,351 as premium mix rose ([Xiaomi Q2 2026 results presentation](https://ir.mi.com/static-files/bdeea0b9-246c-45be-8cb4-ab4faaddf80a), pages 14–17). Apple's FY2025 iPhone revenue increased 4% to US$209.586B because of higher Pro-model sales, while Greater China net sales declined partly because of lower iPhone sales ([Apple FY2025 Form 10-K](https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/c636d8a7-8025-47d2-9b13-bcf5465343b3.html), lines 669–715). This is favorable for suppliers positioned on premium programs, but it is poor evidence for broad unit growth across Android chassis and midrange devices.

Samsung's Q2 2026 disclosure reinforces the cost and mix tension. Its Mobile eXperience and Networks business grew revenue year over year on flagship and A-series demand but reported an operating loss because of elevated component costs; Samsung also expected soft consumer demand and higher costs to persist in H2 2026. At the same time, premium mobile OLED demand and differentiated form factors remained solid ([Samsung Q2 2026 results](https://news.samsung.com/global/samsung-electronics-announces-second-quarter-2026-results)). A parts supplier can therefore benefit from premium content growth while still face customer pressure to offset the OEM's component inflation.

Customer qualification, yield history and delivery reliability are meaningful entry barriers. A smartphone launch involves enormous volumes in a short window, and a defective structural component can halt final assembly or create warranty exposure. Incumbents accumulate process-control data and learn a customer's engineering workflow. Large customers also want supply assurance and geographic redundancy. Apple's FY2025 Form 10-K says final assembly of substantially all hardware products is outsourced to partners primarily in Asia and that the company relies on single-source partners for many components ([Apple FY2025 Form 10-K](https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/c636d8a7-8025-47d2-9b13-bcf5465343b3.html), line 317). That supports stickiness after qualification, but it also highlights the customer's ability to determine where manufacturing capacity must be located.

Geography is becoming a competitive capability. Tariffs, export controls and customer resilience requirements favor manufacturers able to build, operate and localize capacity near end markets. Hon Hai emphasizes a global "Build, Operate, Localize" model and more than 240 campuses across 24 countries. That footprint is difficult to match quickly and is one reason the incumbent can absorb customer requests for regional capacity ([Hon Hai 2025 Annual Report](https://image.honhai.com/upload/202605/financy_by_year/2025_Annual_Report_20260523_7728.pdf), pages 4–6; [Hon Hai Q2 2026 results](https://www.honhai.com/en-us/press-center/press-releases/latest-news)). BYD's segment can be competitive in China through vertical integration and manufacturing execution, but customer-driven geographic diversification can require capital before it earns acceptable utilization.

AI infrastructure is a large opportunity with unusually strong incumbents. NVIDIA's 2026 DSX announcement names Dell, HPE, Lenovo, Supermicro, ASUS, Foxconn, GIGABYTE, Pegatron, QCT, Wistron and Wiwynn as system builders contributing to its deployment ecosystem. It also describes 45°C liquid cooling and in-rack technologies as enabling up to 40% more GPUs at their efficient operating point ([NVIDIA DSX announcement](https://nvidianews.nvidia.com/news/dsx-infrastructure-ai-factory)). The market is expanding, but the vendor list shows why a new program win is not equivalent to durable share. Customers can allocate platforms across several established suppliers, and standardized designs reduce switching friction.

Pricing power consequently sits mainly with platform owners and large customers. BYD can earn better terms where it contributes unique process know-how, meets a launch no competitor can execute, or supplies a tightly integrated component-plus-assembly solution. It has little pricing power for pure labor conversion or commodity parts. The most defensible strategy is to migrate toward thermal, structural and system-integration content whose failure cost is high and whose manufacturing learning curve is steep, while resisting revenue that consumes working capital without adequate conversion margin.

Competition also changes the meaning of vertical integration. Internally producing tools, structures and thermal parts can shorten development time, reduce handoffs and protect supply. But vertical integration helps only when internal processes are globally competitive. Captive capacity with low utilization can become a fixed-cost burden, while a customer may prefer

best-of-breed component suppliers and a separate assembler. The relevant evidence is therefore not the number of processes owned; it is the margin and return on the capital deployed to own them.

5. Moat at the segment level

The segment has capabilities, not an impregnable franchise. Its first defense is manufacturing know-how: precision processing, tooling, automation, yield control, quality systems and the ability to ramp. These capabilities take years to build and are tested under real product cycles. The second is customer qualification and embedded engineering. Once a supplier is designed into a high-volume program and has demonstrated yield, switching creates schedule and quality risk. The third is vertical integration across components and assembly, which can shorten iteration cycles and allow a customer to award a larger work package to one counterparty.

The moat is weakened by buyer concentration. Large global customers purchase at enormous scale, maintain multiple qualified suppliers, benchmark cost and often own the critical product architecture. They can demand annual cost reductions, move capacity between vendors, or redesign a component. The segment's disclosed concentration—one customer at CNY100.737B of group revenue in FY2025—means the buyer can capture much of the economic surplus [data_package §6, lines 270–283]. Scale is valuable, but if scale belongs to the customer's program rather than to BYD's reusable intellectual property, it does not ensure durable returns.

The margin history is the strongest moat test. A truly powerful segment moat should show either resilient margins through product cycles or a credible upward trend as scale compounds. This segment did neither: exact-metric margin ranged from 1.92% to 3.66% over FY2022–FY2025 and then fell to 0.28% in H1 2026 [data_package §3, lines 127–152]. That does not mean the operation lacks skill. It means customers and competition appear able to reclaim most of the value, leaving BYD exposed to mix, ramp and cost shocks.

AI servers and liquid cooling could strengthen the moat if BYD becomes a design-and-integration partner rather than a build-to-print vendor. Thermal reliability at high rack density is mission critical, and field failure carries large downtime costs. Repeated design wins could create process knowledge, validation data and customer trust. Yet the external evidence cautions against assuming uniqueness: Hon Hai already offers components, module design, liquid cooling, system integration and rack integration; NVIDIA is publishing interface and thermal specifications; and many established ODMs are in the ecosystem. BYD's server milestones prove entry, not leadership.

The likely five-to-ten-year outcome is a **narrow and program-dependent moat**. BYD can defend selected process niches and customer relationships, but the overall segment remains contestable. A durable improvement would require three visible proofs: adjusted reportable-segment PBT margin recovers above 2% without sacrificing revenue; new AI-infrastructure programs diversify the customer base; and segment capex earns utilization across more than one product cycle. Until those proofs appear, the segment should be treated as a cyclical precision-manufacturing platform with optionality, not a high-return compounder.

There is also a time-horizon asymmetry. Customer qualification may lock in a supplier for the life of a product model, perhaps one to three years, while the ER2 horizon is five years and the moat question extends to ten. Winning today's program does not guarantee a place on the next architecture. Durable value requires repeated requalification, process renewal and geographic investment. The same reinvestment that protects relevance also prevents the customer relationship from becoming a capital-light annuity.

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

The data package discloses dollars only for the full reportable segment. No sub-product dollar series exists, so the table deliberately contains one full-segment row. The "3-year CAGR" is the three-interval CAGR from FY2022 to FY2025; the three displayed fiscal-year columns are FY2023–FY2025, consistent with the required FY-3 to FY-1 presentation.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Reportable segment total	FY2023 CNY118.577B [data_package §3, line 131]	FY2024 CNY159.609B [data_package §3, line 131]	FY2025 CNY155.237B [data_package §3, line 131]	16.25% from FY2022 CNY98.815B [data_package §3, line 131]	H1 2026 +0.96% [data_package §3, line 151]	data_package §3 lines 127–152; §4 line 215

Arithmetic checks:

- FY2022 to FY2023: CNY98.815B × 1.2000 = CNY118.578B, versus reported CNY118.577B; rounding difference CNY0.001B, within 2%.

- FY2023 to FY2024: CNY118.577B × 1.3460 = CNY159.6096B, versus reported CNY159.609B; rounding difference CNY0.0006B, within 2%.
- FY2024 to FY2025: CNY159.609B × 0.9726 = CNY155.2357B, versus reported CNY155.237B; rounding difference CNY0.0013B, within 2%.
- TTM anchor: CNY155.237B FY2025 − CNY68.744B H1 2025 + CNY69.405B H1 2026 = **CNY155.898B** [data_package §3, lines 131 and 149–152].
- TTM exact profit metric: CNY2.749565B FY2025 − CNY1.335000B H1 2025 + CNY0.193755B H1 2026 = **CNY1.608320B**, matching the sealed bridge exactly [data_package §3a, lines 156 and 176–192].

The 16.25% historical three-year CAGR is backward-looking and heavily influenced by the FY2023–FY2024 expansion. It is not an appropriate straight-line forecast after FY2025's decline and H1 2026's near-flat result. It is instead the upper historical reference against which scenario growth must be haircut. The arithmetic rows satisfy the mandatory 2% consistency test, so no data-package error is flagged.

7. Management guidance — quoted from data package §6

The package explicitly states that BYD provides no formal numeric electronics revenue or margin guidance and no official English quarterly transcript in the reviewed source set [data_package §6, lines 251–283]. The following are all relevant short issuer excerpts preserved there; they are not re-fetched and not expanded beyond the reviewed wording.

- **FY2025 MD&A, "AI computing infrastructure"** [data_package §6, line 274]. This identifies the intended new end market but gives no scale, customer, backlog or margin. It supports including an AI-growth option, not assigning sub-product revenue.
- **H1 2026 MD&A, "mass production and delivery"** [data_package §6, line 275]. This indicates that at least some new electronics work has moved beyond design validation. Mass production still carries ramp, yield and working-capital risk.
- **H1 2026 MD&A, "bulk shipment"** [data_package §6, line 276]. Several server programs are contributing commercial volume, but the absence of dollars prevents any inference about full-segment materiality.
- **FY2025 MD&A, "liquid cooling"** [data_package §6, line 277]. Thermal-management content is strategically relevant because rack power density is rising. The phrase does not demonstrate market share or pricing power.
- **H1 2026 MD&A, "major overseas clients"** [data_package §6, line 278]. Overseas assembly programs supported revenue, while concentration and customer negotiating power remain central risks.
- **H1 2026 MD&A, "created new engines to the Group's business"** [data_package §6, line 279]. This is a diversification aspiration. The terminal cases require evidence in segment profit, not rhetoric.
- **H1 2026 MD&A, "several server models"** [data_package §6, line 280]. Multiple programs are better than one isolated design win, yet customers, shipment value and profitability are not disclosed.
- **H1 2026 MD&A, "mass production ramp-up phase"** [data_package §6, line 281]. The cold-plate opportunity is real enough to be in production, but ramp costs can initially depress the segment margin.

[DATA GAP: BYD provides no numeric FY2026 or five-year revenue, adjusted reportable-segment PBT margin, server revenue, liquid-cooling revenue, sub-product mix, unit shipment or order-backlog guidance for this segment in the reviewed data package.]

The modeling response to that gap is conservative. No management phrase is translated into a percentage. The base case is tied to the full-segment TTM anchor and uses external peer evidence only to test whether the direction and magnitude are plausible. The bull case requires a combination of repeat AI wins, content expansion and customer diversification; the bear case assumes the strategic initiatives do not offset legacy program pressure.

8. Forward growth assumptions

Because the issuer discloses only one revenue line for this segment, all three cases forecast the **full reported segment**. Components, assembly, smartphones, Android chassis, servers and liquid cooling are discussed as qualitative drivers; they are not assigned invented revenue shares. The TTM revenue base is CNY155.898B at 2026-06-30, and the endpoint is

2031-06-30.

Base case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM→TTM+5y	Justification
Full reported electronics and assembly segment	16.25% [data_package §3]	H1 2026 +0.96% [data_package §3]	No numeric guide [data_package §6]	5.79%	Smartphone work stabilizes, AI servers and cooling scale gradually, but assembly mix and customer concentration cap the recovery.

The base case does not extrapolate the historical CAGR. It assumes smartphone demand remains a low-growth installed-base market, with premium devices and new form factors offering content opportunities but unit growth uneven across customers. Apple's 4% FY2025 iPhone-revenue growth and Xiaomi's Q2 2026 industry shipment decline support a conservative mature-market stance. New AI programs are allowed to become meaningful over five years, but the model recognizes that Hon Hai and Jabil already have scale, customer relationships and integrated server capabilities.

The base cadence is deliberately gradual: 3%, 5%, 6%, 7% and 8% annual growth. This produces CNY206.529B of terminal revenue and a 5.79% five-year CAGR. The acceleration rather than deceleration reflects recovery from a depressed TTM period and increasing AI-infrastructure contribution. It is not a claim that the undisclosed AI business alone grows at these rates; it is the path for the whole reportable segment.

The first-year 3% assumption is above H1 2026's 0.96% because the TTM already contains a weak comparison period and management's described server and cold-plate products are entering shipment. It remains below Apple's FY2025 iPhone revenue growth and far below the strong AI growth reported by Hon Hai or Jabil. The later 7–8% years assume the new programs offset the maturity of handset assembly, not that the handset market itself reaccelerates.

Bull case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM→TTM+5y	Justification
Full reported electronics and assembly segment	16.25% [data_package §3]	H1 2026 +0.96% [data_package §3]	No numeric guide [data_package §6]	10.98%	Server and cold-plate ramps convert into repeat programs, premium chassis content rises and customer breadth improves while the legacy smartphone base remains stable.

The bull case still stays below the 16.25% historical three-year CAGR. It assumes BYD executes on several server models, advances from components into higher-value modules or rack subsystems, and wins repeat thermal programs as liquid cooling becomes standard in dense AI systems. NVIDIA's rack architecture and Hon Hai's rapid cloud/network growth show that the end market can sustain double-digit manufacturing growth. The essential extra assumption is share gain: market growth alone is not enough because the incumbent set is formidable.

The bull cadence is 7%, 10%, 12%, 13% and 13%. It yields terminal revenue of CNY262.417B and a 10.98% CAGR. This path requires evidence of broadening beyond one customer and must be rejected if revenue growth comes only from low-margin pass-through assembly. It also assumes the mobile platform does not suffer a large program loss; AI growth starting from an undisclosed base may otherwise be too small to compensate.

Even in the bull case, the endpoint is not built from a sub-product sum. The absence of server and cooling dollars means the model cannot tell whether those lines are 2%, 10% or 20% of current segment revenue. The bull case is therefore a whole-segment outcome that can be judged ex post against reported segment totals and exact-metric profit, avoiding false confidence about the mix that produced it.

Bear case growth

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM→TTM+5y	Justification
Full reported electronics and assembly segment	16.25% [data_package §3]	H1 2026 +0.96% [data_package §3]	No numeric guide [data_package §6]	-0.21%	Smartphone programs weaken, customer price-downs persist and AI revenue remains too small or too pass-through-heavy to offset lost component work.

The bear case is not a collapse. The segment's manufacturing base, existing customer programs and AI entries make a zero-revenue outcome implausible. Instead, it models a long plateau: 0%, -2%, -1%, 0% and +2%. Terminal revenue is CNY154.277B, slightly below the TTM base. This path is consistent with a mature phone market in which premium winners grow but weaker Android platforms contract, while customer diversification and AI monetization take longer than expected.

The sequence also captures operating reality. A major customer can reduce one model's allocation before an AI line is large enough to replace it. Revenue may therefore fall for two years, stabilize as capacity is repurposed, and show modest terminal growth without recovering the lost economics. This is more defensible than imposing a perpetual decline on a segment that has active manufacturing capabilities and new-product programs.

Annual revenue cadence and thesis-consistency check

Case	2026-06-30 TTM	2027-06-30	2028-06-30	2029-06-30	2030-06-30	2031-06-30	Five-year CAGR
Bear	155.898	155.898	152.780	151.252	151.252	154.277	-0.21%
Base	155.898	160.575	168.604	178.720	191.230	206.529	5.79%
Bull	155.898	166.811	183.492	205.511	232.227	262.417	10.98%

The base and bull cases do not jump from H1 2026's 0.96% growth to a terminal rate without a bridge. The base reaches only 3% in the first year and accelerates as server and cooling programs move beyond ramp. The bull begins at 7%, below the 16.25% historical reference, then reaches low teens only after repeat program wins. The bear explicitly absorbs two years of contraction. These paths are consistent with external comparable behavior: Hon Hai's AI-led revenue can grow rapidly while smart consumer electronics remains cyclical, and Jabil's diversified AI demand can raise group growth without erasing execution risk.

The path also distinguishes demand from value capture. Smartphone premiumization can raise content per device but give customers even more incentive to dual-source critical parts. AI racks can increase bill-of-materials value but dilute gross margin if accelerators and memory pass through. For the base case to hold, BYD must improve both the quantity of work and the share of value it earns; a revenue increase paired with further exact-metric margin compression would be evidence against the model.

9. Forward Adjusted profit before tax (reportable segment profit) margin assumptions

The current margin is **1.03%** on the QFR-sealed TTM metric: CNY1.608320B of adjusted reportable-segment PBT divided by CNY155.898B of TTM revenue [data_package §3a, lines 176–192]. The cases forecast this exact issuer-defined basis only. Corporate and unallocated adjustments, statutory operating-income bridge items, non-operating income and expense, and tax are left to the synthesis stage under data_package §3a; none is inserted into this segment.

Government grants are also excluded from the segment forecast unless they are already captured in the issuer-disclosed segment metric. The data package reports CNY12.634B of FY2025 grants recognized in profit or loss but states that grants are not allocated by reportable segment [data_package §0a, lines 68–77]. No portion is assigned to electronics, no grant is used to justify margin recovery, and no grant is added again through corporate, other-income, finance-cost or tax lines. This preserves the sealed bridge perimeter and prevents double counting.

Case	TTM exact-metric margin	2031-06-30 exact-metric margin	Change	Mechanism
Bear	1.03%	0.60%	-43 bps	Price-downs, low utilization and assembly mix offset modest process improvement; the segment remains barely profitable.
Base	1.03%	1.80%	+77 bps	Yield and utilization partly normalize, but buyer price-downs and assembly pass-through prevent an above-FY2025 margin without quantified evidence.
Bull	1.03%	3.00%	+197 bps	Repeat thermal and server wins raise engineering value, customer breadth improves and stable multi-generation volume absorbs fixed conversion cost.

The base recovery is capped at 1.80%, approximately FY2025's 1.77% level rather than above it. H1 2026's 0.28% margin reflects severe component pressure and product-specification changes [data_package §3 and §6], so a five-year partial normalization is plausible. However, the data package discloses neither AI revenue nor the profit contribution of servers, cold plates, components or assembly. The base case therefore credits no unobserved high-margin AI mix. It assumes only that launch inefficiency fades, mature-line yield improves, and utilization recovers enough to offset continuing customer price-downs and the low value added of assembly-heavy revenue.

Normalization is not automatic. Existing handset programs typically face price-downs as yields improve, so BYD must lower conversion cost faster than contractual price declines merely to preserve margin. AI cooling can improve economics only when BYD owns meaningful thermal engineering, validation and manufacturing content; build-to-print cold plates are still exposed to rebids and design standardization. Server integration improves fixed-cost absorption only with committed multi-generation volume and stable yields. If accelerators, memory and other customer-directed content pass through BYD's invoice, revenue can rise sharply while adjusted PBT grows slowly, causing the exact-metric margin to fall rather than recover.

The bull case remains demanding at 3.00%, 197 basis points above TTM and above FY2024's 2.66%. It requires repeat design wins across successive rack generations, paid engineering content in cold plates and structural parts, customer diversification, high utilization and materially fewer adverse specification changes. It cannot be earned by pass-through server assembly alone. Hon Hai's entire 2025 business produced only a 3.20% operating margin despite much greater scale, incumbent hyperscaler relationships and AI leadership. The metric is not identical to BYD's adjusted segment PBT, but the comparison argues against treating BYD's FY2023 3.66% peak as a routine bull endpoint.

The bear margin of 0.60% acknowledges that BYD's disclosed segment stayed profitable throughout the reviewed annual series even when mix deteriorated. It allows intermittent near-break-even periods, including a first forecast year at 0.40%, before modest recovery. A sustained negative margin would be possible under a major customer loss, but the bear case probability is calibrated to persistent pressure rather than a discontinuous loss event.

Case	2026-06-30 TTM	2027-06-30	2028-06-30	2029-06-30	2030-06-30	2031-06-30
Bear adjusted reportable-segment PBT margin	1.03%	0.40%	0.20%	0.30%	0.50%	0.60%
Base adjusted reportable-segment PBT margin	1.03%	0.70%	0.95%	1.20%	1.50%	1.80%
Bull adjusted reportable-segment PBT margin	1.03%	1.10%	1.50%	2.00%	2.50%	3.00%

The first-year base margin of 0.70% is below TTM because the TTM includes a stronger H2 2025 while H1 2026 was only 0.28%. It avoids assuming an immediate rebound from specification and component pressure. The margin then recovers by 25–30 basis points a year, reaching approximately the FY2025 level only at the horizon. This cadence requires utilization and yield improvement but does not rely on a fabricated server or cooling mix.

The bull cadence accelerates only after repeat higher-value wins, better utilization and proof that thermal engineering earns more than assembly conversion. Even then it ends below both the FY2023 peak and Hon Hai's cited 2025 operating margin. The bear falls to 0.20% in the second year because customer pricing and underutilization can lag the initial revenue slowdown; it then recovers modestly as lines are repurposed. That sequencing is important: a constant terminal margin applied to every year would conceal the trough economics and the capital risk of getting there.

No product-level margin table is presented because product revenue weights are not disclosed. A revenue-weighted component/assembly/server margin would require invented mix. The full-segment margin path is the only reconstructable forecast consistent with the source boundary. This choice also prevents a common analytical error: assigning a high margin to an exciting but undisclosed AI sleeve and then using that fabricated mix to lift the consolidated segment.

10. Segment rollup — full reported segment

Each case has one modeled revenue line because only the reportable-segment total is dollar-disclosed. The "sum of product lines" therefore equals the full segment exactly. This is not a claim that the business lacks sub-products; it is an accounting discipline that prevents fabricated sub-product revenue.

Case	Modeled line	TTM revenue	Five-year CAGR	2031-06-30 revenue	Exact profit metric	2031-06-30 margin	2031-06-30 profit
Bear	Full reported electronics and assembly segment	155.898	-0.21%	154.277	Adjusted profit before tax (reportable segment profit)	0.60%	0.926
Base	Full reported electronics and assembly segment	155.898	5.79%	206.529	Adjusted profit before tax (reportable segment profit)	1.80%	3.718
Bull	Full reported electronics and assembly segment	155.898	10.98%	262.417	Adjusted profit before tax (reportable segment profit)	3.00%	7.873

Arithmetic tie-outs:

- Bear revenue: CNY155.898B × 1.000 × 0.980 × 0.990 × 1.000 × 1.020 = CNY154.277B. Profit: CNY154.277B × 0.60% = CNY0.926B.
- Base revenue: CNY155.898B × 1.030 × 1.050 × 1.060 × 1.070 × 1.080 = CNY206.529B. Profit: CNY206.529B × 1.80% = CNY3.718B.
- Bull revenue: CNY155.898B × 1.070 × 1.100 × 1.120 × 1.130 × 1.130 = CNY262.417B. Profit: CNY262.417B × 3.00% = CNY7.873B.

All totals reconcile within rounding to much less than 1%. The base case still more than doubles adjusted reportable-segment PBT from CNY1.608B to CNY3.718B while revenue grows only 32.5%; a material part of profit growth therefore depends on margin normalization. That remains the segment model's most important fragility. The bull case earns CNY7.873B, but terminal profit would be only CNY4.724B if bull revenue occurred at the base 1.80% margin instead of 3.00%. Conversely, the bear segment remains revenue-large but economically marginal.

The rollup exposes why revenue headlines can mislead. At the base terminal revenue, every 50-basis-point error in the exact-metric margin changes segment profit by about CNY1.033B. At the bull revenue, the same error changes profit by CNY1.312B. These sensitivities are material for the consolidated earnings model. Reviewers should therefore focus on evidence that value-added mix and utilization are improving, not simply on server shipment announcements.

Probabilities are intentionally non-uniform: 35% bear, 50% base and 15% bull. The base has the highest weight because the segment has active customer programs and several AI milestones but not enough disclosed evidence to support either permanent stagnation or a rapid mix transformation as the central outcome. Bear probability exceeds bull probability by 20 points because H1 2026 margin is already near zero, customer concentration is high, capex precedes utilization, and AI-server incumbents are stronger than the issuer's unquantified milestones. The bull receives 15% because liquid cooling and rack-scale manufacturing are genuine structural opportunities, but neither revenue scale nor economic value capture is disclosed.

The probability weights do not alter the scenario numbers. They describe uncertainty and must not be used to hide a weak bear outcome inside a single weighted average. The synthesis agent should carry all three full-segment revenue and adjusted reportable-segment PBT outcomes separately before applying the sealed corporate and statutory bridge.

11. Key risks and wildcards

[Bear] Major-customer concentration. One unnamed customer accounted for CNY100.737B of group revenue in FY2025 and CNY46.017B in H1 2026 [data_package §6]. The amount is not disclosed as segment-only, but it is large enough that a program loss, insourcing decision or supplier reallocation could reduce utilization across the electronics platform. The segment's thin margin gives little buffer for an abrupt volume decline. Because the customer is unnamed in the reviewed source, inferring a specific company would create false precision and is not necessary to identify the risk.

[Bear] Smartphone and Android-platform weakness. Xiaomi's Q2 2026 evidence shows that global shipments can contract even while premium leaders grow. If BYD is overexposed to customers or models losing share, premium industry mix does not protect it. Chassis specification changes can also make existing tooling obsolete and create launch expense before the replacement program reaches volume. Android competition is especially intense because several OEMs pursue similar price bands and may change industrial design rapidly to differentiate.

[Bear] Customer price-downs and input-cost mismatch. A one-point adverse cost or price move is roughly the entire TTM adjusted reportable-segment PBT margin. Memory, metals, glass, connectors and thermal materials can reprice faster than customer contracts. OEM margin pressure raises the incentive to push cost reductions onto suppliers. Even when inflation is

ultimately reimbursed, lag effects can depress a reporting period and strain working capital.

[Bear] AI-server revenue without value capture. Expensive accelerators and memory can make server-assembly revenue grow rapidly while the manufacturer earns a small conversion fee. Hon Hai explicitly noted that high-priced AI products could dilute gross margin even as they increase profit dollars. BYD's segment will not deserve a higher margin merely because the invoice value of server shipments rises. The required evidence is adjusted reportable-segment PBT growing at least as fast as revenue over a multi-period ramp.

[Bear and Base] Capex and working-capital intensity. FY2025 segment long-term-asset additions were CNY5.022B [data_package §7]. New server or overseas lines can require tooling, inventory and supplier commitments before customer acceptance. A delayed ramp reduces return on capital even if the program ultimately ships. The lack of segment cash-flow disclosure means investors cannot directly observe conversion, increasing the importance of group cash flow and segment asset-addition trends.

[Base] Execution across product generations. Liquid-cooling and rack platforms evolve quickly. A successful cold plate for one architecture may need redesign for the next. NVIDIA's publication of rack and thermal specifications expands the ecosystem but also enables more suppliers to compete. BYD must convert each milestone into a repeatable platform capability. Missing one generation can interrupt both revenue and the learning curve that supports margin.

[Base] Vertical integration can become diseconomy. Owning more manufacturing steps can reduce coordination cost and protect supply, yet each step adds equipment, engineering and utilization risk. If a customer changes material, form factor or manufacturing geography, specialized internal assets may be underused. Vertical integration is a moat only when the combined offering wins repeat business at an adequate return.

[Bull] Higher-value integration. The most powerful positive wildcard is migration from discrete parts or final assembly into engineered thermal modules, rack subsystems and integrated manufacturing packages. If customers pay for reliability and speed rather than only conversion cost, adjusted reportable-segment PBT margin could approach the historical peak while revenue grows at low double digits. This is the central mechanism behind the bull margin, not a generic assumption of scale leverage.

[Bull] Customer diversification. Several server models and major overseas clients could broaden the revenue base. Evidence would be reduced concentration, more balanced program cycles and less sensitivity to a single handset platform. The issuer currently does not disclose the required sub-product or customer detail, so this remains an outcome to monitor, not a modeled fact. Diversification also needs to be economic: adding customers at near-zero margin would reduce concentration but not improve value.

[Bull and Base] Premium and new-form-factor content. Apple's Pro-model growth, Xiaomi's higher ASP and Samsung's premium/form-factor focus show that smartphone unit maturity does not preclude rising content per device. Precision structures, thermal management and complex assembly can benefit if BYD wins content on premium, foldable, wearable or other smart-terminal products. The opportunity is mix-led, not dependent on broad unit-market growth.

[All cases] Geography and trade policy. Customers are diversifying production and asking suppliers for regional resilience. A global footprint can win programs, but duplicating lines across countries reduces initial utilization and introduces execution risk. Hon Hai's established global platform makes this a competitive requirement rather than an optional advantage. BYD must balance customer demands for localization against the return on each duplicated factory or line.

[All cases] Disclosure opacity. The absence of sub-product revenue, unit volume, backlog and margin prevents direct measurement of AI adoption or customer diversification. Management can truthfully describe a ramp that remains immaterial to a CNY156B segment. Investors must resist treating qualitative milestones as proportional evidence. The exact reportable-segment revenue and adjusted PBT are the control totals.

Monitoring markers

The base case should be downgraded toward bear if two consecutive reported segment periods show an exact-metric margin below 1%, if revenue falls despite disclosed server and cooling ramps, or if segment long-term-asset additions remain high without profit recovery. The base should move toward bull only if adjusted reportable-segment PBT margin exceeds 2% with revenue growth, management quantifies AI-infrastructure revenue or backlog, and customer concentration visibly declines. A revenue-only AI headline is insufficient.

Additional warning indicators are a widening gap between segment revenue growth and profit growth, repeated references to specification changes, new overseas capex without named programs or utilization evidence, and smartphone OEM reports of

severe component-cost pressure. Positive indicators are repeat orders across successive GPU generations, an increasing share of engineered thermal modules, and exact-metric margin resilience during a smartphone downcycle.

Scenario summary

Case	Segment TTM+5y Revenue	Exact profit metric	Segment TTM+5y Profit Margin	Segment TTM+5y Profit	Probability
Bear	CNY154.277B	Adjusted profit before tax (reportable segment profit)	0.60%	CNY0.926B	35%
Base	CNY206.529B	Adjusted profit before tax (reportable segment profit)	1.80%	CNY3.718B	50%
Bull	CNY262.417B	Adjusted profit before tax (reportable segment profit)	3.00%	CNY7.873B	15%

The probabilities sum to 100%. Probability-weighted terminal revenue is 35% × CNY154.277B + 50% × CNY206.529B + 15% × CNY262.417B = **CNY196.624B**. Probability-weighted terminal adjusted reportable-segment PBT is 35% × CNY0.926B + 50% × CNY3.718B + 15% × CNY7.873B = **CNY3.364B**, implying a 1.71% weighted margin. The model’s conclusion is not that AI infrastructure will fail; it is that the segment’s investment value depends on converting genuine end-market growth into **Adjusted profit before tax (reportable segment profit)**. Revenue scale alone is not proof of durable economics in contract manufacturing. Even the revised base outcome requires a visible recovery from the H1 2026 trough. Until that recovery appears in the exact disclosed metric, the segment should be underwritten with a meaningful bear weight.

BYD Company Limited — Synthesis (Combined Earnings Model)

Production ER2 synthesis for 1211.HK. Amounts are CNY billions unless stated otherwise. Calculations retain full precision; displayed values are rounded only after the arithmetic is complete. This appendix performs mechanical forecast consolidation from the reviewed segment appendices and the QFR-sealed statutory bridge. It does not reclassify historical accounting lines, fetch replacement sources, create a residual plug, authorize trading, or select the eventual shareholder-return valuation method.

1. Anchors and immutable-input clearance

- Today and information date: 2026-09-07.
- Fiscal year end: 31 December.
- TTM anchor: 2026-06-30.
- TTM construction: FY2025 minus H1 2025 plus H1 2026, using identical 1 January to 30 June cumulative windows.
- Latest completed fiscal year used for historical tie-out: FY2025.
- Horizon date: 2031-06-30, exactly 5.0 calendar years after the TTM end date.
- Valuation price: HKD 86.15 per XHKG:1211 H ordinary share, raw exchange close, session 2026-09-04.
- Quote actionability expiry: 2026-09-07T16:10:00+08:00. The strict validator ran at 2026-09-07T05:46:01+08:00 and returned QUOTE_PACKET_VALID.
- Raw quote-source SHA-256: e2675829c512992f2a8e4331730f3f914ad7deeea28de28efe6db4475f81c49c.
- QFR-sealed quote-packet SHA-256: a77314fe0bb9897d1fc5100b76a2a57caccb31a92b19bc735c939d1f1ad2f652.
- Financial reporting currency: CNY. Quote currency: HKD. The quoted unit is one H ordinary share; financial statements use combined A and H ordinary shares, each RMB1 par.
- Quote-date split bridge: 9,085.053 million financial-statement diluted shares at 2026-06-30 multiplied by the sealed 1.0 split factor equals 9,085.053 million quote-basis diluted financial shares at 2026-09-04. The packet records no intervening split. The split source is the 2026 Interim Report, hash 79c3e9a9cfb58bba2a1f765ee877a624c3ffd432c59e67e548573a21830893a3.
- Listed-unit bridge: depositary ratio 1.0 multiplied by share-class factor 1.0 equals 1.0 financial share per listed unit. Therefore 9,085.053 million quote-basis financial shares divided by 1.0 equals 9,085.053 million listed-unit equivalents. BYD is not a depositary receipt.
- FX bridge: 1.1672 HKD per CNY at 2026-09-04, from the packet's FMP historical CNYHKD close; raw FX evidence hash 6511368e98e27c5c46e3632594e21ddbe722d7cc43022154b13d3639c2c925f5.
- Historical statutory bridge SHA-256: bc654bb77b76391ec3995b8bfe55a804b2fb2b073f48df6db2d11c7389f7fb64. The installed validator returned STATUTORY_BRIDGE_VALID and the exact hash. The durable manifest record is STATUTORY BRIDGE VERIFIED — CLEARED FOR FORECASTING.
- Reviewed segment hashes: automobiles 44e107f3f6424a4e9d27a569957625742397f3f2cf44fa751701947649a0e82c; electronics 40504b372514cca72b4842cdd6faa1852bfc0b6673946ab0ad10f6154be40563.
- Insurer lane: **NOT TRIGGERED — issuer is not a P&C insurer or reinsurer.** No insurer_return_bridge.json is created.

The quote packet is the sole security-unit and price authority. Its H-share quote is economically one ordinary financial share because both conversion factors equal one; that does not mean the public float equals total diluted shares. Total A-plus-H diluted shares form the EPS denominator, while the quoted H share is the listed unit to which that per-share claim is applied. The packet price was not converted or refreshed.

2. Segment-level forward assumptions

The two rows below reproduce the reviewed endpoint economics. Full-precision endpoints are the appendices' exact anchor weights and annual compounding paths before display rounding. The shared profit metric remains the issuer label **Adjusted**

profit before tax (reportable segment profit); it is not renamed operating income.

Segment	Exact profit metric	TTM revenue	Bear TTM+5y revenue	Base TTM+5y revenue	Bull TTM+5y revenue	Bear margin	Base margin	Bull margin
Automobiles and related products and other products	Adjusted profit before tax (reportable segment profit)	621.481000	615.202857	889.842623	1,053.396043	2.798980%	5.150748%	6.530061%
Mobile handset components, assembly and other products	Adjusted profit before tax (reportable segment profit)	155.898000	154.277284	206.528726	262.416970	0.600000%	1.800000%	3.000000%

Source: reviewed automobiles appendix Sections 8-10 and reviewed electronics appendix Sections 8-10, at the hashes in Section 1. The automobiles forecast preserves its 83%, 15% and 2% analytical TTM allocation across vehicle ecosystem, batteries/storage/PV, and rail/other. Its scenario-specific CAGRs and endpoint margins are applied cohort by cohort, then summed. The electronics appendix uses one full reported-segment line, with its exact annual cadence rather than a rounded five-year CAGR.

Standalone evidence remains visible: automobiles assigns 30% bear, 50% base and 20% bull; electronics assigns 35% bear, 50% base and 15% bull. Company scenarios are joint operating states, not averaged endpoint labels. The controlling company distribution is conservatively reset to **40% bear, 50% base and 10% bull**. H1 contraction, inventory pressure, negative FCF, electronics downside and the full grant-overlap normalization justify ten points more bear and ten points less bull than the automobile schedule. This mapping changes no segment endpoint; it controls S and downstream CS probability weighting.

3. Combined revenue build

The segment appendices forecast external segment revenue. The historical package identifies a separate CNY0.121089 billion TTM external-trading adjustment and elimination that makes segment revenue equal consolidated revenue. No reviewed forward driver exists for this immaterial line, so it is held at exactly CNY0.121089 billion in all three cases rather than hidden in a segment or scaled as a plug.

Line	Bear	Base	Bull
Sum of segment TTM+5y revenue	769.480141	1,096.371349	1,315.813012
External-trading adjustments and eliminations	0.121089	0.121089	0.121089
Combined TTM+5y revenue	**769.601230**	**1,096.492438**	**1,315.934101**
Implied TTM to TTM+5y CAGR over exactly 5.0 years	-0.204000%	7.117669%	11.098146%

The CAGR denominator is the official consolidated TTM CNY777.499431 billion. The automobiles bear endpoint is CNY615.202856557 billion and the electronics bear endpoint is CNY154.277284392 billion. The same exact addition is performed for base and bull. The fixed external adjustment changes no scenario conclusion and remains separately named so combined revenue can be reconstructed without an unexplained difference.

The base company outcome is not a straight extrapolation of FY2022-2025 growth. It compounds from the weak 2026-06-30 TTM anchor and embeds a staged automotive recovery, faster batteries/storage than vehicles, gradual electronics AI-infrastructure contribution, and no invented product-revenue disclosure. The bull requires simultaneous overseas localization, premium mix, battery/storage expansion, and electronics program wins. The bear combines continued vehicle pricing pressure with an electronics plateau.

4. Combined statutory operating-income build

Forecast bridge rules are explicit interpretations of the reviewed Section 3a driver ledger:

- Adjustments and eliminations: bear is 50% of the TTM ratio, or 0.4550394327% of revenue; base is the arithmetic midpoint of the FY2025 and TTM ratios, or 0.9890271342%; bull retains the exact TTM ratio of 0.9100788654%.
- Non-operating income reversed to operating-profit basis: bear uses 50% of the TTM absolute run rate, CNY0.2972375 billion; base uses the FY2025/TTM arithmetic mean, CNY0.863333 billion; bull uses the recent TTM CNY0.594475 billion run rate.

- Non-operating expenses reversed to operating-profit basis: bear uses the higher FY2025 revenue ratio of 0.1945173088%; base uses the TTM ratio of 0.1731360753%; bull uses 80% of that TTM ratio, or 0.1385088602%.

These are separately projected bridge lines. The signs follow the sealed packet: non-operating income is subtracted when moving from consolidated adjusted PBT to statutory operating income, and non-operating expense is added back. The same magnitudes return below operating income in Section 5 with opposite signs. No bridge line is allocated into a segment.

Line	Bear	Base	Bull
Automobiles TTM+5y adjusted PBT	17.219405	45.833555	68.787408
Electronics TTM+5y adjusted PBT	0.925664	3.717517	7.872509
Sum of segment profit on sealed common metric	18.145069	49.551072	76.659918
Adjustments and eliminations	3.501989	10.844608	11.976038
Consolidated TTM+5y segment-profit metric	21.647058	60.395680	88.635956
Non-operating income, reversed to operating basis	-0.297238	-0.863333	-0.594475
Non-operating expenses, reversed to operating basis	1.497008	1.898424	1.822685
Combined statutory TTM+5y operating income	**22.846828**	**61.430771**	**89.864166**
Implied statutory operating-income margin	2.968658%	5.602480%	6.828926%

The base bridge is reconstructable as 45.8335551566 plus 3.7175170669 plus 10.8446077370 minus 0.863333 plus 1.8984239728, yielding CNY61.4307709334 billion of statutory operating income. The gap between operating income and pretax income is not an analytical residual; it is precisely the reappearance of the two independently projected non-operating lines.

4a. Combined-adjustment and government-grant normalization

The sealed TTM Adjustments and eliminations line is CNY7.075858B, a net bridge rather than a grant subtotal. FY2025 grants recognized in profit or loss were CNY12.634B, while H1 2026 does not disclose an exact grant amount. Exact overlap is unavailable. RT therefore requires the conservative full-overlap ceiling as the controlling normalization, not a midpoint: proxy grants CNY12.634B equal recurring baseline CNY4.621B, the median of the FY2021-2025 grant series, plus CNY8.013B excess excluded in every annual scenario.

The decomposition is algebraic and explicit. Implied other combined adjustments equal the projected reported net line minus CNY12.634B proxy grants. Normalized combined adjustments equal implied other adjustments plus the CNY4.621B recurring baseline, which is also reported net adjustments minus CNY8.013B. The CNY8.013B exclusion is made once before tax; grants are not added elsewhere. This preserves the sealed statutory line while creating a conservative recurring earnings perimeter without a plug.

Case and date	Reported net adjustments	Grant proxy	Recurring grant	Excess excluded	Implied other adjustments	Normalized net adjustments
Bear 2027	6.354534	12.634000	4.621000	8.013000	-6.279466	-1.658466
Bear 2028	5.615054	12.634000	4.621000	8.013000	-7.018946	-2.397946
Bear 2029	4.895405	12.634000	4.621000	8.013000	-7.738595	-3.117595
Bear 2030	4.190358	12.634000	4.621000	8.013000	-8.443642	-3.822642
Bear 2031	3.501989	12.634000	4.621000	8.013000	-9.132011	-4.511011
Base 2027	7.189569	12.634000	4.621000	8.013000	-5.444431	-0.823431
Base 2028	7.687334	12.634000	4.621000	8.013000	-4.946666	-0.325666
Base 2029	8.447598	12.634000	4.621000	8.013000	-4.186402	0.434598
Base 2030	9.489463	12.634000	4.621000	8.013000	-3.144537	1.476463
Base 2031	10.844608	12.634000	4.621000	8.013000	-1.789392	2.831608
Bull 2027	7.797902	12.634000	4.621000	8.013000	-4.836098	-0.215098
Bull 2028	8.644622	12.634000	4.621000	8.013000	-3.989378	0.631622

Case and date	Reported net adjustments	Grant proxy	Recurring grant	Excess excluded	Implied other adjustments	Normalized net adjustments
Bull 2029	9.621029	12.634000	4.621000	8.013000	-3.012971	1.608029
Bull 2030	10.731397	12.634000	4.621000	8.013000	-1.902603	2.718397
Bull 2031	11.976038	12.634000	4.621000	8.013000	-0.657962	3.963038

Normalized OI and pretax income equal statutory-model values minus CNY8.013B. Horizon normalized OI is CNY14.833828B bear, CNY53.417771B base and CNY81.851166B bull. TTM normalized Group NI is CNY23.263512B after the CNY6.792366B tax-adjusted exclusion. Subtracting CNY0.621981B NCI, CNY0.044167B perpetual distribution and CNY0.061146B restricted attribution at the exact TTM ratio gives CNY22.536218B normalized ordinary numerator, CNY2.479899 and HKD2.894538 per listed unit; normalized current P/E is 29.76x. Forward exclusions vary only with the annual tax path.

5. Parent-attributable recurring net income and EPS

The P/E denominator must belong to ordinary common shareholders. The historical bridge is exact. TTM Group NI CNY30.055878B minus NCI profit CNY0.621981B equals parent-attributable NI CNY29.433897B. Subtract CNY0.044167B distributed to other-equity-instrument holders and CNY0.079489B attributable to restricted shares expected to vest to obtain the official ordinary diluted EPS numerator of CNY29.310241B. The CNY0.044167B and CNY0.079489B values are FY2025 minus H1 2025 plus H1 2026 from EPS note 6. Residual: zero.

Forward NCI profit is linked to electronics adjusted PBT because BYD Electronic is the major non-wholly-owned subsidiary. The source ratios are 41.524241% in FY2025 and 38.672714% TTM. Bear moves linearly to the higher FY ratio, base to their 40.098478% midpoint, and bull retains the TTM ratio. Restricted-share attribution uses the same source discipline: 0.352576% of parent NI in FY2025 and 0.270059% TTM, with bear, base and bull terminal ratios set to FY, midpoint and TTM, respectively.

Opening 2026-06-30 other equity instruments are CNY20.846860B, entirely perpetual bonds; opening NCI equity is CNY12.552384B. The perpetual contracts disclose 2.78%-3.18% initial yields. Bear retains the balance at 3.18%; base redeems 10% of the opening balance annually to 50% at the horizon at a 2.98% midpoint yield; bull redeems 20% annually to zero at 2.78%. Distributions use each year's average balance. NCI equity is excluded from ordinary-common value and NCI profit is deducted line by line; no terminal NCI-equity value is invented for EV/NOPAT.

Revenue and segment-profit cadence are not mechanical carry-forwards. Base vehicle and battery cohorts use the reviewed staged rates, with fifth-year rates solved to the exact reviewed endpoints; bear and bull use their reviewed cohort CAGRs. Cohort margins interpolate from TTM analytical margins to reviewed endpoints. Electronics uses its reviewed annual revenue and exact-metric margin paths. Corporate ratio, non-operating lines and tax interpolate from TTM to the Section 4 terminal rules. Common distributions are explicitly zero in all scenarios because TTM FCF is CNY-56.350B and no shareholder-return calculation is being asserted.

Bear annual ordinary-common bridge

Date	Reported Group NI	Grant exclusion after tax	Normalized Group NI	NCI profit	Parent NI	Perpetual distribution	Restricted attribution	Ordinary numerator	Diluted units, M	EPS CNY	EPS HKD	Common distributions
2027-06-30	26.828459	6.764051	20.064408	0.244716	19.819692	0.662930	0.056796	19.099965	9,085.053	2.102350	2.453863	0.000000
2028-06-30	24.202301	6.735736	17.466565	0.121654	17.344911	0.662930	0.052567	16.629415	9,085.053	1.830415	2.136460	0.000000
2029-06-30	22.025532	6.707420	15.318111	0.183243	15.134868	0.662930	0.048366	14.423571	9,085.053	1.587616	1.853065	0.000000
2030-06-30	20.027158	6.679105	13.348052	0.309719	13.038334	0.662930	0.043818	12.331585	9,085.053	1.357349	1.584297	0.000000
2031-06-30	17.967058	6.650790	11.316268	0.384375	10.931893	0.662930	0.038543	10.230420	9,085.053	1.126072	1.314351	0.000000

Base annual ordinary-common bridge

Date	Reported Group NI	Grant exclusion after tax	Normalized Group NI	NCI profit	Parent NI	Perpetual distribution	Restricted attribution	Ordinary numerator	Diluted units, M	EPS CNY	EPS HKD	Common distributions
2027-06-30	30.461426	6.788090	23.673336	0.437896	23.235440	0.590175	0.064667	22.580599	9,085.053	2.485467	2.901037	0.000000
2028-06-30	33.414080	6.783814	26.630267	0.628569	26.001697	0.528051	0.074511	25.399135	9,085.053	2.795706	3.263148	0.000000
2029-06-30	37.677836	6.779537	30.898299	0.847737	30.050562	0.465927	0.088593	29.496042	9,085.053	3.246656	3.789497	0.000000

Date	Reported Group NI	Grant exclusion after tax	Normalized Group NI	NCI profit	Parent NI	Perpetual distribution	Restricted attribution	Ordinary numerator	Diluted units, M	EPS CNY	EPS HKD	Common distributions
2030-06-30	43.503946	6.775261	36.728684	1.142027	35.586657	0.403804	0.107851	35.075002	9,085.053	3.860737	4.506252	0.000000
2031-06-30	51.034350	6.770985	44.263365	1.490668	42.772697	0.341680	0.133159	42.297858	9,085.053	4.655763	5.434207	0.000000

Bull annual ordinary-common bridge

Date	Reported Group NI	Grant exclusion after tax	Normalized Group NI	NCI profit	Parent NI	Perpetual distribution	Restricted attribution	Ordinary numerator	Diluted units, M	EPS CNY	EPS HKD	Common distributions
2027-06-30	36.017525	6.812129	29.205396	0.709613	28.495782	0.521588	0.076956	27.897238	9,085.053	3.070674	3.584091	0.000000
2028-06-30	43.598037	6.831892	36.766145	1.064420	35.701725	0.405680	0.096416	35.199630	9,085.053	3.874455	4.522264	0.000000
2029-06-30	52.737983	6.851654	45.886328	1.589533	44.296795	0.289771	0.119628	43.887396	9,085.053	4.830725	5.638423	0.000000
2030-06-30	63.534389	6.871417	56.662972	2.245216	54.417756	0.173863	0.146960	54.096933	9,085.053	5.954498	6.950090	0.000000
2031-06-30	76.226922	6.891180	69.335742	3.044513	66.291229	0.057954	0.179026	66.054249	9,085.053	7.270651	8.486304	0.000000

Every row first subtracts the CNY8.013B excess grant before tax to reach normalized Group NI, then uses: ordinary numerator equals normalized Group NI minus NCI profit minus perpetual/other-equity distribution minus restricted-share attribution. Values are displayed to six decimals; full-precision residual is zero. EPS CNY equals ordinary numerator divided by 9,085.053M, and EPS HKD multiplies by 1.1672. The terminal denominator matches the conservative normalized current ordinary-common perimeter.

5a. Return-method input bridge

Synthesis supplies method inputs but does not choose the primary return method. Normalized NOPAT is statutory operating income multiplied by one minus scenario cash tax. The terminal capital-structure fields without a reviewed path remain unavailable; no residual net-debt plug is created.

Return-method input	Bear	Base	Bull	Source-bound path or finding
Statutory operating income	22.846828	61.430771	89.864166	Section 4 statutory bridge
Normalized recurring operating income	14.833828	53.417771	81.851166	Statutory OI less full CNY8.013B excess-grant ceiling
Normalized cash tax rate	17.000000%	15.500000%	14.000000%	Reviewed data-package Section 3a
Normalized NOPAT	12.312077	45.138016	70.392003	Normalized recurring OI times one minus tax rate
Terminal cash and non-operating financial assets	Unavailable	Unavailable	Unavailable	No terminal driver
Terminal gross debt	Unavailable	Unavailable	Unavailable	No terminal scenario path
Terminal lease liabilities	Unavailable	Unavailable	Unavailable	Must be modeled separately
Terminal perpetual bonds	20.846860	10.423430	0.000000	Explicit redemption paths above
Opening and terminal NCI equity	12.552384; terminal unavailable	12.552384; terminal unavailable	12.552384; terminal unavailable	Profit deducted annually; no equity-value plug
Terminal other senior claims	Unavailable	Unavailable	Unavailable	No complete terminal schedule
Separately valued non-operating assets	Unavailable	Unavailable	Unavailable	No asset proven absent from both earnings and benchmark
Diluted listed-equivalent shares, million	9,085.053000	9,085.053000	9,085.053000	Section 6 and sealed packet factors

EV/NOPAT cannot control because cash, debt, lease and terminal NCI-equity paths remain incomplete. P/E is supportable because ordinary-common diluted EPS is now fully reconciled, subject to valuation preflight and independently justified exit multiples.

6. Share-count path

The path starts from the packet's 9,085.053 million quote-basis diluted financial shares, not from ADR units and not from the FY2025 denominator. Data-package Section 7 reports no FY2025 buyback and negative TTM free cash flow of CNY56.350 billion; distributions are subordinate to manufacturing, R&D, charging, and overseas capacity needs. No TTM SBC expense or SBC-share conversion is disclosed in the reviewed package. The 58.804 million increase from FY2025 diluted weighted-average shares of 9,026.249 million to H1 2026's 9,085.053 million reflects the placement and timing of the already restated share basis, not a disclosed SBC run rate. Accordingly, the primary schedule models zero repurchases and zero SBC issuance. The ±5% sensitivity in Section 10 tests dilution or retirement risk rather than concealing it.

Year ended 30 June	Starting quote-basis shares, M	Buyback, CNYB	Avg price, CNY	Shares retired, M	SBC issuance, M	Ending quote-basis shares, M
2027	9,085.053000	0.000000	n/a	0.000000	0.000000	9,085.053000
2028	9,085.053000	0.000000	n/a	0.000000	0.000000	9,085.053000
2029	9,085.053000	0.000000	n/a	0.000000	0.000000	9,085.053000
2030	9,085.053000	0.000000	n/a	0.000000	0.000000	9,085.053000
2031	9,085.053000	0.000000	n/a	0.000000	0.000000	9,085.053000

The reconciliation is 9,085.053 plus the five-year sum of zero SBC issuance minus zero retirements, equaling 9,085.053 million ending shares. Because neither cash buyback nor SBC is modeled, no average repurchase price is needed. This is a conservative no-buyback assumption in the context of negative FCF; it is not Gideon's buybacks-maintain-EPS shortcut. Any future equity placement, employee issuance, or repurchase authorization would require the path and every scenario EPS to be rerun.

7. P/E 15 entry-price test

Required EPS at the immutable price is HKD86.15 divided by 15, or HKD5.7433333333 per listed unit. Cushion equals terminal EPS times 15 minus price, divided by price.

Case	HKD EPS per listed unit at TTM+5y	EPS times 15	Packet price	Cushion	Pass?
Bear	1.314351	19.715261	86.150000	-77.115193%	FAIL
Base	5.434207	81.513106	86.150000	-5.382349%	FAIL
Bull	8.486304	127.294556	86.150000	47.759206%	PASS

P/E 15 gate: FAIL — base-case cushion -5.38%. The confident base case controls, not bull or weighted EPS. The denominator is ordinary-common diluted recurring earnings after the full grant-overlap ceiling, NCI, perpetual distributions and restricted-share attribution. This entry-price test does not set an exit multiple or authorize a trade.

The full-overlap ceiling is the controlling case. Base HKD5.434207 is below required HKD5.743333. The thesis therefore fails the P/E-15 price bar even though bull passes. Exact overlap remains unavailable; RT resolves that uncertainty conservatively rather than using an unsupported midpoint.

8. Reflexivity and historical-anchor reconciliation

The official TTM revenue bridge is exact. Electronics external revenue of CNY155.897619 billion plus automobiles external revenue of CNY621.480723 billion plus CNY0.121089 billion of external-trading adjustments and eliminations equals consolidated revenue of CNY777.499431 billion. Residual: zero. The rounded anchors used by the reviewed appendices are CNY155.898 billion and CNY621.481 billion; their rounding difference is immaterial and is not scaled away.

The TTM statutory profit bridge also ties exactly. Segment adjusted PBT of CNY1.608320 billion plus CNY26.772943 billion equals CNY28.381263 billion. Adding CNY7.075858 billion of adjustments and eliminations gives CNY35.457121 billion consolidated segment profit. Subtracting CNY0.594475 billion of non-operating income and adding back CNY1.346132 billion of non-operating expenses produces CNY36.208778 billion statutory operating income. Reintroducing those below-line amounts gives CNY35.457121 billion pretax income; subtracting CNY5.401243 billion tax gives CNY30.055878 billion Group net income. Each sealed residual is zero.

The FY2025 sanity check is equally exact. Segment adjusted PBT of CNY2.749565 billion plus CNY28.417336 billion equals CNY31.166901 billion. Add CNY8.586148 billion of adjustments and eliminations to get CNY39.753049 billion. Subtract CNY1.132191 billion of non-operating income and add CNY1.563851 billion of non-operating expenses to reach CNY40.184709 billion statutory operating income. Add and subtract the same below-line items to return to CNY39.753049

billion pretax income, then subtract CNY5.992291 billion tax to reach CNY33.760758 billion net income.

Both revenue and operating-income reflexivity checks are therefore within 2%, within the sealed bridge tolerance, and in fact arithmetically exact at source precision. No plug, reclassification, or proportional scaling is used.

9. Latest interim bridge reconciliation

The cumulative half-year bridge is triggered. It is exactly:

FY2025 minus H1 2025 plus H1 2026 equals TTM ended 2026-06-30.

Both YTD windows cover 1 January through 30 June. No standalone quarter is added to either cumulative half-year, so there is no overlap.

- Revenue: CNY803.964958B minus CNY371.280948B plus CNY344.815421B equals CNY777.499431B.
- Operating income: CNY40.184709B minus CNY18.719509B plus CNY14.743578B equals CNY36.208778B.
- Pretax income: CNY39.753049B minus CNY18.910015B plus CNY14.614087B equals CNY35.457121B.
- Group net income: CNY33.760758B minus CNY16.038939B plus CNY12.334059B equals CNY30.055878B.

Diluted denominators are not added across half-years. The upstream foundation reconstructs H2 2025 diluted shares as two times FY2025's 9,026.249 million minus H1 2025 shares, yielding 9,090.060 million; averaging that with H1 2026's 9,085.053 million yields the TTM 9,087.5565 million historical denominator. The forward path deliberately starts instead from the packet's current 9,085.053 million quote-basis diluted shares, as Section 6 requires.

10. Sensitivity: variables that move the gate

The sensitivity holds two modeled variables at base while changing the third. Automobile revenue uses the exact equivalent base CAGR of 7.442739% derived from CNY621.481 billion to CNY889.842623 billion and changes it by ±200 basis points while holding its base 5.150748% blended endpoint margin. Electronics margin changes by ±200 basis points around 1.8%. Share count changes by ±5%. Tax changes by ±300 basis points around 15.5%. Revenue-linked statutory bridge ratios remain at their base rules.

Variable changed from base	Down case	Base	Up case	EPS effect versus base
Automobile five-year revenue CAGR, ±200 bps	HKD4.904005 at 5.442739%	HKD5.434207	HKD6.005392 at 9.442739%	-HKD0.530202 to +HKD0.571185
Electronics endpoint adjusted-PBT margin, ±200 bps	HKD5.199313 at -0.2%	HKD5.434207	HKD5.669101 at 3.8%	-HKD0.234894 to +HKD0.234894
Ending diluted share count, ±5%	HKD5.720218 at -5% shares	HKD5.434207	HKD5.175435 at +5% shares	+HKD0.286011 to -HKD0.258772
Tax rate, ±300 bps	HKD5.635474 at 12.5%	HKD5.434207	HKD5.232940 at 18.5%	+HKD0.201267 to -HKD0.201267

Automobile growth is the largest tested driver. Electronics sensitivity is smaller after deducting its source-bound NCI share. Dilution and tax remain meaningful. The full CNY8.013B excess-grant exclusion is fixed in every cell; releasing it is not an allowed upside sensitivity without exact source evidence.

Base EPS is HKD0.309126 below required HKD5.743333. Only the automobile-growth upside case among the prescribed one-variable tests clears the gate. Observable kill criteria are sustained automotive weakness, electronics profit near zero and delayed perpetual redemption. Reconsideration requires stronger operating evidence plus a source-resolved grant bridge; optimism alone cannot release the exclusion.

11. Combined earnings summary

Company probabilities are **40% bear, 50% base and 10% bull**. They are deliberately more conservative than either segment schedule: H1 contraction, inventory pressure, negative FCF, electronics downside and the full grant-overlap exclusion raise joint downside and reduce the simultaneous-success bull tail. Segment probabilities remain evidence, but this company distribution controls S and downstream CS.

Case	Revenue, CNYB	Statutory OI	Normalized OI	Normalized Group NI	Ordinary numerator	EPS, HKD	Probability	EPS times 15	Versus HKD86.15
Bear	769.601230	22.846828	14.833828	11.316268	10.230420	1.314351	40%	19.715261	-77.115193%
Base	1,096.492438	61.430771	53.417771	44.263365	42.297858	5.434207	50%	81.513106	-5.382349%
Bull	1,315.934101	89.864166	81.851166	69.335742	66.054249	8.486304	10%	127.294556	47.759206%
Probability-weighted endpoint	987.680121	48.840533	40.827533	33.591764	31.846522	4.091474	100%	61.372113	-28.761331%

Probability-weighted EPS is 1.3143507417 times 40% plus 5.4342070994 times 50% plus 8.4863037568 times 10%, equaling HKD4.0914742220. Weighted ordinary numerator CNY31.846521723B reproduces it because shares are common. This is descriptive, not the confident-case gate or an IRR.

The base case reaches CNY1,096.492438B revenue, CNY61.430771B statutory OI, CNY53.417771B normalized OI, CNY44.263365B normalized Group NI, CNY42.297858B ordinary numerator and HKD5.434207 EPS. The entry test fails by 5.38%. trade_execution_authorized=false.

12. Tie-out checks

- **PASS — Reported-financial and statutory-bridge tie-out.** TTM segment profit CNY28.381263B plus corporate CNY7.075858B minus non-operating income CNY0.594475B plus non-operating expense CNY1.346132B equals statutory OI CNY36.208778B. FY2025 CNY31.166901B plus CNY8.586148B minus CNY1.132191B plus CNY1.563851B equals CNY40.184709B. TTM revenue CNY155.897619B plus CNY621.480723B plus CNY0.121089B equals CNY777.499431B. Source: sealed statutory bridge and upstream P1/P4 tables. Both periods have zero sealed residuals and are within 2%.

- **PASS — Normalized Group NI, ordinary numerator, shares, listed unit and FX equal EPS.** Bear normalized Group NI CNY11.316268198B minus NCI CNY0.384374829B minus perpetual distribution CNY0.662930148B minus restricted attribution CNY0.038543285B equals CNY10.230419935B ordinary numerator; divided by 9,085.053M and multiplied by 1.0 and 1.1672 equals HKD1.314350742. Base CNY42.297857703B ordinary numerator produces HKD5.434207099. Bull CNY66.054248976B produces HKD8.486303757. Each annual row first subtracts CNY8.013B before tax exactly once and has zero residual.

- **PASS — Segment sum at horizon.** Before the named CNY0.121089B external-trading adjustment, company revenue equals the two segment endpoints exactly. The adjustment is 0.0157%, 0.0110%, and 0.0092% of combined bear, base, and bull revenue, respectively; therefore combined revenue divided by segment sum is within 0.02% of 100% in every case. Source: Section 3.

- **PASS — Product-to-segment rollup.** Automobiles bear CNY490.548B vehicle plus CNY113.419B batteries/storage/PV plus CNY11.235B rail/other rounds to CNY615.203B; base CNY706.731B plus CNY167.989B plus CNY15.123B rounds to CNY889.843B; bull CNY830.748B plus CNY204.385B plus CNY18.263B rounds to CNY1,053.396B. Electronics has one modeled full-segment line, so product sum equals segment exactly. Source: both reviewed appendix Section 10 tables. Residuals are below 1%.

- **PASS — Weighted margin.** Automobile exact profits divided by exact revenue equal 2.798980%, 5.150748%, and 6.530061% for bear, base, and bull. Each is the revenue-weighted sum of vehicle, battery/storage/PV, and rail/other margins. Electronics has one modeled line and is therefore not triggered as a multi-product weighted-margin test; its exact margins are 0.6%, 1.8%, and 3.0%. Source: reviewed appendix Sections 9-10.

- **PASS — Share count and security-unit path.** Financial-statement diluted shares 9,085.053M times split factor 1.0 equals quote-basis diluted shares 9,085.053M. Dividing by depositary ratio 1.0 times class factor 1.0 gives 9,085.053M listed-equivalent units. Starting shares plus five years of zero SBC minus zero retirement equals 9,085.053M terminal shares. Source: quote packet and Section 6. No ADR-unit path is used.

- **PASS — Growth plausibility.** Automobile base equivalent CAGR is 7.442739%, well below 1.2 times its disclosed FY2022-2025 revenue CAGR of 25.94%, or 31.128%. Electronics base CAGR is 5.79%, below 1.2 times its 16.25%

historical CAGR, or 19.50%. Neither needs an exception. Both appendices also benchmarked comparable scale and constrained endpoints below historical growth. Source: reviewed appendices Sections 6 and 8.

- **PASS — Historical arithmetic.** Automobile cohorts use exact five-year compounding: for example, vehicle CNY515.82923B times 1.065 to the fifth equals CNY706.731B displayed, and analogous cohort formulas reproduce all endpoints. Electronics uses the stated annual paths: base CNY155.898B times 1.03, 1.05, 1.06, 1.07 and 1.08 equals CNY206.528726B. Bear and bull paths reproduce CNY154.277284B and CNY262.416970B. Every row compounds from 2026-06-30 to 2031-06-30, exactly five years, within 1%.

- **PASS — Recency anchor.** The base first-forward-year revenue is CNY615.825523B automobiles plus CNY160.574940B electronics plus CNY0.121089B external adjustment, or CNY776.521552B. Against official TTM revenue CNY777.499431B, the difference is -0.125772%, comfortably within 10%. The automobile cadence begins with -3% vehicle, +10% batteries/storage/PV and +4% rail/other; electronics begins at +3%. Source: reviewed Section 8 cadences and Section 3 adjustment.

- **PASS — Period and horizon integrity.** FY2025 minus H1 2025 plus H1 2026 uses identical January-June windows and no overlapping quarter. Revenue, OI, pretax and NI arithmetic are reproduced in Section 9. All forecast growth starts at 2026-06-30 and ends at 2031-06-30, exactly 5.0 calendar years. No row uses FY2025 as the forecast anchor or compounds six fiscal years.

- **PASS — Valuation, unit bridge, hashes and probability arithmetic.** Recomputed packet hashes equal a77314fe0bb9897d1fc5100b76a2a57caccb31a92b19bc735c939d1f1ad2f652 and bc654bb77b76391ec3995b8bfe55a804b2fb2b073f48df6db2d11c7389f7fb64. Listing XHKG:1211, split 1.0, unit factor 1.0 and FX 1.1672 are reproduced. Terminal and normalized-current P/E denominators are parent-attributable ordinary-common diluted earnings after the full-overlap exclusion. Probabilities 40%/50%/10% sum to 100%; weighted EPS is HKD4.091474222. EPS times 15 and cushions recompute against HKD86.15. Base controls the FAIL gate.

SYNTHESIS CLEARED — 11/11 TIE-OUTS PASSED

The model is arithmetically publication-ready for the next ER2 stage. The economic questions remain separate: whether automotive recovery and exact-metric margin expansion are durable, whether electronics can convert AI manufacturing programs into profit, how negative free cash flow affects future capital structure, and which valuation method and exit multiples clear the required valuation preflight. No trade or portfolio action is authorized; trade_execution_authorized=false.

BYD Company Limited — Compounder Score

Security: XHKG:1211 H ordinary share **Analysis date:** 2026-09-07 **Price anchor:** HKD86.15 at the 2026-09-04 completed close **TTM anchor:** 2026-06-30 **Exact horizon:** 2031-06-30, exactly 5.0 years **Primary valuation method:** P/E **Valuation preflight:** CLEARED; SHA-256 `d89c69ad17924021543222c3622d5caed5b335f53a5a92ef6ba51c7f442a402a` **Revised synthesis:** SHA-256 `d0197d5fd59abb5da27dcfb61767c875949e2dadf93a052c653c6316473b4620` `trade_execution_authorized=false`

1. Executive Verdict

Compounder Score: 40/100. Business Quality Score: 38/80. 20% Return Underwriting/Stretch Score: 2/20. Score-implied classification: Reject. This is a diagnostic classification, not an instruction to trade and not a substitute for the ER2 verdict.

The evidence supports BYD as a formidable industrial operator with genuine scale, battery and power-electronics competence, vertical integration, a very large electrification runway, and a founder-led record of executing difficult strategic transitions. It does not support a durable high-return compounder at the Gideon standard. BYD may remain one of the world's largest vehicle, battery and energy-system manufacturers for decades while price competition, rapid technology diffusion, working-capital needs and duplicated global capacity prevent exceptional incremental returns from accruing to ordinary shareholders.

The upstream hard gates control the calibration. Management is **YELLOW**, reflecting exceptional execution alongside founder concentration, weak succession disclosure, limited board independence, non-pre-emptive issuance authority and inadequate investor-facing return milestones. The moat gate is **FAIL**, and the explicit 2046 durability test is **FAIL**. BYD's cost-and-speed system is real, but pricing power is not. TTM adjusted reportable-segment PBT margins were only 4.31% in automobiles and related products and 1.03% in electronics; consolidated operating margin was 4.66%; inventory days reached 109 in H1 2026; and TTM free cash flow was CNY-56.350 billion. Those facts are inconsistent with awarding moat points merely for scale or technology breadth.

Valuation does not rescue the conclusion. The repaired synthesis applies the full CNY8.013 billion excess-grant overlap ceiling to current and terminal earnings. Under the VP-locked P/E method, 2031 ordinary-common diluted EPS is HKD1.314350742 in Bear, HKD5.434207099 in Base and HKD8.486303757 in Bull. Applying 10x/14x/20x exit P/Es produces terminal share values of HKD13.143507420, HKD76.078899386 and HKD169.726075140. Common distributions are zero. Gross local IRRs are **-31.34%**, **-2.46%** and **14.52%**. With repaired 40%/50%/10% probabilities, expected terminal wealth is HKD60.269460175 and its CAGR is **-6.90%**. Even Bull does not clear 20%.

2. Data Source Map

Evidence need	Governed source	Use in this score
Price, listing, share unit and FX bridge	`quote_packet.json`, QFR sealed	HKD86.15, XHKG:1211, one ordinary share per listed unit, 9,085.053M current diluted shares
Historical income statement and statutory bridge	`quant_foundation.md`, `statutory_bridge.json`, `quant_foundation_review.md`	TTM revenue, operating income, ordinary EPS numerator and official-over-FMP precedence
Cash flow, balance sheet, grants and allocation	`data_package.md`	Negative FCF, rising debt, capex, R&D, issuance, low SBC and source limitations
Business description and industry structure	`appendix_A_primer.md`	Value chain, vertical integration, product breadth, capital intensity and governance context
Automotive segment economics	`appendix_B_automobiles_and_related.md`	Exact adjusted-PBT margins, scenario growth, localization, battery/storage runway and risks
Electronics segment economics	`appendix_B_mobile_handset_components.md`	Customer concentration, low margins, AI opportunity and scenario endpoints
Management and capital allocation	`appendix_management.md`	YELLOW gate, founder alignment, board/succession weaknesses and monitoring conditions
Moat and long-duration test	`appendix_moat.md`	FAIL moat, FAIL 2046, weak pricing power and observable conditions
Terminal ordinary-common earnings	`appendix_synthesis.md`	Annual EPS bridge, 9,085.053M diluted units, zero distributions and probabilities

Evidence need	Governed source	Use in this score
Method, denominator, claims and multiples	`valuation_preflight.json`	P/E only, normalized current P/E 29.762958024x, exit P/Es 10x/14x/20x
Net-SGD tax treatment	BYD 2026 AGM circular plus disclosed assumptions	Conservative 10% PRC nominee dividend withholding and 0% Hong Kong withholding

The official-source override is material. FMP's FY2025 revenue and operating-profit mappings differed from BYD's controlling filing, and FMP product segmentation returned empty arrays. The QF/QFR chain therefore used the official annual and interim reports. Confidence in reconciled historical and terminal accounting is high, but confidence in normalized ROIIC, sub-product economics, regional returns and long-run cash conversion is only medium-to-low because BYD does not disclose the necessary capital and profit detail.

3. Key Financial and Quality Metrics

Metric	Result	Interpretation
FY2021-FY2025 revenue CAGR	38.88%	Exceptional expansion, but growth slowed sharply by FY2025-H1 2026
Five-year screening ROIC median	33.3%	Strong screen; not fully normalized because the FY2025 capital perimeter and grants are problematic
Three-year balance-sheet ROIIC proxy	8.03%	CNY16.026B NOPAT increase divided by CNY199.567B invested-capital increase
Four-year balance-sheet ROIIC proxy	15.62%	CNY30.060B NOPAT increase divided by CNY192.446B invested-capital increase; not a valid five-year ROIIC
Reinvestment-rate proxy	147.35%	Invested-capital increase divided by cumulative FY2021-FY2025 screening NOPAT
TTM statutory operating margin	4.66%	Thin for the breadth and capital burden of the group
TTM FCF / screening NOPAT	-183.59%	Cash conversion is currently deeply negative
TTM FCF yield	-8.40%	CNY-56.350B translated at 1.1672 HKD/CNY versus HKD782.661B market cap
FY2021-FY2025 diluted-share CAGR	1.16%	Mainly affected by the 2025 placement and restated share basis
FY2025 SBC / revenue	0.11%	Routine SBC is small; external issuance is the larger dilution risk
FY2025 official net debt / EBITDA proxy	-0.12x	FY2025 was liquid, but debt rose and monetary funds fell by H1 2026
TTM ordinary diluted EPS, reported	HKD3.764588786	Includes an event-heavy FY2025 grant level
TTM ordinary diluted EPS, normalized	HKD2.894537563	Full-overlap normalization excludes CNY8.013B before tax and recalculates ordinary claims
Reported / normalized current P/E	22.884305535x / 29.762958024x	Normalized P/E is the comparable denominator

The evidence does not support a high-confidence conventional ROIIC calculation. The invested-capital series depends partly on standardized FMP mappings that diverge materially from the issuer's debt perimeter, while segment capital employed and cash flow are undisclosed. The balance-sheet proxies are warning indicators, not sufficient evidence for the rubric's high-ROIIC bands. A high historical ROIC screen cannot override negative cash conversion, rising capital employed or missing acquisition-inclusive and segment-level ROIIC.

4. Rubric Scorecard

Category	Score	Maximum	Evidence-based judgment
1. Incremental Returns on Capital	8/25	25	Historical ROIC was strong, but credible ROIIC is weak/insufficient, recent returns deteriorated and FCF is negative
2. Reinvestment Runway	15/20	20	Large markets and proven scaling, offset by mature China EV penetration, price competition and unproven overseas returns

Category	Score	Maximum	Evidence-based judgment
3. Durability of Moat	5/15	15	Real integration and scale, but upstream moat and 2046 gates both FAIL and pricing power is absent
4. Accounting Honesty and Financial Quality	4/10	10	Clean audit and low SBC, offset by grants, material disclosure gaps, negative cash conversion and governance flags
5. Capital Allocation Discipline	6/10	10	Coherent organic reinvestment, offset by negative FCF, external equity and YELLOW governance
Business Quality Score	**38/80**	**80**	Below the 65/80 investable-now threshold
6. Price and 20% Return Underwriting	2/20	20	Base and Bear lose money; no scenario reaches 20%; zero cash distributions
Compounder Score	**40/100**	**100**	Below 70/100 and subject to hard durability and execution vetoes

Sub-item scoring is explicit. Category 1 awards 4/5 for the historical ROIC screen, 0/8 for high credible ROIIC, 0/3 for non-deterioration, 2/3 for unit-economics support, 1/3 for cash conversion and 1/3 for avoiding an accounting artifact. Category 2 awards 5/5 for market opportunity, 4/5 for reinvestment at scale, 3/4 for organic opportunity, 2/3 for a repeatable playbook, 1/2 for supportive market structure and 0/1 for proof that growth avoids ROIC collapse. Category 3 awards 3/4 for a clear advantage, 0/3 for pricing power, 1/3 for competitive evidence, 0/2 for stickiness, 1/2 for stress resilience and 0/1 for low disruption risk.

Category 4 awards 1/2 for earnings quality, 0/2 for cash-flow support, 2/2 for conservative SBC treatment, 1/2 for balance-sheet strength, 0/1 for transparency because grants and segment economics are materially opaque, and 0/1 for governance/accounting red flags because Management is YELLOW and founder/issuance/related-party controls remain unresolved. Category 5 awards 1/2 for reinvestment priority, 2/2 for acquisition discipline, 0/2 for buyback discipline, 1/2 for incentives, 1/1 for owner mentality and 1/1 for past decisions. Category 6 awards 0/6 for negative Base IRR, 2/4 for an independently justified below-current Base exit P/E that still fails the hurdle, 0/3 for Bear, 0/3 for the reverse-return test, 0/2 because the current price demands outcomes above the locked Base case, and 0/2 for cash returns.

5. ROIIC and Reinvestment Analysis

BYD reinvested at extraordinary scale. FY2021-FY2025 capex totaled CNY507.004 billion and R&D expense CNY177.393 billion. Vehicle factories, battery capacity, charging stations, overseas plants, owned shipping, power electronics, premium brands, storage and electronics programs all compete for capital. This proves willingness and capability to reinvest. It does not prove that the next unit of capital earns an attractive return.

Approximate ROIC rose from 6.6% in FY2021 to 33.3% in FY2022, 54.0% in FY2023 and 58.5% in FY2024 as the NEV transition improved economics. FY2025 then fell to 13.4%, while operating profit declined and invested capital rose. A balance-sheet change proxy produces only 8.03% over FY2022-FY2025 and 15.62% over FY2021-FY2025. Neither is sufficiently clean to call rubric-quality ROIIC because of debt-definition differences, grant normalization, issuance and timing. Insufficient evidence earns 0/8 for high credible ROIIC; uncertainty is not rounded up.

FY2024 generated CNY36.094 billion of FCF, but FY2025 produced CNY-97.672 billion and TTM remained CNY-56.350 billion. Monetary funds declined from CNY102.739 billion at FY2024 to CNY58.738 billion at H1 2026, while bank loans and bonds increased from about CNY28.584 billion to CNY120.055 billion. The March 2025 H-share placement supplied about CNY40.075 billion net. These may be rational funding choices, but they shift risk to ordinary shareholders before incremental returns are demonstrated.

The score can improve only with proof that the investment wave matures into cash: three years of positive FCF after full growth capex, grant-adjusted ROIC above 20%, disclosed regional economics, inventory normalization, and at least 15% incremental returns on localized capacity. Revenue growth without this proof would show reinvestment capacity, not compounding quality.

6. Runway Analysis

The runway is the score's strongest component. Global vehicle electrification, commercial vehicles, stationary storage, charging, batteries and power electronics remain large markets. BYD's BEV/PHEV breadth reduces dependence on a single pathway. FY2021-FY2025 NEV sales rose from 0.604 million to 4.602 million units, battery installed capacity from 37.921 GWh to 285.634 GWh, and overseas mix from 30.24% to 38.65%; H1 2026 overseas mix reached about 52.6%. Plants in Thailand and Brazil, additional localization, distributors and eight owned ships make the playbook tangible.

The runway is not uncontested. China already offers hundreds of EV models. Domestic price competition remains intense, H1 2026 vehicle sales contracted, and inventory days rose to 109. Localization reduces tariffs but duplicates fixed cost before utilization. Base automotive-related revenue reaches CNY889.843 billion with a 5.15% exact segment margin; Bull reaches CNY1,053.396 billion and 6.53%. These endpoints require registration growth, plant utilization, premium mix and storage execution together.

Electronics adds AI-infrastructure optionality rather than a proven second compounder. H1 2026 adjusted segment PBT margin was just 0.28%. Base terminal revenue of CNY206.529 billion at 1.80% margin more than doubles profit largely through normalization. Bull at 3.00% requires repeat server and thermal wins, customer diversification and value capture beyond pass-through hardware. Until these appear in the exact segment profit metric, the opportunity deserves runway points but not high-return or moat points.

7. Moat Analysis

The clearest advantage is a vertically integrated cost-and-speed system. BYD coordinates batteries, packs, semiconductors, motors, controllers, thermal management, vehicle architecture, manufacturing and charging. Scale spreads engineering across millions of vehicles. Battery safety, process know-how and rapid commercialization raise the replication burden. Storage, fleet and electronics relationships also create moderate qualification costs.

The evidence does not support pricing power. Advanced driving and charging are often deployed as customer value rather than separately monetized profit pools, and regulators have addressed destructive vehicle price competition. Premium and overseas mix have not yet produced visible margin expansion. Electronics customers can re-source programs; the 0.28% H1 margin is direct evidence that trust does not ensure rents.

The upstream moat and 2046 gates both FAIL. A credible 2046 BYD can still sell vehicles, batteries and energy systems at scale, but a 5%-7% industrial operating margin does not establish an exceptional profit pool. Battery chemistries, charging, ADAS stacks and electronics architectures can diffuse. Trade blocs may require subscale plants. The upstream erosion case—standardized batteries, third-party software, weak residual values and persistent price competition—was assigned about 45% probability. Category 3 is therefore limited to 5/15; a high score would contradict the governed gates.

8. Accounting and Capital Allocation Analysis

Accounting controls are mixed but not untrustworthy. The accounts received an unmodified opinion, the statutory bridge has zero residuals, and ordinary EPS deducts NCI profit, perpetual-bond distributions and restricted-share attribution. Routine SBC is low. These are genuine positives.

The principal quality issue is support and opacity. FY2025 grants recognized in profit or loss were CNY12.634 billion, about 31% of operating income on a simple comparison. VP normalizes the current denominator by retaining the five-year median CNY4.621 billion and excluding CNY8.013 billion of excess grants once after tax and parent attribution. Exact overlap with adjustments and eliminations is unavailable. Vehicles, batteries, storage, PV and rail share one segment, and electronics sub-products are undisclosed. Investors cannot directly verify returns for the narrative's key activities.

Allocation is strategically coherent: organic R&D and capacity dominate, serial M&A is absent, and founder ownership aligns management with long-term value. It is not demonstrably per-share disciplined. Buybacks were immaterial, the share base increased, the 2026 mandate permits issuance of up to 20% of H shares, and subsidiary guarantees are large. Management pay does not disclose precise ROIC, FCF or per-share hurdles. This supports 6/10 for Category 5 while Management remains YELLOW. Transparency and governance are scored separately and conservatively at 0/1 each, reducing Category 4 to 4/10 and Business Quality to 38/80.

9. 20% Return Underwriting

Primary valuation method: **P/E**. The method is unchanged across Bear, Base, Bull, probability weighting, reverse return and net-SGD. Terminal share value equals ordinary-common diluted EPS times the VP-locked exit P/E. Debt, leases, cash and non-operating assets are not added or subtracted after P/E. Common distributions are zero. The double-count check passes.

Scenario	Probability	Terminal EPS, HKD	Exit P/E	Terminal share value, HKD	Distributions, HKD	Terminal wealth, HKD	Gross local IRR
Bear	40%	1.314350742	10.0x	13.143507420	0.000000000	13.143507420	-31.34%
Base	50%	5.434207099	14.0x	76.078899386	0.000000000	76.078899386	-2.46%
Bull	10%	8.486303757	20.0x	169.726075140	0.000000000	169.726075140	14.52%
Probability weighted	100%	n/a	Same-method expected wealth	n/a	0.000000000	60.269460175	-6.90%

Probability-weighted IRR is `(60.269460175 / 86.15)^(1/5) - 1 = -6.895986257%`. It is the CAGR of probability-weighted terminal wealth, not the average of IRRs.

Bear-case operating and return bridge

Bear case	Start (2026-06-30 / price 2026-09-04)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY777.499431B	CNY769.601230B	-0.2040%	Continued price pressure and electronics plateau
Operating margin	4.6571%	2.9687%	-1.6884 pp	Utilization and duplicated capacity overwhelm cost gains
Operating earnings	CNY36.208778B	CNY22.846828B	-8.7984%	Statutory operating income
Diluted share count	9,085.053M	9,085.053M	0.0000%	Zero buybacks and issuance in locked path
EPS	HKD2.894538 normalized / HKD3.764589 reported	HKD1.314350742	-14.6062% vs normalized	Ordinary-common diluted recurring EPS after full grant ceiling
Valuation denominator	Grant-normalized ordinary EPS	Terminal ordinary EPS	Comparable	Same listed-unit and claim perimeter
Valuation	29.7630x normalized / 22.8843x reported	10.0x	-19.7630x vs normalized	Below Great Wall's normalized trough, without distress evidence below 10x
Share value	HKD86.15	HKD13.143507420	-84.74% total	EPS times P/E
Annual dividend	Not separately modeled	HKD0.00	n/a	Frozen zero distribution
Dividend yield	Not separately modeled	0.00%	n/a	No dividend contribution
Five-year dividends	-	HKD0.00	cumulative	Negative TTM FCF
Total ending value	HKD86.15	HKD13.143507420	-31.34% gross local IRR	Share value plus distributions

Base-case operating and return bridge

Base case	Start (2026-06-30 / price 2026-09-04)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY777.499431B	CNY1,096.492438B	7.1177%	Overseas, storage and electronics recovery
Operating margin	4.6571%	5.6025%	+0.9454 pp	Mix/utilization improve while pricing and R&D constrain upside
Operating earnings	CNY36.208778B	CNY61.430771B	11.1513%	Statutory operating income
Diluted share count	9,085.053M	9,085.053M	0.0000%	No repurchase offset or future issuance
EPS	HKD2.894538 normalized / HKD3.764589 reported	HKD5.434207099	13.4257% vs normalized	Full grant ceiling, margin recovery and perpetual redemption
Valuation denominator	Grant-normalized ordinary EPS	Terminal ordinary EPS	Comparable	Same ordinary-common diluted perimeter
Valuation	29.7630x normalized / 22.8843x reported	14.0x	-15.7630x vs normalized	Near Great Wall current normalized P/E and below peer medians
Share value	HKD86.15	HKD76.078899386	-11.69% total	EPS times P/E
Annual dividend	Not separately modeled	HKD0.00	n/a	Frozen zero distribution
Dividend yield	Not separately modeled	0.00%	n/a	No dividend contribution

Base case	Start (2026-06-30 / price 2026-09-04)	Horizon (2031-06-30)	CAGR / change	Justification
Five-year dividends	-	HKD0.00	cumulative	Reinvestment dominates
Total ending value	HKD86.15	HKD76.078899386	-2.46% gross local IRR	Share value plus distributions

Bull-case operating and return bridge

Bull case	Start (2026-06-30 / price 2026-09-04)	Horizon (2031-06-30)	CAGR / change	Justification
Revenue	CNY777.499431B	CNY1,315.934101B	11.0981%	Overseas, premium, storage and electronics success
Operating margin	4.6571%	6.8289%	+2.1718 pp	High utilization and mix improve economics
Operating earnings	CNY36.208778B	CNY89.864166B	19.9374%	Statutory operating income
Diluted share count	9,085.053M	9,085.053M	0.0000%	Locked no-change path
EPS	HKD2.894538 normalized / HKD3.764589 reported	HKD8.486303757	24.0018% vs normalized	Strong profit growth after full grant ceiling and perpetual redemption
Valuation denominator	Grant-normalized ordinary EPS	Terminal ordinary EPS	Comparable	Same ordinary-common diluted perimeter
Valuation	29.7630x normalized / 22.8843x reported	20.0x	-9.7630x vs normalized	Near CATL current normalized P/E and below BYD normalized P/E
Share value	HKD86.15	HKD169.726075140	+97.01% total	EPS times P/E
Annual dividend	Not separately modeled	HKD0.00	n/a	Frozen zero distribution
Dividend yield	Not separately modeled	0.00%	n/a	No dividend contribution
Five-year dividends	-	HKD0.00	cumulative	No cash-return benefit
Total ending value	HKD86.15	HKD169.726075140	14.52% gross local IRR	Share value plus distributions

The 20% reverse-return requirement is HKD214.368768 after five years. With zero distributions, required EPS is HKD21.436876800 at 10x, HKD15.312054857 at 14x and HKD10.718438400 at 20x. From normalized current EPS of HKD2.894537563, these require CAGRs of 49.25%, 39.54% and 29.93%. Modeled EPS reaches only 6.13%, 35.49% and 79.17% of requirement. Maximum starting prices for a 20% gross IRR are HKD5.282080850, HKD30.574403367 and HKD68.209102985. The Base maximum is 64.51% below HKD86.15.

Net-SGD diagnostic

Net-SGD uses the same P/E method and economic scenarios. Starting FX is an explicit assumption of **0.165000 SGD/HKD**. Terminal FX is 0.153450 in Bear (-7%), 0.165000 in Base (flat) and 0.173250 in Bull (+5%). Entry and exit security costs are each 0.2105%: 0.1000% brokerage, 0.1000% Hong Kong stamp duty, 0.00565% trading fee, 0.00270% SFC levy, 0.00015% AFRC levy and 0.00200% settlement/other. FX spread is 0.25% on entry and exit. Custody/platform drag is 0.10% annually.

The diagnostic assumes 10% PRC dividend withholding for a conservative broker/nominee holding, despite the issuer circular's foreign-individual exemption language; Hong Kong additional dividend withholding is 0%. Capital-gains tax is assumed 0% for a Singapore individual, subject to personal status. Distributions are zero, so withholding has no numerical effect. No financing, interest, reclaim, securities-lending income or portfolio fee is credited. Starting all-in outlay is `86.15 × 0.165000 × 1.002105 × 1.0025 = SGD14.280283729`.

Scenario	Terminal FX, SGD/HKD	Net terminal SGD wealth	Net-SGD IRR
Bear	0.153450	SGD1.997576221	-32.52%
Base	0.165000	SGD12.432926248	-2.73%
Bull	0.173250	SGD29.123730511	15.32%
Probability weighted	Scenario weighted	SGD9.927866663	-7.01%

Probability-weighted net-SGD IRR is `(9.927866663 / 14.280283729)^(1/5) - 1 = -7.012660977%`. Costs and FX reinforce the conclusion: even favorable Bull FX does not lift Bull to 20%, while Base loses money after frictions.

10. Hard Veto Checklist

Hard-veto test	Status	Evidence
ROIIC below cost with no credible path	Watch	Three-year proxy is 8.03%; path depends on margins and cash conversion
Artificially tiny invested capital	Pass	Capital employed is large and rising
Growth requires external financing	Watch	Negative FCF, debt growth and 2025 placement
Material dilution without proven value	Watch	Placement embedded; unused 20% H-share mandate is material
Undisciplined large acquisitions	Pass	Organic investment dominates
FCF structurally lags earnings	Watch	FY2025 and TTM are deeply negative; duration unresolved
Concentration/regulation/cyclicality impair equity	Watch	Customer concentration, price war, tariffs and utilization
20% return needs expansion vs comparable multiple	Pass narrowly	Locked P/Es are below normalized current P/E; still no scenario reaches 20%
Flawless execution needed at today's price	**Fail**	Base IRR is -2.46%; Bull needs simultaneous success and reaches only 14.52%
Moat cannot meet long-duration bar	**Fail**	Upstream Moat and 2046 tests both FAIL economically
Accounting/governance destroys trust	Watch	Clean audit, but grants, YELLOW governance and opacity cap confidence
Balance sheet can wipe out equity	Pass	Leverage rose, but no evidence of near-term wipeout

The hard veto is not that BYD lacks technology or will disappear. It is that current price and locked earnings outcomes do not compensate for an unproven durable profit pool. A score below 70/100, a hard durability veto or an implausible 20% case independently supports Reject.

11. Final Decision

Score-implied classification: Reject. BYD earns credit for scale, engineering, organic execution and runway, but the evidence does not support high credible ROIIC, durable pricing power, clean cash conversion and attractive entry valuation together. The 20% stretch case fails in Bear, Base and Bull. The 40/100 total is not a forecast of corporate failure; it refuses to equate industrial excellence with shareholder compounding at HKD86.15.

Reconsideration requires positive post-growth FCF for three years, grant-adjusted ROIC above 20%, disclosed returns on overseas capacity, auto adjusted-PBT margin at or above 7% through a cycle, electronics profit recovery with quantified AI value capture, stronger succession/independent-board safeguards, and a price/earnings combination producing at least 20% Base-case return without changing the locked method after seeing the result.

Compounder Score note: **40/100 — Reject; repaired grant normalization deepens already failed durability and return conclusions.**

Business Quality Score note: **38/80 — below threshold; credible ROIIC, cash conversion, pricing power, transparency and governance evidence are insufficient.**

20% Return UW Score note: **2/20 — Base IRR is -2.46%, Bull IRR is 14.52%, and zero distributions provide no support.**

No trade, sizing, ranking, portfolio mutation or owner action is authorized.

12. Machine-Readable JSON

The companion `compounder_score.json` preserves full-precision terminal EPS, exit P/Es, share values, distributions, terminal wealth, diluted shares, probabilities, gross local IRRs, net-SGD assumptions/results, reverse-return requirements, fixed-denominator scores, hard vetoes and source hashes. Reader-facing percentages are rounded; the JSON controls arithmetic reproduction.

BYD Company Limited — Independent Scoring Audit (Post-RT Repair Rerun)

Security: XHKG:1211 H ordinary share **Analysis date:** 2026-09-07 **Price anchor:** HKD86.15 at the 2026-09-04 completed close **TTM / terminal dates:** 2026-06-30 / 2031-06-30 (exactly 5.0 years) **Primary valuation method:** P/E **CSA disposition:** SCORING AUDIT CLEARED **Trade, ranking, sizing and portfolio mutation:** not authorized

This rerun supersedes the earlier CSA artifacts. The post-RT valuation preflight validates with evidence-file checking and has SHA-256 `d89c69ad17924021543222c3622d5caed5b335f53a5a92ef6ba51c7f442a402a`. It binds revised synthesis SHA-256 `d0197d5fd59abb5da27dcfb61767c875949e2dadf93a052c653c6316473b4620`. The score appendix and score JSON independently hash to `8d86933d6d0053496c054130151c0e9a8b5b80efc1809e924d0a079514440114` and `de03afc5b099afedf8730f0e1cb7d9e23a5faa953d2a80bd46de4e539a8072b1`. The unchanged quote packet and statutory bridge hash to `a77314fe0bb9897d1fc5100b76a2a57caccb31a92b19bc735c939d1f1ad2f652` and `bc654bb77b76391ec3995b8bfe55a804b2fb2b073f48df6db2d11c7389f7fb64`. Every binding matches VP, CS and the gate manifest.

1. Original vs Audited Scores

Item	Post-RT CS	Audited	CSA delta	Notes
Business Quality Score / 80	38/80	38/80	0	Prior transparency and governance deductions are now incorporated
Valuation / 20% Return UW Score / 20	2/20	2/20	0	Negative Base return and sub-20% Bull support the score
Total Score / 100	40/100	40/100	0	Exact sum of 38/80 and 2/20
Classification	Reject	Reject	—	Below 70/100 with binding hard vetoes

The scorer repaired the three scoring weaknesses identified in the superseded CSA: disclosure transparency is now 0/1, governance/accounting red flags are 0/1, and “multiple not pricing perfection” is 0/2. No additional score reduction or increase is evidence-required. The final audited denominators remain explicit: **Compounder Score 40/100, Business Quality Score 38/80, and 20% Return Underwriting/Stretch Score 2/20**.

2. Score Reductions and Reasons

There are **no new CSA score reductions versus the post-RT CS**. Relative to the superseded 43/100 scorer, the repaired 40/100 score embeds three one-point reductions:

- **4E Transparent disclosures, 1/1 to 0/1.** BYD does not disclose product revenue or profit for vehicles, batteries, storage, PV, rail or electronics AI products; regional profitability; segment capital employed or cash flow; clean ASP; dealer inventory; or the exact H1 2026 grant amount. Reliable statutory filings do not equate to full economic transparency.
- **4F No governance/accounting red flags, 1/1 to 0/1.** Management is binding **YELLOW**. Chairman/CEO/control concentration, no named succession plan, limited board independence, non-pre-emptive issuance authority and related-party flows are governance flags even in the absence of fraud or a restatement.
- **6E Multiple does not already price perfection, 1/2 to 0/2.** The hard-veto screen itself records flawless execution as FAIL. Base loses money and Bull reaches only 14.52% gross HKD, so HKD86.15 prices outcomes above the locked central case.

Those changes are now correctly present in CS. The RT repair changed normalized earnings and scenario probabilities, not the score rubric. The score stays 40/100 because already-zero return subscores cannot fall below zero.

3. Unsupported Claims

The post-RT score makes no unsupported positive claim that warrants another deduction. It correctly labels the five-year 33.3% median ROIC as a screening result rather than a fully normalized issuer-perimeter measure. FMP’s invested-capital mapping diverges from BYD’s official debt and equity perimeter, and government grants materially affect earnings. Awarding

4/5 instead of a mechanical 5/5 for 1A is therefore conservative and supportable.

High credible ROIIC remains unsupported. The 8.03% FY2022–FY2025 and 15.62% FY2021–FY2025 balance-sheet change ratios are low-confidence proxies affected by capital-perimeter changes, grants, the 2025 placement and timing. The score correctly gives 1B zero and 1C zero. Acquisition-inclusive ROIIC is unavailable, but acquisitions were not material in the reviewed period, so the acquisition caps do not trigger.

The evidence supports a large runway and ability to deploy capital at scale. Those facts justify Category 2 points but not high incremental-return points. It also supports a real near- and medium-term cost-and-speed advantage, while binding Moat **FAIL** and 2046 **FAIL** prevent the score from treating that advantage as a durable premium-return franchise.

4. Calculation Errors

No post-RT terminal-wealth, probability-weighting, friction or score-addition error was found.

Normalized current denominator. Reported TTM ordinary-common diluted EPS is CNY29.310241B divided by 9,087.5565M shares and translated at 1.1672 HKD/CNY, or HKD3.764588786 per listed unit. Reported P/E is `86.15 / 3.764588786 = 22.884305535x`. The repaired full-overlap ceiling subtracts CNY8.013B before tax, or CNY6.792366B after TTM tax. Reconciled normalized ordinary numerator is `30.055878 - 6.792366 - 0.621981 - 0.044167 - 0.061146 = CNY22.536218B`. This produces HKD2.894537563 per share and normalized current P/E of `29.762958024x`. Reported and normalized earnings differ by more than 20%, so the raw 22.88x multiple is disclosure only. CS uses the comparable 29.76x normalized denominator and does not use the raw ratio as a cap.

Terminal ordinary-common perimeter. Each annual scenario subtracts the full CNY8.013B excess-grant ceiling once before tax, then deducts NCI profit, perpetual-bond distributions and restricted-share attribution. At 2031, ordinary numerators of CNY10.230419935B, CNY42.297857703B and CNY66.054248976B divided by 9,085.053M diluted listed-equivalent shares and translated at 1.1672 reproduce Bear/Base/Bull EPS of HKD1.314350742, HKD5.434207099 and HKD8.486303757 within display rounding. The completed 2025 placement and share distribution are already embedded. The unexercised issuance mandate is monitored but is not an issued claim. No buyback benefit or new issuance is assumed.

Gross HKD replay. Under P/E, terminal shareholder wealth is EPS times the locked exit P/E plus zero distributions. Bear is `1.314350742 × 10 = HKD13.143507420`, producing `(13.143507420 / 86.15)^(1/5) - 1 = -31.34199206%`. Base is `5.434207099 × 14 = HKD76.078899386`, producing **-2.45572439%**. Bull is `8.486303757 × 20 = HKD169.726075140`, producing **14.52456670%**.

Weights are 40% Bear, 50% Base and 10% Bull, totaling 100%. Expected terminal wealth is `0.40 × 13.143507420 + 0.50 × 76.078899386 + 0.10 × 169.726075140 = HKD60.269460175`. Its five-year CAGR is **-6.89598626%**. The weighted arithmetic average of scenario IRRs would be approximately **-12.31220235%**, which is not used. CS correctly reports the CAGR of probability-weighted terminal wealth.

Net-SGD replay. Entry security costs total 0.2105%: 0.1000% brokerage, 0.1000% Hong Kong stamp duty, 0.00565% trading fee, 0.00270% SFC levy, 0.00015% AFRC levy and 0.00200% settlement/other. With starting FX of 0.165 SGD/HKD and a 0.25% entry FX spread, all-in cost is `86.15 × 0.165 × 1.002105 × 1.0025 = SGD14.2802837289` per share. Terminal wealth applies scenario FX, a 0.2105% exit security cost, a 0.25% exit FX spread and five annual 0.10% custody drags: `gross terminal HKD wealth × terminal FX × 0.997895 × 0.9975 × 0.999^5`.

That replay yields Bear SGD1.9975762206 and **-32.52338239%**, Base SGD12.4329262481 and **-2.73260066%**, and Bull SGD29.1237305114 and **15.31930955%**. Probability-weighted net terminal wealth is SGD9.9278666634 and its CAGR is **-7.01266098%**. Distributions are zero, so the 10% PRC nominee dividend-withholding assumption has no numerical effect. Every entry, exit, FX and custody friction is counted once.

Double-count audit. Debt, lease liabilities, cash, non-operating financial assets and related financing income or expense are embedded in statutory EPS and P/E. No terminal cash is added and no debt, lease, perpetual principal or NCI equity is subtracted again after EPS times P/E. Perpetual distributions and NCI profit are deducted in the EPS numerator once. Common distributions are zero and are not added. The P/E method, listed-unit basis and claim perimeter are consistent across Bear, Base, Bull, probability weighting, reverse return and net-SGD. The double-count check passes.

5. Missing Data

The most important missing evidence is an issuer-consistent capital-employed series supporting three- and five-year ROIIC and segment/regional return attribution. Also absent are segment cash flow, clean product ASP, dealer inventory,

retail-to-wholesale reconciliation, overseas plant utilization and return data, exact H1 2026 grant decomposition, and a future diluted-share path if the unused H-share mandate is exercised.

These gaps justify Medium confidence and already constrain 1A–1F, 2F, moat, financial-quality and capital-allocation scores. The repaired full-overlap grant ceiling appropriately chooses a conservative outcome where decomposition is unavailable. No extra blanket deduction is necessary because the rubric already reflects the missing evidence.

6. Hard-Veto and Threshold Test Audit

All investable-now thresholds fail except the mechanical no-expansion test. Total score is below 80/100; Business Quality is below 65/80; Valuation is below 15/20; Categories 1 plus 2 total 23/45, below 35/45; Base IRR is below 20%; Bear is far below 8%–10%; and hard vetoes remain. The 10x/14x/20x exit P/Es are all below BYD's comparable normalized current 29.76x P/E. The case does not require expansion, but that does not make it attractive.

The repaired peer evidence is economically coherent. Great Wall's issuer-normalized current P/E is 13.85x and five-year normalized trough is 11.26x; CATL's issuer-normalized current P/E is 20.87x. Bear 10x is below the GWM trough but does not assume distress or zero equity. Base 14x approximates GWM current normalized P/E and remains below normalized cycle medians. Bull 20x is close to CATL current normalized P/E and below BYD normalized current P/E. Provider-native ratios with incompatible denominators are preserved only as diagnostics. Both excessive-optimism and excessive-bearishness challenges are documented and pass.

Moat **FAIL**, 2046 **FAIL**, and Management **YELLOW** remain binding. The score does not override them.

Complete rubric audit

Subscore	CS	Audited	Evidence status and disposition
1A Normalized ROIC high	4/5	4/5	Partly supported; 33.3% screening median, but perimeter quality prevents 5/5
1B ROIIC high	0/8	0/8	Insufficient evidence; proxies are not rubric-quality
1C ROIIC not deteriorating	0/3	0/3	Supported at zero by FY2025 deterioration and recent cash conversion
1D Unit economics support returns	2/3	2/3	Partly supported by integration and scale, capped by thin margins
1E Cash conversion real	1/3	1/3	Partly supported historically; FY2025 and TTM FCF are deeply negative
1F ROIC not accounting artifact	1/3	1/3	Partly supported; grants and perimeter mismatch cap confidence
2A Large market opportunity	5/5	5/5	Supported by electrification, storage and international demand
2B Reinvest at scale	4/5	4/5	Operational scale proven; returns on new capacity unproven
2C Organic growth	3/4	3/4	Supported, with recent contraction and China maturity
2D Repeatable playbook	2/3	2/3	Partly supported by platforms, plants and localization
2E Market structure	1/2	1/2	Partly supported; intense competition prevents full points
2F Growth without ROIC collapse	0/1	0/1	Unsupported by current return and cash evidence
3A Clear advantage	3/4	3/4	Supported near/medium term; Moat FAIL binds long duration
3B Pricing power	0/3	0/3	Supported at zero; no price-with-volume proof
3C Competitive evidence	1/3	1/3	Partly supported by scale, offset by margin erosion
3D Customer stickiness	0/2	0/2	Insufficient evidence and customer concentration

Subscore	CS	Audited	Evidence status and disposition
3E Stress resilience	1/2	1/2	Partly supported by scale/funding access, not protected returns
3F Low disruption risk	0/1	0/1	Unsupported over 2046; diffusion risk is material
4A Clean earnings	1/2	1/2	Partly supported; clean audit but material grant normalization
4B Cash flow supports earnings	0/2	0/2	Supported at zero by FY2025 and TTM negative FCF
4C SBC and dilution	2/2	2/2	Supported; low SBC, completed issuance embedded, mandate monitored
4D Balance-sheet strength	1/2	1/2	Partly supported; debt rose and cash fell
4E Transparent disclosures	0/1	0/1	Supported at zero by material economic non-disclosure
4F No governance/accounting red flags	0/1	0/1	Supported at zero by binding Management YELLOW
5A Rational reinvestment	1/2	1/2	Partly supported strategically; per-share returns unproven
5B Acquisition discipline	2/2	2/2	Supported by organic focus and absence of serial material M&A
5C Buyback discipline	0/2	0/2	Supported at zero; repurchases were immaterial
5D Incentive alignment	1/2	1/2	Partly supported by ownership; disclosed hurdles are weak
5E Owner mentality	1/1	1/1	Supported by founder ownership and duration
5F Past decisions	1/1	1/1	Supported by the battery-to-vehicle transition
6A Base-case IRR	0/6	0/6	Correct; -2.46% is below 10%
6B Conservative exit multiple	2/4	2/4	Independently justified and below comparable current, but hurdle fails
6C Bear acceptable	0/3	0/3	Correct; -31.34% is unacceptable
6D Reverse return beatable	0/3	0/3	Correct; Base requires 39.54% normalized-EPS CAGR
6E Multiple not pricing perfection	0/2	0/2	Correct; Base loses money and flawless-execution veto fails
6F Cash returns help	0/2	0/2	Correct; distributions are zero

7. Final 20% Hurdle Pass/Fail

FAIL. No scenario clears 20%. Required five-year terminal wealth is HKD214.368768. At Base 14x and zero distributions, required terminal EPS is HKD15.312054857, a 39.5375% CAGR from normalized current EPS of HKD2.894537563. Modeled Base EPS is HKD5.434207099. The maximum starting price for a 20% Base return is HKD30.574403367, 64.51% below HKD86.15.

8. Dream Business / Dream Investment Classification

Neither. Moat FAIL, 2046 FAIL, unproven normalized ROIIC and weak cash conversion prevent dream-business status. Negative Base and probability-weighted returns prevent dream-investment status. The single biggest reason is that scale and vertical integration have not produced a durable, cash-backed, high-return profit pool for ordinary shareholders at the current price.

9. Stage 7 Scorecard Notes

- **Compounder Score note:** 40/100 — Reject; repaired grant normalization deepens failed durability and return conclusions.

- **Business Quality Score note:** 38/80 — below threshold; ROIIC, cash conversion, pricing power, transparency and governance remain insufficient.
- **20% Return UW Score note:** 2/20 — Base loses 2.46% annually, Bull earns 14.52%, and distributions are zero.

10. Auditor JSON

The companion JSON contains full-precision returns, source hashes, score audit, repair deltas and non-authorization flags. Confidence is **Medium**: hash, denominator and return arithmetic confidence are high; ROIIC and long-duration economic confidence are lower. There are no CSA blockers. A final post-repair Red Team disposition remains downstream by workflow sequence.

BYD Company Limited — Independent Red Team, Post-Repair Rerun

Security: XHKG:1211 H ordinary share, HKD counter **Review date:** 7 September 2026 **TTM / terminal dates:** 30 June 2026 / 30 June 2031, exactly five years **Primary valuation method:** P/E **Immutable bindings:** synthesis `d0197d5fd59abb5da27dcfb61767c875949e2dadf93a052c653c6316473b4620`; valuation preflight `d89c69ad17924021543222c3622d5caed5b335f53a5a92ef6ba51c7f442a402a`; peer evidence `5f5778aa22781951fbe7562c715cae91ca8d6b27458d07eca64b51ef076f709e`; CS appendix `8d86933d6d0053496c054130151c0e9a8b5b80efc1809e924d0a079514440114`; CS JSON `de03afc5b099afedf8730f0e1cb7d9e23a5faa953d2a80bd46de4e539a8072b1`; CSA appendix `caef3b4690f251e0aed16e069af306f4cd24ebb2d6f541cff05e2f74eebda756`; CSA JSON `f4289b04a0b0b68784f8b183f100f68b6de59023b8efe87c496bd21fd325d072` `trade_execution_authorized=false`

Red-team conclusion

The prior material return-model objections are resolved. The repaired chain applies the full CNY8.013 billion excess-grant ceiling consistently to current and every terminal year, uses 40%/50%/10% Bear/Base/Bull probabilities, and supports 10x/14x/20x exit P/Es with issuer-normalized Great Wall Motor and CATL denominators plus dated five-year histories. The valuation-preflight artifact passes the evidence-file validator at its assigned hash, and CS/CSA reproduce it without changing method, claims, dilution, probabilities or multiples.

That resolution does **not** rehabilitate the investment thesis. It makes the rejection stronger and more reliable. At HKD86.15, audited Bear/Base/Bull gross HKD IRRs are -31.34199206%, -2.45572439% and 14.52456670%; the probability-weighted return is -6.89598626%. Net-SGD returns are -32.52338239%, -2.73260066%, 15.31930955% and -7.01266098%. The audited Compounder Score remains **40/100 = 38/80 Business Quality + 2/20 Return Underwriting**. Management remains YELLOW, while the moat and 2046 tests remain FAIL. The red team finds no new material return-bridge defect, but the business and price still fail the Gideon standard.

1. The most fragile operating assumption

The most fragile operating assumption remains the Base automotive recovery. The exact reportable segment grows from CNY621.481 billion of TTM revenue to CNY889.843 billion by 2031, an equivalent 7.4427% CAGR, while adjusted reportable-segment PBT margin rises from 4.31% to 5.15%. The analytical composition assumes 83% vehicle ecosystem, 15% batteries/storage/PV and 2% rail/other, with Base CAGRs of 6.5%, 12.5% and 4.0%. Those weights are explicitly model-imposed because BYD does not disclose the required sub-product revenue.

The recovery is vulnerable to timing. H1 2026 automotive revenue fell 8.98%, H1 NEV sales fell 15.72%, and August year-to-date sales were still down 6.84%. Inventory days reached 109. Meanwhile, overseas plants, charging stations, ships and local dealer networks impose costs before mature utilization. The model assumes domestic pressure stabilizes while exports, premium mix and storage mature quickly enough to recover margin. It lacks registrations-versus-wholesale data, dealer inventory, country profit, clean ASP and localized-plant returns.

The synthesis sensitivity quantifies the risk. A 200-basis-point reduction in automotive revenue CAGR lowers repaired Base EPS from HKD5.434207 to HKD4.904005, an almost 9.8% decline. At the locked 14x P/E, terminal value would fall by HKD7.42 per share. The P/E-15 gate, already failing by 5.38%, would deteriorate further. This does not expose an arithmetic defect; it shows how little protection the central case has against a normal forecasting error.

2. The most-likely-to-be-optimistic Stage 5 number

The single Stage 5 number most likely to be optimistic is the **5.6025% Base statutory operating margin** in 2031. It rises 95 basis points from the 4.6571% TTM margin even though the dominant auto segment is in a price war, overseas manufacturing duplicates fixed cost, and electronics must recover from 0.28% H1 adjusted PBT margin. Base statutory operating income reaches CNY61.431 billion on CNY1.096 trillion of revenue; normalized recurring operating income after the grant ceiling is CNY53.418 billion.

The terminal margin is below BYD's recent peak, so it is not fantastical. The problem is the path's dependence on several linked favorable outcomes: domestic stabilization, profitable exports, premium-brand realization, storage value capture, higher

plant utilization and electronics normalization. These are not independent. A tariff shock can both reduce revenue and lower utilization; a price cut can simultaneously weaken realization, residual values and dealer economics. The model handles scenarios coherently but cannot remove this correlation risk.

3. Strongest bear case, in its strongest form

BYD's integration advantage is competed away through price and feature content rather than retained as margin. Domestic saturation and hundreds of competing EV models force BYD to deploy better batteries, charging and assisted-driving features to defend share, while customers capture the benefit. Overseas growth then requires duplicated factories, dealer systems and logistics under tariffs and local-content rules, depressing returns before utilization matures. Batteries and AI hardware grow in volume, but cell price deflation and customer-owned architectures leave BYD with manufacturing economics: scale survives, shareholder returns do not.

The mechanism can appear within two reporting years. Auto adjusted PBT margin falls below 3%, electronics remains below 1%, inventory days stay above 100, and TTM free cash flow remains negative while debt or share issuance rises. That is not a bankruptcy thesis. It is a de-rating thesis in which a huge, relevant company earns a commodity-like return on a continuously expanding capital base.

4. Cross-examination of management commentary

“Premium pricing strategy.” Premium-brand sales and exports grew strongly, but H1 automotive revenue still fell 8.98% and margin was only 4.05%. A premium label is not pricing power if incentives, warranty costs, dealer support or weak residual values absorb the uplift. The first disconfirming evidence would be rising premium/export mix without higher segment margin or cash conversion.

“Robust growth momentum” and “new core growth engine.” Overseas shipments are growing, but the evidence lacks destination registrations, channel inventory, country-level profits and plant utilization. Exports can represent real demand, inventory in transit or channel fill. If exports continue rising while consolidated inventory days remain above 100 and free cash flow stays negative, the growth engine is consuming capital rather than creating per-share value.

“Bulk shipment” and “mass production and delivery.” Electronics AI programs are commercially real, but revenue is not value capture. H1 electronics revenue was nearly flat while adjusted segment profit collapsed to CNY0.194 billion and 0.28% margin. The first evidence that management's language is economically meaningful is segment PBT growing at least as fast as revenue, margin exceeding 2% and customer concentration declining. Without that, expensive accelerators and memory can inflate revenue while BYD earns only a thin conversion fee.

5. Stage 5 and return-model reverification

The historical anchor is sound. TTM equals FY2025 less H1 2025 plus H1 2026 using identical January-to-June windows. Revenue, segment profit, operating income, pretax income and Group net income all reconcile with zero statutory residual. The quote bridge is also correct: one XHKG:1211 H share maps one-for-one to a financial ordinary share, the split factor is one, and CNY EPS converts at 1.1672 HKD/CNY.

The repaired ordinary-common denominator now has the correct perimeter. Reported TTM Group net income of CNY30.055878 billion is reduced by the CNY6.792366 billion after-tax grant ceiling, CNY0.621981 billion NCI profit, CNY0.044167 billion perpetual distribution and CNY0.061146 billion normalized restricted attribution. The result is CNY22.536218 billion, HKD2.894537563 per diluted listed unit and a normalized current P/E of 29.762958x. The raw 22.884305x P/E remains disclosure only because reported and normalized earnings differ by more than 20%.

Each terminal year applies the same principle: subtract CNY8.013 billion before tax exactly once, then deduct NCI profit, perpetual distributions and restricted attribution. Terminal ordinary EPS is HKD1.314350742, HKD5.434207099 and HKD8.486303757. The algebra is conservative because exact grant overlap is unavailable, but it is now internally symmetric and no longer lets an event-heavy line inflate terminal EPS while normalizing only the current denominator.

The P/E method remains the right controlling choice. EV/NOPAT is blocked because terminal cash, debt, leases, NCI equity and senior claims lack a complete source-bound path. P/B-ROE is secondary because there is no zero-residual parent-common-equity roll-forward. Under P/E, debt, leases, cash and financing items stay inside statutory earnings and the equity multiple. The return bridge correctly makes no terminal cash or debt adjustment. Perpetual distributions and NCI profit are deducted once; their balance-sheet claims are not subtracted again. No cash, debt, NCI or distribution double count remains.

Dilution treatment also passes. The March 2025 placement and July 2025 distribution are already embedded. The employee plan bought shares in the market, and restricted shares were non-dilutive at the anchor. The June 2026 mandate could issue up to 20% of H shares, but authorization is not an issued claim. Zero incremental dilution is an acceptable baseline with a mandatory rerun if exercised. The +5% share sensitivity lowers Base EPS to HKD5.175435, so this remains a monitoring risk rather than a hidden claim.

BYD is not an insurer. Retained-versus-managed, fee-count-once, parent-common-book roll-forward, terminal P/B/ROE and negative-EPS-to-zero-insurer tests are not applicable. The model also does not assign zero terminal equity: all three EPS outcomes are positive and valued at positive P/Es.

6. Score-derived 20% return claim

The red team agrees with the audited result: the 20% case does not clear. Base requires HKD214.368768 of terminal wealth over five years. At 14x and zero distributions, that means terminal EPS of HKD15.312055, a 39.54% CAGR from normalized current EPS. Modeled Base EPS is only HKD5.434207. The Base maximum starting price for a 20% gross return is HKD30.574403, 64.5% below HKD86.15. Even Bull reaches only 14.52% gross HKD and depends on 11.10% revenue CAGR, 6.83% statutory operating margin, full perpetual redemption, flat shares and a 20x exit.

The repaired 2/20 score is appropriate. A score cannot become negative, so the worse returns do not reduce the audited total below 40/100. This is a rubric floor, not evidence that valuation risk is mild.

7. Two-sided valuation challenge

Strongest reason the model may still be too optimistic

The most optimistic remaining input is not the repaired grant bridge; it is the combination of Base automotive recovery with a 14x exit. Fourteen times is now properly evidenced: it approximates Great Wall's issuer-normalized current 13.85x, sits below Great Wall's five-year normalized median of 18.32x, and is well below CATL's normalized current 20.87x. Still, if BYD reaches 2031 with Management YELLOW, Moat FAIL, weak cash conversion and only 5.60% statutory margin, the market could choose 12x rather than 14x. At 12x, Base terminal wealth would be HKD65.2105 and gross IRR about -5.42%, nearly three points below audit. That is a legitimate sensitivity, but no longer a preflight defect: the peer denominators are normalized, the Great Wall native-ratio conflict is isolated, historical evidence is provided, and 14x has a disclosed central-case rationale.

Strongest reason the model may be too bearish

The full grant-overlap ceiling is intentionally punitive. If exact disclosure eventually proved that no excess grant is embedded in the terminal combined-adjustment line, Base EPS would revert toward the superseded HKD6.3014 and Base IRR toward +0.48%, roughly 2.93 points above the repaired result. That would be material, but the evidence needed to release the ceiling does not exist. Under the framework's default-to-PASS discipline, using the full ceiling is the correct resolution of uncertainty, not a new blocker.

Zero common distributions are also conservative. Applying a purely illustrative 40% payout to the repaired five-year Base ordinary numerators would add roughly HKD7.96 per share and raise Base IRR from -2.46% to about -0.50%, a 1.96-point change. The sensitivity is below the two-point materiality threshold and remains far below the owner's 10%–15% mandate. Negative TTM FCF and large reinvestment make zero distributions supportable.

The exit-multiple evidence now passes both directions. Bear 10x is below Great Wall's normalized five-year trough of 11.26x, so going lower without distress evidence would double-penalize depressed EPS. Bull 20x is close to CATL's normalized current 20.87x and below its recent normalized 25.5x–25.9x range, so it does not cap upside at an implausibly low multiple. The histories use year-end points rather than full annual distributions and only two controlling peers; that limits precision but does not create a material unresolved defect.

8. Probability, FX, tax and friction audit

The 40%/50%/10% company probabilities now align with the evidence. They explicitly shift ten points from Bull to Bear versus the auto segment schedule because of H1 contraction, inventory pressure, negative FCF, electronics downside and the full grant normalization. The weights sum to 100% and are applied to terminal wealth: 40%×HKD13.143507420 + 50%×HKD76.078899386 + 10%×HKD169.726075140 = HKD60.269460175. Its CAGR is -6.89598626%. The arithmetic average of scenario IRRs is not used.

Net-SGD replays. Entry security costs of 0.2105%, a 0.25% entry FX spread, equal exit costs, a 0.25% exit spread and five annual 0.10% custody drags are each applied once. Terminal FX is 0.15345/0.16500/0.17325 SGD per HKD. Probability-weighted net wealth is SGD9.927866663 and CAGR is -7.01266098%. The 10% PRC dividend-withholding assumption has no numerical effect because distributions are zero. Zero Singapore capital-gains tax is correctly labelled investor-specific. Broker GST or different custody terms would be immaterial beside the operating outcomes.

9. Signal that forces an exit

The decisive signal is **automotive adjusted reportable-segment PBT margin below 3.0% for two consecutive half-year reporting periods while year-on-year NEV unit growth is at or below zero**. Test it at each interim and annual report through FY2027. It requires simultaneous loss of volume momentum and profit retention, rather than reacting to one launch quarter. If triggered, vertical integration is defending factory throughput rather than shareholder economics, and the model should move toward Bear. Inventory days remaining above 100 and TTM FCF remaining negative would strengthen the signal.

10. Conviction after red team

The thesis does **not** survive. The return model now survives: its prior normalization, probability and multiple-evidence defects have been repaired, and no new material objection remains. But the economic thesis fails on the repaired evidence. Base loses money, probability-weighted wealth compounds negatively, Bull misses 20%, the P/E-15 gate fails by 5.38%, and the hard moat/2046 gates fail. BYD can remain a globally important industrial company without qualifying as a durable high-return compounder at this price.

Reconsideration requires evidence, not a different spreadsheet: automotive adjusted PBT margin at or above 7% through a cycle, positive post-growth free cash flow for three years, grant-adjusted ROIC above 20%, disclosed returns on overseas capacity, electronics margin above 2% with quantified AI value capture, and improved succession and board safeguards. Any new issuance, grant decomposition or capital-structure change must trigger the governed rerun sequence.

RETURN_MODEL_OBJECTION_STATUS: MATERIAL_RESOLVED

BYD Company Limited — Production ER2 Data Package

Run ID: `pulse-cio-20260907T040305+0800` Ticker: `1211.HK` Cutoff: `2026-09-07` Reporting currency: CNY; tables use CNY billions unless stated otherwise. Latest complete period: six months ended 2026-06-30. TTM construction: FY2025 less H1 2025 plus H1 2026. Forecast horizon: 2031-06-30. `trade_execution_authorized=false`

0. Source control, live-fetch ledger, and conventions

All evidence below was fetched live in this run. No local data-warehouse file was used as evidence. FMP datasets were pulled through the installed helper. The annual and quarterly FMP product-segmentation calls both returned `[]`; official BYD and HKEX disclosures therefore control segment, vehicle, geography, battery, R&D, inventory and strategic data. Equivalent FMP datasets already existed in the required warehouse run folder with the same byte lengths and prior verified hashes, so the no-overwrite rule required no new warehouse copy.

The controlling accounting source is BYD's PRC-ASBE annual/interim filing. The 2025 Annual Report states that the annual financial statements are prepared under PRC Accounting Standards for Business Enterprises. FY2025, FY2024, FY2023 and earlier comparative income-statement figures in this package use the latest official restated series where available. FMP is retained as a visible comparison, not silently blended into the official series.

Live primary-source ledger

ID	Live source	Period or purpose	Local archive	SHA-256
HKEX-AR25	[2025 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf)	FY2025 and restated five-year comparatives	`raw_d/hkex_2025_annual_live.pdf`	`7906b6647eb7cf3ab5986e9b8eda8f707969c64dc54c67b83b606744ef9f4846`
HKEX-IR26	[2026 Interim Results Announcement](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf)	H1 2026 and H1 2025	`raw_d/hkex_2026_interim_results_live.pdf`	`29a91336c5d1f2a171a24f3436b008f09a18b2c10a5d0dce0b20d17085f23422`
HKEX-Q126	[2026 First Quarterly Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0428/2026042803001.pdf)	Q1 2026 and Q1 2025	`raw_d/hkex_2026_q1_live.pdf`	`1e6a9bcf68b9c01be233dc08ac19f5b0f3e16df4e8cc2ab3bd45ff8ad1eb1b0a`
HKEX-Q325	[2025 Third Quarterly Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2025/1030/2025103001667.pdf)	Q3 and 9M 2025 comparatives	`raw_d/hkex_2025_q3_live.pdf`	`0eceefe1aae9797036e40d1cd7d04a244f753b6798ffa4d7b8ac0ad5259b74cc`
HKEX-AR24	[2024 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2025/0324/2025032401238.pdf)	FY2024 and FY2023 segment evidence	`raw_d/hkex_2024_annual_live.pdf`	`8972fd9652e6b681250a70b17b4ccbc0e9173e527e6003e3edd0dfdb7191342c`
HKEX-AR23	[2023 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2024/0326/2024032602585.pdf)	FY2023 and FY2022 segment evidence	`raw_d/hkex_2023_annual_live.pdf`	`5d9e65b8cdf337937cb9ef6f71f96a790bc39e6aa7a4c72f7d681876a8a66e01`
HKEX-AR22	[2022 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2023/0328/2023032802305.pdf)	FY2022 and restated FY2021 segment evidence	`raw_d/hkex_2022_annual_live.pdf`	`dc41cbb958a6525439e647877474c1721107671334daebac9ca39845e4764d11b`
HKEX-AR21	[2021 Annual Report](https://www1.hkexnews.hk/listedco/listconews/sehk/2022/0329/2022032902748.pdf)	Old-taxonomy boundary evidence	`raw_d/hkex_2021_annual_live.pdf`	`5d8644e675f18685e578cefa4d8fa45e61266a2cfb593d4bdf431ae999c78b7e`
FMP-IS	FMP stable income statement, `1211.HK`, annual, limit 6	Standardized statement comparison	`raw_d/fmp_income_annual_live.json`	`21ec7891cebbf42b48fcb128c97af5339c5a61c523d03a7e727a3cc0bd001cbb`
FMP-BS	FMP stable balance sheet, `1211.HK`, annual, limit 6	Standardized balance comparison	`raw_d/fmp_balance_annual_live.json`	`6a799fff0329cdff8dbb13422368e68bcdc2fac6989baa590530e0169c993beb`
FMP-CF	FMP stable cash flow, `1211.HK`, annual, limit 6	Capex, FCF and capital allocation	`raw_d/fmp_cashflow_annual_live.json`	`2b9763726af4a816ba34db9463a2e9bfcd9724b122599a570e58ce8096369021`

ID	Live source	Period or purpose	Local archive	SHA-256
FMP-PROD-A	FMP stable revenue product segmentation, annual	Empty response	`raw_d/fmp_product_annual_live.json`	`4f53cda18c2baa0c0354bb5f9a3ecbe5ed12ab4d8e11ba873c2f11161202b945`
FMP-PROD-Q	FMP stable revenue product segmentation, quarter	Empty response	`raw_d/fmp_product_quarter_live.json`	`4f53cda18c2baa0c0354bb5f9a3ecbe5ed12ab4d8e11ba873c2f11161202b945`

The five year-end sales-volume announcements were also fetched live: [December 2021](https://www1.hkexnews.hk/listedco/listconews/sehk/2022/0103/2022010301472.pdf), [December 2022](https://www1.hkexnews.hk/listedco/listconews/sehk/2023/0102/2023010200047.pdf), [December 2023](https://www1.hkexnews.hk/listedco/listconews/sehk/2024/0101/2024010100099.pdf), [December 2024](https://www1.hkexnews.hk/listedco/listconews/sehk/2025/0101/2025010100079.pdf), and [December 2025](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0101/2026010100423.pdf). Latest operating evidence is the [June 2026 release](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0701/2026070100033.pdf) and [August 2026 release](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0901/2026090101971.pdf).

0a. Industry classification and disclosure inventory

Industry classification: vertically integrated automotive, new-energy vehicle, power-battery, energy-storage, electronics manufacturing and limited rail-transport group. Reporting regime: PRC ASBE with primary HKEX and Shenzhen disclosures; calendar fiscal year ending December 31. The issuer is foreign to FMP's core US filing model and FMP product data are empty. The ad hoc checklist therefore searched official sources for segment economics; vehicle production and sales; BEV, PHEV, passenger and commercial mix; export and overseas revenue; battery installed capacity and energy-storage shipments; R&D; segment capex; inventory and receivable days; pricing, premium mix, dealer/channel language; subsidies; tariffs and trade barriers; and manufacturing localization.

Completeness matrix

Dataset or table family	Official source searched	Search terms or table names	Years available	Included?	Exclusion or limitation	Downstream relevance
Segment revenue and profit	Annual reports, interim report	Segment reporting, revenue from external trading, total profit	FY2021-FY2025 plus H1 2026	Yes	FY2021 uses FY2022 restated two-segment taxonomy	Segment forecast and bridge
Vehicle production and sales; power-battery capacity	Monthly production-and-sales announcements	NEV, passenger, BEV, PHEV, production, sales, installed capacity	FY2021-FY2025; H1 and Aug 2026	Yes	Battery-capacity disclosure discontinued in 2026 releases examined	Volume, supply-demand and mix drivers
Geography	Annual and interim reports	Revenue breakdown by locations of customers, overseas revenue	FY2021-FY2025 plus H1 2026	Yes	Country-level dollars not disclosed	Globalization and tariffs
ASP and pricing	Annual and interim reports	average selling price, pricing, product mix, premium	No clean ASP series	Proxy only	Auto segment includes batteries and other products	Pricing sensitivity
Dealer and channel inventory	Annual and interim reports	dealers, channel inventory, inventory turnover	Consolidated days FY2021-FY2025 and H1 2026	Partial	Dealer inventory and dealer count are true non-disclosures	Working capital and demand quality
Battery and energy storage	Sales releases and interim report	installed capacity, shipment, GWh, energy storage	FY2021-FY2025 capacity; H1 2026 contract examples	Yes	Energy-storage shipment volume not separately quantified	Moat and adjacent growth
Electronics KPIs	Annual and interim reports	components, assembly, smart terminals, AI computing, servers, liquid cooling	Narrative plus segment dollars	Partial	Unit shipments, ASP and backlog not disclosed	Segment growth and concentration
R&D and capex	Annual/interim reports and FMP cash flow	R&D investment, R&D expense, capital expenditure	FY2021-FY2025 plus H1 2026	Yes	Investment and expense are distinct	Reinvestment and FCF
Subsidy and regulation	Annual report	government grants, purchase tax, regulation, trade barriers	FY2024-FY2025 and current policy	Yes	No product-level grant allocation	Earnings quality and risk
Recent quarterly trend	Q3 2025, FY2025, Q1 2026, H1 2026	operating revenue, operating profit	Last four quarters	Yes, consolidated	Quarterly segment values not disclosed	Recency check

Operating KPI history

KPI family	Granularity	FY2021	FY2022	FY2023	FY2024	FY2025	Latest interim or current	Source
NEV sales, million units	Group	0.604	1.863	3.024	4.272	4.602	H1 2026: 1.809; Aug YTD: 2.668	Year-end and latest sales releases
Passenger BEV sales, million units	Group	0.321	0.911	1.575	1.765	2.257	H1 2026: 0.867; Aug YTD: 1.357	Year-end, June and August releases
Passenger PHEV sales, million units	Group	0.273	0.946	1.438	2.485	2.289	H1 2026: 0.910; Aug YTD: 1.265	Year-end, June and August releases
NEV production, million units	Group	0.607	1.877	3.045	4.304	4.537	H1 2026: 1.814; Aug YTD: 2.675	Year-end, June and August production-and-sales releases
Passenger BEV production, million units	Group	0.323	0.917	1.590	1.778	2.222	H1 2026: 0.871; Aug YTD: 1.362	Year-end, June and August production-and-sales releases
Passenger PHEV production, million units	Group	0.274	0.954	1.444	2.503	2.257	H1 2026: 0.914; Aug YTD: 1.268	Year-end, June and August production-and-sales releases
Power and energy-storage battery installed capacity, GWh	Group	37.921	89.836	150.909	194.705	285.634	Not disclosed in June or August 2026 release	December sales releases
Overseas revenue mix	Customer location	30.24%	21.57%	26.60%	28.55%	38.65%	H1 2026: about 52.6%	Annual and interim reports
Inventory turnover days	Consolidated	73	63	63	61	72	H1 2026: 109	Annual and interim reports
R&D expense, CNYB	Consolidated	7.991	18.654	39.575	53.195	57.978	H1 2026: 23.307	Official income statements
Government grants recognized in profit or loss, CNYB	Consolidated	2.263	1.677	4.621	10.660	12.634	H1 2026 not separately tabulated in the interim report	Annual-report grant notes; FY2021 five-year summary

Vehicle production and sales mix is fully official. BEV plus PHEV passenger units tie to passenger NEV production and sales each year. Commercial vehicles explain the residual between passenger and total NEV production and sales. BYD stopped oil-fueled vehicle production in March 2022; FY2022 still contains 4,635 legacy ICE units produced and 5,049 sold, while FY2023 onward is entirely NEV in the monthly schedule.

The broad auto-segment-revenue divided by NEV-sales proxy was CNY213.6k, CNY174.2k, CNY159.9k, CNY144.5k and CNY140.9k per vehicle in FY2021-FY2025, then CNY152.2k in H1 2026. This is **not an ASP**: the numerator includes batteries, photovoltaics, rail and other auto-related products, and the perimeter changed at the FY2022 taxonomy boundary. Use it only as a mix/revenue-intensity diagnostic.

Subsidy context: government grants recognized in profit or loss rose from CNY2.263B in FY2021 to CNY1.677B, CNY4.621B, CNY10.660B and CNY12.634B in FY2022-FY2025. FY2025 comprised asset-related grants in other income, income-related grants in other income, and finance-expense offsets. The annual report does not allocate grants by model or reportable segment. Trade context: BYD identifies geopolitical tensions and overseas trade barriers as risks and responds through localized production, an owned roll-on/roll-off fleet and local distribution. H1 2026 identifies operating plants in Brazil and Thailand and additional overseas capacity under construction.

1. Reporting structure and taxonomy

Current reportable segments are:

- **Mobile handset components, assembly and other products** — electronic components and assembly services, smart terminals, emerging AI-computing infrastructure, thermal management, precision manufacturing and related products.
- **Automobiles and related products and other products** — vehicles, molds and components, vehicle leasing and after-sales services, power batteries, lithium-ion and iron batteries, photovoltaics, rail transportation and related businesses.

FY2025 external revenue was CNY155.237B for mobile/electronics, 19.31% of Group revenue, and CNY648.646B for automobiles and related products, 80.68%. Adjustments/other external revenue was CNY0.083B, 0.01%.

Taxonomy investigation

The FY2021 Annual Report used three operating businesses: rechargeable batteries and photovoltaics; mobile components and assembly; and automobiles and related products. The FY2022 Annual Report combined rechargeable batteries and photovoltaics into the automobiles-and-related-products reportable segment and provided a restated FY2021 two-segment comparison. This package therefore uses the FY2022 restated FY2021 revenue and reportable-segment-profit values, not the old FY2021 three-segment table. The two-segment statutory taxonomy is comparable from restated FY2021 through H1 2026. Later narrative increasingly calls the first segment the “electronics business,” but the statutory segment label and financial perimeter remain the mobile-handset-components and assembly category.

Geography

Customer location	FY2021	FY2022	FY2023	FY2024	FY2025	H1 2026
PRC including Hong Kong, Macau and Taiwan	69.76%	78.43%	73.40%	71.45%	61.35%	about 47.4%
Overseas	30.24%	21.57%	26.60%	28.55%	38.65%	about 52.6%
Overseas revenue, CNYB	65.361	91.470	160.216	221.863	310.732	about 181.3

FY2025 overseas vehicle exports exceeded one million units and rose 1.4 times year on year. H1 2026 exports were 792,000 units, up 67.8%, and represented about 43.8% of H1 NEV sales. Country-level revenue dollars are not separately disclosed.

2. Consolidated historicals

Official FY2025 Annual Report restated figures control. FMP live values are referenced where standardized cash-flow or share-count data are used. Amounts are CNYB except per-share and percentages.

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
Revenue	216.142	424.061	602.315	777.102	803.965	HKEX-AR25 five-year comparison
Operating income	4.632	21.542	38.103	50.486	40.185	HKEX-AR25 restated income statement
Operating margin	2.14%	5.08%	6.33%	6.50%	5.00%	Calculated
Group net income	3.967	17.713	31.344	41.588	33.761	HKEX-AR25
Parent net income	3.045	16.622	30.041	40.254	32.619	HKEX-AR25
Diluted EPS, CNY	0.35	1.90	3.44	4.61	3.58	Official restated basis; FMP comparison
Diluted shares, million	8,618	8,733	8,724	8,725	9,026	FMP-IS; FY2025 official Note 60 agrees
Capex	37.344	97.457	122.094	97.360	152.749	FMP-CF standardized cash capex
FCF	28.123	43.381	47.632	36.094	-94.793	FMP-CF standardized CFO less capex
Approximate ROIC	6.6%	33.3%	54.0%	58.5%	13.4%	Calculation below

FMP discrepancy log: live FY2025 FMP reports revenue CNY773.468B, operating income CNY21.904B and parent net income CNY31.775B versus official CNY803.965B, CNY40.185B and CNY32.619B. Revenue misses official by 3.79%, so the required live FMP revenue spot-check does **not** tie within 1%. The resolution is an explicit official-source override, permitted for the foreign-issuer mapping case; the mismatch is not hidden. FY2024 and earlier revenue rows tie the latest official restated series.

ROIC definition: NOPAT equals official operating income multiplied by one minus reported tax expense divided by pretax income. Invested capital equals FMP standardized total stockholders’ equity plus total debt less cash and equivalents less short-term investments, using year-end balances. Tax rates were 12.19%, 15.97%, 15.90%, 16.29% and 15.07%. NOPAT was CNY4.067B, CNY18.101B, CNY32.046B, CNY42.262B and CNY34.127B. Invested capital was CNY61.416B, CNY54.295B, CNY59.299B, CNY72.238B and CNY253.862B. This is a screening ROIC, not the final forecast return measure: FMP's FY2025 debt and equity mapping diverges from the statutory balance sheet.

3. Segment historicals

The exact common profit basis is **Adjusted profit before tax (reportable segment profit)**. It excludes specified fair-value changes, finance costs, non-operating lines, other income, asset-disposal items, investment income other than associates/JVs, property-sale economics, related taxes and headquarters administrative costs. It is not statutory operating income.

Mobile handset components, assembly and other products

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
External revenue	86.454	98.815	118.577	159.609	155.237	HKEX-AR22 through HKEX-AR25
YoY	n/a	14.30%	20.00%	34.60%	-2.74%	Calculated
Adjusted profit before tax (reportable segment profit)	1.843	1.893	4.335	4.247	2.750	Official segment notes
Margin on exact metric	2.13%	1.92%	3.66%	2.66%	1.77%	Calculated

Automobiles and related products and other products

Metric	FY2021	FY2022	FY2023	FY2024	FY2025	Source
External revenue	128.960	324.691	483.453	617.382	648.646	HKEX-AR22 through HKEX-AR25
YoY	n/a	151.78%	48.90%	27.70%	5.06%	Calculated
Adjusted profit before tax (reportable segment profit)	3.136	18.642	31.108	36.333	28.417	Official segment notes
Margin on exact metric	2.43%	5.74%	6.43%	5.88%	4.38%	Calculated

FY2021 uses the FY2022 report's restated two-segment figures. Do not splice in the old separate rechargeable-battery segment.

Latest interim segment update

Segment	H1 2025 revenue	H1 2026 revenue	YoY	H1 2025 adjusted PBT	H1 2026 adjusted PBT	H1 2026 margin
Mobile handset components, assembly and other products	68.744	69.405	0.96%	1.335	0.194	0.28%
Automobiles and related products and other products	302.506	275.341	-8.98%	12.805	11.161	4.05%

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

Sealed packet: `statutory_bridge.json`. Exact-byte SHA-256: `bc654bb77b76391ec3995b8bfe55a804b2fb2b073f48df6db2d11c7389f7fb64`. Common segment basis: `Adjusted profit before tax (reportable segment profit)`. Reporting currency and scale: CNY millions. Source records preserved from the sealed packet are `HKEX_2025_ANNUAL`, local path `raw/hkex_2025_annual_report.pdf`, hash `7906b6647eb7cf3ab5986e9b8eda8f707969c64dc54c67b83b606744ef9f4846`; `HKEX_2026_INTERIM`, local path `raw/hkex_2026_interim_report.pdf`, hash `79c3e9a9cfb58bba2a1f765ee877a624c3ffd432c59e67e548573a21830893a3`; and `QF_TTM_RECONCILIATION`, local path `raw/qf_ttm_bridge_calculation.json`, hash `38d6cd401352e48e463b2ea65d65dd106f16f813b83247001e1a5c933b931a53`.

FY2025 bridge — CNY millions

Bridge line	Classification	Value	Source ID	Running subtotal
Mobile handset components, assembly and other products	segment profit	2,749.565	HKEX_2025_ANNUAL	2,749.565
Automobiles and related products and other products	segment profit	28,417.336	HKEX_2025_ANNUAL	31,166.901

Bridge line	Classification	Value	Source ID	Running subtotal
Sum of reportable segment profit	segment profit subtotal	31,166.901	HKEX_2025_ANNUAL	31,166.901
Adjustments and eliminations	corporate unallocated	8,586.148	HKEX_2025_ANNUAL	39,753.049
Consolidated segment profit metric	subtotal	39,753.049	HKEX_2025_ANNUAL	39,753.049
Non-operating income (reversed to operating-profit basis)	operating	-1,132.191	HKEX_2025_ANNUAL	38,620.858
Non-operating expenses (reversed to operating-profit basis)	operating	1,563.851	HKEX_2025_ANNUAL	40,184.709
Statutory operating income	statutory subtotal	40,184.709	HKEX_2025_ANNUAL	40,184.709
Non-operating income	other non-operating	1,132.191	HKEX_2025_ANNUAL	41,316.900
Non-operating expenses	other non-operating	-1,563.851	HKEX_2025_ANNUAL	39,753.049
Pretax income	statutory subtotal	39,753.049	HKEX_2025_ANNUAL	39,753.049
Income tax expenses	tax	-5,992.291	HKEX_2025_ANNUAL	33,760.758
Net income	statutory subtotal	33,760.758	HKEX_2025_ANNUAL	33,760.758

TTM ended 2026-06-30 bridge — CNY millions

Bridge line	Classification	Value	Source ID	Running subtotal
Mobile handset components, assembly and other products	segment profit	1,608.320	QF_TTM_RECONCILIATION	1,608.320
Automobiles and related products and other products	segment profit	26,772.943	QF_TTM_RECONCILIATION	28,381.263
Sum of reportable segment profit	segment profit subtotal	28,381.263	QF_TTM_RECONCILIATION	28,381.263
Adjustments and eliminations	corporate unallocated	7,075.858	QF_TTM_RECONCILIATION	35,457.121
Consolidated segment profit metric	subtotal	35,457.121	QF_TTM_RECONCILIATION	35,457.121
Non-operating income (reversed to operating-profit basis)	operating	-594.475	QF_TTM_RECONCILIATION	34,862.646
Non-operating expenses (reversed to operating-profit basis)	operating	1,346.132	QF_TTM_RECONCILIATION	36,208.778
Statutory operating income	statutory subtotal	36,208.778	QF_TTM_RECONCILIATION	36,208.778
Non-operating income	other non-operating	594.475	QF_TTM_RECONCILIATION	36,803.253
Non-operating expenses	other non-operating	-1,346.132	QF_TTM_RECONCILIATION	35,457.121
Pretax income	statutory subtotal	35,457.121	QF_TTM_RECONCILIATION	35,457.121
Income tax expenses	tax	-5,401.243	QF_TTM_RECONCILIATION	30,055.878
Net income	statutory subtotal	30,055.878	QF_TTM_RECONCILIATION	30,055.878

All five sealed residuals are zero for both periods. Allowed tolerances are CNY20.0923545M for FY2025 and CNY18.104389M for TTM.

Forecast-driver schedule

Historical bridge line	FY value	TTM value	Forecast treatment	Driver and source	Bear, base and bull rule
Adjustments and eliminations	8,586.148	7,075.858	Percentage of consolidated revenue, separately audited	Official segment bridge	Bear fades faster; base normalizes; bull retains TTM ratio
Non-operating income (reversed to operating-profit basis)	-1,132.191	-594.475	Forecast income independently, then reverse only for operating bridge	Statutory statement	Bear lower; base normalized average; bull recent run rate
Non-operating expenses (reversed to operating-profit basis)	1,563.851	1,346.132	Forecast independently as revenue percentage, then reverse	Statutory statement	Bear higher; base TTM ratio; bull lower ratio

Historical bridge line	FY value	TTM value	Forecast treatment	Driver and source	Bear, base and bull rule
Non-operating income	1,132.191	594.475	Below-line schedule, opposite of operating reversal	Statutory statement	Must equal operating reversal in magnitude
Non-operating expenses	-1,563.851	-1,346.132	Below-line schedule, opposite of operating reversal	Statutory statement	Must equal operating reversal in magnitude
Income tax expenses	-5,992.291	-5,401.243	Tax-rate schedule applied to pretax income	FY 15.07%; TTM 15.23%	Bear 17%; base 15.5%; bull 14%

STATUTORY_BRIDGE_STATUS: VERIFIED — CLEARED FOR FORECASTING

4. Product and sub-segment historicals

Dollar-disclosed revenue

Segment	Product or disclosure unit	What it is	Dollar disclosure?	Last three years revenue and source
Mobile handset components, assembly and other products	Reportable segment	Components, assembly, smart terminals and AI infrastructure	Yes, segment only	FY2023 CNY118.577B; FY2024 CNY159.609B; FY2025 CNY155.237B; official notes
Automobiles and related products and other products	Reportable segment	Vehicles, components, batteries, PV, rail and related operations	Yes, segment only	FY2023 CNY483.453B; FY2024 CNY617.382B; FY2025 CNY648.646B; official notes
Group geography	Overseas customers	Revenue attributed by customer location	Yes, consolidated	FY2023 CNY160.216B; FY2024 CNY221.863B; FY2025 CNY310.732B
Group geography	PRC customers	Revenue attributed by customer location	Yes, consolidated	FY2023 CNY442.099B; FY2024 CNY555.239B; FY2025 CNY493.233B

The filings do **not** separately disclose revenue dollars for BYD/Dynasty/Ocean, Denza, Fangchengbao, Yangwang, BEV, PHEV, passenger vehicle, commercial vehicle, power batteries, energy storage, photovoltaics, rail, smart terminals, components, assembly, AI servers or liquid cooling. No dollars are back-solved from growth rates. Vehicle units and operating KPIs are kept separate from revenue.

Operating disclosure without product revenue dollars

Segment	Product or KPI	Disclosure method	Recent growth or level	Source
Automobiles	Total NEV sales	Monthly units	FY2025 4.602M, +7.73%; H1 2026 1.809M, -15.72%; Aug YTD 2.668M, -6.84%	December 2025, June and August 2026 releases
Automobiles	Passenger BEV	Monthly units	FY2025 2.257M, +27.86%; H1 2026 0.867M, -15.23%; Aug YTD 1.357M, -3.14%	Same releases
Automobiles	Passenger PHEV	Monthly units	FY2025 2.289M, -7.91%; H1 2026 0.910M, -16.51%; Aug YTD 1.265M, -11.22%	Same releases
Automobiles	Premium brands	Narrative units	Combined sales more than doubled FY2025; H1 2026 +61.0% and 12.8% of passenger sales	HKEX-AR25 and HKEX-IR26
Automobiles	Exports	Units and narrative	FY2025 over 1M, up 1.4 times; H1 2026 0.792M, +67.8%	HKEX-AR25 and HKEX-IR26
Batteries	Installed capacity	GWh	FY2025 285.634GWh, +46.7%	December 2025 release
Energy storage	Orders and projects	Contract capacity	Masdar 11.275GWh; Grenergy 2.6GWh; Elena 3.5GWh; CGN 1.2GWh	HKEX-IR26
Electronics	Components and assembly	Narrative	Components decreased; assembly grew with major overseas clients	HKEX-AR25 and HKEX-IR26

Segment	Product or KPI	Disclosure method	Recent growth or level	Source
Electronics	AI infrastructure	Milestones	Server models in bulk shipment; liquid-cooling cold plates entered ramp	HKEX-IR26

5. Most recent quarterly trend

BYD's FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q2, covering April-June 2026, reported on 2026-08-28 via the [2026 Interim Results Announcement](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf).

BYD does not publish quarterly reportable-segment revenue or margins. The last-four-quarter table is consolidated. Q4 and Q2 are exact subtraction of non-overlapping official year-to-date periods; the derivation is labeled rather than presented as directly disclosed.

Quarter	Revenue	YoY	Operating margin	Source and derivation
Q3 FY2025	194.985	-3.05%	5.22%	HKEX-Q325 quarter revenue; operating profit equals 9M less H1
Q4 FY2025	237.699	-13.52%	4.75%	HKEX-AR25 FY less HKEX-Q325 9M
Q1 FY2026	150.225	-11.82%	3.13%	HKEX-Q126, reported 2026-04-28
Q2 FY2026	194.590	-3.15%	5.16%	HKEX-IR26 H1 less HKEX-Q126 Q1

The latest directly disclosed segment period is H1 2026: automotive revenue fell 8.98%, mobile/electronics rose 0.96%, and consolidated revenue fell 7.13%. The live largest-segment spot-check confirms automotive H1 values CNY275.341B versus CNY302.506B.

6. Management commentary on forward growth

BYD does not publish English quarterly earnings-call transcripts in the official HKEX source set examined, and the live FMP transcript route returned an empty response. The following short verbatim excerpts are issuer statements from the official annual/interim Management Discussion and Analysis, not speaker-attributed earnings-call remarks; interpretations are ours. Absence of formal numeric segment guidance is material.

Automobiles, batteries, energy storage and rail

Source date and official document	Verbatim official snippet	Topic	Modeling interpretation
2026-03-27, BYD FY2025 MD&A	“growth driven by technological innovation”	Strategy	Tie volume and margin to technology cycles
2026-03-27, BYD FY2025 MD&A	“high-level R&D investment”	R&D	R&D remains structurally elevated
2026-03-27, BYD FY2025 MD&A	“premium pricing strategy”	Overseas pricing	Export mix can support unit economics
2026-03-27, BYD FY2025 MD&A	“new core growth engine”	Overseas	Overseas contribution should rise
2026-08-28, BYD H1 2026 MD&A	“FLASH Charging Planet”	Charging ecosystem	Infrastructure supports adoption and capex
2026-08-28, BYD H1 2026 MD&A	“robust growth momentum”	Overseas	Exports offset some domestic weakness
2026-08-28, BYD H1 2026 MD&A	“localized manufacturing”	Tariffs	Overseas capacity hedges trade friction
2026-08-28, BYD H1 2026 MD&A	“scale up the deployment”	Charging	Rollout requires capital and execution

The interim outlook specifically plans 6,000 flash-charging stations overseas, says overseas momentum remains an important support for sales, and commits to accelerating overseas production capacity. These are strategic aspirations, not revenue guidance. The reports provide no numeric FY2026 automotive revenue, margin or unit-sales target.

Mobile components, assembly and electronics

Source date and official document	Verbatim official snippet	Topic	Modeling interpretation
2026-03-27, BYD FY2025 MD&A	“AI computing infrastructure”	New end market	Adds an option beyond smartphones
2026-08-28, BYD H1 2026 MD&A	“mass production and delivery”	Execution	Products moved beyond design stage
2026-08-28, BYD H1 2026 MD&A	“bulk shipment”	Servers	Contribution begins but is unquantified
2026-03-27, BYD FY2025 MD&A	“liquid cooling”	Data center	Supports higher-growth mix
2026-08-28, BYD H1 2026 MD&A	“major overseas clients”	Assembly	Customer concentration remains important
2026-08-28, BYD H1 2026 MD&A	“created new engines to the Group’s business”	Diversification	Model a gradual diversification
2026-08-28, BYD H1 2026 MD&A	“several server models”	Product breadth	Multiple programs reduce model reliance
2026-08-28, BYD H1 2026 MD&A	“mass production ramp-up phase”	Liquid cooling	Ramp should be phased and margin-sensitive

Management states weak smartphone demand and product-specification changes pressured components while assembly benefited from major overseas customers. There is no formal electronics revenue or margin guidance. One customer represented CNY100.737B of FY2025 operating revenue and CNY46.017B of H1 2026 revenue.

7. Capital allocation history

Amounts are CNYB. Capex, FCF, dividends, buybacks and acquisition cash flow use live FMP standardized cash flow; R&D uses official statements. FY2025 official cash paid for fixed, intangible and other long-term assets was CNY156.808B versus FMP capex CNY152.749B. The difference is preserved.

Year	Capex	Capex or revenue	R&D expense	R&D or revenue	Buybacks	Dividends paid	Acquisitions net cash flow	Source
FY2021	37.344	17.28%	7.991	3.70%	1.100	2.433	0.222	FMP-CF; HKEX-AR25
FY2022	97.457	22.98%	18.654	4.40%	1.810	1.553	0.096	FMP-CF; HKEX-AR25
FY2023	122.094	20.27%	39.575	6.57%	0.000	3.974	-13.881	FMP-CF; HKEX-AR25
FY2024	97.360	12.53%	53.195	6.85%	0.400	9.636	-0.104	FMP-CF; HKEX-AR25
FY2025	152.749	19.00%	57.978	7.21%	0.000	14.133	2.073	FMP-CF; HKEX-AR25

FY2025 R&D **investment** was CNY63.4B, up 17%, versus statutory R&D **expense** CNY57.978B; the difference reflects capitalization and scope. H1 2026 investment was CNY28.9B and expense CNY23.307B. FY2025 segment capex in the official note was CNY5.022B mobile/electronics, CNY134.492B automotive and CNY0.709B adjustments, totaling CNY140.222B on the long-term-asset-additions definition.

FY2025 FCF was negative on standardized and official cash-capex definitions. The Group simultaneously completed a USD5.6B H-share placement in March 2025 and increased debt. Forward distributions should be subordinated to manufacturing, R&D and overseas expansion cash needs rather than extrapolated mechanically.

TTM FCF ended 2026-06-30 remained negative. On the fully official definition of operating cash flow less cash paid to acquire and construct fixed, intangible and other long-term assets, FY2025 FCF was CNY-97.672B, H1 2025 was CNY-48.691B and H1 2026 was CNY-7.368B; the non-overlapping FY2025-minus-H1-2025-plus-H1-2026 construction gives TTM FCF of **CNY-56.350B**. A fresh live FMP quarterly sum independently gives CNY-57.106B; the 1.34% difference reflects FMP's standardized capex mapping, so the official construction controls.

8. Balance sheet snapshot at FY2025

Item	CNYB	Source
Cash and cash equivalents	68.395	HKEX-AR25 Note 62
Monetary funds including restricted amounts	75.425	HKEX-AR25 balance sheet
Trading financial assets	54.533	HKEX-AR25 balance sheet
Bank borrowings	103.375	HKEX-AR25 maturity schedule

Item	CNYB	Source
Bonds payable	5.030	HKEX-AR25 Note 35
Total debt excluding leases	108.404	Official bank borrowings plus bonds
Net debt after cash and trading assets	-14.523	Calculated; negative means net cash
EBITDA proxy	118.051	Operating income plus segment-note D&A
Net debt or EBITDA	-0.12x	Calculated
Goodwill plus intangible assets	45.913	HKEX-AR25 balance sheet
Parent equity	246.275	HKEX-AR25 five-year comparison
Tangible book value	200.362	Parent equity less goodwill and intangibles
Inventory	138.421	HKEX-AR25 balance sheet

FMP reports FY2025 total debt CNY165.420B and short-term investments CNY63.739B, materially different from the issuer's bank-loan-and-bond perimeter. The official debt definition controls. Lease liabilities, supplier finance and other liabilities should be modeled separately.

9. Recent corporate actions and operating events

- **2025-10-30:** Q3 revenue CNY194.985B, down 3.05%, and parent net income CNY7.823B, down 32.60%; [HKEX-Q325](https://www1.hkexnews.hk/listedco/listconews/sehk/2025/1030/2025103001667.pdf).
- **2026-03-05:** BYD unveiled second-generation Blade Battery and flash-charging technology, followed by the Annual Report's wider commercialization plan; [HKEX-AR25](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0327/2026032703008.pdf).
- **2026-04-28:** Q1 revenue fell 11.82% and parent net income fell 55.38%; [HKEX-Q126](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0428/2026042803001.pdf).
- **2026-08-28:** H1 confirmed automotive contraction, electronics revenue stability but profit compression, and proposed board changes; [HKEX-IR26](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0828/2026082801633.pdf).
- **2026-09-01:** August NEV sales were 440,293 and exports 189,466; August YTD sales were 2.668M, down 6.84%; [August release](https://www1.hkexnews.hk/listedco/listconews/sehk/2026/0901/2026090101971.pdf).
- No material acquisition or divestiture completed in the last 12 months was identified. The major balance event was the March 2025 H-share placement, slightly outside the strict cutoff.

10. Open data gaps and evidence boundaries

Classification	Gap	Sources and searches completed	Required treatment
True non-disclosure	Product revenue for BEV, PHEV, batteries, energy storage, PV, rail, brands and electronics sub-products	FY2021-FY2025 annuals and H1 2026; searched revenue, product, segment, brand, battery, storage, terminal, server, cooling	Do not fabricate; use segment revenue and units
True non-disclosure	Quarterly reportable-segment revenue and profit	Q3 2025, FY2025, Q1 2026, H1 2026; searched segment reporting	Use consolidated quarters and H1 segment trend
True non-disclosure	Clean vehicle ASP	Annual/interim; searched average selling price, pricing and product mix	Treat revenue-per-unit as broad diagnostic
True non-disclosure	Dealer count, dealer inventory and retail-wholesale bridge	Annual/interim; searched dealer, distributor, channel inventory, inventory turnover	Use consolidated inventory days; flag opacity
True non-disclosure	Energy-storage shipment GWh by year and segment economics	Annual/interim and sales releases; searched shipment, GWh, energy storage	Use contracts and installed capacity only
True non-disclosure	Formal FY2026 revenue, margin or unit guidance	Annual/interim management discussion and FMP transcript route	Model scenarios independently
Estimated	Overseas revenue dollars	Official total revenue times official location percentage	Suitable for mix analysis; rounding noted
Estimated	Q4 2025 and Q2 2026 quarters	Exact official FY or H1 less official prior YTD	Arithmetic tie-out; not standalone disclosure

Classification	Gap	Sources and searches completed	Required treatment
Estimated	ROIC	Official NOPAT with FMP invested-capital perimeter	Screening only; repair debt perimeter later
Not fetched or omitted	Monthly export sum for FY2021-FY2024	Year-end releases give December overseas units; annuals give selected totals	Backfill only if monthly history is required
Not applicable	P&C ownership perimeter and fee bridge	BYD is not an insurer	No insurer schedule required

No open item exists in the segment-profit-to-statutory-operating-income bridge. The sealed two-segment adjusted-PBT bridge is reproduced exactly and all five residuals are zero. The unresolved modeling choices are operational: domestic unit recovery, premium/export mix, overseas-localization margin and capex, and electronics AI-infrastructure growth versus smartphone pressure.

Required self-check record

- Largest segment recency: the live 2026 Interim Results Announcement contains automotive H1 revenue CNY275,341.358M versus CNY302,506.271M, a calculated decline of 8.98%.
- Management-source check: the live 2025 Annual Report contains “growth driven by technological innovation” in the issuer's MD&A; publication date 2026-03-27. No individual speaker attribution is applied to the written excerpt.
- Full-year revenue check: live FMP FY2025 revenue CNY773.468B does not tie official CNY803.965B within 1%; discrepancy is 3.79%. Official HKEX override controls and the mismatch is logged.
- Production disclosure check: live December 2021-2025 and June/August 2026 HKEX releases provide production beside sales; the five-year NEV/BEV/PHEV production series is included above.
- TTM FCF check: official FY2025, H1 2025 and H1 2026 cash-flow statements produce CNY-56.350B; fresh live FMP quarterly data corroborate the sign and magnitude at CNY-57.106B.