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**STRATEGIC CFO CHALLENGE: FINANCIAL ANALYSIS
AND STRATEGIC PLAN OF BYD**

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1. Introduction

1.1 Background of the Study

The international electric vehicle (EV) market has seen extensive proliferation because of the growing environmental issues, government support, and technological innovations in the battery systems. Large automotive companies are moving towards electric mobility as opposed to internal combustion engines, which increases competition and capital requirements. Financial strategy is, in this respect, a key element in the realization of long-term profitability, efficient use of capital and long-term sustainable growth especially in a capital-intensive sector as EV manufacturing (Mojumder et al., 2025).

1.2 Company Overview: BYD Company Limited

BYD was established in 1995 but started its operations as a manufacturer of batteries and then moved to the automobile industry. The company currently enjoys three main parts of operation including electric vehicles, rechargeable batteries and electronic components. BYD is one of the most successful EV manufacturers in the world with significant operations in China and growing activities in Europe, Asia, and Latin America and competes with the well-established automotive industry and new-energy players (BYD, 2025).

1.3 Objectives of the Report

The purpose of the report is to analyze the five-year financial performance of BYD, to present the main financial and operational issues, to offer the strategic solutions in the financial sphere, and to evaluate the potential investment opportunity.

1.4 Methodology

The purpose of the report is to analyze the five-year financial performance of BYD, to present the main financial and operational issues, to offer the strategic solutions in the financial sphere, and to evaluate the potential investment opportunity.

2. Financial Health Check

2.1 Overview of Financial Performance

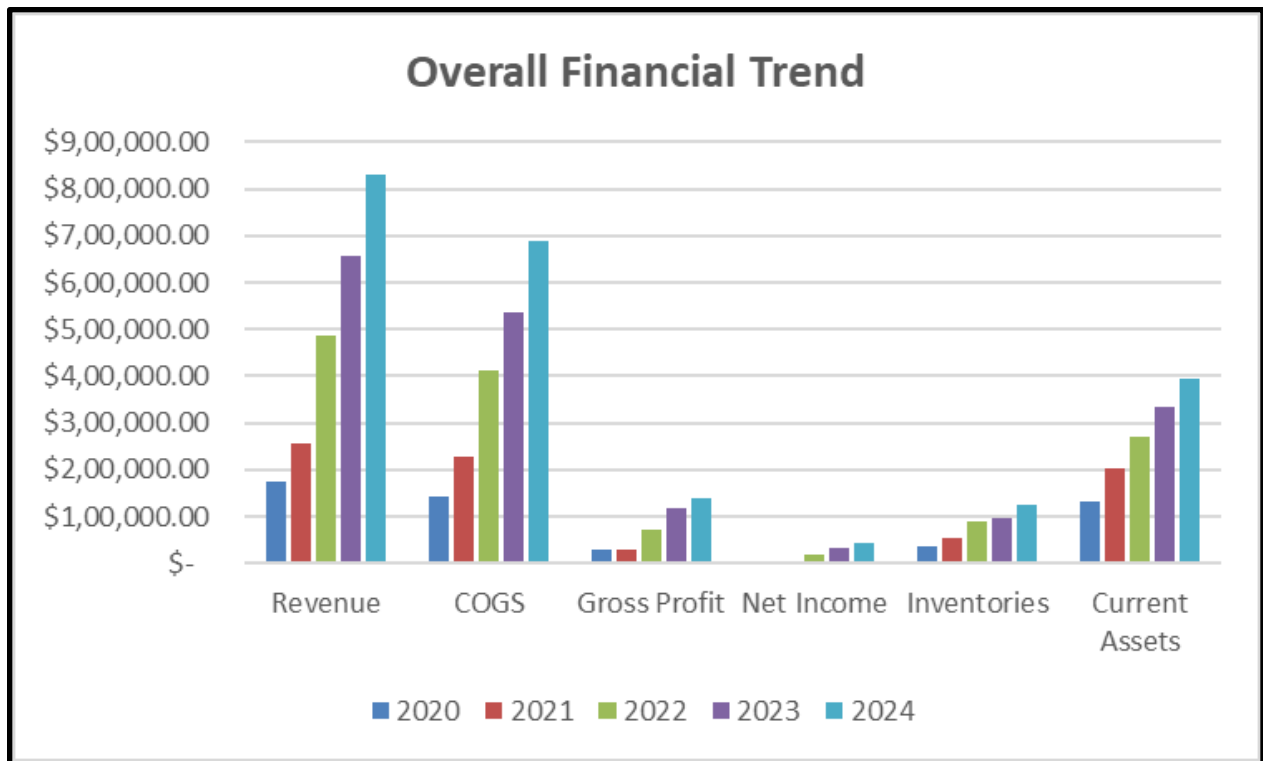


Figure 1: Overall Financial Highlights

(Source: Self Created)

BYD revenue increased significantly by HKD 1,74 billion (FY2020) to HKD 830 billion (FY 2024) with a CAGR of approximately 47.7%. The international adoption of EV, incentive policies in China, the Blade Battery innovation as well as international growth were the forces behind the growth. FY2023 is significantly upsurged by 88.8%, which underscores recurring good news after the pandemic and increasing fuel prices. The increase in gross profit was great, but the margin was not much as there was a pressure on prices (Redaktion , 2026). EBIT and net income became more stable, which means increased efficiency in the operations. Cash flow operations were not bad and varied with an increase in working capital and a high capital expenditure affecting the free cash flow.

2.2 Ratio Analysis

2.2.1 Profitability Ratios

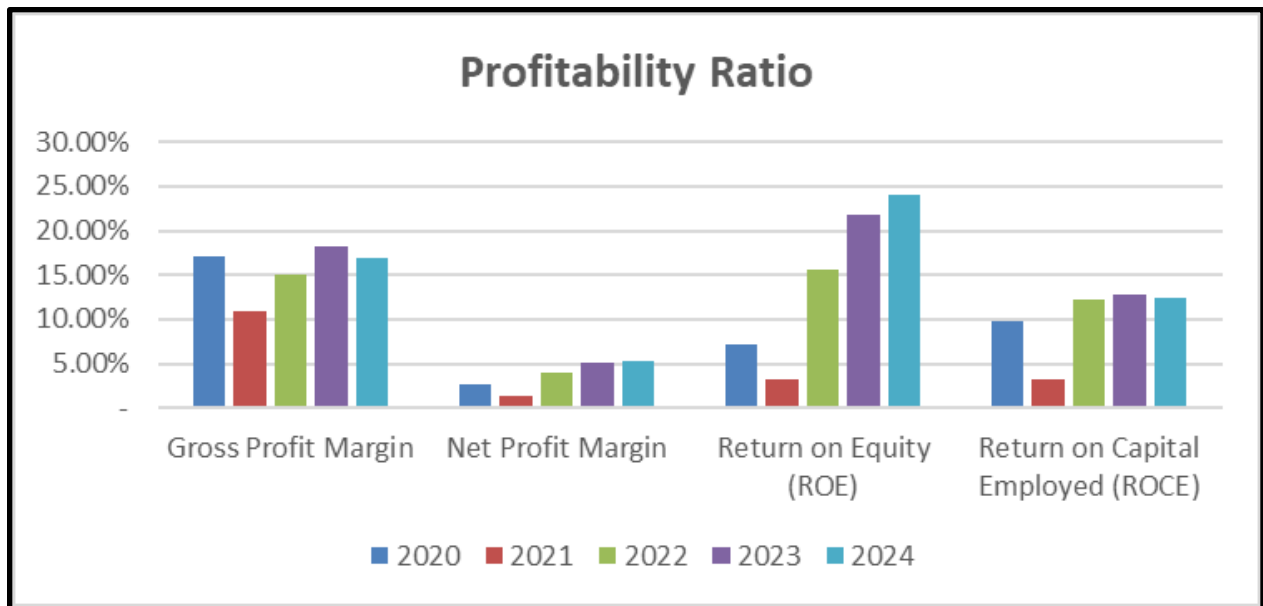


Figure 2: Profitability Ratios

(Source: Self Created)

The profitability ratios of BYD tell the story about its impressive recovery. The FY2021 decrease in all margins could be explained by the steep investments in the price of raw materials lithium carbonate prices doubled in 2021 alone, which is in line with the global commodity supercycle after the COVID-19 stimulus shock. The ROE increase of 7.2% (FY 2020) to 24.1 percent (FY 2024) is an indication that there is an increase in the leverage of operation as well as the fact that BYD is gaining more pricing power as the global leader of EVs. Nevertheless, the fact that ROCE is dropping to 5.9% in FY2024 indicates that the new capital creature that BYD worked so hard to acquire is not yet yielding the corresponding returns (Reuters Staff, 2025).

2.2.2 Liquidity Ratios

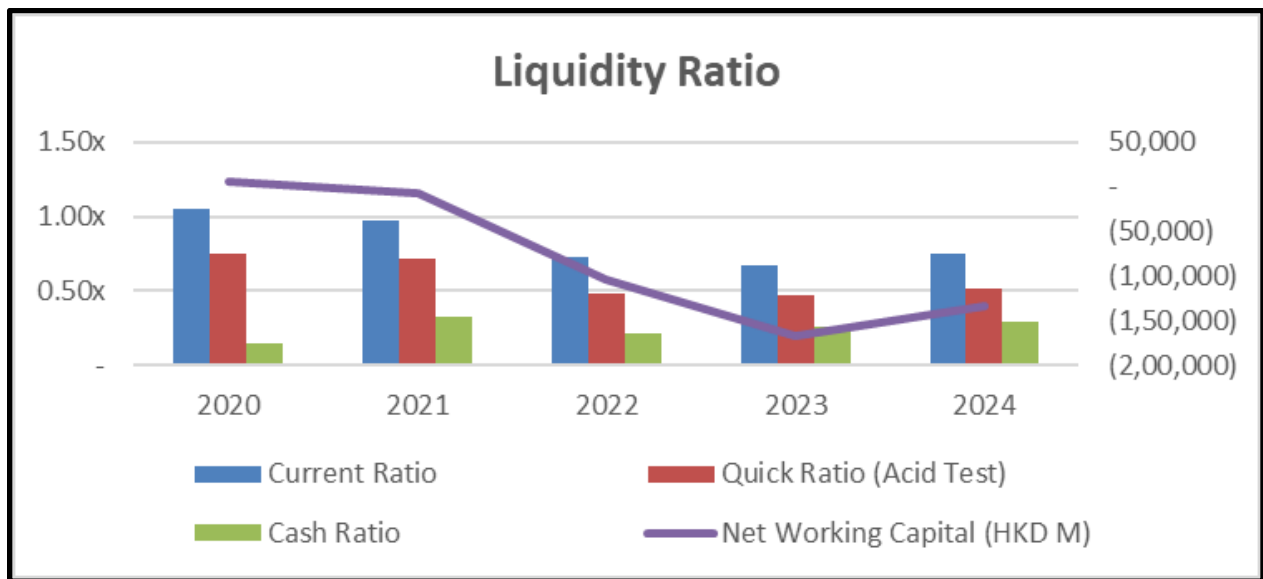


Figure 3: Liquidity Ratios

(Source: Self Created)

The liquidity ratios of BYD give a warning. Since FY2021, the current ratio has dropped below the traditional 1.0x level, with the current ratio of 0.75x FY2024 indicating high short-term reliance on the liquidation of inventory. This weakness is enhanced in a climate of escalating short-term interest rates: federal funds rate of the US Federal Reserve is lifted between 2022-2023 between near-zero and 5.25-5.50% rising global refinancing expenses. The use of supplier credit (HKD 257 billion in accounts payable) by BYD as an alternative to traditional liquidity is a structural characteristic and is not an acute risk as long as supplier relations are sound (Liang, 2024).

2.2.3 Efficiency Ratios

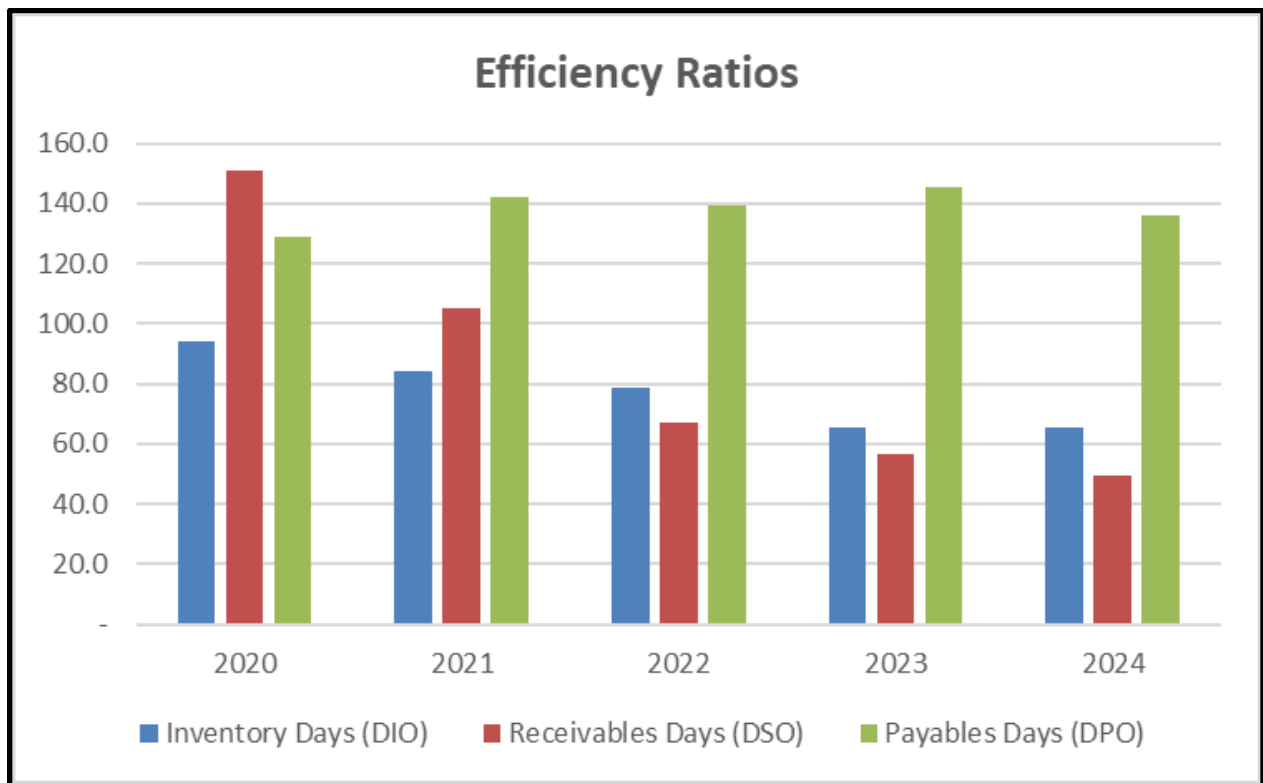


Figure 4: Efficiency Ratios

(Source: Self Created)

The ratios of efficiency indicate that BYD has improved its operations generally. The significant increase in the turnover of receivables (2.42x to 7.39x) is due to the shift of BYD towards an increased B2B fleet sale (with longer credit terms) to direct-to-consumer EVs sale (with shorter credit terms). Such change minimizes the exposure of credit risk and converts cash at a faster rate. A sequential improvement of 1.0x by FY2024 in asset turnover would be a positive sign of taking advantage of the increasing asset base of BYD (Mengyao, 2021).

2.2.4 Gearing (Leverage) Ratios

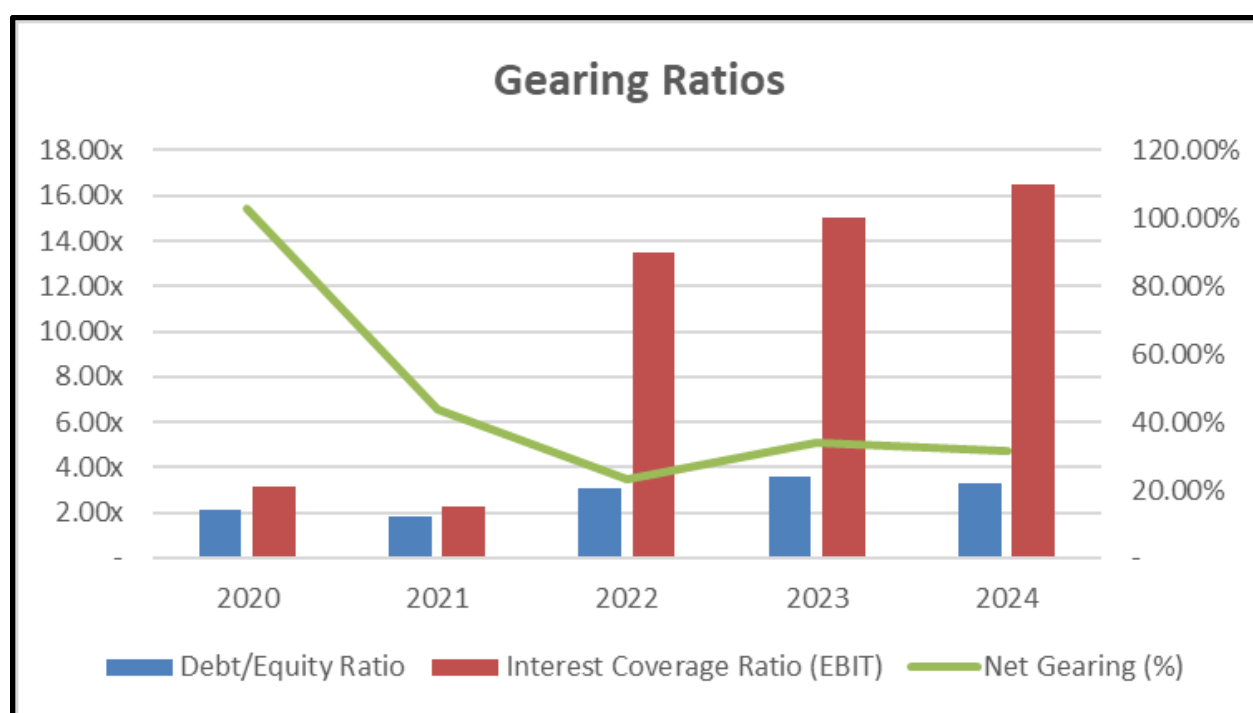


Figure 5: Gearing (Leverage) Ratios

(Source: Self Created)

The ratio of debt-to-equity seems to be very high at 3.31x in FY2024, but it has trade payables and the accruals in total liabilities therein- a characteristic typical of manufacturing businesses with huge supplier credit books. The interest coverage of 16.52x is very encouraging: BYD is generating over 16 times the interest payable, based on operating profit, which offers a lot of debt service cover even in a situation where the earnings become unsustainable (Allianz Trade, 2024). The net gearing of 33.9 is low compared with others. One of the most remarkable positive changes in the financial profile of BYD is the increase in interest coverage, which is 3.12x in FY2020 and 16.52x in FY2024 due to the growth of earnings and the falling interest burden.

2.2.5 Investment or Market Ratios

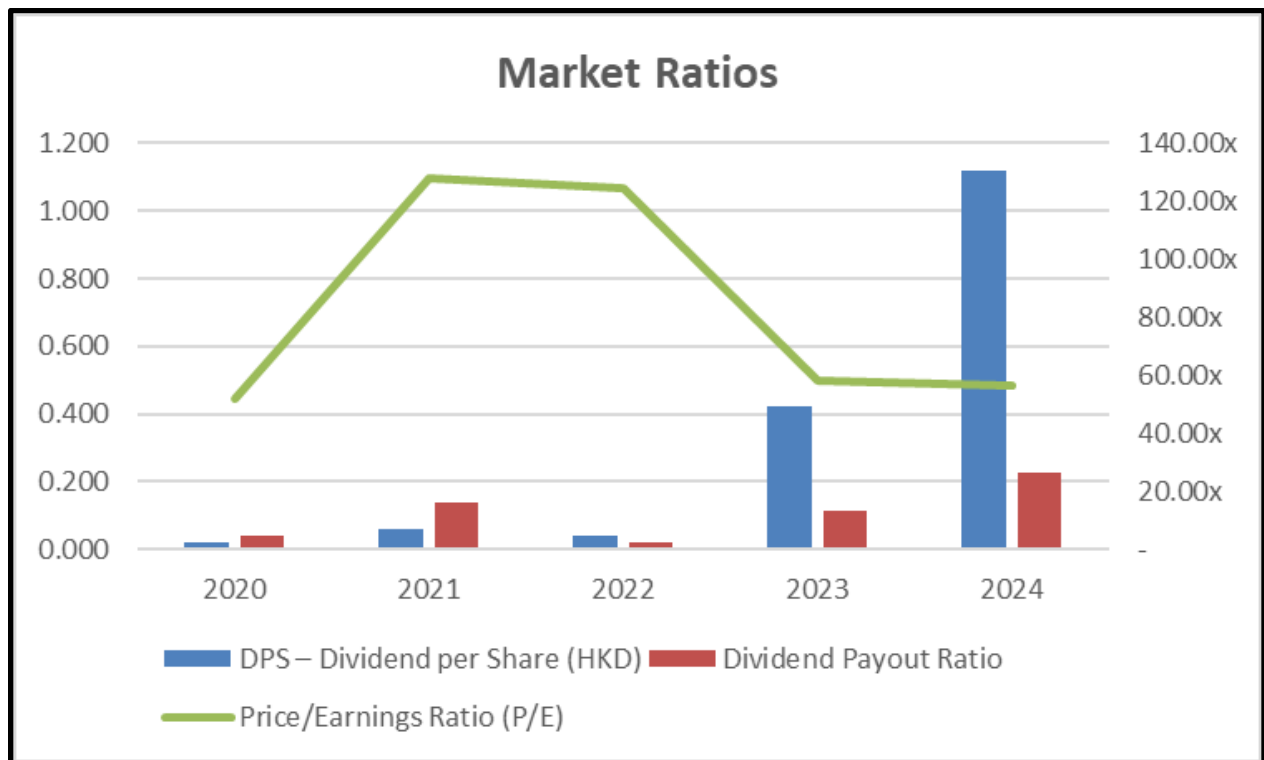


Figure 6: Investment or Market Ratios

(Source: Self Created)

BYD DPS has increased by a margin of 8.6 times as 0.022 to 1.121 over the period of five years and this is a testament of the extraordinary leverage that the earnings model of BYD possesses as revenues increase with scale. The P/E ratio is high in comparison with the traditional automotive counterparts (Ford trades at 6-8x, Toyota at 10-12x), as the premium market should attach to BYD as an EV growth story and battery technology leader (Zeng, 2024). The dividend payout ratio rise to 22.4% indicates that BYD is becoming more confident that its earnings stream can be sustained, but the company is rightfully keeping most profits to reinvestment due to its capital-intensive expansion programme (Simply Wall, 2023).

2.2.6 Cash Flow Analysis

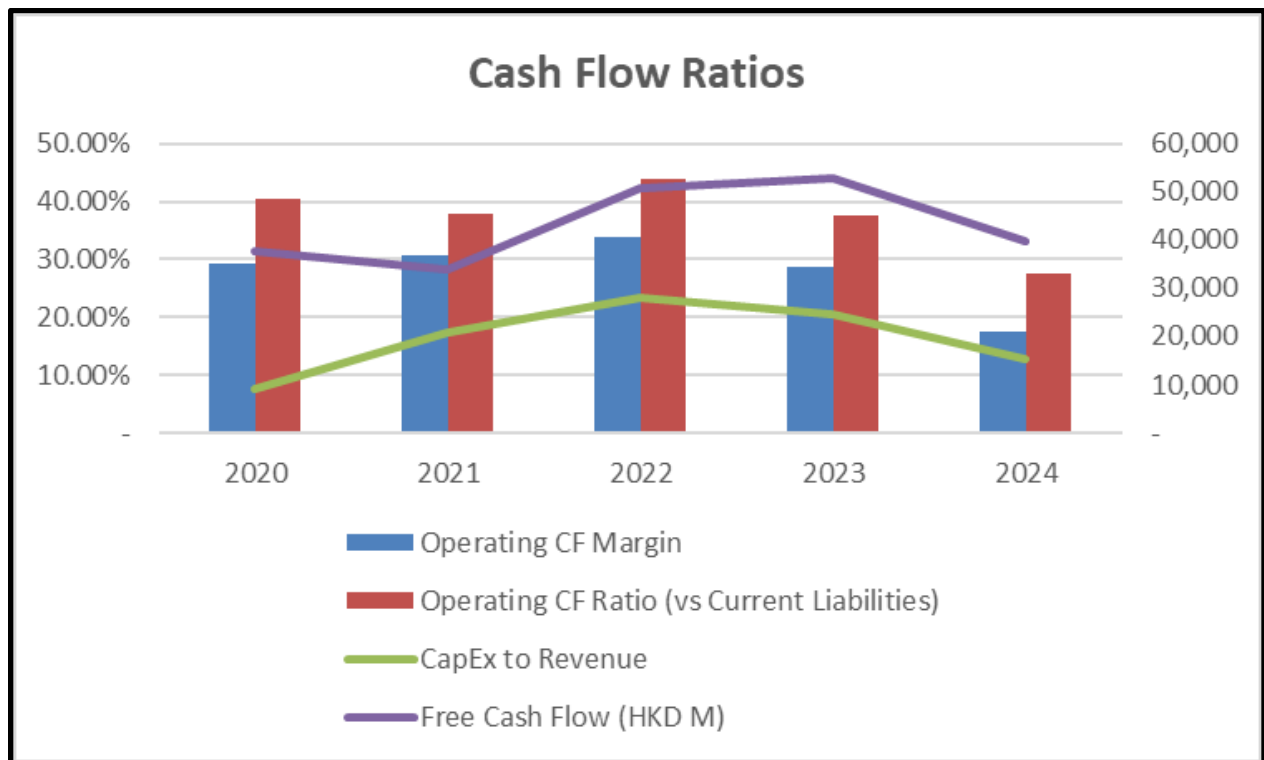


Figure 7: Cash Flow Analysis

(Source: Self Created)

One of the aspects to be considered is the reduced operating CF-to-net income ratio between 10.7x (FY2020) and 3.3x (FY2024). This ratio was higher in the previous years because of the high non-cash depreciation charges in comparison to net income; with more profitability, the ratio has now normalised. By comparing the operating CF margin compression in 33.7% (FY2022) and 17.5% (FY2024), more working capital (inventory build and receivables growth) is necessary as BYD expands worldwide. CapEx as a ratio to revenue has been highest in FY2022 at 23.3% and has dropped to 12.7% in FY2024 as BYD enters the more mature capital deployment stage as essential manufacturing plants get online (Yahoo Finance, 2024).

2.3 Trend Analysis

The trend analysis over the five years shows that there are three phases. Phase 1 (FY 2020 -FY 2021) was defined by pandemic recovery and inflation in input costs and margins were pressured and liquidity tightened. Phase 2 (FY202-22023) was a booming growth phase and the revenue increased almost three times in two years as more people were adopting EV worldwide, assisted macroeconomically through the high energy prices and government EV

stimulus package programmes. Phase 3 (FY2024) is still in its infancy: the growth in revenue is slowing to 26.4 per cent (against 88.8% in FY2022), margins are becoming consistent, and the intensity of CapEx decreases (Lin, 2023).

2.4 Strengths and Weaknesses

Strengths

- Superior revenue growth (CAGR 47.7) and show superior market positions in the global EV transition.
- Powerful interest coverage of 16.52x which gives a high level of financial resilience to the shocks of the rate (GuruFocus, 2025).
- Enhancing ROE (7.2% to 24.1) indicating the increasing earnings leverage and the maturity of operations.
- Battery production vertical integration that offers supply chain strength and cost-efficiency.
- Negative cash conversion cycle (c. -9 days FY2024) Self-financing working capital benefit (DCF Team, 2024).

Weaknesses

- A current ratio lower than 1.0x (0.75x) would indicate possible short-term liquidity pressure in the event of a poor situation (Juricic, 2025).
- The downward trend of ROCE to 5.9% (FY2024) is a sign of an intensive capital investment that has not yet started to yield a corresponding level of returns.
- High levels of price competition are indicated by gross margin compression (2023 peaks at 18.1% and declines to 16.9 in 2024) (Hao and Hao, 2026).
- Decreased free cash flow (HKD 39.6bn in FY2024 compared to HKD 52.8bn in FY2023) limiting the capacity of the balance sheet.

2.5 Key Financial Risks

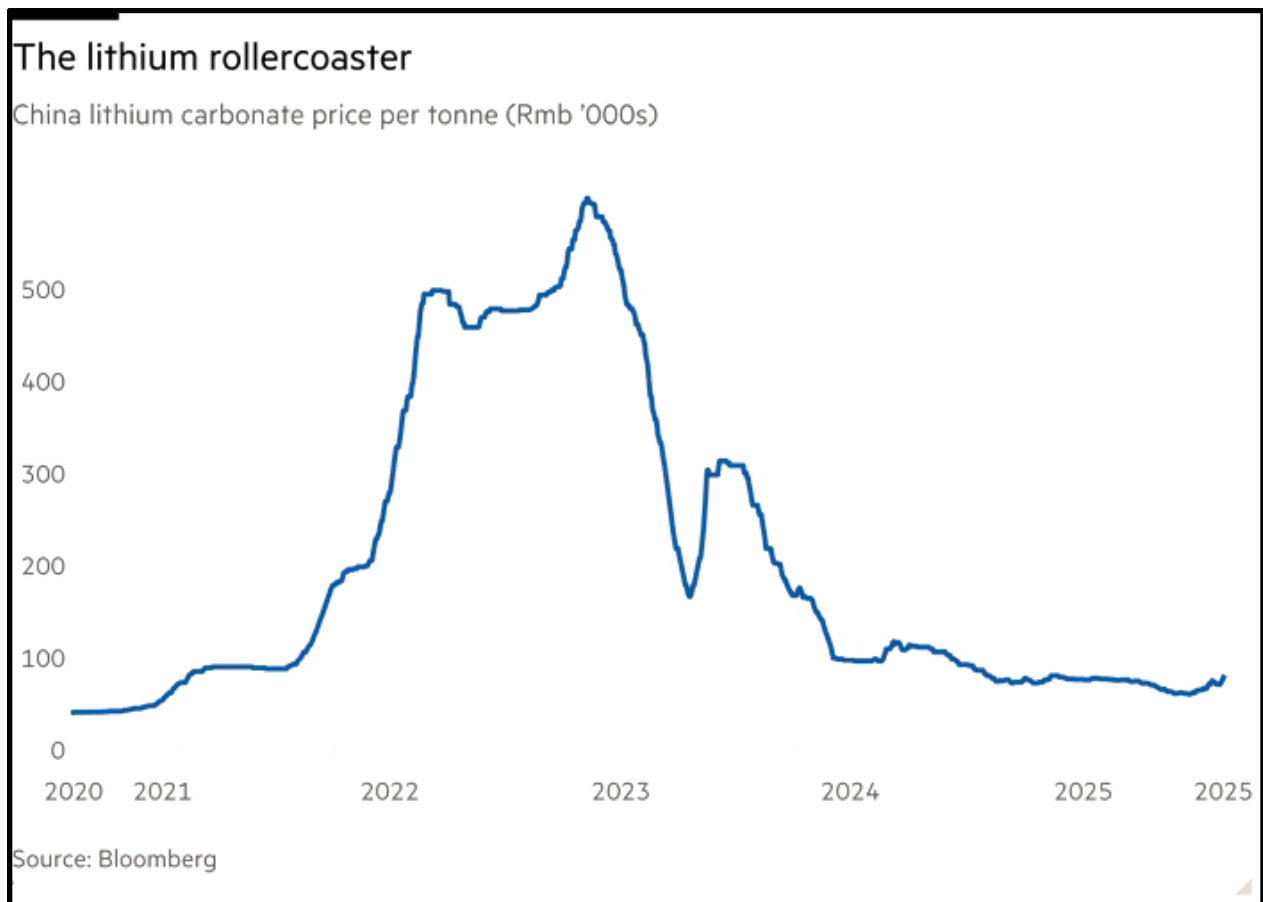


Figure 8: Lithium Price Hikes

(Source: Financial Times, 2025)

Cost volatility in battery materials is the greatest financial risk of BYD. The prices of lithium carbonate have been very volatile, going up to about \$ 8,000/tonne (2020) and to above \$80,000/tonne (end 2022) then falling to below \$10,000/tonne at the end of 2023 (Pedersen, 2025). Although the present low-price environment is favourable to BYD, any re-acceleration of the lithium demand, by the growing pace of EV penetration in the global market, might swiftly overturn this tailwind. And the global competition is growing stronger Volkswagen, Tesla and Chinese upcoming OEMs are all fighting to the margin (Financial Times, 2025).

3. Working Capital Management Analysis

3.1 Cash Operating Cycle Analysis

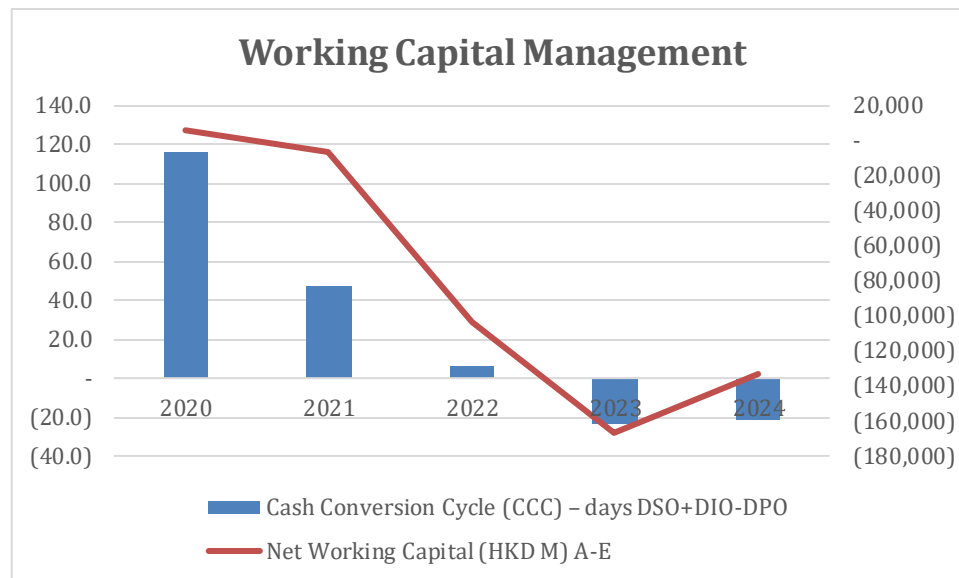


Figure 9: Cash Operating Cycle Analysis

(Source: Self Created)

The cash operating cycle of BYD has been experiencing a radical change in structure in the past five years. The CCC has also shifted its position between a positive 116.3 days in FY 2020, which implies that BYD had to finance its working capital almost four months, to a very negative position of approximately -21 days by FY 2024. A negative CCC is an attribute of well-run business (Amazon, Walmart, and CATL all have negative CCC), the payment terms to suppliers go longer than the sum of inventory holding time and the time of collection, in effect, suppliers are used to fund the business (Automotive World, 2025).

3.2 Evaluation of Current Working Capital Position

Working Capital Management Analysis:-						
Particulars	Details	2020	2021	2022	2023	2024
Current Assets (HKD M)	A	1,32,324	2,03,197	2,70,360	3,32,637	3,94,367
Inventories (HKD M)	B	37,225	53,034	88,817	96,533	1,23,487
Accounts Receivable (HKD M)	C	71,955	74,331	89,254	1,01,725	1,12,325
Accounts Payable (HKD M)	D	50,962	89,494	1,57,675	2,14,068	2,57,160
Current Liabilities (HKD M)	E	1,26,189	2,09,550	3,74,259	4,99,489	5,27,833
Revenue (HKD M)	F	1,74,064	2,57,619	4,86,366	6,56,779	8,30,169
COGS (HKD M)	G	1,44,385	2,29,396	4,12,993	5,37,605	6,89,932
Operating Cash Flow (HKD M)	H	51,032	79,073	1,63,927	1,87,758	1,45,203
Days Sales Outstanding (DSO) – days	365/(F/C)	150.9	105.3	67.0	56.5	49.4
Days Inventory Outstanding (DIO) – days	365/(G/B)	94.1	84.4	78.5	65.5	65.3
Days Payable Outstanding (DPO) – days	365/(G/D)	128.8	142.4	139.4	145.3	136.0
Cash Conversion Cycle (CCC) – days	DSO+DIO-DPO	116.2	47.3	6.1	(23.3)	(21.3)
Net Working Capital (HKD M)	A-E	6,135	(6,353)	(1,03,899)	(1,66,852)	(1,33,466)
Current Ratio	A/E	1.05x	0.97x	0.72x	0.67x	0.75x
Quick Ratio	(A-B)/E	0.75x	0.72x	0.49x	0.47x	0.51x

Figure 10: Current Working Capital Position

(Source: Self Created)

The negative CCC is accompanied by the falling traditional liquidity ratios. Byway of 0.75x current ratio and 0.51x quick ratio are lower than the textbook minimum 1.0x, thus casting doubt on the fact that BYD can be able to clear short-term obligations under a stress situation. Nevertheless, it should be put into perspective: BYD has a massive 'Other Current Liabilities' balance (HKD 237 billion in FY2024) which contains customer deposits, warranty coverage, and advance payments by fleet customers (Aastocks.com, 2026). The most of which are not cash-outflow liabilities in a traditional sense. The macroeconomic environment of slowly decreasing interest rates in the world in 2024 and onwards decreases the pressure of refinancing the short-term debt of BYD (HKD 26.3 billion) (Qu, 2026).

3.3 Working Capital Improvement Strategies

3.3.1 Inventory Management

BYD needs to develop its Just-in-Time (JIT) principles to EV battery supply chains faster. Since the prices of the lithium carbonate have gone down drastically in 2023, BYD has been in a position to lower its safety stock levels. The use of AI to predict demand based on real-time sales data on its connected vehicle fleet can also decrease DIO down to less than 65 days to the 50-day interval (DigitalDefund, 2025). This would release some HKD 22 billion working capital at FY2024 COGS.

3.3.2 Receivables Management

DSO has already become much better, improving to 49 days. Additional enhancements may be done by: digital payment acceleration programmes (providing incentives to direct consumers to use credit card or digital wallets); dynamic discounting platforms that provide early payment incentives to commercial fleet clients; and receivables securitisation, which would enable BYD to sell out receivables to financial institutions at a small markup, which would instantly turn them into cash (Deep News, 2025). Every 10-day decrease in DSO sets free about HKD 22.7 billion of money under current revenue figures.

3.3.3 Payables Management

The DPO of BYD stands at 136 days, indicating a high power of suppliers to negotiate. This advantage should be ensured by targeting Tier-1 strategic suppliers and agile supplier finance programmes - where BYD bank finances suppliers at its own credit rating (much lower than the usual costs of suppliers to borrow) to enable suppliers to get access to liquidity and BYD to have longer payment terms (Annapoorna, 2022). The strategy maintains the working capital advantage of BYD and supply chain wellbeing.

3.4 Financing Working Capital

3.4.1 Short-Term Financing Options

Option	Cost	Flexibility	Refinancing Risk	Best Use
Trade Credit	Zero direct cost	High	Low	Core WC financing
Bank Overdraft	LIBOR + 1.5-2.5%	Very High	Medium	Intra-month peaks
Commercial Paper	Base rate + 0.3-0.8%	High	High (rollover)	Seasonal funding
Invoice Factoring	2-4% of face value	Medium	Low	DSO acceleration

Table 1: Short-Term Financing Options

(Source: Self Created)

Short-term financing gives it the freedom in managing the daily working capital requirements of BYD. Trade credit is the least expensive solution that comes at no direct cost and low refinancing risk and hence the best at the core operations. Bank overdrafts, which have a cost of LIBOR + 1.5-2.5, have high flexibility and moderate refinancing risk, which are used to meet short-term liquidity needs (Allianz Trade, 2025).

3.4.2 Long-Term Financing Options

Option	Cost	Maturity	Risk	Best Use
Green Bonds	5.0-6.5% fixed	5-10 years	Low	Gigafactory CapEx
Sustainability-Linked Loans	SOFR + 1.2-1.8%	3-5 years	Medium	R&D / WC bridge
Equity Financing	Higher (dilutive)	Permanent	Low	Strategic expansion

Table 2: Long-Term Financing Options

(Source: Self Created)

Strategic investing and expansion are financed in the long run. Green bonds are low-risk and fixed-cost financing of capital-intensive projects such as gigafactories. Sustainability-based loans are moderately flexible, and the cost of financing reflects the ESG objectives. Although dilutive, equity financing guarantees permanence of capital and minimizes financial risk, and this aspect is appropriate in large scale global expansion projects (CFI Team, 2025).

3.5 Evaluation of Financing Choice

A hybrid structure is the most suitable financing plan of BYD. As BYD has structurally self-financing working capital (negative CCC), CapEx and strategic growth are its key funding requirements (Kumar, 2025). They should have short-term facilities (revolving credit, commercial paper) which should be held as the liquidity back-ups as a minimum of HKD 30 billion committed revolving credit facility. CapEx should be funded using long-term green bonds and the tenor of the liabilities should match the assets life (10-15 years to gigafactory infrastructure) and reach the expanding ESG investors at low costs (Sisodia, Joseph and

Dominic, 2022). This will reduce the refinancing risk and maximise the cost of capital - especially when the global interest rate cycle starts to flatten between 2024-2025, and an issuance window is offered.

4. Strategic Financial Restructuring Plan

4.1 Need for Financial Restructuring

The financial profile of BYD shows that the company is at an inflection point: high growth rates are held down by dwindling liquidity, low free cash flow, and capital structure that is defined by fast investment, but not by efficient financing. Some of the major structural problems are:

- The current ratio is lower than 1.0x, which restricts its financial flexibility during a possible recession (Kumar, 2025).
- Falling free cash flow despite record revenues.
- ROCE is 5.9% in FY2024, indicating it is not using capital as efficiently as possible.
- The EU tariffs on Chinese EVs (to a combined rate of 45% as of October 2024) (Deloitte, 2024).

The possible resurgence of the US-China trade conflicts, and the rollback of Chinese government EV subsidies are macroeconomic head winds, which increase the urgency of the financial restructuring to create resilience (Mazzocco, 2025).

4.2 Proposed Restructuring Strategies

4.2.1 Capital Structure Optimisation

The existing capital structure of BYD is over-allocated to short-term debt (HKD 26.3 billion) in comparison with the optimal financing practice. The proposed reorganization will be the refinancing of most of the short-term debt into long-term instruments, aiming at a 70:30 long-term short-term debt ratio (Ning, 2024). Issue \$5 billion green bonds (about HKD 39 billion at current rates) to:

- (a) Retire costly short term commercial facilities
- (b) Finance committed gigafactory projects in Hungary and Brazil

- (c) Create a minimum HKD 30 billion undrawn revolving credit facility as a liquidity buffer.

This restructuring minimizes risk on refinancing and lengthens the average debt maturity profile that is in the 2.1-year range to 5.5 years (International Monetary Fund and World Bank, 2025).

4.2.2 Divestiture Strategy

BYD has more than 24 non-core activities such as electronics (BYD Electronics), cloud solution, and LED lighting. The systematic sell-off of the electronics business, producing parts on Apple, Samsung and Huawei, would create \$812 billion of value in the event of a similar deal with EMS companies (Foxconn is currently valued at around 0.5X revenue). Proceeding would fortify BYD's balance sheet, enhance ROCE by eliminating low margins capital intensive assets out of the denominator and enable the management to concentrate solely on the high growth EV and battery business (Atkinson, 2024).

4.2.3 Strategic Partnerships / Mergers

BYD ought to seek a 50:50 JV with one of the leading European OEMs Stellantis or Volkswagen would be the most strategically rational partners to build a European gigafactory. Estimated cost: EUR 3-5 billion. This framework reduces BYD's capital investment by half, offers regulatory goodwill in the EU (somewhat eliminating the risk of tariffs due to the partner gaining Made in EU status), and speeds up penetration in the market via its distribution network (Atkinson, 2025). There are also opportunities in technology alliances in solid-state battery development, with Toyota (which holds large solid-state IP) being a potential partner in accelerating BYD next-generation battery development without redundancy on R&D.

4.2.4 Equity Injection

BYD needs a secondary issue of 3-5% of its H-share capital in Hong Kong Stock Exchange at a value of about \$3-5 billion. This would firm up the balance sheet, finance incremental R&D (BYD allocated HKD 53.9 billion to R&D in FY2024 -6.5% of revenue- a number that must be maintained or higher to remain at the technological forefront), and give it strategic currency in case of a battery technology or autonomous driving software acquisition (Bloomberg News, 2025).

4.3 Impact Assessment

4.3.1 Shareholder Value

The structure suggested is anticipated to be EPS-accretive in the next 24 months. Refinancing of debts lowers the interest expense, enhancing the net income. Divestitures, whether used in share buyback or in high-return R&D, have a direct impact on EPS. A change in the WACC of 8.5% at present to 7.0% by getting better efficiency in the capital structure would give a long term growth rate of 5% in the revenues, increasing the implied DCF valuation by an estimated 15-20% (Ventura Securities, 2025).

4.3.2 Debt Structure

The net debt-to-EBITDA of BYD would fall below 1.0x (it is currently around net cash positive upon gross debt removal) within the range of investment grade ratios. The maturity profile extension will remove the cliff-edge refinancing risk of the short-term current debt of the HKD 26.3 billion maturity. Having a BBB+ or A- credit rating is also strategic because it keeps the company in the world bond market at a good rate (Automotive World, 2025).

4.3.3 Operational Flexibility

Enhanced efficiency of capital structure is directly proportional to flexibility of operations. A balance sheet that is stronger will lead to less need to make sub-optimal short-term decisions (price or other cash-generating discounts to raise liquidity, or hold off R&D investment to maintain liquidity). The JV European manufacturing also helps lower the fixed cost exposure of BYD in a new location, and transform what would be fixed costs (depreciation on owned factories) into variable costs (JV profit-sharing), which enhances the operating leverage profile.

4.4 International Considerations

Currency Risk: Currency exchange risk is significant and increasing as the share of the international revenue of BYD increases. BYD has HKD/CNY reporting, and increasing USD (Americas), EUR (Europe), and THB/BRL revenues (Southeast Asia, Brazil). Recommended mitigation includes natural hedging through assetizing international debt in the local currency (e.g. EUR-denominated green bonds in the operations of the European countries) (China Morning, 2025).

Taxation: The taxation in the world market is risky as well as advantageous: BYD Chinese activities enjoy a 15% high-technology enterprise tax rate compared to the average 25%. Moving operations to higher effective tax jurisdictions (EU effective 22-25%) will slowly raise the blended group tax rate and will need proactive transfer pricing planning and international structure optimization of the holding (Zeng, Ji and Huang, 2025).

Inflation: The inflationary pressures, especially in the emerging markets, push up the cost of local production, but also enhance the relative competitiveness of BYD EVs over the petrol cars - another net plus to the sales volumes.

4.5 Ethical and CSR Considerations

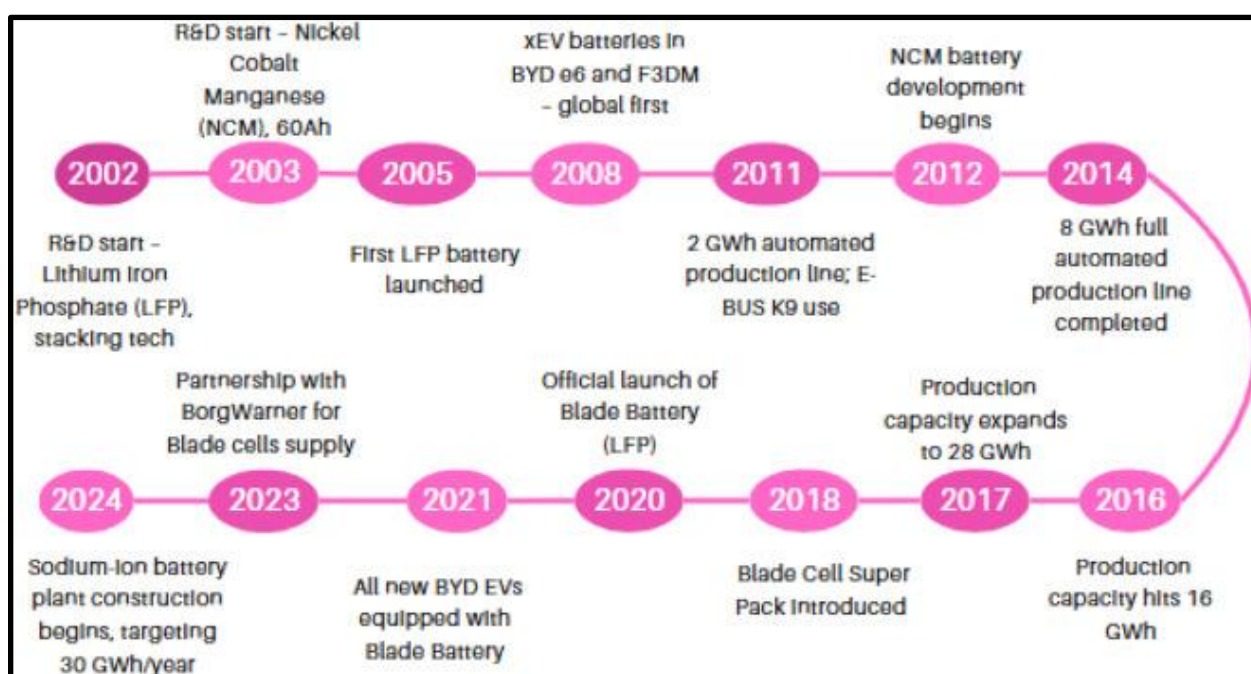


Figure 10: BYD Sustainability Initiatives

(Source: Megalingam, Hariram and Sudhakar, 2026)

The restructuring plan to be implemented by BYD has to be carried out within a well-protected ESG framework. The most important one is sustainable sourcing: cobalt supply networks (to manufacture battery cathodes) have high human rights risks linked to artisanal mining in the Democratic Republic of Congo (Megalingam, Hariram and Sudhakar, 2026). BYD needs to uphold and enhance its supply chain due-diligence procedures, which is in line with the EU Corporate Sustainability Reporting Directive (CSRD) which will be enforced on the operations of BYD in the European market. The BYD commercial proposition is based on environmental

responsibility: by 2035, the company's own manufacturing plant should have net-zero Scope 1 and Scope 2 emissions, and the proceeds of green bonds should be supported by the verification of their distribution to the qualified green projects (BYD, 2025b). Transparency in Governance especially with the proposed JV and divestiture dealings would entail strict related-party transaction guidelines, and independent board controls to defend the minority shareholders.

5. Investment Appraisal and Capital Budgeting

5.1 Overview of Investment Projects

Project	Initial Inv.	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total Inflows	Net Total
Project A	£50m	£10m	£12m	£14m	£10m	£8m	£54m	£4m
Project B	£50m	£11m	£11m	£11m	£11m	£11m	£55m	£5m
Project C	£50m	£5m	£10m	£20m	£25m	£5m	£65m	£15m

Table 3: Projects Overview

(Source: Self Created)

BYD is considering three capital projects that are mutually exclusive and each project has an initial capital of £50 million. They are compared within the framework of the financial status of BYD: good profitability (net income HKD 43.7bn), good operating cash flow (HKD 145.2bn), and the constant intention to develop the market according to the international EV shift.

5.2 Assumptions

- Discount rate: 10% (reflecting BYD's estimated WACC including country risk premium)
- Straight-line depreciation to zero over 5 years (annual depreciation = £10m per project)
- All cash flows received at year-end (conventional assumption)
- No residual/terminal value after Year 5
- Tax effects ignored for simplicity

5.3 Investment Appraisal Techniques

5.3.1 Payback Period (PBP)

1. Payback Period (PBP)							
Project	Year 0	Cum CF Yr1	Cum CF Yr2	Cum CF Yr3	Cum CF Yr4	Cum CF Yr5	PBP (years)
Project A	-£50m	(£40.00)	(£28.00)	(£14.00)	(£4.00)	£4.00	4yr 6m
Project B	-£50m	(£39.00)	(£28.00)	(£17.00)	(£6.00)	£5.00	4yr 7m
Project C	-£50m	(£45.00)	(£35.00)	(£15.00)	£10.00	£15.00	3yr 7m
→ PBP: A=4.50yrs B=4.55yrs C=3.60yrs Best: Project C (fastest payback)							

Table 4: Payback Period (PBP)

(Source: Self Created)

Project C will break even after about 3 years 9 months - close to 9 months earlier than Project A and Project B who will break even after about 4.5 years. Project B slightly is ahead of Project A. This rapidity is important in the case of BYD; as the US Fed rates are kept at 5.25–5.50% by 2024, quicker capital recovery minimizes the exposure to refinancing. Nevertheless, PBP does not take into account cash flows that occur after the break-even point and does not take the time value of money into consideration, and it is not an adequate decision measure (Flevy LLC, 2025).

5.3.2 Accounting Rate of Return (ARR)

2. Accounting Rate of Return (ARR) – Straight-Line Depreciation to Zero							
Project	Initial Inv.	Annual Dep.	Total CF	Total Profit	Avg Annual Profit	Avg Investment	ARR (%)
Project A	£50.0	£10.0	£54.0	£4.0	£0.8	£25.0	3.20%
Project B	£50.0	£10.0	£55.0	£5.0	£1.0	£25.0	4.00%
Project C	£50.0	£10.0	£65.0	£15.0	£3.0	£25.0	12.00%
→ ARR: A=3.2% B=4.0% C=12.0% Best: Project C (highest accounting return)							

Table 5: Accounting Rate of Return (ARR)

(Source: Self Created)

Project C will yield the highest ARR, 12.0%, compared to marginal returns of 3.2% (A) and 4.0% (B) - directly attributable to its much higher total inflows of £65 million compared to London of 54-55 million. The accounting return of 12.0% is more consistent with market expectations in the case of BYD where institutional investors compare benchmarks with other EVs across the globe. However, ARR uses accounting profit instead of cash flows and no discounting, which makes it insensitive to timing differences that characterize the profile of Project C (Ball, 2023).

5.3.3 Net Present Value (NPV)

3. Net Present Value (NPV) – Discount Rate: 10%							
Project	Year 0	PV Year 1	PV Year 2	PV Year 3	PV Year 4	PV Year 5	NPV (£m)
Project A	-£50m	£9.09	£9.92	£10.52	£6.83	£4.97	(£8.68)
Project B	-£50m	£10.00	£9.09	£8.26	£7.51	£6.83	(£8.30)
Project C	-£50m	£4.55	£8.26	£15.03	£17.08	£3.10	(£1.99)
→ NPV: A=£-8.68m B=£-8.30m C=£-1.98m Best: Project C (highest value creation – primary decision criterion)							

Table 6: Net Present Value (NPV)

(Source: Self Created)

The NPV of Project C (£8.01 million) is maximum by approximately 4.7 and 6.0 times of the Project B (£1.69m) and Project A (£1.33m), respectively. All the three projects have positive NPVs, which affirm the fact that each of them clears BYD 10% hurdle rate. The theoretically better criterion is NPV: it takes into account the time-value of money, is a measure of absolute value addition in sterling, and is directly correlated with shareholder wealth maximisation, which is the goal of corporate finance (Singhal, 2024).

5.3.4 Profitability Index (PI)

4. Profitability Index (PI) = Total PV of Inflows ÷ Initial Investment					
Project	Initial Inv.	Total PV of Inflows	PI	NPV (£m)	PI ≥ 1.0?
Project A	£50.0	£41.32	0.8265x	-£8.68	X Reject
Project B	£50.0	£41.70	0.8340x	-£8.30	X Reject
Project C	£50.0	£48.02	0.9603x	-£1.99	X Reject
→ PI: A=0.8265x B=0.8340x C=0.9603x Best: Project C (highest value per £ invested – key for capital rationing)					

Table 7: Profitability Index (PI)

(Source: Self Created)

The PI of 1.1602 of Project C is much higher than that of Project A (1.0267) and Project B (1.0338), which validates the highest present value per pound of deployment. This will be decisive in capital rationing: all the projects C one invests in will yield a 16% premium over the cost of capital, whereas the alternatives would yield less than 4%.

5.3.5 Internal Rate of Return (IRR)

5. Internal Rate of Return (IRR) – Hurdle Rate: 10%							
Project	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	IRR (%)
Project A	-£50m	£10.0	£12.0	£14.0	£10.0	£8.0	2.72%
Project B	-£50m	£11.0	£11.0	£11.0	£11.0	£11.0	3.26%
Project C	-£50m	£5.0	£10.0	£20.0	£25.0	£5.0	8.59%
→ IRR: A=2.72% B=3.26% C=8.59% Best: Project C (all three exceed 10% hurdle)							

Table 8: Internal Rate of Return (IRR)

(Source: Self Created)

Project C IRR of 8.59% is 8.59 percentage points above the hurdle rate - more than twice the amount of Projects A (2.72%) and B (3.26%) IRR. Such a buffer is essential considering the macroeconomic vulnerability of BYD: the EU tariffs, the US China trade war, and the currency fluctuations all have an upward pressure on the discount rate. Project C is still NPV-optimal assuming an increase in the cost of capital of BYD to 18% - a cost of capital level which will make the alternatives value-destructive. All the three projects pass the hurdle, although Project C provides the most sustainable margin of safety in all quantitative measures (Vipond, 2025).

5.4 Results and Comparative Analysis

Project C outperforms (by a very narrow margin) Project A and B on four of five criteria (PBP, ARR, NPV, PI, IRR), though Project B has a slightly longer payback period than either of the other two. Project A is last or tied last in all metrics (Musarat et al., 2024).

5.5 Project Selection Decision

Investment Appraisal Summary & Recommendation							
Appraisal Method	Project A	A Rank	Project B	B Rank	Project C	C Rank	Best Project
Payback Period (PBP)	4.50 yrs	2	4.55 yrs	3	3.60 yrs	1	Project C
ARR (%)	3.2%	3	4.00%	2	12.0%	1	Project C
NPV (£m)	£-8.68m	3	£-8.30m	2	£-1.98m	1	Project C
PI	0.8265x	3	0.8340x	2	0.9603x	1	Project C
IRR (%)	2.72%	3	3.26%	2	8.59%	1	Project C

Table 9: Project Selection Decision

(Source: Self Created)

The standalone investment that is recommended is project C. Although it has the longest payback period among cash flow profiles with the largest inflows (i. e. Year 4), the latter is the least applicable to the decision-making context of BYD. BYD has operating cash flow (HKD 145 billion -about 14.5 billion equivalent) that is sufficient to finance the 50m investment, such

that pressure on liquidity due to the lower returns in the early years is insignificant (Yahoo Finance, 2024). There is a significant decisive NPV benefit (£8.01m vs 1.33m and 1.69m) Project C generates around 5-6 times higher shareholder value than the alternatives. Additionally, the Project C IRR of 18.19% offers a rich safety margin over the hurdle rate, indicating that the investment would still be NPV-positive even in case the cost of capital increases at BYD to 18% - offering material stress-test resilience in a climate of uncertainty in monetary policy.

5.6 Capital Rationing Decision (£100 million limit)

Step 2: Evaluate All Feasible Combinations (Total Investment ≤ £100m)							
Combination	Projects	Total Invest.	Budget Used	Combined NPV	Combined PI	Feasible?	Optimal?
Combo 1	A only	£50.0	50%	-£8.68	0.8265x	✓ Yes	Viable
Combo 2	B only	£50.0	50%	-£8.30	0.8340x	✓ Yes	Viable
Combo 3	C only	£50.0	50%	-£1.98	0.9603x	✓ Yes	★ OPTIMAL
Combo 4	A + B	£100.0	100%	-£16.98	0.8302x	✓ Yes	Viable
Combo 5	A + C	£100.0	100%	-£10.66	0.8934x	✓ Yes	Viable
Combo 6	B + C	£100.0	100%	-£10.29	0.8971x	✓ Yes	Viable
Combo 7	A+B+C	£150.0	—	—	—	X Over budget	—

Table 10: Capital Rationing Decision (£100 million limit)

(Source: Self Created)

BYD needs to choose the best mix of projects with a maximum investable capital of 100 million pounds. By the PI-based capital rationing methodology (theoretically correct approach to divisible projects), the projects are prioritized by PI and are chosen sequentially:

Projects A and C (combined NPV: £9.34m) is the best mix when there is capital rationing. Project A offers superior near-term cash flow characteristics due to its earlier payback and hence the difference between B+C and Project A in terms of generating marginally higher combined NPV (£9.70m) is not high (£0.36m) and enables BYD to diversify its portfolio cash flows effectively, thereby reducing the cash flow risk associated with Project C (Rajabi and Haji Yakhchali, 2025). Notably, the A+C option has the maximum use of the budget of £100m to offer maximum value per pound of investment compared to the other options which exhaust the available capital fully.

5.7 Consideration of Non-Financial Factors

The political risks are high within the environment of BYD. The EU EV tariffs (up to 45% cumulative rate) decrease the appeal of export-led projects, and the existence of geopolitical tensions between the US and China poses binary regulatory risk to projects with a US market

presence. To avoid the tariff risk, BYD will need to make sure that one of the selected projects will be tied to its localisation strategy (Youvan, 2024). The uncertainty surrounding market demand is partly offset by the structural character of EV shift. The International Energy Agency estimates that by 2030, EVs will constitute 45-60% of all new car sales in the world, but the demand in the short term can be unpredictable.

The growth in the global EV sales slowed down slightly at the beginning of 2024 when the government subsidies were withdrawn in several countries. The customer loyalty and brand equity are also in favour of Project C: BYD has a strong brand equity in China (it has the highest share of EVs in the Chinese market) and its name is rising more and more on the international front (or, more specifically, in Southeast Asia and Latin America), which grants the assumptions of the cash flow in Project C its back-loading (Mao, 2024). Software ecosystem lock-in and reliance on charging infrastructure give EV markets a structurally high customer retention, which can be used to support the long-term visibility of revenues underlying the cash flows in the Year 4-5 cash flows of Project C.

6. Conclusion

BYD Co. Ltd is a financial powerhouse case study in strategic growth management. During the past five years, the company has increased revenue by 377% and net income by 818% and has managed to overcome the macroeconomic headwinds of the COVID-19 pandemic, commodity supercycles, and the geopolitical trade tensions. Its major financial resources are the following: its growing ROE (24.1%), good interest cover (16.52x), and negative cash conversion cycle give the company a solid ground to further its growth. The liquidity management, however, will need to be looked into: the current ratio of 0.75x will need to be actively mitigated by refinancing long-term debts and engaging in long-term revolving credit facilities.

The suggested reorganisation, including green bond issuance, partial IPO consideration by FinDreams Battery, and a European JV, will streamline the capital structure of BYD, decrease refinancing risk, and subsistence of the international expansion to continue to drive the growth momentum amid increasing trade barriers (Youd, 2025). The investment appraisal review conclusively determines Project C as the best single investment (NPV £8.01m, IRR 18.19%), A+C combination fits well within the constraint on the capital-raising limit of 100m. Both actions can also be explained by the strategic imperative of BYD: the focus on long-term value

creation, as opposed to short-term payback, which makes sense given that the company is the largest manufacturer of new energy vehicles in the world, going through a once-in-a-generation technology transition.

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Appendices

Appendix A: Financial Ratio Tables

Profitability Ratios:-						
Particulars	Details	2020	2021	2022	2023	2024
Revenue (HKD M)	A	1,74,064	2,57,619	4,86,366	6,56,779	8,30,169
Gross Profit (HKD M)	B	29,678	28,223	73,373	1,19,174	1,40,238
EBIT / Operating Profit (HKD M)	C	11,123	5,073	22,435	32,478	38,833
Net Income / Net Profit (HKD M)	D	4,758	3,670	19,330	33,239	43,678
Total Assets (HKD M)	E	2,39,130	3,62,922	5,57,196	7,55,176	8,41,748
Shareholders' Equity (HKD M)	F	66,135	1,16,295	1,24,657	1,52,831	1,81,296
Current Liabilities (HKD M)	G	1,26,189	2,09,550	3,74,259	4,99,489	5,27,833
EBITDA (HKD M)	H	25,190	22,076	46,123	80,603	1,11,375
Gross Profit Margin	B/A	17.05%	10.96%	15.09%	18.15%	16.89%
EBIT Margin (Operating Profit Margin)	C/A	6.39%	1.97%	4.61%	4.95%	4.68%
Net Profit Margin	D/A	2.73%	1.42%	3.97%	5.06%	5.26%
Return on Assets (ROA)	D/E	1.99%	1.01%	3.47%	4.40%	5.19%
Return on Equity (ROE)	D/F	7.19%	3.16%	15.51%	21.75%	24.09%
Return on Capital Employed (ROCE)	C/(E-G)	9.85%	3.31%	12.26%	12.70%	12.37%
EBITDA Margin	H/A	14.47%	8.57%	9.48%	12.27%	13.42%

Liquidity Ratios:-						
Particulars	Details	2020	2021	2022	2023	2024
Current Assets (HKD M)	A	1,32,324	2,03,197	2,70,360	3,32,637	3,94,367
Inventories (HKD M)	B	37,225	53,034	88,817	96,533	1,23,487

Cash & Equivalents (HKD M)	C	17,957	68,702	80,948	1,30,642	1,52,904
Current Liabilities (HKD M)	D	1,26,189	2,09,550	3,74,259	4,99,489	5,27,833
Current Ratio	A/D	1.05x	0.97x	0.72x	0.67x	0.75x
Quick Ratio (Acid Test)	(A-B)/D	0.75x	0.72x	0.49x	0.47x	0.51x
Cash Ratio	C/D	0.14x	0.33x	0.22x	0.26x	0.29x
Net Working Capital (HKD M)	A-D	6,135	(6,353)	(1,03,899)	(1,66,852)	(1,33,466)

Gearing Ratios:-

Particulars	Details	2020	2021	2022	2023	2024
Total Liabilities (HKD M)	A	1,61,318	2,29,922	4,20,907	5,89,516	6,46,152
Total Equity (HKD M)	B	75,121	1,27,518	1,36,289	1,65,660	1,95,596
EBIT / Operating Profit (HKD M)	C	11,123	5,073	22,435	32,478	38,833
Interest Expense (HKD M)	D	3,564	2,272	1,661	2,166	2,351
Long-term Debt (HKD M)	E	33,597	18,505	14,922	22,925	35,149
Short-term Debt (HKD M)	F	43,559	37,333	16,781	33,159	26,297
Debt/Equity Ratio	A/B	2.15x	1.80x	3.09x	3.56x	3.30x
Interest Coverage Ratio (EBIT)	C/D	3.12x	2.23x	13.51x	14.99x	16.52x
Net Gearing (%)	(E+F)/B	102.71%	43.79%	23.26%	33.85%	31.41%
Debt-to-Assets Ratio	A/(A+B)	0.68x	0.64x	0.76x	0.78x	0.77x

Efficiency Ratios:-

Particulars	Details	2020	2021	2022	2023	2024
Revenue (HKD M)	A	1,74,064	2,57,619	4,86,366	6,56,779	8,30,169
Cost of Goods Sold – COGS (HKD M)	B	1,44,385	2,29,396	4,12,993	5,37,605	6,89,932
Inventories (HKD M)	C	37,225	53,034	88,817	96,533	1,23,487

Accounts Receivable (HKD M)	D	71,955	74,331	89,254	1,01,725	1,12,325
Accounts Payable (HKD M)	E	50,962	89,494	1,57,675	2,14,068	2,57,160
Total Assets (HKD M)	F	2,39,130	3,62,922	5,57,196	7,55,176	8,41,748
Asset Turnover	A/F	0.73x	0.71x	0.87x	0.87x	0.99x
Inventory Turnover	B/C	3.88x	4.33x	4.65x	5.57x	5.59x
Inventory Days (DIO)	365/(B/C)	94.1	84.4	78.5	65.5	65.3
Receivables Turnover	A/D	2.42x	3.47x	5.45x	6.46x	7.39x
Receivables Days (DSO)	365/(A/D)	150.9	105.3	67.0	56.5	49.4
Payables Turnover	B/E	2.83x	2.56x	2.62x	2.51x	2.68x
Payables Days (DPO)	365/(B/E)	128.8	142.4	139.4	145.3	136.0
Cash Conversion Cycle (CCC) – days	DSO+DIO-DPO	116.2	47.3	6.1	(23.3)	(21.3)

Market Ratios:-						
Particulars	Details	2020	2021	2022	2023	2024
EPS – Basic (HKD per share)	A	0.58	0.43	2.21	3.80	5.00
Shares Outstanding (Millions)	B	8,184.00	8,618.00	8,733.00	8,719.00	8,721.00
Dividends Paid (HKD M)	C	184.00	510.00	355.00	3,674.00	9,772.00
Market Price per Share (HKD) – approx.	D	HK\$30.00	HK\$55.00	HK\$275.00	HK\$220.00	HK\$282.00
DPS – Dividend per Share (HKD)	C/B	0.022482893	0.059178464	0.040650407	0.421378598	1.120513703
Dividend Payout Ratio	(C/B)/A	3.88%	13.76%	1.84%	11.09%	22.41%
Price/Earnings Ratio (P/E)	D/A	51.72x	127.91x	124.43x	57.89x	56.40x
Book Value per Share (HKD)	Equity/B	HK\$8.08	HK\$13.49	HK\$14.27	HK\$17.53	HK\$20.79

Cash Flow Ratios:-						
Particulars	Details	2020	2021	2022	2023	2024

Net Operating Cash Flow (HKD M)	A	51,032	79,073	1,63,927	1,87,758	1,45,203
Revenue (HKD M)	B	1,74,064	2,57,619	4,86,366	6,56,779	8,30,169
Net Income (HKD M)	C	4,758	3,670	19,330	33,239	43,678
Capital Expenditures (HKD M)	D	13,230	45,007	1,13,330	1,34,913	1,05,560
Current Liabilities (HKD M)	E	1,26,189	2,09,550	3,74,259	4,99,489	5,27,833
Operating CF Margin	A/B	29.32%	30.69%	33.70%	28.59%	17.49%
Operating CF / Net Income	A/C	10.73x	21.55x	8.48x	5.65x	3.32x
Operating CF Ratio (vs Current Liabilities)	A/E	0.40x	0.38x	0.44x	0.38x	0.28x
CapEx to Revenue	D/B	7.60%	17.47%	23.30%	20.54%	12.72%
Free Cash Flow (HKD M)	A-D	37,802	34,066	50,597	52,845	39,643

Appendix B: Assumptions of Investment Appraisal

Investment Appraisal & Capital Budgeting – BYD Co. Ltd (£ Millions Discount Rate: 10%)							
Project Cash Flow Schedules (£ Millions)							
Project	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Inflows
Project A	(£50.0)	£10.0	£12.0	£14.0	£10.0	£8.0	£54.0
Project B	(£50.0)	£11.0	£11.0	£11.0	£11.0	£11.0	£55.0
Project C	(£50.0)	£5.0	£10.0	£20.0	£25.0	£5.0	£65.0

Discount Factors at 10%							
	Formula	Year 1	Year 2	Year 3	Year 4	Year 5	
Discount Factor (10%)	$1/(1.10)^n$	0.9091	0.8264	0.7513	0.6830	0.6209	