

# SWOT Analysis, Porter's Five Forces Analysis and Financial Analysis for NIO Inc

Ruihang Zhang \*

Faculty of Business and Management, Beijing Normal, University-Hong Kong Baptist University  
United International College, Zhuhai, 519087, China

\* Correspondence mailbox: r130006252@mail.uic.edu.cn

**Abstract.** NIO is a globally-based Chinese smart electric car company. However, compared with its competitors of the same type, NIO is not as developed as its competitors. As a result, this paper analyzes NIO in various aspects, including the analysis of industry competitors, the SWOT analysis of NIO, the value chain analysis, the five forces analysis, and the analysis of financial status. The purpose is to explore the reasons why NIO lags behind its competitors in terms of development. After conducting an in-depth study of NIO, this paper finds that NIO suffers from losses and excessive debt. Therefore, this paper suggests that NIO should reduce the investment in research and development and the speed of infrastructure construction to reduce the risk of debt. At the same time, it should improve the sales volume and product quality, and increase the gross margin of the products to increase the operating income. The significance of this paper is to provide an in-depth analysis of NIO to help understand the basic situation of NIO and to reveal the environment of the market in which NIO operates.

**Keywords:** Electric vehicle, NIO, Financial analysis, SWOT, Porter's Five Forces Analysis.

## 1. Introduction

With the urgent need for environmental protection and sustainable development, the electric vehicle industry is facing unprecedented opportunities. Among them, NIO is rapidly emerging with its outstanding technical strength and innovation capability. NIO is a Chinese electric vehicle manufacturer founded in 2014 and headquartered in Shanghai, China. NIO was founded to develop and promote electric vehicle technology to combat global climate change and environmental pollution. The company's goal is to provide high-performance, high-quality electric vehicles and to promote sustainable energy and smart driving technologies.

NIO's current product lineup includes several electric vehicle models, such as the NIO ET5, EC6 and ES8. These models feature advanced electric technology, smart driving features and innovative designs. NIO's unique power-swap model allows users to quickly change batteries, improving charging efficiency and convenience. NIO is aggressively expanding its business globally, including marketing and sales in markets outside of China. The company was listed on the NASDAQ exchange in the U.S. in 2020, and will be one of the first Chinese electric vehicle manufacturers to list in the U.S. NIO also focuses on user experience and community building and has built a loyal user base through activities such as the NIO User Club. As of September 30, 2023, NIO has opened more than 441 stores worldwide.

Investors should understand NIO's fundamental situation, competitive environment, and financial performance. However, there are relatively few comprehensive studies on NIO, especially in terms of industry analysis and financial assessment. Therefore, the purpose of this paper is to analyze NIO to understand its basic situation, the competitive environment of the industry in which it operates, and the company's financial performance.

## **2. Market and Competitor Analysis:**

### **2.1. Li Auto**

Li Auto is a Chinese electric vehicle manufacturer that specializes in developing and marketing extended-range (ER) electric vehicles. Li's ER EVs can be powered by gasoline just like traditional gasoline cars, in addition to pure electricity. This is different from NIO's use of pure electricity as a power source and is one of the main reasons for the difference in sales between Azera and Li. The following data is based on official website information for information collection and comparison. Li delivered 139,100 new cars in the first half of 2023, already surpassing the total number of Li deliveries in 2022. NIO delivered only 54,600 units in the same period. Li is in direct competition with NIO in the Chinese market, with Ideal's share of China's market at about 5.5% of sales in July 2023, compared to NIO's share of 3.1% in the same period [1].

### **2.2. Tesla**

Tesla is the world's leading manufacturer of electric vehicles, with a product lineup that spans several models of electric sedans and SUVs. Both Tesla and NIO's products are purely electric types of electric vehicles, unlike Li's main focus on add-on vehicles. Tesla and NIO are also direct competitors. Tesla is known for its advanced electric vehicle technology, high performance and long range, and has built a large user base worldwide. Tesla has achieved remarkable success since entering the Chinese market and has become a major competitor in the Chinese electric vehicle market. NIO is in direct competition with Tesla in the Chinese market, and both companies are committed to promoting the popularity of electric vehicles and technological advances. Tesla's sales share of the Chinese market was approximately 4.9% in July 2023, while NIO's share was 3.2% during the same period [1].

### **2.3. Discussion**

These competitors are in direct competition with NIO in terms of product features, market share, technology and brand recognition. Each company is striving to improve the performance, range, and charging infrastructure of its electric vehicles to meet consumer demand for sustainable transportation solutions. Competition for market share and brand recognition will have an impact on each company's market position and long-term growth.

## **3. Value Chain Analysis**

### **3.1. Research and Development (R&D)**

NIO's R&D activities play a key role in its value chain and have a significant impact on the company's competitiveness and innovation. NIO has demonstrated a high level of technological innovation in R&D. They are committed to promoting the development of electric vehicles and smart mobility technologies and continue to introduce advanced battery technologies, electric drive systems, autonomous driving technologies and smart connectivity features. Through continuous R&D investment and technological innovation, NIO can provide competitive products and solutions to meet the ever-changing needs of users.

NIO continues to invest a lot of resources in R&D activities. They not only invest in manpower and expertise in their R&D team but also invest in R&D facilities and equipment to support innovation and technology trials. This continuous investment in R&D provides NIO with the foundation to realize technological breakthroughs and product innovations.

### **3.2. Focus on Supply Chain Management**

NIO has developed close relationships with suppliers and a highly sophisticated supply chain to ensure access to high-quality raw materials and parts. NIO focuses on selecting and building

relationships with supply chain partners. NIO emphasizes quality, reliability, cost-effectiveness and sustainability in the supplier selection process to ensure a stable and efficient supply chain.

In addition, NIO focuses on sustainable sourcing, social responsibility and environmental protection. They work with suppliers that meet sustainability standards and promote the application of sustainable materials and supply chain management practices. NIO also actively promotes environmental friendliness and social responsibility in the supply chain to achieve the goal of sustainable development. For Manufacturing, NIO's manufacturing is outsourced by Anhui Jianghuai Automobile Group Co., Ltd. (JAC). Handing over manufacturing to JAC allows NIO to focus its superior resources on the more important parts of its corporate strategy, such as user service, software, branding, and technology updates, and also saves costs, reduces the need for a lot of centralized investment in heavy assets at the initial stage, and maintains a good cash flow for the startup. For delivery, NIO delivers vehicles to customers through a unified delivery center, where delivery personnel will explain the vehicle's features to the customer in detail at the time of delivery. For sales and marketing, through offline store experience and online publicity, customers can understand and experience NIO's products.

### **3.3. Service and After-Sales Support**

NIO focuses on butler service and provides comprehensive after-sales support. NIO has demonstrated a series of positive practices in service and after-sales support activities to provide customers with comprehensive care and support. They have established a comprehensive customer support system, including a professional customer service team and multi-channel communication methods to ensure that customers receive timely and efficient service responses. They offer a wide range of service options, including on-site repairs, remote diagnostics, maintenance programs and 24/7 emergency assistance to meet the needs of different customers.

## **4. Swot Analysis**

### **4.1. Strengths**

#### **4.1.1. Power-swap mode**

The NIO has a unique power-swap mode among pure electric vehicles. NIO's power-swap mode refers to the use of removable battery packs in electric vehicles to achieve rapid battery replacement to solve the limitations of electric vehicle range and charging time. Compared to traditional charging methods, the Power Swap Mode can complete battery replacement in minutes, much faster than a long charging process. This allows users to quickly continue driving without waiting, improving the convenience of using electric vehicles.

The power-swap mode solves the limitations of the electric vehicle range. Owners can change the battery as often as needed, thus extending the range of the car. This flexibility and convenience eliminate car owners' anxiety about range.

NIO has adopted uniform battery specifications and standards, making batteries from different models compatible with each other. This means users can change batteries at any NIO swap station, whether in the city or on the highway and enjoy the same service.

Overall, NIO's power exchange model solves the limitations of electric vehicle range and charging time by providing fast and convenient battery replacement services, providing users with a better experience. This unique battery-swapping model is innovative in the field of electric vehicles and provides a viable solution for the further popularization and promotion of electric vehicles.

#### **4.1.2. Unique brand culture**

NIO's brand culture emphasizes the establishment of a user community. The NIO community allows car owners and enthusiasts to connect and communicate with each other through online and offline activities. This idea of community embodies NIO's pursuit. The NIO House is a lifestyle community for NIO users to share joy and grow together and features Forums, a meeting room and

workspace Lab, a museum of knowledge, a space for relaxation and solitude Library, an NIO Café, a Joy Camp for kids, a Gallery to learn about the brand and its products and a Living room.

#### **4.1.3. Excellent user experience**

NIO focuses on the user experience and is committed to providing excellent products and services to its customers; NIO Service is a one-stop service ecosystem built independently by NIO to provide comprehensive car maintenance services to its owners. In addition, NIO offers a full range of customer services, including an intelligent charging network, efficient maintenance services and personalized customization options to meet users' individual needs and provide a full-service experience that exceeds expectations. NIO also has mobile service vehicles to provide door-to-door service for users. It supports maintenance and emergency charging.

#### **4.1.4. A lot of technological innovation**

NIO's patented innovations have provided NIO with a competitive advantage, solidifying its position in the electric vehicle sector and advancing the industry as a whole. The following data is based on official website information for information collection and comparison. From 2015 to 2020, NIO has deployed more than 4,000 patents, including more than 1,500 invention patents, in a number of countries, including China (mainland and Hong Kong and Taiwan), the United States, Europe, Japan, and South Korea, which is ranked first in the new car-making camp and far ahead of the second place. Among them, NOMI is a unique on-board intelligent partner of NIO. The screen and motor allow NOMI to make natural movements, expressions and voice communication. NOMI uses a new way of human-car interaction to make cars become living and emotional partners.

From the statistics, NIO's patent portfolio also perfectly reflects the company's attributes of strong intertwining of intelligence and user concepts: in addition to "traditional" vehicle patents such as vehicle engineering, manufacturing and quality, and model design, NIO has also filed for a large number of patents for its unique power switching technology (power management), intelligent assisted driving and digital cockpit, user development and service operation, and user digital products.

A simple calculation shows that these patents represent 38% of NIO's patent portfolio. These nearly 1,600 patents are in areas that other automakers are not and will not be involved in, and represent NIO's most differentiated and truly competitive strengths.

For example, the Bayobolt locking mechanism of the switching station is unique to NIO's switching system and can withstand up to thousands of disassembling and installing cycles while ensuring the structural strength of the battery support. It is one of the most important components of NIO's battery rental service, and the Bayobolt locking mechanism needs to be healthy throughout the vehicle's lifecycle, including a wide range of conditions, such as a dirty chassis when it rains, and a washable design that ensures quick alignment of the station with the vehicle and fast locking and unlocking.

## **4.2. Weaknesses**

### **4.2.1. Higher price**

The higher selling price compared to the same class of products makes NIO's sales not as good as other competitors. The following data is based on official website information for information collection and comparison. NIO's ET5 and Tesla's Model 3 are competing products in the same class, the price of the Model 3 refreshed version starts from 259,000 yuan, while the price of ET5 starts from 298,000 yuan, the difference is 39,000 yuan. NIO's other model, the ES8, and Li's L9 are also competing in the same class, with the L9 Pro priced at 429,000 RMB while the ES8 is priced at 498,000 RMB, a difference of 69,000 RMB. NIO's high price makes it a challenge to compete with other electric vehicle manufacturers in the market. The high price limits NIO's potential consumer base. Many competitors offer more competitive prices, which may cause potential consumers to switch to other brands, especially in price-sensitive markets. As a result, high prices may limit NIO's potential sales opportunities in the market.

#### **4.2.2. Differences in replenishment models**

Although NIO's power exchange model brings some advantages in certain aspects, there are also some potential disadvantages. NIO's refill model requires the construction of a large number of refill stations in various locations in order to support battery replacement services for a wider range of regions and users. This involves expensive infrastructure development and operating costs, including land purchase, building construction, battery storage and management equipment. This makes the expansion of the switching model potentially subject to financial constraints and time delays. The coverage of current power exchange stations is still limited and may be restricted especially in certain remote areas or developing countries. This may affect user convenience and accessibility.

#### **4.2.3. Battery quality and maintenance issues**

NIO's power exchange model relies on large-scale battery management and maintenance. Battery quality and performance are critical to the user experience, and large-scale battery management and maintenance requires strict quality control and monitoring mechanisms. If battery quality is questionable or poorly maintained, it may lead to user dissatisfaction and safety risks [2].

### **4.3. Opportunities**

#### **4.3.1. Patent R&D**

NIO continues to invest in research and development of patented technologies, which may form a technological barrier in the future and lead to other competitors.

More and more perfect power exchange station layout: NIO can provide a more convenient and efficient power exchange service to meet users' demand for fast power exchange. Instead of waiting for a charge, users can simply replace their batteries with fully charged ones, saving time and improving travel efficiency, which will enhance user satisfaction with NIO's EVs. By providing an extensive network of power exchange stations, NIO will be able to attract more potential users, especially those who have high requirements for long-distance traveling and convenience of charging, and thus increase its market share.

### **4.4. Threats**

#### **4.4.1. Increased Competition**

As the electric vehicle market grows, competition is becoming more intense, which may affect NIO's market share. The following data is based on official website information for information collection and comparison. Li, one of NIO's main competitors, achieved 10,123 deliveries of the Ideal L9 in its first full delivery month in September 2022, making it the first Chinese-branded model with over 10,000 deliveries in a single month and a price tag of 400,000 or more. From September 2022 to May 2023, Li L9 won the sales title of China's large SUV and China's 400,000+ luxury SUV for 9 consecutive months.

#### **4.4.2. Ongoing Losses**

NIO has been losing money for several years. In 2020 NIO lost 5,304,082 thousand dollars; in 2021 NIO lost 4,016,949 thousand dollars; and in 2022 NIO lost 14,437,104 thousand dollars. NIO has not made a profit since the company's inception [3].

#### **4.4.3. Fast charging technology development**

NIO's main switching mode requires several minutes to switch a battery to the car. The number of batteries available at the switching station is also limited, and there may be a queue for switching or no available batteries during the peak period of switching. If fast-charging technology gets a breakthrough. The time advantage of the power exchange mode will diminish. The two recommended national standards GB/T 20314.1-2023 Connecting Device for Conductive Charging of Electric Vehicles Part 1: General Requirements and GB/T 20314.3-2023 Connecting Device for Conductive Charging of Electric Vehicles Part 3: DC Charging Interface, which are under the purview of the

National Automotive Standardization Technical Committee, have been released. The maximum charging power is increased to 800 kW, and the charging time from 10% to 80% is only 15 minutes [4,5]. Unfortunately, due to the high technical difficulty and cost problems, high-power supercharging is slow to popularize. At present, the proportion of high-power charging piles is very low, and the proportion of public DC piles with a single gun of 150kW or more is only 5%, and there is still much room for progress in the penetration rate [6].

## **5. Analysis of the Five Forces**

### **5.1. Buyer Bargaining Power**

This refers to the bargaining power of buyers over the firm's products or services. If there is a high concentration of buyers and buyers have strong bargaining power, the firm may face the challenge of price competition and declining profit margins. NIO has a low concentration of buyers, with many smaller buyers in the market and a relatively fragmented market share. The bargaining power of buyers is relatively low.

### **5.2. Seller's Bargaining Power**

This refers to the supplier's ability to supply resources (e.g., raw materials, components, etc.) required by the firm as well as its ability to negotiate prices and terms. If supplier concentration is high and suppliers have high bargaining power, firms may face supply chain risks and upward pressure on costs. Supplier bargaining power may be higher. For NIO, the bargaining power of suppliers may be higher. NIO, as an electric vehicle manufacturer, relies on various components and materials from its suppliers to produce its vehicles.

### **5.3. Level of Competition from Competitors**

Competitors in the industry include traditional automobile manufacturers and emerging electric vehicle manufacturers. The electric vehicle industry is undergoing a period of intense competition. According to the data of the Passenger Association, the Top 15 companies in terms of retail sales of new energy narrow passenger car manufacturers in 2022 are BYD (with a market share of 31.7%), Tesla China (7.8%), Geely Automobile (5.4%), Changan Automobile (3.7%), Li (2.3%), NIO (2.2%), [7].

### **5.4. Barriers to Entry**

Barriers to entry in the electric vehicle market include economies of scale and technical barriers. The electric vehicle industry is highly competitive, with leading companies occupying a large share. It is difficult for new entrants to divide the market occupied by large companies. The key technologies in the electric vehicle industry are batteries and motors. NIO has been insisting on research and development of patented technology, from 2015 to 2020, NIO invented more than 4,000 patents, which will be a technical barrier for other manufacturers who want to enter the electric vehicle market or develop the power exchange mode.

### **5.5. Threat of Substitution**

The substitute for electric cars is gasoline cars. Despite NIO's rapid growth, traditional fuel vehicles still dominate the market. Traditional fuel vehicle manufacturers are also improving their products and actively developing hybrid and electric vehicle technologies. These traditional fuel vehicle manufacturers could be a potential alternative, especially in second and third-tier cities or in northern regions where NIO's power exchange stations are not well built.

## 6. Ratio Analysis

This section first focuses on NIO's profitability.

The P/E ratio is the Price Earnings Ratio, also known as the "principal to earnings ratio". The P/E ratio is the ratio of stock price divided by earnings per share (EPS). Gross profit margin is the percentage of gross profit over operating income, where gross profit is the difference between income and the operating costs corresponding to that income. Net profit margin Net profit margin is the net profit earned from operations as a percentage of operating income. This percentage provides a comprehensive picture of the operating efficiency of a business or an industry. ROCE is the return on capital employed, which is the percentage of current pre-tax profit ÷ current average capital employed. ROCE can be used as an indicator of a firm's ability to utilize capital.

As shown in Table 1, the P/E ratio, ROCE, and Net profit margin are all negative from 2020 to 2022. As shown in Fig. 1, NIO's stock price is also falling, from \$60 in 2021 to \$9 in 2023.

**Table 1.** NIO's partial financial ratios from 2020 to 2022

	2020	2021	2022
P/E ratio	-10.28	-4.71	-1.1
ROCE	-0.20	-0.12	-0.60
Gross profit margin	0.12	0.18	0.13
Net profit margin	-3.07	-9.00	-3.41



**Figure 1.** NIO's share price trend from 2019 to 2023 [8]

It is worth noting that NIO has not made a profit since its inception. Even though NIO is positive in terms of gross profit, the huge operating expenses make it impossible for NIO to make a profit. Especially in the R&D section, as shown in Table 2, the R&D expenses are rising every year, from 2,487,770 thousand dollars in 2020, 4,591,852 thousand dollars in 2021, and 10,836,261 thousand dollars in 2022.

Secondly, this paper focuses on the liquidity aspect. Liability on asset ratio, also known as the debt to operations ratio, is the percentage of total liabilities divided by total assets at the end of the period and is a comprehensive indicator for evaluating a company's level of indebtedness. The rise in Liabilities to asset ratio shows that NIO's debt-to-asset ratio is also rising.

The current ratio represents the level of a company's solvency. Current ratio = current assets/current liabilities. Current assets are assets that can be easily liquidated within one year, such

as cash, marketable securities, accounts receivable, and inventory. Current liabilities represent liabilities that will be repaid within one year, such as short-term borrowings, notes payable, etc. As shown in Table 3, the current ratio decreases from 3.31 in 2020 to 1.29 in 2022.

**Table 2.** NIO research & development and sales, general & administration expenses from 2020 to 2022 (in thousands)

	2020	2021	2022
Research and development expenses	2,487,770	4,591,852	10,836,261
Sales, general & administration expenses	3,932,271	6,878,132	10,537,119

**Table 3.** NIO's partial financial ratios from 2020 to 2022

	2020	2021	2022
Liabilities to asset ratio	0.42	0.54	0.71
Current ratio	3.31	2.18	1.29
Quick ratio	3.11	1.89	0.96

Quick Ratio is a more rigorous assessment of the cash on hand that a company has to service its debt. Quick Ratio excludes inventory from the calculation, which is uncertain in its ability to be realized, and therefore results in a more meaningful ratio called the Quick Ratio. Quick Ratio = Quick Assets/Current Liabilities [9]. Where, Quick Assets = Current Assets – Inventories. As shown in Table 3, the quick ratio decreases from 3.11 in 2020 to 0.96 in 2022. The quick ratio decreases below 1.

Both measures of liquidity Current ratio and Quick ratio are decreasing. This is a bad sign, which suggests that NIO may not have enough cash to service its debt.

To summarize, NIO is not yet profitable, and its high operating expenses are causing it to lose money. NIO's liquidity is also a concern, as its ability to service its debt is insufficient.

## 7. Discussion

Based on the above analysis this paper finds that NIO has the problem of not being able to make a profit. the gross profit in 2022 is only 5,143,993 thousand dollars while the total operating expenses are 20,784,652 thousand dollars [3], which ultimately leads to a loss. NIO's vigorous construction of infrastructure such as power exchange stations and investment in research and development are behaviors conducive to future development. The construction of power stations will help NIO to lay out the energy supply network and reduce consumers' worries about buying NIO's cars. Investing in research and development will help NIO improve its products. These investments will greatly enhance the company's core competitiveness and build up the company's brand influence and competitive barriers in the market, which are truly strategic and favorable to future development [10]. Only these inputs cannot be immediately converted into current vehicle sales and gross profit.

In the long term, NIO, as a growth company, is in the stage of developing and losing money.

However, in the short term, lower liquidity due to debt is not a good sign. NIO's high level of debt leads to a decrease in debt servicing capacity and a rise in operational risk, and NIO may find it difficult to cope with short-term emergencies.

Therefore, this paper suggests that NIO appropriately reduce its large investment in R&D and the speed of building infrastructure and put more cash into daily operations to ensure the company's normal flow and reduce debt risk. At the same time, stabilize the quality of existing products, carry out appropriate price reduction activities or increase sales channels to enhance sales; improve the gross margin of products and increase operating income.

## 8. Conclusion

This paper describes the basic information of NIO; analyzes the electric vehicle market and NIO's competitors; and conducts value chain analysis, SWOT analysis, five forces analysis and financial ratio analysis of NIO. This study finds that NIO is not in a good position to operate profitably. The reason is the large investment in operating expenses and R&D expenses, the higher pricing of the product leads to the sales not being as good as the competitors. This paper suggests that NIO appropriately reduces the large investment in R&D and the speed of building infrastructure and puts more cash into daily operations to ensure the normal flow of the company and reduce debt risk. At the same time, stabilize the quality of existing products, carry out appropriate price reduction activities or increase sales channels to enhance sales; improve the gross margin of products and increase operating income. The research significance of this paper is to provide an in-depth analysis of NIO and its competitors to help understand the basic situation of NIO, reveal the dynamics and trends of the market in which NIO operates, and provide NIO and relevant stakeholders with a comprehensive understanding of the competitive environment of the Chinese electric vehicle market.

There are still some shortcomings in this article. This paper has not yet examined the impact of consumer demand on NIO. Future research could examine consumer demand in more detail through market research, consumer surveys and behavioral data analysis to give NIO a more detailed study of its product development and market positioning.

## References

- [1] Passenger Vehicle Market Information Association, July 2023 New Energy Vehicle Industry Monthly Report, 2023.09.08, Retrieved from: <http://www.cpcauto.com/newslst.php?types=bgzl&id=1221>.
- [2] Yao Su Hang, Qiao Ya Rong, Zhang Yu Meng. Study on the Operation of Power Exchange Mode Based on the Background of New Energy Vehicle Development--Taking NIO Power Exchange Mode as an Example [J]. Special Purpose Vehicle, 2022, (06): 8 - 10.
- [3] NIO, 2022 Annual Report, 2023.04.28, Retrieved from: [https://www1.hkexnews.hk/listedco/listconews/sehk/2023/0428/2023042804234\\_c.pdf](https://www1.hkexnews.hk/listedco/listconews/sehk/2023/0428/2023042804234_c.pdf).
- [4] National Automobile Standardization Technical Committee, Connection device for conductive charging of electric vehicles Part 1: General requirements, 2023.09.07, Retrieved from: <http://www.catarc.org.cn/standard.html?keyword=GB/T%2020234.1-2023>.
- [5] National Automotive Standardization Technical Committee, Connection device for conductive charging of electric vehicles Part 3: DC charging interface, 2023.09.07, Retrieved from: <http://www.catarc.org.cn/standard.html?keyword=GB/T%2020234.3-2023>.
- [6] Huawei Digital Energy Technology Co, China High Voltage Fast Charging Industry Development Report (2023-2025), 2023.03.05, Retrieved from: <https://digitalpower.huawei.com/attachments/index/abdbd0ebff44435a8>.
- [7] Passenger Vehicle Market Information Joint Committee, In-depth Analysis Report on National New Energy Market in December 2022, 2023.01.20, Retrieved from: <http://www.cpcauto.com/newslst.php?types=csjd&id=2995>.
- [8] NASDAQ, 2023.09.29, Retrieved from: <https://www.nasdaq.com/market-activity/stocks/nio/advanced-charting>.
- [9] Deng Jing Jing. Short-term solvency analysis of MD [J]. China Management Informatization, 2021, 24 (14): 34 - 35.
- [10] Jin Yi Dan, NIO Founder Li Bin: Anchoring Charging and Switching Infrastructure to Make Refueling More Convenient Than Fueling[N], China Securities Journal, 2023 - 04 - 07 (A07).