



# Investment Analysis of BYD A New Energy Vehicle Enterprise

Haojiangshan Huang<sup>1,\*</sup>

<sup>1</sup>*Mathematical Sciences, University of Liverpool, L69 3BX, Liverpool, United Kingdom*<sup>1</sup>

*\*Corresponding author. Email: 20151311313@stu.qhnu.edu.cn\**

## ABSTRACT

Under the macro background of the 21<sup>st</sup> century and the demand for environmental protection, the new energy vehicle brand, BYD is among the best in the world. Compared with Tesla, BYD's price is more affordable, but its product quality control has certain deficiencies compared with Tesla. According to the financial report, BYD's sales and profit margins are on the rise. Under the background that traditional energy needs to be gradually replaced by new clean energy, BYD company has the ability for long-term development and profitability. From the perspective of the stock market, BYD needs to make a value investment, and only by holding shares for a long time can it enjoy the dividends of The Times and policies. In the recent stock investment, it is necessary to take into account the impact of the war between Ukraine and Russia on the stock market, and hedge operations are needed to avoid risks.

**Keywords:** *electric car, stock market, hedging, COVID-19*

## 1. INTRODUCTION

The concept of a portfolio is to “keep all your eggs out of one basket.” Or to spread your short-term risk by buying a basket of stocks. It's really about two things: risk and return [1-3]. In the pursuit and guarantee of high returns at the same time, reduce the risk of investors. The originator of diversification theory Harry Markowitz mentioned in his book “Portfolio Selection: Effective Diversification” that in the process of investment diversification, investors should not consider risks and returns, but also consider the correlation between independent investments, which suddenly increased the original consideration of two-dimensional factors of the investment portfolio to three levels [4-6]. Purchase a package of securities in independent, unrelated fields to diversify investments and weaken risks, and effectively combine funds, stocks, options, and futures to maximize profits and reduce risk costs.

George Box mentioned that all models are wrong, but some are useful, like the most widely model in the finance area is the Black-Scholes model, although this model is flawed, traders need more time and simpler ways to judge when making transactions, so there are more complex and accurate models. But in practice, traders need to make trade-offs among these models to find the most efficient method. The Black-Scholes model is used to value stock options, pay constant dividends, or

value Time-dependent options for interest rates, volatility, and dividends [7-9].

In terms of the current situation, BYD has a bright future. Peter Garney, the head of equity strategy mentioned in his article that in the next 30 years, new energy will be used more and more widely in the world, and BYD company is an enterprise focusing on new energy, but also trying to do innovation to improve the company's products. Only need in the new crown outbreak this corner, because of this global epidemic, for a long time, various places in the city of all countries in the seal, they do not go out so they will not lead to consumers to use these products, but the global economy is gradually warming, the outbreak is in the past, as long as the company continues to keep the firm a huge advantage and do some small quality control grasp and consumer negative feedback problem, the stock price is expected to reach the pea, after all, BYD company produced new energy vehicles can be regarded as the global leader in this field.

## 2. STYLE PALETTE

BYD Limited Company was established in 1995 and the company is headquartered in Shenzhen, China. It is listed in Hong Kong and Shenzhen, and its revenue and market value both exceed 100 billion RMB. BYD Limited Group is principally engaged and related to automobile,

rail transit, new energy, and electronics. Since its establishment, the company followed its own research and development and became the world's second-largest rechargeable battery manufacturer in 2003.

In the battery field, BYD has 100% independent research and development, design, and production capacity [10-11]. With more than 20 years of continuous innovation, BYD become a leading global supplier of solar energy and energy storage solutions [12]. The company is not just illustriousness on battery, but also in the field of electronic, it relying on strong materials, product research and development ability, automation

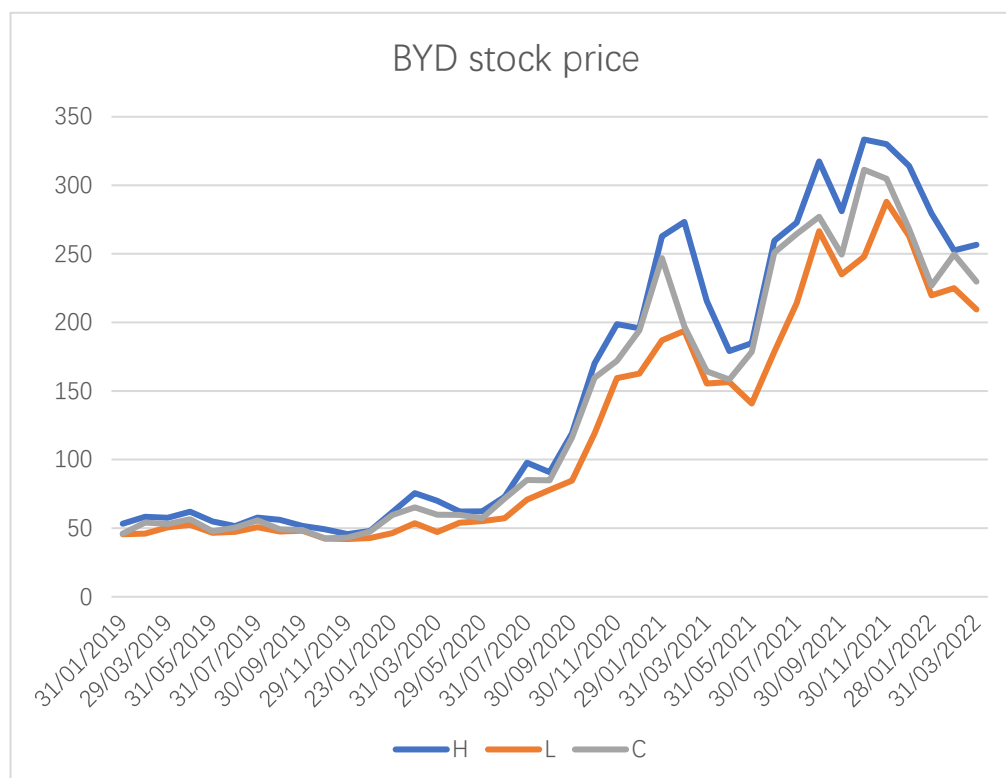
equipment development and application ability, and large scale processing and manufacturing capabilities, BYD is the world's leading electronic products design, can provide customers "one-stop" services. With technology research and development and innovation strength, BYD has mastered battery, motor,, electronic control and other core technologies of new energy vehicles two product series, covering seven conventional areas and four special areas to covers the whole field in the world. In 2016, in order to solve the problem of traffic congestion, BYD released a sub-brand of rail transit industry to officially enter the rail transit field.

**Table 1.** BYD Limited Company's financial status in the past three years

Year	Total income(RMB)	Operating income(RMB)	Total income(RMB)	Operating income(RMB)	Year-on-year growth in total revenue(%)	Year-over-year increase in attributable net profit(%)
2020	1566 billion	42.34 billion	42.34 billion	42.34 billion	22.59	162.27
2019	1277 billion	16.14 billion	16.14 billion	16.14 billion	-1.78	-41.93
2018	1301 billion	27.80 billion	27.80 billion	27.80 billion	22.79	-31.63

As Table 1. shows, the company's net interest rate has increased year by year except 2019, because the COVID-19 is sweeping the world. After that, it ascend to the top at 42.34 billion RMB. From the Figure 1. the stock price

was at the bottom out until December 2019, then reached to the peak at 333.33 RMB in the years that followed. In terms of its financial position, BYD's future looks promising if it can weather the global disaster.



**Figure 1** BYD Limited Company's stock price between 2019-2021(month)

### 3. HEDGING STRATEGY

The stock figure of BYD, shows that its monthly chart is still an uptrend, but the weekly chart is a downtrend. The main reason for that is because of the Ukraine war. Many investors are selling out their stock position. If now investors are trying to find a good way to invest in BYD stock at this moment, it's not a good time to buy in or sell out [13]. However, if they must invest it, the institution should wait for a sign, a sign that shows the price of BYD will stop falling. The price hit the previous height might be a good place to buy-in. Once investors buy the BYD stocks, they will face three possibilities: the price might go up, down, or stay flat. If the price goes up, they should just keep waiting and don't do anything. If the price stays flat, they should lower the positions and wait for another sign to tell them to sell out or add more positions. However, if the price goes down by around 5%-10%, they can sell out the BYD stocks.

When the investor wants to invest in the stock of BYD, they can't just analyze the news and finance report of BYD. It's too general, investors need to make trading plans based on the stock price and the trading volume. The monthly trend of BYD stock is going upward, from this the investor can see that the price and trend match the policies that government supports electric cars. If the investors can invest for a long period of time, they can just simply buy-in and wait till the price goes up. However, the safest strategy is the hedging strategy. When investors buy in the stock of BYD, they need to short the future or option of BYD, so they can lock their profits.

But the hedging strategy only works when the trend of an index doesn't match the trend of the stocks that the investor holds a position. If the trend of the index goes a different way compared with the stock, that means the stock can follow the trend of the index at any time easily, which is the opposite way the investors invested. That's why investors need to use a hedging strategy to avoid the losses might incur in this type of situation.

### 4. DISCUSSION

The move follows a statement by the Chinese central leadership that it will promote new energy and support energy conservation and emissions reduction. The company has always been a leader in the industry, and its brand value continues to improve. Although some factors may lead to the price of the company in the short term, in long term, the company's growth path is still logical. This is a domestic brand, cost-effective that almost family can afford. On the other hand, what the company values most and is most proud of is technology. Whether it is talent cultivation or technology research and development. The company's core products are independent research and development, also their independent production. Another point worth investing in is that Warren Buffett's

investment in BYD has raised the company's popularity not only in China but also abroad. The keen sense of show in the capital market has been ready to move in the past few years so that BYD's share price surged from 43 RMB to 247 RMB today, and as long as the rise continues, it is even expected to hit a new high.

Every coin has two sides. BYD not only has advantages but also has disadvantages in some aspects. Although BYD's popularity is enough, its brand influence needs to be improved. Because the brand in the early stage of its establishment is more biased toward the low-income group, the audience and consumer spending power are not high, but on January 21, the company officially announced that its new energy car prices will be increased by 1,000-7,000 RMB. On March 15<sup>th</sup>, when Tesla announced a price increase of 18,000 to 20,000 RMB, BYD followed a second price rise of 3,000 to 6,000 RMB. Because new energy vehicles are compared with traditional cars, the direct sales situation of new energy vehicles makes the price more transparent, and it will let consumers have an intuitive feeling, but whether consumers will accept or not the successive price raise of BYD new energy vehicles. BYD is a private enterprise, and salary increase is subject to the company's senior leadership and company system, so the salary system is relatively backward, which is easy to cause brain drain. Meanwhile, BYD prefers to hire fresh graduates and lacks professional and technical talents, before developing a new product BYD needs enough technical support to develop. On this basis, not only technical personnel are needed, but also sales personnel are needed to promote and sell these products.

From the sales market, in recent years, there are more and more new energy vehicle enterprises and more cost-effective, energy-saving, and environmentally friendly cars, so consumers have a lot of choices to make. Compare with the others, BYD has a second price rise before is not so competitive. In addition, the negative comments from consumers who have bought the products before will make BYD's competitiveness inferior to other car companies, and its quality cannot compete with some multinational car companies. Secondly, due to the impact of the pandemic, the global economy is in a downturn, and people have no spare money to spend on things that are not necessities of lives.

In the meantime, BYD can do a lot to improve its product quality. Not only to achieve innovation but also to ensure that consumers get as little negative feedback as possible after getting the product, which will affect the reputation of the enterprise, but also in the long run, there will be no competitive ability.

### 5. CONCLUSION

In today's environment, there are more and more new energy vehicles on the road. New energy is gradually

replacing traditional energy, new energy vehicles are the new energy vehicle industry, as an investor, can see huge business opportunities, in order to exchange for profits. One of the simplest ways to do this is by buying and selling stocks for a profit.

While developing new technologies, BYD company improves product quality control and promotes corporate culture to a greater extent, so that the history and culture of the company are strongly bound to the product itself, similar to consumers' psychology toward buying luxury goods.

In the research process, there was no firm stock or hedging operation, but more judgments were made based on the actual situation, current policies, historical stock prices, and company fundamentals. There were no definitive articles can support BYD's research strategy. No one knows BYD's future trends, and no one knows about the new policy will walk far. What the company to make a footprint step a footprint, honestly do products, improve their products, develop new technology, let more consumers and investors see the value of the company. The BYD should not stop there. We shall know that the history is no guide to predict the future investors.

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