

Zeekr vs. BYD: A DuPont Analysis for Value Investors

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Abstract. This research evaluates the financial performance and potential long-term value of BYD and Zeekr within the context of China's rapidly developing electric vehicle sector. Integrating value-investing ideology and the DuPont Analysis System shows how the research combines the components of profitability, operational efficiency, and financial leverage. Assessing these factors makes it possible to understand which of the two firms possess the greater capacity to generate value. Financial reports made publicly available were the primary data source, which were subsequently analyzed using the DuPont model. As the findings pointed out, BYD demonstrates a stronger and more consistent profitability which mirrors sustainable and competitive advantages and a more mature market position. Whereas BYD shows relatively high and stable profitability, Zeekr has high asset turnover which conveys operational efficiency and increase potential, albeit consistent negative profitability. The equity multiplier demonstrates the financial leverage within Zeekr which, combined with negative equity, greater Zeekr financial uncertainty and risk. Overall, the results suggest that BYD is aligned with the traditional value-investing model owing to the stability of financial fundamentals. In contrast, Zeekr is poised for high-growth speculative investments. Overall, these findings suggest highly that the DuPont system can evaluate corporate performance and can assist an investor in determining long-term value in different stages of market maturation.

Keywords: Electric Vehicle Industry, Value Investing Theory, DuPont Analysis Model

1. Introduction

Recently, worldwide new-energy cars industry grows fast. Investors and researchers start to notice that. Increasingly assessing the financial performance and the long-term worth of the electric vehicle companies is becoming imperative. Due to intensified competition and rapid technological advancements, market and technology shifts. Value assessment of these companies would be critical. Existing valuation models may not gaps the differences between new tech companies and established car companies. This creates the need for comprehensive and systematic financial assessments.

Value investing fundamentals indicate that strong financials and profitability coupled with a sustainable moat increases the probability and extent of predicted returns over a substantial duration. Simultaneously, the DuPont Analysis System disaggregates Return on Equity (ROE) into profitability, efficiency and leverage and thus provides a simpler way of understanding the

components of a firm's value. This study aims to analyze the financial performance of the two representative companies in the Chinese EV market, namely, BYD and Zeekr, through the synergy of value-investing fundamentals and the DuPont system.

Investors and researchers will benefit from this research to understand financial symptoms within the new-energy automobile industry, especially in an uncertain and competitive market. To uncover which firm demonstrates superior value-creation ability and sustainable growth potential, an analysis of profit margin, asset turnover, and equity multiplier has been undertaken.

Over the past ten years, the automotive industry has been tremendously changing due to electrification, technological advancement, and new environmental policies. For instance, China has emerged as the world's largest market for new-energy vehicles, with domestic leaders such as BYD and Zeekr becoming increasingly influential. As competition becomes more fierce and the attention from the capital market increases, investors are more interested in understanding the real value and sustainability foresight concerning the growth potential of such EV firms rather than on the short-term market volatility.

Classic models of valuation often fail to account for the unique attributes of fast-growing technology firms. Thus, for the assessment of performance differentials, using the DuPont Analysis System, which is both systematic and well-established, becomes meaningful. Evaluating the prism of profitability, asset turnover, and financial leverage, one could appreciate the different ways that these firms generate and preserve value, and competitive edge, in the fast-evolving industry.

This study looks to assess BYD and Zeekr through the lens of value-investing principles paired with the DuPont Analysis technique. Rather than fixating on the volatile movements of stocks or prevailing market sentiments, the study considers the fundamental financial drivers of long-term high-quality businesses. Applying the principles of value-investing, this study looks to determine if both companies possess the attributes of stable profitability, persistent competitive advantages, and manageable financial risk. Simultaneously, the DuPont model complements this analysis of value creation by decomposing Return on Equity (ROE) into its profitability, efficiency, and leverage components, thereby elucidating how each firm delivers value.

Drawing on these forces, the research aims to ascertain which company has superior financial fundamentals and long-term investment prospects in China's rapidly expanding EV market.

2. Literature review

The value investing theory is attributed to Graham and Dodd. The basic meaning of value investing theory is to find the market underpriced securities and acquire them when the fair value is below the intrinsic value [1]. Usually this invest theory focus on three company main parts, first is a share of stock represents an ownership claim on a firm's future cash flows. Ultimately the future cash-flow determines the long value of a stock. Finally in a short period, market prices frequently deviate from reasonable estimate of a stock's fundamental value [2].

Warren E. Buffett is the person who practice value investing and achieved great success in his investing career. In the career of practicing the value investing Buffett focus on analyze financial situation ,long-term competitiveness and profitability of company.

Behavioral finance theories identify irrational behavior, mostly, the behavior of investors may be driven by 'panic' due to market fluctuations (whether these be short-term fluctuations or crises). However, it is critical to assess the fundamentals of the company when deciding upon a stock, as well as determining the long-term hold potential of that stock [3].

DuPont first introduced the system now known as DuPont analysis in the 1920s with the aim of disaggregating Return on Equity (ROE) into different financial elements, facilitating a more

thorough appraisal of a company's performance [4]. The simplest expression of ROE is net profit over shareholders' equity. DuPont extended this into three parts, where ROE is equal to net profit margin times asset turnover times the equity multiplier. In this sense, ROE is influenced by profitability, efficiency of the assets and the degree of leverage.

The net profit margin indicates the effectiveness of the company in controlling costs and generating profit whereas the asset turnover shows the efficiency of the company's revenue generation relative to the assets employed [5]. The equity multiplier shows the extent of financial leverage the company employs. Based on these three components, the DuPont system determines the fundamental drivers of changes in ROE which is important in determining the value sustainability of a company from the perspective of an investor.

2.1. Three core indications in existing research

Profit margin indicates the extent to which a company can generate earnings from its sales. It is a metric that shows the company's profitability when it shows cost control efficiency and pricing power. A profit margin signal sustained competitive advantages i.e. a good brand name, high-level technology, or increased economies of scale. A high profit margin is a good indicator and is considered a positive attribute of a company [6]. Advanced margin control shows that a company is capable of sustaining its earnings, even when the market conditions turn for the worst.

Prospects of increasing or steady profit margins suggests an economic moat from a value-investing perspective. This implies the company has structural defenses that ensure its profitability over the long-term [7]. This is consistent with the value-investing principle of "margin of safety" where investors prefer companies that can offer value protection with steady profitability.

Asset turnover illustrates the efficiency of a company's asset usage in revenue generation, capturing the essence of operational prowess and managerial competence [8]. When the asset turnover ratio is higher, the company is more successful in converting its asset base into sales, implying that a business can still achieve great returns even with lower profit margins if turnover is sufficiently strong. The asset turnover ratio is commonly used to assess the resource management of a company, particularly in resource-intensive sectors [9].

From the view of a value investor, asset turnover is useful for differentiation of "cheap" companies from those "genuinely undervalued". Companies with consistently high turnover rates are likely to possess strong operating fundamentals, and hence, are positioned to sustain long-term value creation, independent of low valuation multiples and business model dependence.

The equity multiplier indicates how much of a firm's assets are financed through equity as opposed to debt and captures the extent to which the firm employs financial leverage. Using some leverage increases the return on equity due to profits being amplified, however, too much leverage creates a disproportionate financial risk and may endanger the firm's long-term viability. In more practical financial analysis, equity multipliers can be used to evaluate how a company's capital structure withstands recessions and variable interest rates and how aggressive the firm is financially.

Having a well organized and proportionate capital structure is important in value investing. Value investors usually stay away from businesses with a high dependence on loans because high debt recourse can inflate returns for a brief period while concealing serious weaknesses. Excessive debt can convert an undervalued stock into a "value trap" [10]. This is where apparent cheapness is concealing high risk rather than a true value investment opportunity.

2.2. Research gaps

Most of the existing literature highlights the usefulness of the DuPont system of analysis in providing value investors a cohesive framework for financial analysis. By analyzing profit margins, operational efficiency, and financial leverage, the model enables one to attain a holistic corporate valuation. In the presence of information asymmetry, the model serves as a proxy worth signal that allows investors to sort out firms earning genuine long-term profits from those that only superficially appear profitable in the short run.

3. Research data and method

The data used in this research from financial information databases including Bloomberg, as well as the annual reports of Zeekr and BYD [11,12]. All the data acquired was from public resources. The research used the DuPont Analysis System to sort and organize these data, including the calculations of asset turnover, equity multiplier and profit margin. The research performed these calculations to evaluate the financial condition of each company and their incorporation with the value investing theory.

4. Results

All the results of the DuPont analysis of BYD are presented in the Table 1. BYD illustrates an effective and improving profitability mechanism. From 2020 to 2024, the net profit margin nearly doubled, growing from 2.70% to 5.18%. This improvement shows the company's profit model growing more efficient, especially as the new energy vehicle sector begins to realize economies of scale, production costs fall, and the brand gains a premium. In particular, the company's net margin increased from 1.41% to 3.92% between 2021 and 2022 can be explained by the rapid growth of NEV's sales, new tax incentives, and a strategy shift towards more premium models.

Compared to others, Zeekr shows the signs of profitability typical of an early-stage, high-growth EV company. Aside from a slight profit of 3.27% in 2020, the company has had negative net margins in the following years. Of these, 2021 had a net margin of -66.84%, the most negative of the observed years. This shows the company's heavy investment in R&D, network expansion, and even loss leader pricing strategies in a possible market penetration phase. More encouraging, however, is the company's narrowing losses over the years. Falling from -66.84% in 2021 to -8.46% in 2024, they show that the growing scale of operations is eating away at the fixed costs, suggesting an approach to the break-even point.

Table 1. Results of DuPont analysis of BYD (2020-2024)

	2024	2023	2022	2021	2020
Profit margin	5.18	4.99	3.92	1.41	2.70
Asset turnover	1.06	1.02	1.07	0.87	0.78
Equity multiplier	4.19	4.32	3.50	2.94	3.08
ROE(%)	23.06	22.10	14.74	3.61	6.57

Data Source: Annual report of BYD

About the asset turnover ratio measures how efficiently a company utilizes its total assets to generate revenue and serves as a key indicator of operating capability.

The asset turnover ratio for BYD over the past few years has been consistent, having attained a benchmark of approximately 1.0. This translates to operational efficiency, for every unit of revenue generated, a unit of asset is utilized, conveying competent asset administration. This is also indicative of the consistent utilization of production capacity. Notably, there has been a ratio improvement to 1.06 in 2024, the peak over the last five years, indicating that the company has capitalized on the capacity of its extensive manufacturing network, with a well coordinated supply chain and industrial ecosystem.

In contrast, Zeekr shows much higher efficiency in maximizing its assets. Since 2022, the company has recorded an asset turnover ratio of over 2.0 for a multitude of years, culminating 2024 with 2.54, a significant improvement compared to BYD. This could be due to a number of reasons: Zeekr may have a lighter-asset operational model due to Geely's production assets underpinnings; focusing on premium smart EVs may generate higher revenue; and in the rapid expansion phase, relatively few assets are utilized intensively. All of the above shows strong market traction and a much more efficient use of their assets. Table 2 shows the results of the DuPont analysis of Zeekr.

Table 2. Results of DuPont analysis of Zeekr (2020-2024)

	2024	2023	2022	2021	2020
Profit margin	-7.64	-15.99	-24.00	-69.14	3.27
Asset turnover	2.54	2.22	2.03	0.67	0.42
Equity multiplier	-2.80	-2.83	-4.83	5.24	2.23
ROE(%)	54.28	100.30	235.40	-242.76	3.08

Data Source: Annual report of Zeekr

The equity multiplier reflects a company's level of financial leverage, while ROE is the final measure of shareholder return and value creation.

The equity multiplier for BYD has oscillated between 3.0 and 4.3, suggesting a balanced level of leverage. In conjunction with an increase in profitability, along with stable asset efficiency, BYD's return on equity has positively increased from 6.57% in 2020 to 23.06% in 2024. Such development illustrates a predominantly positive form of value creation, centered on internal growth and core business expansion rather than the aggressive use of debt.

Zeekr's financial situation is puzzling. From 2022 to 2024, the company's equity multiplier became negative due to the fact that the company made losses, and thus, the equity shareholders became negative which means the company is insolvent. The case is that when shareholders equity is negative, the equity multiplier gives the DuPont formula a negative ROE which is not really profitability is a financial distortion that is offset mathematically. Equally puzzling is the fact that in 2021, Zeekr's equity multiplier was positive at 5.24, but the company made such a large net loss that Zeekr's return on equity sank to -234.7%, a true testament to the equity erosion. The case is that the financial distortion is offset mathematically when it is negative. These cases demonstrate the high financial risk that investors have to take when evaluating results linked to the debt.

The financial outcomes allow the investors to comprehend how various types of investors may execute their equity decision: Value investors interested in more stable returns will most likely favor BYD. The case for BYD as a long-term investment for risk-averse investors is supported by its improving profitability, efficient use of its assets, and a robust and increasing return on equity. In contrast, Zeekr is likely to attract more risk-oriented, high-growth investors due to its high-growth potential, which is linked to its parent company, Geely. These investors are likely wagering on Zeekr

due to its high asset turnover and shrinking losses; however, such expectations need to be tempered by the significant risk of negative equity and losses, as well as the potential of extraordinary returns around the corner.

5. Discussion

There is a noticeable divergence in the financial and operational profiles of BYD and Zeekr. To enhance analytical exposition, this chapter situates the findings within the context of signaling theory, agency theory, and institutional theory. In this regard, the seek to show how the empirical results relate to the functions of the DuPont measures as signals in the context of the theory of rational investors in the market and the theory of informational asymmetry in the market, how the DuPont measures influence investor expectations and capital allocation.

5.1. Financial indicators as market signals

In information-asymmetric markets, financial indicators function as key signaling devices through which managers communicate firm quality to outside investors.

The consistent increase in BYD's net profit margin over time manifests positive qualitative perception. According to the signal theory, firms with strong fundamentals are able and motivated to differentiate themselves regarding observable financial outcomes. Also, from the agency theory perspective, increasing profitability decreases external monitoring costs by providing evidence that managers use resources efficiently and that there is no value destruction, which further reinforces investor confidence in the rational "investment-to-return" mechanism. Managerial value destruction lowers resource allocation to profit generating activities.

An outstanding asset turnover ratio provides another distinct efficiency signal for Zeekr. Negative earnings do not diminish the fact that excellent asset utilization indicates some level of business model validity and considerable market traction. Under high-growth conditions, the lack of profits is often accompanied by operational efficiency, and these factors act predictively. The finding adds to signaling theory by positing that, for nascent industries, efficiency signals may span the profitability signals for emerging forward-looking valuation models predicated on anticipated cash flow streams.

The equity multiplier, as a indication for financial leverage, embodies a much more complex theoretical significance than its numerical value alone suggests, requiring interpretation through multiple theoretical lenses. The moderately low but steady equity multiplier shows that BYD complies with the trade-off theory optimal capital structure principle. Therefore, it shows the top degree of financial prudence. On the other hand, Zeekr has negative equity multiplier due to having lost track of a rational financing strategy. This raises severe agency problem risks between the investors and the shareholders or between shareholders themselves. Negative shareholder value optimizing is a feature of financial distress and potentially more severe agency problem distortion at the core of value maximizing management. Hence negative leverage constitutes an immediate threat and not a financing strategy.

5.2. Contextualizing leverage risk

Investor hesitance regarding leverage mirrors the particular context within which an entity operates. Compared to Western markets where borrowing can be seen positively as a mechanism for value addition, the capital markets in China which have experienced negative balance decomposing alongside non-paying borrowers, focus more on the risks associated borrowing. This explains why

situations within the manufacturing policy states where leverage reaches abnormally high levels (e.g., negative equity) are more often perceived negatively. This shows that the institutional context reduces the signaling value of financial variables.

This study supports a contextual reinterpretation of the DuPont framework. The DuPont decomposition need not be a mechanical mathematical identity; it can be thought of as a multidimensional surpassing a mere mathematical identity.

In the case of established companies like BYD, high ROE results from the combination of high profit margins and reasonable debt levels, in line with value investing tenets of safety margin and economic moat. This constellation of signals indicates the firm's value is realized, and agency costs are minimal.

In the case of growth-oriented firms such as Zeekr, the ROE may be impacted by some inconsistencies within the capital structure; however, the high asset turnover indicates an 'efficiency' signal, which is consistent with the logic of real options-based valuation. Here, the predominant analytical task is determining the most relevant signal and, with respect to disproportionate leverage, evaluating the agency problems and the institutional risk present.

5.3. Insights from integration and reconstruction

This research advances a theoretical extension of the DuPont framework, proposing that it should be viewed not merely as a ratio-based decomposition tool but as a strategic signaling architecture reflecting firm behavior and market interpretation across development stages.

Established companies such as BYD have steady profit generation capacity and disciplined use of equity as leverage due to its consistent and disciplined adherence to value investing principles of steady compounding and capital stewardship. Such appreciation reflects the actual value of the firm and the quality of its governance as transparent.

In contrast, for high growth companies like Zeekr, the distortions in the capital structure primarily complicate the interpretation of ROE. The disproportionate growth in assets signifies future value expectations primarily because the firm excels in asset turnover. For the purpose of DuPont analysis, these scenarios should emphasize the efficiency sign while considering the leverage situation primarily as a reflection of the management control issue and the reaction of the capital market.

6. Conclusion

In this research, DuPont model together with value-investing principles, was used to compare BYD and Zeekr, in order to analyze potential long-term investments in the emerging EV market in China. The analysis indicates net profit margin and asset turnover are the most influential factors since they directly relate to the profitability and operational efficiency of the firm. In contrast, the equity multiplier shows no significant influence which indicates that high reliance on debt is not a primary reason for long-term value investors. This is indicative that in the EV market, the durability of returns and the efficiency of assets are far more important than the provision of high leverage.

Based on the empirical results, BYD shows stronger and more consistent performance, which corresponds to the value-investing principle which likes companies with stable fundamentals and sustainable competitive advantages. Zeekr, on the other hand, is still loss making, although, due to the operational growth potential, the financial uncertainty renders it more suitable for investors with a higher risk appetite and a long investment horizon.

The methodology in this case is straightforward and can be conducted with basic Excel calculations, which makes this useful for the individual investor. Of course, there are limitations: for

one, the sample size is only two companies, which lowers the potential for generalisation. Future research could branch out to more EV companies, or even an interindustry comparison. All in all, this study has developed a financial evaluation which is both clear and useful for investors and for managers in the company.

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