

**DISCOUNTED CASH FLOW VALUATION OF
MIDEA GROUP CO., LTD.**



**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
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ABSTRACT

This thematic paper mainly studies the valuation of Midea Company. The implied stock value of Midea is calculated by the DCF method. The final result is 65.38 CNY per share. The market price of the stock on December 31, 2024 is 75.22 CNY per share. The stock price is overvalued by 15.05%. In addition, the estimated stock price on May 3, 2025 will be 71.01 CNY. At that time, the stock price will be overvalued by 8.61%. The overestimation ratio will decrease. Otherwise, we analyze that investing in Midea Company will face economic risks, business risk, market risk, financial risk and regulatory risk. These risks will also affect the income of investing in Midea. Therefore, the recommendation is to "SELL"

KEYWORDS: MIDEA/ VALUATION/ DISCOUNTED CASH FLOW/ DCF
VALUATION/ INVESTMENT

49 pages

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
AIOT	Artificial Intelligence of Things
CAPEX	Capital Expenditures
CAPM	Capital Asset Pricing Model
CNY	Chinese Yuan
COVID-19	Coronavirus Disease Starting In 2019
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
FCFF	Free Cash Flow to the Firm
GDP	Gross Domestic Product
HVAC	Heating, Ventilation and Air Conditioning
IMF	International Monetary Fund
IoT	Internet of Things
MRP	Market Risk Premium
NOPAT	Net Operating Profit After Taxes
R&D	Research and Development
TV	Terminal Value
USD	United States Dollar
WACC	Weighted Average Cost of Capital

CHAPTER 1

BUSINESS ANALYSIS

1.1 Macro Background of Midea

As a leading company in the home appliance industry, Midea has diversified businesses and a wide market, making it susceptible to various external influences. This chapter will analyze Midea's macro background through business environment, social trends and industry overview to fully understand the external environment.

1.1.1 Global Business Environment

1.1.1.1 Political

China has a stable political environment, the government supports technological innovation, provides subsidies for energy-saving industries, and encourages companies to develop overseas, creating a stable internal environment for the long-term development of companies. However, in recent years, the tense international situation and Sino-US trade frictions have led to exchange rate fluctuations and increased export costs, bringing major challenges to companies' overseas development.

1.1.1.2 Economic

In the past five years, the Gross Domestic Product of China has continued to grow, and the continuous improvement of residents' consumption capacity has brought positive prospects for the domestic market (National Bureau of Statistics of China, 2024).

In the global market, although the overall economic growth rate has slowed down, emerging markets and developing economies have shown a clear growth trend and still have great potential (IMF, 2025).

1.1.1.3 Legal

The operation of enterprises is strictly constrained by relevant laws such as intellectual property rights, labor contracts, and consumer rights. Enterprises must ensure compliance and assume social responsibility while making profits. In addition, the international market has different certification standards for export commodities, which increases the cost and difficulty of enterprises entering overseas markets.

1.1.2 Market Development Trends

1.1.2.1 Social

Based on the changes in the global population structure, the aging problem has driven the demand for health management and the elderly care industry. At the same time, the decline in birth rates has led to a decrease in the labor supply. Enterprises should flexibly adjust their business strategies and accelerate the transformation to mechanized and automated production.

In addition, with the advancement of technology, Artificial Intelligence and cloud computing are constantly reshaping the industry landscape. In order to maintain competitive advantages, companies should increase investment in core areas, build industry technology barriers, and enhance market competitiveness.

1.1.2.2 Environmental

Global climate change and environmental problems are becoming increasingly serious. The high energy consumption and high pollution in the manufacturing industry directly impact the ecological environment. In order to cope with this problem, governments and organizations have formulated stricter production standards. Therefore, enterprises should achieve sustainable development through energy conservation and emission reduction, improving energy efficiency and reducing greenhouse gas emissions.

1.1.3 Industry Overview

1.1.3.1 Industry Development

The development of the home appliance industry began in the late 19th century and has undergone significant transformation from mechanical operation to electric power, and now to the application of cloud computing, AI and Internet of

Things technology. Since 2015, the global market has continued to grow, with strong market prospects. Global home appliance shipments generally showed an upward trend from 2016 to 2023, and China is the world's largest market (Qianzhan Industry Research Institute, 2024).

In terms of the domestic market, China's home appliance industry started later but has now achieved a leading global position through technological innovation. In 2023, the domestic market revenue reached 715 billion yuan (about 100 billion US dollars), and it is expected to exceed 120 billion US dollars in 2029, with rapid development (Statista, 2024).

1.1.3.2 Market Structure

From the perspective of the consumer market, Asia is the largest market globally, while Africa has the fastest growth rate. Developed countries have higher per capita consumption and are the target market for high-end home appliances (Statista, 2024).

From the perspective of corporate competition, Midea ranks first in the global home appliance market in 2023 with revenue of \$41.41 billion, followed by Haier and LG. The world presents an oligopolistic market dominated by Asian companies. Old European and American companies are still competitive in the high-end market. On the other hand, the domestic market is highly saturated, and the competition among leading companies is very fierce. Companies must focus on clear market positioning and core advantages to succeed (Statista, 2024).

1.1.3.3 Future Trend

Smart Development: In the future, the home appliance industry will develop towards intelligence. Technology and innovation will be deeply integrated into home appliances. Smart home appliances will gradually replace manual operation through voice control and remote operation.

At the same time, internal enterprise management will also move towards intelligent upgrades. Through the Internet of Things, blockchain and big data analysis, to establish an integrated smart management system, optimizing cost control and efficiency.

Eco-Friendly: Environmental protection and energy conservation have always been hot topics in society. Driven by both the market and policies, the demand

for energy-efficient home appliances will continue to grow and become the mainstream of society.

On the other hand, companies should also respond to sustainable development in the production process, use eco-friendly materials, reduce carbon emissions, and reduce overall energy consumption.

Consumer Driven: The home appliance market is affected by a variety of factors, such as technological progress, urban development, and economic growth. Consumer demand has shifted from single basic functions to diversified needs. Young consumer groups focus on appearance design and innovative functions, high-income groups prefer high-end customized products, and family consumers focus on practicality and cost-effectiveness. In addition, due to changes in shopping habits, companies need to strengthen social media operations and optimize online marketing strategies.

1.2 Midea Company's Overview

In the following subchapters, we provide the target company's business segments (1.2.1), business model (1.2.2), financial analysis (1.2.3), core competencies (1.2.4) and SWOT analysis (1.2.5).

1.2.1 Business Segments

In Midea, the business segment is divided into four parts, which is smart home, industrial technology, building technology, robotics & automation, and innovative businesses (Figure 1.1).

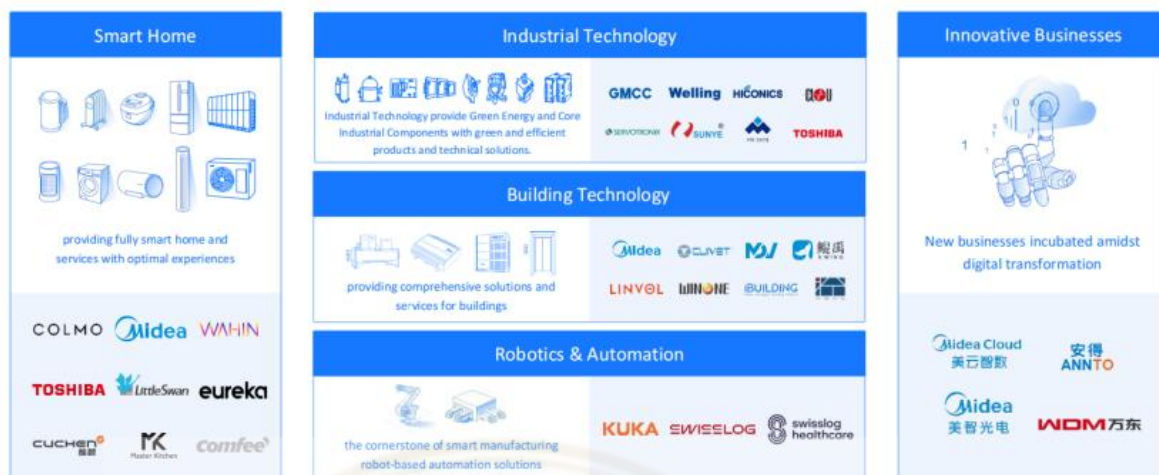


Figure 1.1 Midea's business segments

Source: Midea, 2024

The first segment is Smart Home. This is Midea's most important business department. It mainly provides customers with fully intelligent home appliances and facilities to enhance customers' smart living experience. The theme of Midea's smart home appliances has its own uniqueness, creating a safe, healthy, delicacy, convenient, and tailored intelligent system. Safe is mainly aimed at smart door locks, smart electronic eyes and other household security products. The function helps the customers build the various security through the product security. Healthy mainly targets white appliances such as washing machines and air conditioners. Midea is committed to creating a series of healthy appliances, focusing on healthy air and water quality, supplemented by a healthy living environment, to give customers a caring and healthy brand image. Delicacy mainly targets Midea's kitchen products, such as microwave ovens, refrigerators, exhaust fans, dishwashers, etc. Midea is committed to creating exquisite kitchen products, fully helping families to plan meals, store food, and assist in nutritious diets, successfully satisfying customers' pursuit of exquisite characteristics of kitchen products. Convenience is mainly aimed at ventilation equipment. Midea is committed to making ventilation equipment extremely convenient to reduce sound and noise in the home environment. Tailored mainly focuses on several various modes of household appliances, customized for the elderly mode, children mode and Midea's unique single mode. According to different user characteristics, the product can be more in line with user needs, improve customer satisfaction, and achieve a one-to-one product experience (Midea, 2024).

The second segment is Industrial Technology. This part mainly provides green energy, core industrial component services for industrial enterprises, and system services for energy planning. From energy supply to energy distribution, to the formulation of energy rules, to strict control of energy consumption, and finally to effective configuration of energy management, the system helps enterprises reduce energy consumption and achieve the goal of industrial green energy conservation (Midea, 2024).

The third segment is Building Technology. This part mainly provides comprehensive solutions for buildings. The goal is to establish an artificial intelligence environment with sustainable development. The facilities mainly provide elevators, intelligent control and ventilation systems. The system mainly controls the environment and management platform, thereby reducing carbon emissions, integrating energy use, flexibly saving resources, and achieving an intelligent experience with comprehensive optimization of building top-level design (Midea, 2024).

The fourth segment is Robotics & Automation. This part mainly provides four services: industrial intelligence, health detection, intelligent robots and intelligent distribution. Midea's main belief is to use intelligent manufacturing as the cornerstone of industry and use intelligent robots to solve the automation problems. At the same time, in this part, it also strengthens strong cooperation with automation companies, such as Kuka, Swisslog, etc., to achieve a full range of intelligent experience (Midea, 2024).

The last part is Innovative Business. Midea has been making continuous breakthroughs and developments in the field of innovation. This part mainly focuses on digital transmission and launches end-to-end digital supply chain solutions such as Midea cloud. This part has also been making continuous breakthroughs and developments year by year (Midea, 2024).

In total, Midea's uniqueness is mainly in creating energy-saving, intelligent, environmentally friendly, green, and technological products. In addition, Midea focuses on enhancing customer customization and the intelligent user experience.

1.2.2 Business Model Canvas

The business model canvas chart shows that the Midea's business model, which includes nine different parts. That are Key Partners, Key Activities, Key Resources, Value Proposition, Customer Relationship, Channel, Customer Segments, Cost Structure and Revenue Structure (Figure 1.2).

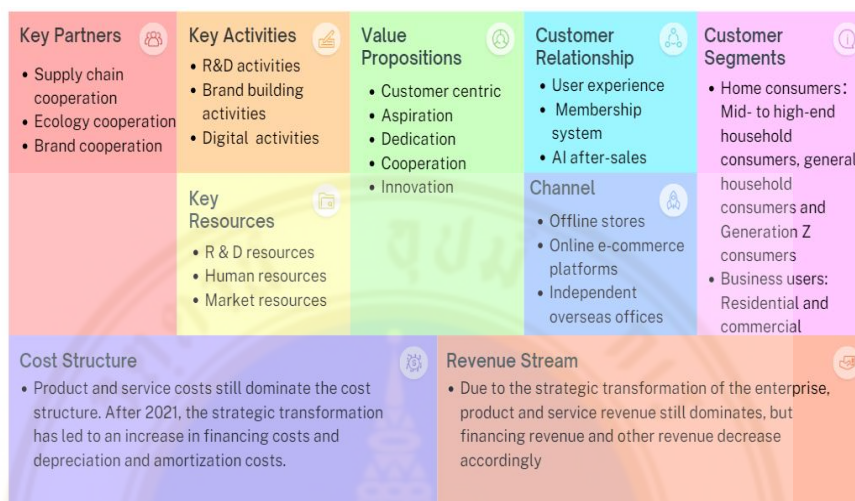


Figure 1.2 Midea's business model canvas

Source: Midea, 2024

1.2.2.1 Key Partners

Firstly, Midea mainly cooperates with fully automated companies, such as KUKA, to help manufacturing companies complete the construction of automation and finally to achieve supply chain cooperation (Midea, 2024). This is mainly reflected in Midea's industrial technology business, building technology business, and robotics & automation business. Close cooperation with downstream industrial enterprises not only helps Midea expand its downstream links, but also further enhances Midea's vertical integration strategic layout.

Secondly, Midea's ecological industry chain cooperation involves enterprise services. Liru has terminal cooperation with Apple, platform cooperation with Alibaba and Huawei, terminal service cooperation with Meituan and JD.com, content marketing cooperation with Himalaya and 58 Daojia, and intelligent cooperation with iFlytek (Midea, 2024).

Finally, Midea has also signed a brand partnership with Manchester City Football Club (Midea, 2020). The two parties will jointly plan digital marketing

activities and expand Midea's influence through social media and video advertising. Erling Haaland will also act as a Midea influence spokesman to strengthen the cooperation between the two parties.

1.2.2.2 Key Activities

Midea attaches great importance to research and development activities. In addition, Midea organizes events such as Science and Technology Month every year to improve the science and technology system, establish an R&D system, separate technology research and product development, and build a technology platform conducive to the development of new products. For example, at the 29th Midea Group Technology Month Conference held on October 16, 2024, the talents in R&D and product development were honored under the theme of innovation, globalization, and transformation (Midea, 2024). The highest project award is Chinese Yuan 5 million, the highest individual award is over 1 million CNY, and the cumulative award is over 450 million CNY.

In addition, Midea attaches great importance to brand building and has invested in a variety of brand-building-related activities, such as partnering with international sports to carry out influence activities, partnering with Manchester City Football Club to carry out digital marketing activities, and partnering with Greek suppliers to design a new subway and introduce the brand into the transportation system (Midea, 2020).

Finally, Midea has also made every effort to promote digital transformation and carried out a variety of related activities. For example, they have set up a digital production base in Guangzhou and held a digital transformation event to discuss and share digital transformation experiences with experts.

1.2.2.3 Key Resources

Midea has abundant R&D resources. Midea provides R&D services that can connect people around the world. Midea has 35 R&D departments around the world. In addition, a research center was established at Midea's headquarters, bringing together cutting-edge engineers worldwide to carry out product design and research.

Midea has strong human resources. Midea has attracted relevant talent through a rigorous management system. By improving the organizational structure, they have achieved a flat management model. Firstly, Midea needs to strengthen talent

development, then provide continuous follow-up suggestions on recruitment, training, promotion, etc., and finally help employees realize their career planning.

Midea has been named the world's most valuable home appliance brand in 2023 (Midea, 2023). This event opened up new markets for Midea and improved market structure and layout. Diverse perspectives and global visions strengthened marketing channels and helped Midea obtain rich marketing resources.

1.2.2.4 Value Propositions

Midea is centric, which adheres to aspiration, dedication, cooperation and innovation as the organization's value proposition (Midea, 2024). Midea's corporate culture considers customer needs as the principle and condition for the company's development, and it considers dedication to customers to be the company's main ambition. They actively work with other partners, continuously update and iterate the products, transform the organization model, and build their own organizational system based on digital applications.

1.2.2.5 Customer Relationship

Midea attaches great importance to customer experience in building relationships with customers and uses it as the core of ongoing customer service activities. Midea's customized functions can meet different user needs, such as single mode, children mode and elderly mode, etc. Through questionnaire design and market user surveys to whole-home AI, they can collect various user needs and provide customers with a perfect user experience (Midea, 2024).

At the same time, they have also introduced a membership system to maintain relationships with customers. Building customer loyalty, providing relevant benefits and exceptions to customers during holiday periods to strengthen customer relationships.

Finally, strong after-sales service is also key to maintaining customer relationships. Their 24/7 intelligent customer service can answer customers' questions about usage anytime and anywhere (Midea, 2024). At the same time, one-on-one installation and maintenance services also provide a guarantee for customer use.

1.2.2.6 Channel

Midea has completed the construction of online and offline sales channels. Offline, it has integrated its own stores and direct sales channels of electronics retailers

and distributors. Online, it has mainly integrated mainstream e-commerce channels such as Tmall, JD.com, and Pinduoduo (Midea, 2024). Meanwhile, it also gained momentum on social platforms and short videos during the sales periods, and integrated official accounts on Douyin, Kuaishou, and WeChat for further sales promotion. When facing the international market, the company focuses on establishing independent offices. They mainly cooperated with the local suppliers to strengthen international trade and build the sales network.

1.2.2.7 Customer Segments

Midea's customer groups are separated into family and corporate users. Individual users are divided into three types. The first group is mid-to-high-end family consumers. This type of user has a high income. And they demand high-quality products, advanced technology, and immersive user experience. This type of user does not care much about the price. But their requirements for the product quality are very high. The second type is general family consumers. This type of user tends to focus on cost-effective products. They mainly focus on the price of the product. The third group is Generation Z consumers. This user group is relatively young, and they value fashion, customization, innovation, and uniqueness. And they also have a high demand for customization (Midea, 2024). For example, Dyson's multi-color customized hair dryers (Dyson Limited, 2023), Samsung's The Frame art with replaceable frames (Samsung, 2024), and smart home devices provided by brands such as Xiaomi and Huawei can be freely adjusted and personalized controlled through APP to meet their needs for customization and innovation.

For corporate users, they mainly include individual residential real estate developers and commercial building developers (Midea, 2024). Residential real estate developers care about the quality of the product and whether it can meet the needs of the residents. Commercial building developers focus on energy efficiency and cost reduction according to the needs of users. They are looking for products that can save energy, reduce emissions, and effectively reduce noise.

1.2.2.8 Cost Structure

The cost structure chart shows that product and service costs still dominate the cost structure, accounting for almost all the costs from 2017 to 2023 (Figure 1.3).

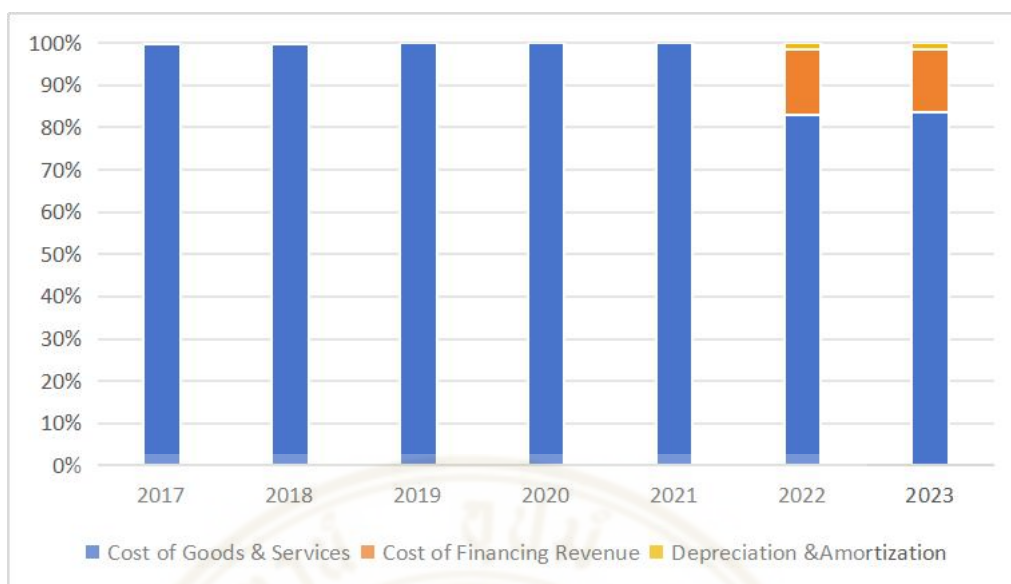


Figure 1.3 Midea's cost structure between 2014 and 2023

Source: Own calculation

The cost structure chart shows that product and service costs still dominate the cost structure, accounting for almost all the costs from 2017 to 2021. Since 2021, Midea has been implementing a strategic transformation from a traditional manufacturing organization to a digital intelligent organization, which requires the expansion of new businesses, such as fully automatic robot business, increased investment in fixed assets, and financing, resulting in 20% increase in financing costs and depreciation (Figure 1.3).

1.2.2.9 Revenue Structure

The revenue structure chart shows that product and service revenue still dominate the revenue structure, accounting for almost all the revenues from 2017 to 2023 (Figure 1.4).

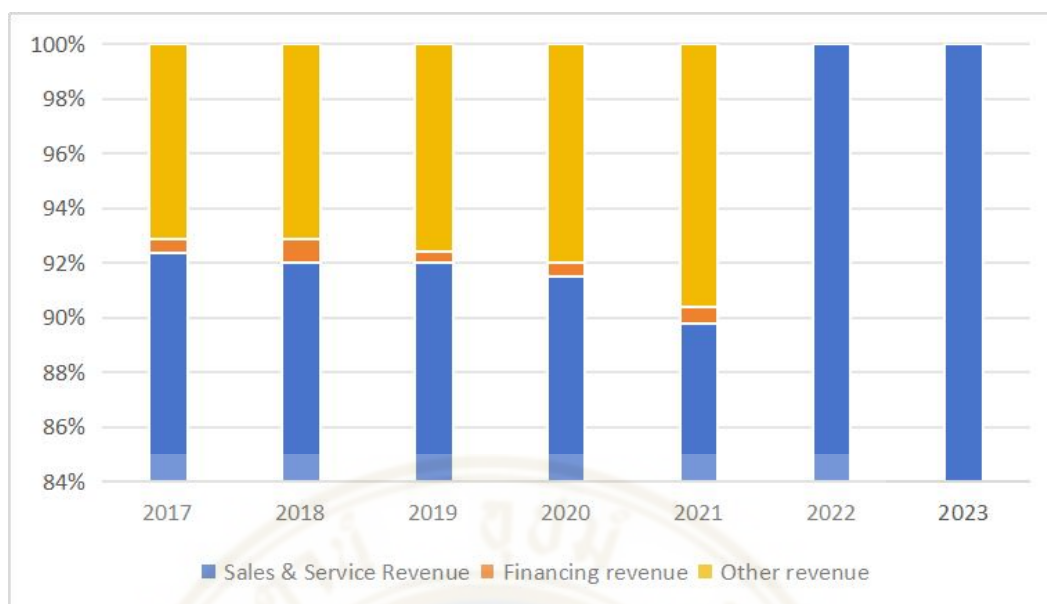


Figure 1.4 Midea's revenue between 2017 and 2023

Source: Own calculation

From the revenue structure chart, revenue will increase gradually and is stable, focusing on products and services. Until 2022, financial income and other income will still account for a certain proportion. However, after the change in strategy, in order to develop new businesses and the success of transformation, the company's financial cost has increased and financial income has decreased. In the future, when the profit pattern stabilizes, it will also bring positive benefits to the company (Figure 1.4).

1.2.3 Financial Analysis

1.2.3.1 Profitability

The margin ratio chart shows that Midea's gross margin, operating margin, EBITDA margin and net profit margin from 2015 to 2023 (Figure 1.5).



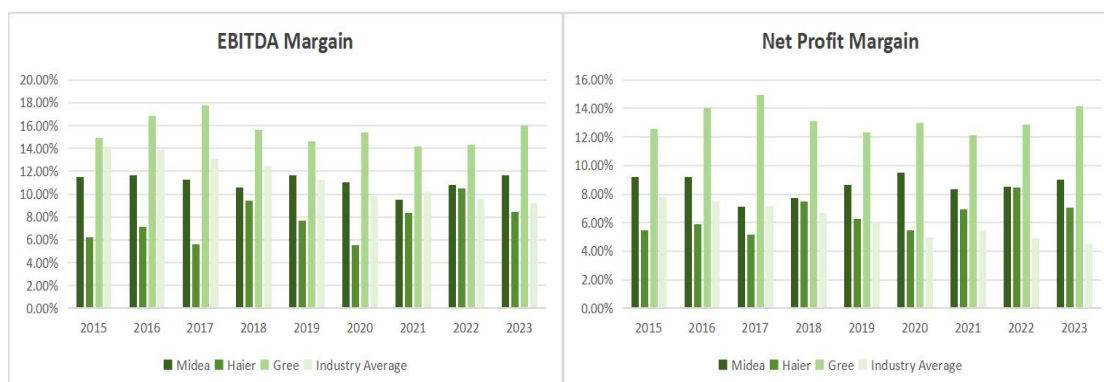


Figure 1.5 Midea's margin ratios between 2015 and 2023

Source: Own calculation

Midea's gross margin and EBITDA margin were slightly lower than the industry average before 2022, but exceeded the industry average in 2022 and 2023. However, overall, Midea's gross margin and EBITDA margin from 2015 to 2023 still have a certain gap compared with the main benchmarks (Haier and Gree). In the future, Midea needs to consider how to reduce unit costs and increase gross profit margins.

Midea's operating margin and net profit margin from 2015 to 2023 generally exceeded the industry average. At the same time, it also exceeded the competing brand Haier during this period. However, it still has a huge gap compared with Gree.

The figures show that Midea's cost control method needs to be improved. It can adopt diversified methods to increase operating efficiency to control costs. For example, it can adopt more refined supply chain management and use artificial intelligence and smart factories to reduce labor costs, thereby improving its operating efficiency. In addition, it can transition from a cost-oriented business strategy to a differentiation strategy, using this method to increase the room for product price increases, thereby increasing unit product revenue and profits (Figure 1.5).

Table 1.1 Midea's DuPont ROE analysis between 2015 and 2023

Midea	2015	2016	2017	2018	2019	2020	2021	2022	2023
Operating Margin	9.42%	9.40%	8.52%	8.72%	9.77%	9.27%	7.73%	8.92%	9.70%
Asset Turnover	1.1	1.07	1.16	1.02	0.99	0.86	0.92	0.85	0.82
Leverage Ratio	2.81	2.71	3.1	3.26	3.06	3.02	3.09	3.03	2.97
ROE	29.12%	27.26%	30.64%	29.00%	29.60%	24.08%	21.97%	22.97%	23.62%
Haier	2015	2016	2017	2018	2019	2020	2021	2022	2023
Operating Margin	5.61%	5.93%	5.80%	8.18%	6.93%	6.20%	7.99%	9.39%	7.69%
Asset Turnover	1.08	1.09	1.07	1.07	1.08	1.07	1.07	1.04	1.06
Leverage Ratio	2.73	2.56	2.51	2.50	2.50	2.45	2.43	2.44	2.41
ROE	16.53%	16.65%	15.67%	21.94%	18.74%	16.22%	20.75%	23.92%	19.63%
Gree	2015	2016	2017	2018	2019	2020	2021	2022	2023
Operating Margin	11.51%	13.51%	17.44%	14.97%	13.67%	13.72%	12.60%	13.14%	14.20%
Asset Turnover	0.63	0.64	0.76	0.86	0.75	0.61	0.63	0.56	0.57
Leverage Ratio	3.47	3.39	3.32	2.97	2.65	2.49	2.74	3.37	3.39
ROE	25.07%	29.32%	43.75%	38.16%	27.20%	20.76%	21.84%	24.94%	27.27%
Industry Average	2015	2016	2017	2018	2019	2020	2021	2022	2023
Operating Margin	9.50%	9.10%	8.70%	8.20%	7.60%	6.30%	6.80%	6.10%	5.70%
Asset Turnover	1.20	1.80	1.15	1.12	1.08	1.02	1.05	1.00	0.98
Leverage Ratio	2.25	2.30	2.35	2.40	2.45	2.55	2.50	2.60	2.65
ROE	25.65%	37.67%	23.51%	22.04%	20.11%	16.39%	17.85%	15.86%	14.80%

Source: Own calculation

Midea's operating margin remained stable at around 9% from 2015 to 2023. During this period, Midea's performance exceeded the industry average and Haier. However, Midea's operating margin is still a certain distance away from Gree's value. This shows that although Midea's product profitability is higher than most companies in the industry, it can still be optimized. Midea can refer to Gree's operating methods, increase the proportion of high-end products, create a market layout for high-end products, and continuously improve product revenue. At the same time, in terms of cost control, it can achieve refined management, improve the efficient combination with artificial intelligence to reduce product costs and management expenses.

Overall, Midea's asset turnover rate from 2015 to 2023 is roughly the same as the industry average and Haier's performance and far exceeds Gree's performance. This shows that Midea has high operational efficiency and can effectively utilize assets. In addition, Midea's digital-driven supply chain management is relatively effective and can well balance the demand and supply of assets.

Midea's leverage ratio is stable from 2015 to 2023, maintaining at around 3, indicating a good financial situation. Therefore, in the future Midea can continue to maintain its leverage ratio to reasonably balance financial leverage and profitability.

Midea's ROE ratio from 2015 to 2023 is strong, and relatively stable compared to the competitors. Midea's ROE is higher than the industry average overall. However, its performance in 2017, 2018, 2022 and 2023 is much lower than that of Gree. The reason for this is the low operating margin. Therefore, Midea can

effectively increase its operating margin and ROE by transforming its products into high-end products (Table 1.1).

1.2.3.2 Growth

The growth ratio chart shows that Midea's revenue growth, net profit growth, fixed asset growth and total asset growth from 2015 to 2023 (Figure 1.6).

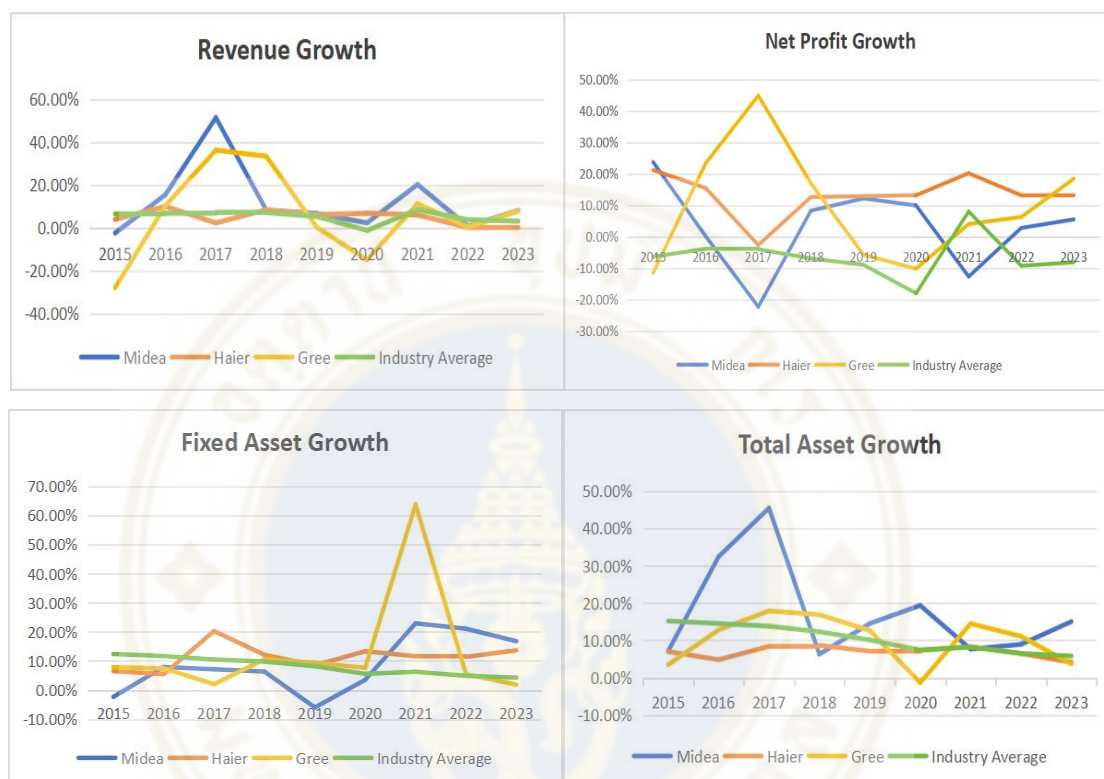


Figure 1.6 Midea's growth ratios between 2015 and 2023

Source: Own calculation

Overall, Midea's revenue growth rate in 2015-2023 fluctuates more than Gree, Haier and the average of the same industry. It fluctuated greatly in 2015-2018, flattened in 2018-2020, and experienced a second large volatility after 2020. The reason for the revenue growth in 2015-2018 was that Midea's market expansion and business expansion had significant effects, while the situation after 2020 was mainly due to the recovery of revenue after Coronavirus Disease Starting In 2019.

However, Midea's net profit growth rate in 2015-2023 was weak, which shows that Midea still needs to improve its cost control and expense control. Midea needs to control expenses in product promotion to balance revenue and costs.

Midea's fixed asset growth was relatively stable compared with its peers in 2015-2023, stable at 10%, which illustrates that Midea's planning of fixed assets are relatively reasonable and can effectively match asset support. In addition, the growth of Midea's total assets gradually stabilized during this period, which also indicates that Midea can gradually stabilize its asset investment and improve its operational efficiency during the business expansion (Figure 1.6).

1.2.3.3 Liquidity

The liquidity ratio chart shows that Midea's current ratio, quick ratio, total debt/equity ratio and altman's z score from 2015 to 2023 (Figure 1.7).

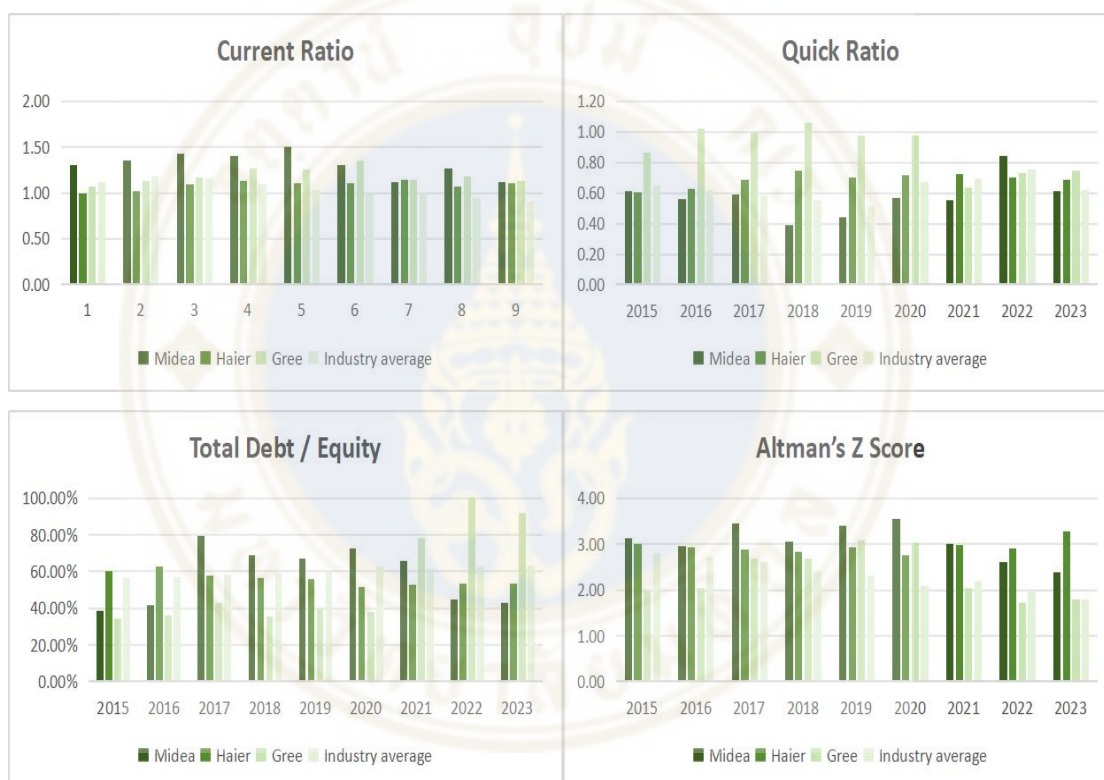


Figure 1.7 Midea's liquidity between 2015 and 2023

Source: Own calculation

Midea's current ratio was high in 2015-2023, much higher than the industry average and competitors in the same industry, which shows that Midea has strong short-term debt repayment ability. Midea can continue to maintain its current liquidity management and optimize the efficiency of capital use.

For the quick ratio, it can be seen that Midea was lower than Gree before 2021 but gradually exceeded Gree after 2021. The quick ratio reflects the ability of a company to repay short-term liabilities with quick assets. Midea's quick ratio was

lower than Gree's before 2021, indicating that Midea's liquidity and short-term debt repayment ability were relatively weak at that time. However, after 2021, it gradually surpassed Gree, which means that Midea has optimized its asset structure or liability management, which has enhanced its short-term debt repayment ability, strengthened corporate liquidity, and improved financial stability.

Midea's leveraged debt is higher than the industry average and Haier, but lower than Gree, which indicates that Midea can optimize its debt structure and reduce financing costs while maintaining its current financing structure. In addition, Midea's Z-score is relatively stable overall, which is around 3, and higher than the industry average, which illustrates that its financial risk is low and its financial operation is effective (Figure 1.7).

1.2.3.4 Operational Capacity

The operational capacity table shows that Midea and its competitive company's days sales outstanding, days inventory outstanding, account payable outstanding and cash conversion cycle from 2015 to 2023 (Table 1.2).

Table 1.2 Midea's operational capacity between 2015 and 2023

Midea	2015	2016	2017	2018	2019	2020	2021	2022	2023
Days sales outstanding	66	51	37	42	41	47	44	46	48
Days inventory outstanding	45	41	46	57	57	54	53	64	62
Account payable turnover days	70	65	57	72	72	82	78	91	90
Cash conversion cycle	41	27	26	27	26	18	18	19	20
Haier	2015	2016	2017	2018	2019	2020	2021	2022	2023
Days sales outstanding	47	45	40	42	43	38	41	43	43
Days inventory outstanding	81	82	89	84	82	83	82	79	79
Account payable turnover days	86	86	91	91	89	92	97	95	95
Cash conversion cycle	42	41	38	35	36	29	26	28	27
Gree	2015	2016	2017	2018	2019	2020	2021	2022	2023
Days sales outstanding	130	84	86	75	73	71	67	79	62
Days inventory outstanding	49	46	47	48	56	76	90	106	91
Account payable turnover days	139	137	109	95	100	104	78	93	99
Cash conversion cycle	40	-7	24	28	30	43	79	93	54
Industry Average	2015	2016	2017	2018	2019	2020	2021	2022	2023
Days sales outstanding	45	47	49	51	53	56	55	57	58
Days inventory outstanding	85	82	78	74	70	67	65	63	62
Account payable turnover days	65	66	68	70	72	74	73	75	76
Cash conversion cycle	65	63	59	55	51	49	47	45	44

Source: Own calculation

Overall, Midea's operating capacity has gradually improved from 2015 to 2023, and its cash conversion days have also gradually decreased, from 41 days in 2015 to 20 days in 2023. The main reason for the decrease is that the turnover of accounts receivable has increased, with the turnover days decreasing from 66 days to 48 days; the turnover days of accounts payable have gradually increased, from 70 days

to 90 days, which indicates that Midea's bargaining power with suppliers has become stronger and it has a more significant market position in the home appliance industry.

Midea's operating capacity is higher than the industry average and that of its competitors in 2015-2023. This shows that Midea has strong cash management capabilities and is good at balancing its relationship with suppliers to ensure long-term and stable cooperation with them. However, Midea's only shortcoming is inventory management. The inventory turnover days are relatively long, and it is difficult to balance the supply and demand of the inventory. Therefore, Midea needs to optimize inventory management and speed up inventory turnover in the future (Table 1.2).

1.2.4 Core Competencies

Midea's core competitiveness is reflected in three major aspects: Firstly, Midea has cutting-edge innovative technology. Midea's main strategic goal is to become a leading technology company. After the strategic transformation, Midea continues to conduct R&D in this field, integrating smart home and the Artificial Intelligence of Things. At the same time, they have partnered with Huawei to integrate into Hongmeng's ecosystem to further advance the design and development of smart appliances and digital products. While exploring new areas, the company continues to maintain its competitive advantage in green energy conservation. The promotion of variable frequency air conditioning technology has built an environmentally friendly brand image. The product's energy saving and efficiency is deeply rooted in people's minds (Midea, 2024).

Secondly, Midea has a strong supply chain network. The supply chain network has expanded to 35 countries around the world, with independent offices in different countries. Strengthening relationships with local suppliers can improve production efficiency and adapt to different market demands. In addition, the optimization of the digital supply chain also enables Midea to integrate big data and intelligent AI into sales channels. It will also improve the efficiency of content marketing and digital marketing.

Thirdly, Midea has a systematic market structure. For example, they have Achieved continuous growth in the market share in the Southeast Asian region; launched a high-end household brand in Europe; increased brand partnerships in North

America; improved the establishment of the import and export channels in Latin America.

1.2.5 SWOT Analysis

The SWOT analysis chart shows that Midea's strengths, weaknesses, opportunities and threatens (Figure 1.8).

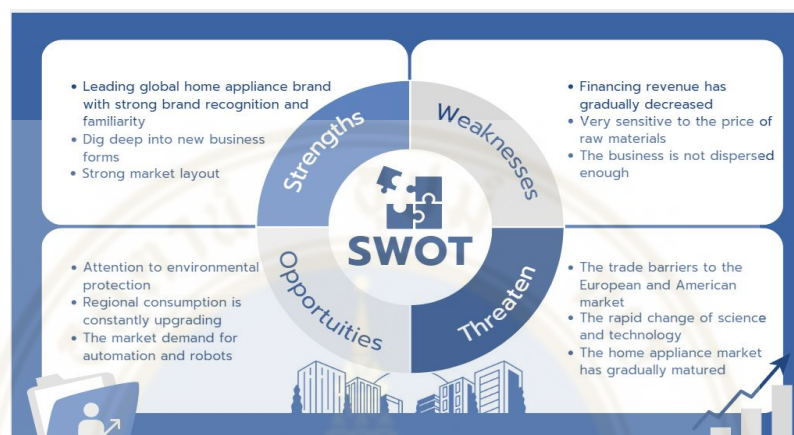


Figure 1.8 Midea's SWOT analysis

Source: Midea, 2024

Strengths: Firstly, Midea is a leading global home appliance brand with strong brand recognition and familiarity which occupies a large global market share (SWOT & PESTLE, 2023). Secondly, Midea continues to dig deep into new business forms. After the strategic transformation, it has strengthened the connection between the IOT and smart homes and opened up new paths. Thirdly, Midea has a strong market layout, offices in many countries worldwide, and relatively complete supply chain management (Midea, 2024).

Weaknesses: Firstly, Midea's financing revenue has gradually decreased since 2022, and sales have stagnated and solidified in some markets. Secondly, it is very sensitive to the price of raw materials. For example, in the cost structure, most of the costs are concentrated on the cost of products and services. Thirdly, even if new businesses are continuously developed, the business is not dispersed enough and the concentration is too high, so there are still certain risks (Midea, 2024).

Opportunities: Firstly, consumers' attention to environmental protection is gradually increasing, and the demand for the smart home appliances and the environmentally friendly home appliances are gradually increasing (Midea, 2024).

Secondly, the Southeast Asian and Latin American markets where Midea is deployed are also booming, and regional consumption is also constantly upgrading. Thirdly, the market demand for automation and robots is also rising, which gives Midea the opportunity to develop new businesses (Midea, 2024).

Threats: Firstly, the trade friction between China and the United States has brought the trade barriers to the European and American market (SWOT & PESTLE, 2023). Secondly, the rapid change of science and technology has brought new challenges to companies in the home appliance industry. Thirdly, the home appliance market has gradually matured, and consumers' demands for product quality have become more diversified (Midea, 2024).

1.3 Benchmark Introduction

1.3.1 Benchmark Selection Criteria

To ensure a comprehensive assessment of Midea's corporate value and market performance, this chapter will select benchmarks based on the following four criteria:

Industry category: Midea belongs to the home appliance manufacturing industry. Therefore, the benchmark companies are selected in the same industry.

Enterprise scale: As a world-leading home appliance company, Midea has a wide range of businesses, and other companies need to have similar enterprise scale or corporate structure.

Business scope: Midea's business covers consumer appliances, smart home appliances, HVAC. The core business structure of other companies should be similar to Midea.

Time dimension: Benchmark companies should be at the same development stage as Midea or have similar growth experiences.

1.3.2 Introduction of the Benchmark

Gree Electric: A leading enterprise in China's home appliance industry, specializing in HVAC. As one of the world's largest air conditioner manufacturers, it

operates in multiple countries and has a market value of approximately 34 billion USD (Gree, 2024).

Haier Smart Home: Founded in Qingdao, China in 1984, its core business is home appliances, it owns multiple multinational brands, and occupies an important position in the global market, with a market value of approximately 36.5 billion USD (Haier, 2024).

LG Electronics: Founded in Seoul, South Korea in 1958, its business scope covers the world, involving businesses in multiple electronic fields, of which home appliances account for approximately 36% of revenue, the highest proportion of all revenue, and a market value of approximately 10 billion USD (LG, 2024).

Daikin Industries: A large multinational enterprise with a long history founded in Japan in 1924, its core business HVAC accounts for 89.7% of total revenue, and its current market value is approximately 32 billion USD (Daikin, 2024).

Hisense Home Appliances: Founded in Guangdong, China in 1984, its main HVAC and home appliance businesses account for 49.3% and 27% respectively, with a current market value of approximately 5.5 billion USD (Hisense, 2024).

Sichuan Changhong Electric: Founded in Sichuan, China in 1958, its main businesses include smart home appliances, HVAC, and general equipment manufacturing, with multiple manufacturing bases around the world, and a current market value of approximately 5.3 billion USD (Sichuan Changhong, 2024).

ECOVACS Robotics: Founded in Suzhou, China in 1998, it focuses on home service robots and high-end smart appliances. It is the world's leading home service robot brand with a market value of approximately 3.4 billion USD (ECOVACS, 2024).

Vatti Corporation: Founded in Guangdong, China in 1992, it is the leading kitchen appliance brand in China. The company's main business is high-end home kitchen appliances, with a market value of approximately 900 million USD (Vatti Corporation Ltd, 2024).

CHAPTER 2

VALUATION - DISCOUNTED CASH FLOW METHOD

For the valuation of Midea, this paper uses DCF valuation. Firstly, a financial projection (2.1) is made, and then the terminal growth rate is predicted to calculate the terminal value (2.2). Then, the Weighted Average Cost of Capital is predicted to discount future cash flows. After that, add up the discounted cash flows and subtract net debt to get the implied stock value (2.3). Finally, a sensitivity analysis (2.4) will be performed by adjusting the terminal growth rate and WACC.

2.1 Financial Projection

This part predicts Midea's finances for five years from four aspects, which are Revenue Projection (2.1.1), EBIT Projection (2.1.2), Depreciation and Capital Expenditures (CAPEX) Projection (2.1.3), Working Capital Projection (2.1.4), FCFE Projection (2.1.5).

2.1.1 Revenue Projection

Midea's revenue from 2019 to 2024 can be broken down into regions, and the revenue projection will be based on it.

Table 2.1 Midea's revenue breakdown between 2019-2024

Billion CNY	2019	2020	2021	2022	2023	2024
Total Revenue	279.4	285.7	343.4	345.7	373.7	407.9
YoY %	6.71%	2.27%	20.18%	0.68%	8.10%	9.15%
Chinese Operating Revenue	161.6	151.0	203.6	201.3	221.1	243.5
YoY %	6.05%	-6.56%	34.83%	-1.13%	9.84%	10.13%
Overseas Operating Revenue	116.7	132.0	137.7	142.6	150.9	162.4
YoY %	7.64%	13.11%	4.32%	3.56%	5.82%	7.62%
Others	1.1	2.7	2.1	1.8	1.7	2.0
YoY %	120.32%	150.78%	-23.95%	-12.23%	-5.47%	16.97%

Source: Own calculation

As can be seen from Table 2.1, Midea's revenue can be divided into Chinese Operating Revenue, Overseas Operating Revenue and Others. Midea's

revenue growth in China fluctuates greatly, but starting from 2023, revenue growth begins to rise steadily, between 9% and 10%. Therefore, it can be predicted that Midea's revenue in China will show a 9% growth in the next five years. As for the growth of Midea's overseas operating revenue, it has shown a steady increase after COVID-19, from 4.32% in 2021 (Midea, 2021) to 7.62% in 2024 (Midea, 2024). Therefore, it can be predicted that Midea's overseas operating revenue will show a 7% growth in the next five years. In addition, other revenue basically remains at around 2 billion CNY in 2019-2024, so it can be estimated that it will still be 2 billion CNY per year in the next five years. Finally, the projection of the total revenue in 2025-2029 is equal to the sum of the three parts' projection. The revenue projection is summarized in Table 2.2.

Table 2.2 Midea's revenue projection between 2025-2029

Billion CNY	2025 E	2026 E	2027 E	2028 E	2029 E
Total Revenue	441.2	477.2	516.3	558.6	604.4
YoY %	8.16%	8.17%	8.18%	8.19%	8.21%
Chinese Operating Revenue	265.4	289.3	315.3	343.7	374.7
YoY %	9%	9%	9%	9%	9%
Overseas Operating Revenue	173.8	185.9	198.9	212.9	227.8
YoY %	7%	7%	7%	7%	7%
Others	2.0	2.0	2.0	2.0	2.0
YoY %	-	-	-	-	-

Source: Own Calculation

2.1.2 EBIT Projection

The EBIT table shows that Midea's EBIT value from 2019 to 2024, the EBIT projection is calculated based on this (Table 2.3).

Table 2.3 Midea's EBIT projection between 2019-2024

Billion CNY	2019	2020	2021	2022	2023	2024
Total Revenue	279.4	285.7	343.4	345.7	373.7	206.3
Cost of Sales	198.1	216.9	264.6	262.3	275.3	297.5
Gross Profit	81.3	68.8	78.7	83.4	98.4	110.4
Gross Margin (%)	29.11%	24.08%	22.93%	24.12%	26.33%	27.06%
Selling Expenses	34.6	23.6	28.6	28.7	34.9	40.7
Selling Expenses (%)	12.39%	8.25%	8.34%	8.31%	9.33%	9.98%
Admin Expenses	44.1	32.8	38.9	40.7	48.9	55.2
Admin Expenses (%)	15.80%	11.49%	11.33%	11.78%	13.07%	13.53%
Total Expense	78.8	56.4	67.6	69.5	83.7	95.9
EBIT	2.6	12.4	11.2	13.9	14.7	14.5

Source: Own Calculation

According to the revenue projection, we can further analyze the forecast of EBIT. Firstly, we can get gross profit by subtracting the cost of sales from revenue. Therefore, we can predict the gross profit for the next five years based on the gross margin. After 2021, gross margin is relatively stable, growing steadily, and finally stabilized at around 27%. Therefore, we can predict the gross margin for the next five years to be 27% and use it to calculate the gross profit for the next five years. The sales expense ratio of Midea stabilized at 8%-9% after 2020. Therefore, it can be predicted that Midea will still spend 8% of sales expenses in 2025 and 2026. However, after 2026, as the enterprise scale expands, the marginal cost decreases, which decreases the sales expense ratio gradually (CITIC Securities, 2025). It can be predicted that the sales expense ratio after 2026 will be 7%. Midea's admin expenses stabilized between 11%-13% after 2020, so it can be predicted that Midea will still spend 11% of admin expenses in 2025 and 2026. However, after 2026, as the management methods of enterprises improve and management efficiency increases, the admin expense ratio will gradually decrease (CITIC Securities, 2025) and it can be predicted that it will be 10% after 2026. Through this forecasting method, EBIT can be obtained by subtracting total expense (sales expenses + admin expenses) from gross profit. The EBIT projection is summarized in Table 2.4.

Table 2.4 Midea's EBIT projection between 2025-2029

Billion CNY	2025 E	2026 E	2027 E	2028 E	2029 E
Total Revenue	224.3	244.3	265.0	287.5	311.9
Cost of Sales	322.1	348.4	376.9	407.8	441.2
Gross Profit	119.1	128.9	139.4	150.8	163.2
Gross Margin (%)	27%	27%	27%	27%	27%
Selling Expenses	44.0	47.5	50.8	54.3	58.2
Selling Expenses (%)	8%	8%	7%	7%	7%
Admin Expenses	61.3	68.0	74.8	82.3	90.5
Admin Expenses (%)	11%	11%	10%	10%	10%
Total Expense	105.2	115.5	125.6	136.6	148.7
EBIT	13.9	13.4	13.8	14.2	14.5

Source: Own Calculation

2.1.3 Depreciation and Capital Expenditures (CAPEX) Projection

For the depreciation expenses in the next five years, we can first predict the depreciation rate in the next five years based on the depreciation rate in 2019-2024. Then, we can calculate the depreciation expenses in the next five years by multiplying

the predicted depreciation rate by the fixed asset at the beginning of the period. Therefore, by this method, we can predict that the depreciation rate in the next five years will be 4%.

For the capital expenditures in the next five years, we can first predict the CAPEX rate in the next five years based on the CAPEX rate in 2019-2024. Then, we can calculate the CAPEX in the next five years by multiplying the predicted CAPEX rate by the fixed asset at the beginning of the period. Therefore, by this method, we can predict that the future CAPEX rate will be around 3.7% and increase by 0.1% each year for the next four years. This is mainly because Midea Group is planning to gradually implement the strategy of intelligent manufacturing and digital transformation, during which it is necessary to continuously increase CAPEX. The forecast of an annual increase of 0.1% is mainly because it is believed that future CAPEX will grow steadily and gradually (Midea, 2024).

The depreciation and CAPEX projection is summarized in Table 2.5.

Table 2.5 Midea's depreciation and CAPEX projection between 2025-2029

Billion CNY	2025 E	2026 E	2027 E	2028 E	2029 E
PPE	85.2	88.1	91.0	93.9	96.8
Intangible Asset	43.0	44.8	46.6	48.4	50.2
Fixed Assets (PPE+Intangible)	128.2	132.9	137.6	142.3	147
Depreciation	5.1	5.3	5.5	5.7	5.9
Depreciation (%)	4.00%	4.00%	4.00%	4.00%	4.00%
CAPEX	4.7	5.1	5.4	5.7	6.0
CAPEX (%)	3.7%	3.8%	3.9%	4.0%	4.1%

Source: Own Calculation

According to the projection of depreciation and CAPEX for the next five years, the two predictions are represented on the unified image as shown in the Figure 2.1.

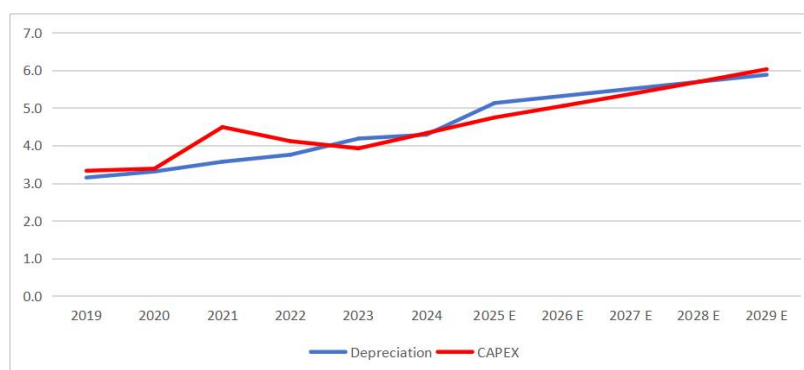


Figure 2.1 Midea's depreciation and CAPEX between 2019-2029 (Unit: Billion CNY)

Source: Own Calculation

Comparing the projected CAPEX with the depreciation expenses, we can see that the two lines tend to overlap in the end. The reason for this prediction is that the CAPEX approaching the depreciation expenses is a long-term steady-state prediction, and the predicted assets can maintain the current operating level. If the CAPEX are less than the depreciation expenses, the value of the company's assets will continue to shrink, and the CAPEX cannot make up for the depreciation costs. The net asset value continues to decline, the production capacity decreases, and it cannot support the growth of income for the company's operation. If the CAPEX is greater than the depreciation costs, it means that the company continues to expand the production capacity, and the income cannot grow synchronously, resulting in an imbalance in the company. Therefore, it is more reasonable to predict that the CAPEX will approach the depreciation expenses.

2.1.4 Working Capital Projection

Firstly, calculate the turnover days of accounts receivable, accounts payable and inventory from 2019 to 2024. Then, based on these historical values, predict the turnover days for the next five years. Therefore, it can be predicted that the turnover days of accounts receivable in the next five years will be 46 days, the turnover days of inventory will be 58 days, and the turnover days of accounts payable will be 90 days. Based on the turnover days of each item, through revenue and cost of sales, calculate the accounts receivable, inventory and accounts payable for the next five years, as shown in Table 2.6, and calculate the working capital for the next five years. Finally, subtract the working capital at the beginning of the period from the end of the period to calculate the change in working capital.

Table 2.6 Midea's working capital projection between 2025-2029

Billion CNY	2025 E	2026 E	2027 E	2028 E	2029 E
Working Capital	28.2	29.6	32.0	34.6	37.5
Change in Working Capital	0.9	1.4	2.4	2.6	2.8
Account Receivable	57.3	60.1	65.1	70.4	76.2
Inventory	51.6	55.4	59.9	64.8	70.1
Account Payable	80.7	85.9	92.9	100.5	108.8
Days Sales Outstanding	46	46	46	46	46
Days Inventory Outstanding	58	58	58	58	58
Account Payable Turnover Days	90	90	90	90	90
Cash Conversion Cycle	14	14	14	14	14

Source: Own Calculation

2.1.5 FCFF Projection

FCFF is free cash flow to firm, which is the cash flow that is still available to creditors and shareholders after the company meets all the expenses required for operation. The firm value is calculated by summing up the discounted cash flow. Firstly, use the above predicted EBIT for the next five years minus the tax expenses to calculate the Net Operating Profit After Taxes. And then, add the predicted depreciation expenses for the next five years, minus the predicted working capital changes and CAPEX for the next five years, finally calculate FCFF, as shown in Table 2.7.

Table 2.7 Midea's FCFF projection between 2025-2029

Billion CNY	2025 E	2026 E	2027 E	2028 E	2029 E
EBIT	13.9	13.4	13.8	14.2	14.5
Tax Expense	0.8	0.7	0.6	0.5	0.3
NOPAT	13.1	12.7	13.2	13.7	14.2
Depreciation	5.1	5.3	5.5	5.7	5.9
Change in Working Capital	0.9	1.4	2.4	2.6	2.8
CAPEX	4.7	5.1	5.4	5.7	6.0
Free Cash Flow to Firm	12.6	11.6	10.9	11.1	11.2

Source: Own Calculation

2.2 WACC and Terminal Growth Rate

After predicting FCFF, the next step is to calculate WACC (2.2.1) and terminal growth rate (2.2.2). Use terminal growth rate to calculate the terminal value of the company after the next five years, when it will show long-term stable growth.

Use WACC to discount the value of the next five years and the terminal value to calculate the value of the company.

2.2.1 WACC

$$\text{WACC} = (W_e \times R_e) + ((W_d \times R_d) \times (1 - T))$$

Where:

W_e = Weight of Equity

R_e = Cost of Equity

W_d = Weight of Debt

R_d = Cost of Debt

T = Tax Rate

According to the above WACC formula, we need to calculate the market value of equity, the market value of debt, the cost of equity, and the cost of debt respectively.

Firstly, the share price on December 31, 2024 is 75.22 CNY (Midea, 2024). Multiply it by Weighted-average shares-diluted 5.18 billion shares (Midea, 2024), and the Market Capitalization of equity is calculated to be 389.64 billion CNY. In addition, the market value of short-term debt on December 31, 2024 is 23.28 billion CNY (Midea, 2024), and the market value of long-term debt is 51.4 billion CNY (Midea, 2024). It can be calculated that the market value of total debt is 74.86 billion CNY. According to the market value of equity and debt, it can be calculated that the weight of stocks is 83.92% and the weight of liabilities is 16.08%, as shown in Table 2.8.

Table 2.8 Midea's Capital Structure

Market Value of Equity	
Stock Price as of (2024/12/31) CNY	75.22
Weighted-average shares-diluted (Billion)	5.18
Market Capitalization (Billion)	389.64
Market Value of Debt	
Short term debt (Billion)	23.28
Long term debt (Billion)	51.4
Total debt (Billion)	74.68
Weight of Equity	83.92%
Weight of Debt	16.08%

Source: Own Calculation

$$R_e = R_f + \beta \times \text{MRP}$$

Where:

R_f = The Risk-Free Rate

β = The Equity Beta

MRP = Market Risk Premium

Then, the cost of equity is calculated based on the Capital Asset Pricing Model mentioned above. The interest on China's 10-year government bonds on December 31, 2024 is used as the risk-free rate, which is 1.76% per year (Trading Economics, 2024). In addition, the MRP is calculated to be 6.17% (Damodaran, 2025) and the BETA is 0.91. The cost of equity is calculated to be 7.37%. Using the long-term debt borrowing rate of 4.66% (Midea, 2024) and the tax rate of 16.28% (Midea, 2024), the after-tax cost of debt is calculated to be 3.9%. Finally, the WACC is calculated to be 6.82%.

2.2.2 Terminal Growth Rate

The terminal growth rate is the growth rate at which Midea tends to grow steadily in the long term after the forecast period. This growth rate is used to calculate Midea's terminal value and sum the discounted cash flow for the next five years to calculate the firm value. The growth rate is calculated based on the growth rate of the home appliance industry, which is 3.48% (Fitch Ratings, 2024).

2.3 Implied Share Price

$$TV = FCFF \times (1+g) / (WACC - g)$$

Where:

TV = Terminal Value

FCFF = Free Cash Flow to the Firm

g = Terminal Growth Rate

WACC = Weighted Average Cost of Capital

According to the above forecast, WACC, terminal growth rate and the above formula, the terminal value can be calculated to be 346.9 billion CNY. Then, based on the FCFF discount forecast for the next five years, the discount rate is calculated using WACC (6.82%), and the discounted value is summed up to get the

company's value of 311.2 billion CNY. Then, minus the market value of total debt (74.7 billion CNY), plus the market value of cash and its equivalents (102.2 billion CNY), the equity value is calculated to be 338.7 billion CNY, which is divided by the weighted-average shares-diluted 5.18 billion shares, and the implied price per share is 65.38 CNY, while the market value on December 31, 2024 is 75.22 CNY, which is 15.05% overestimated. And compared to the estimated market price on May 3, 2025 which is 71.02 CNY, it will be overvalued by 8.61%. The overestimation ratio will decrease. The results are presented in the following Table 2.9.

Table 2.9 Midea's Implied Share Price

PERIOD	0	1	2	3	4	5	Terminal Value
	2024	2025	2026	2027	2028	2029	
EBIT		13.9	13.4	13.8	14.2	14.5	
Tax Expense		0.8	0.7	0.6	0.5	0.3	
NOPAT		13.1	12.7	13.2	13.7	14.2	
Depreciation		5.1	5.3	5.5	5.7	5.9	
Change in Working Capital		0.9	1.4	2.4	2.6	2.8	
CAPEX		4.7	5.1	5.4	5.7	6.0	
Free Cash Flow to Firm		12.6	11.6	10.9	11.1	11.2	346.5
Discount Factor		0.94	0.88	0.82	0.77	0.72	0.76
		11.8	10.2	9.0	8.5	8.0	263.4
PV of Firm Value	310.9						
Total Debt	74.7						
Cash & Marketable Securities	102.2						
Equity Value	338.4						
Weighted-average shares-diluted (Billion)	5.18						
Stock Implied Price Per Share	65.38						
Stock Market Price as of (2024/12/31) CNY	75.22						
Overvalue (Compared to the market price of 2024/12/31)	15.05%						
Estimated stock Market Price as of (2024/05/03) CNY	71.01						
Overvalue (Compared to the estimated market price of 2024/05/03)	8.61%						

Source: Own Calculation

By putting the estimated present value of each year on a graph (Figure 2.2), we can find that the final terminal value present value accounts for the highest proportion, accounting for 84.75%. This is also consistent with Midea's actual situation. As a mature and stable manufacturing leader, Midea's future cash flow growth is stable, and the terminal value part represents the company's long-term operating value after the forecast period, and occupies a dominant position in the discounted valuation. This valuation structure is in line with the characteristics of Midea Group's long-term profitability and sustainable operating prospects.

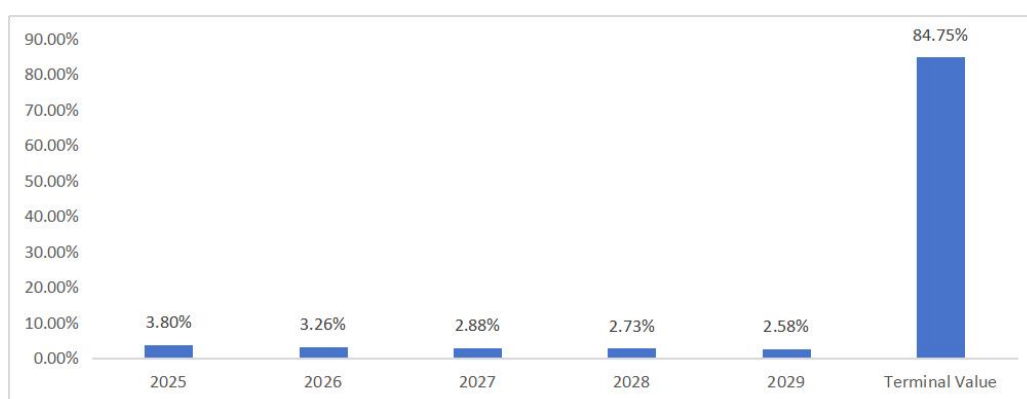


Figure 2.2 The proportion of each future cash flow to the total value

Source: Own Calculation

2.4 Sensitivity Analysis

After obtaining the stock valuation, we can look at the changes in the corresponding stock value based on the changes in WACC and Terminal Growth Rate, which is the sensitivity of the stock value to WACC and Terminal Growth Rate. The range of changes in WACC and Terminal Growth Rate is set at -20%-60%.

Table 2.10 Sensitivity of WACC to Implied Share Price

	WACC	Stock Price	Change in Value
60%	10.91%	36.43	-44.28%
50%	10.23%	38.87	-40.55%
40%	9.55%	41.83	-36.02%
30%	8.87%	45.53	-30.36%
20%	8.18%	50.26	-23.13%
10%	7.50%	56.54	-13.52%
0%	6.82%	65.38	0.00%
-10%	6.14%	78.54	20.13%
-20%	5.46%	100.76	54.11%

Source: Own Calculation

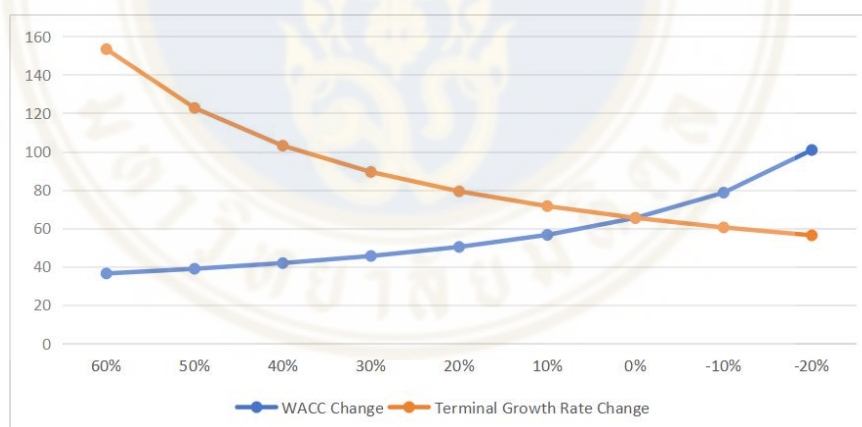
According to Table 2.10, we can find that when WACC increases, the change in implied stock value is smaller than when it decreases. When WACC increases by 60%, the implied stock value will only decrease by 44.28%, but when WACC decreases by 20%, the implied stock value will increase by 54.11%.

Table 2.11 Sensitivity of Terminal Growth Rate to Implied Share Price

	Terminal Growth Rate	Stock Price	Change in Value
60%	5.57%	153.3	134.48%
50%	5.22%	122.67	87.63%
40%	4.87%	103.01	57.56%
30%	4.52%	89.32	36.62%
20%	4.18%	79.24	21.20%
10%	3.83%	71.5	9.36%
0%	3.48%	65.38	0.00%
-10%	3.13%	60.42	-7.59%
-20%	2.78%	56.31	-13.87%

Source: Own Calculation

According to Table 2.11, it can be found that when the Terminal Growth Rate increases, the change in implied stock value will be greater than the change when it decreases. In particular, the larger the proportion of the Terminal Growth Rate increase, the more change in implied stock value. When the Terminal Growth Rate increases by 10%, the implied stock value only increases by 9.36%, but when the Terminal Growth Rate increases by 60%, the implied stock value increases by 134.48%.

**Figure 2.3 Sensitivity Graph of WACC and Terminal Growth Rate to Implied Share Price**

Source: Own Calculation

Putting the impact of changes in WACC and Terminal Growth Rate in one graph, we can see that the change in implied stock value caused by Terminal Growth Rate is greater than the change in implied stock value caused by WACC. This shows that implied stock value is more sensitive to Terminal Growth Rate. Midea can

continue to increase its innovation-driven strategy, expand high value-added products, and strengthen its global market layout to consolidate its long-term growth potential.

Table 2.12 Sensitivity of WACC and Terminal Growth Rate to Implied Share Price

WACC/Terminal Growth Rate		Change Terminal Growth Rate	60%	50%	40%	30%	20%	10%	0%	-10%	-20%
Change	WACC		5.57%	5.22%	4.87%	4.52%	4.18%	3.83%	3.48%	3.13%	2.78%
60%	10.91%		46.01	43.92	42.06	40.41	38.97	37.64	36.43	35.32	34.32
50%	10.23%		50.89	48.18	45.82	43.75	41.97	40.33	38.87	37.55	36.35
40%	9.55%		57.39	53.73	50.63	47.96	45.69	43.64	41.83	40.22	38.77
30%	8.87%		66.51	61.31	57.03	53.44	50.46	47.81	45.53	43.49	41.7
20%	8.18%		80.54	72.5	66.15	61.02	56.9	53.33	50.26	47.67	45.39
10%	7.50%		104.09	90.05	79.76	71.88	65.81	60.74	56.54	53.04	50.05
0%	6.82%		153.3	122.67	103.01	89.32	79.24	71.5	65.38	60.42	56.31
-10%	6.14%		318.61	202.35	150.16	120.53	101.88	88.41	78.54	70.87	64.84
-20%	5.46%		-	734.35	306.53	197.3	148.39	119.36	100.76	87.45	77.75

Source: Own Calculation

Table 2.12 shows the effect of implied stock value when WACC and Terminal Growth Rate change simultaneously. As can be seen from Table 2.12 and the current price is 75.22 CNY, if the implied stock value is lower than the market price, it means that the stock price is overvalued and it is not worth investing the stock; if the implied stock value is higher than the market price, it means that the stock price is undervalued and it is worth buying the stock. The orange area in the table is the area worth investing in.

CHAPTER 3

RECOMMENDATION

This chapter mainly analyzes Midea's valuation and makes corresponding suggestions for investment in Midea. It first summarizes the valuation results (3.1), then evaluates the risks of investing in Midea (3.2), and finally gives corresponding investment suggestions based on the risks and valuation (3.3).

3.1 Valuation Result

According to the valuation results in Chapter 2, the estimated WACC is 6.82%, the estimated Terminal Growth Rate is 3.48%, and the implied stock value per share is 65.38 CNY (Table 2.9). This value is lower than the market value of CNY 75.22 per share on December 31, 2024. This shows that Midea's stock is overvalued, with each share overvalued by 15.05%. And compared to the estimated market price on May 3, 2025 which is 71.02 CNY, it will be overvalued by 8.61%. The overestimation ratio will decrease. Because this overvaluation is mainly a defensive premium driven by sentiment (Guotai Junan Securities, 2024). Nowadays, due to the unclear Sino-US trade relations, the obvious trend of de-Chinaization of the global supply chain (CITIC Securities, 2025), and the unclear prospects for the transformation of the home appliance industry from traditional to smart AI (National Bureau of Statistics of China, 2024), investors are not clear about the direction of the home appliance industry market, which leads to investors investing in defensive stocks in the industry in a short period of time. As a leading enterprise in the home appliance industry, Midea has high dividends (Midea, 2024), and its ROE is also higher than the industry average (Table 1.1). It has defensive characteristics and can help investors avoid risks well, so that a large number of investors flock to buy, raising Midea's stock price.

3.2 Investment Risk

This part mainly explains the risks of investing in Midea, mainly analyzing from five aspects: Economic Risk (3.2.1), Business Risk (3.2.2), Market Risk (3.2.3), Financial Risk (3.2.4), and Regulatory Risk (3.2.5). Table 3.1 summarizes the likelihood and severity of each of the above risks.

Risk Matrix		Severity		
		Acceptable	Moderate	Intolerable
Probability	Unlikely		Industry Access and Technology Licensing Risks	
	Possible		Technology and Brand Risk Operational Capacity Risk	Economic Risk Environmental Policy Risks Data Compliance and Privacy Regulatory Risks
	Probable	Quality Control and After-sales Risks	Competitor Risk Risk of Profitability Fluctuations	Supply Chain Risks

Table 3.1 Risk Matrix

Source: Own Elaboration

3.2.1 Economic Risk

As a global leader in the home appliance industry, economic fluctuations have a direct impact on Midea Group. After the impact of COVID-19, the global economic growth has slowed and consumer spending has declined, leading to a reduction in overall demand for the home appliance industry and more intense industry competition. Additionally, rising interest rates will increase corporate financing costs, weaken corporate profitability, and further intensify industry competition (World Bank, 2024).

At the same time, with the growing international market of Midea, fluctuations in the CNY exchange rate introduce additional uncertainties. The depreciation of the CNY will increase the cost of importing raw materials, while the appreciation may weaken the price advantage of the international market and reduce profitability. Moreover, geopolitical instability further influences global exchange rate fluctuations, posing additional challenges for multinational corporations in overseas trade.

3.2.2 Business Risk

3.2.2.1 Supply Chain Risks

The home appliance manufacturing industry is highly dependent on the global supply chain. For example, international political instability, environmental disasters, and logistics disruptions may lead to shortages of raw materials and cost increases, which significantly impact the supply chain. In addition, the global chip shortage has also introduced uncertainty to the production and operation of smart home appliances, further affecting the profitability and competitiveness of enterprises (National Development and Reform Commission, 2022).

3.2.2.2 Quality Control and After-sales Risks

The home appliance industry has strict requirements for product quality and safety. Especially in the context of the rapid development of smart home appliances, the probability of product failure and the difficulty of repair have increased significantly. In addition, the installation and after-sales service of home appliances directly affect market competitiveness. As the smart home appliance market sinks, whether convenient on-site installation and repair services can be provided has become a key factor affecting consumers' purchasing decisions.

3.2.3 Market Risk

3.2.3.1 Competitor Risk

Competitive brands in the home appliance industry are emerging in an endless stream. The revenue growth and innovation capacity of traditional categories are limited. Midea's categories are relatively single, and its new business lines have not yet formed large-scale production, which does not give it an advantage in the competition. Competitive brands such as Gree have an absolute advantage in air-conditioning appliances (Gree, 2024), and Haier has seized the mid-to-high-end market through its smart ecology (Haier, 2024). The layout of these brands poses a strong competitive threat to Midea.

3.2.3.2 Technology and Brand Risk

Midea's technological development and innovation in the field of home appliances need to be improved, but it still needs to seize the market share of smart home appliances to ensure a corresponding competitive advantage. Otherwise, Midea

has a long history in brand and has formed its own brand loyal users, but there are still deficiencies in developing new brand users, which has also become a risk faced in the next step of market development (CICC, 2024) .

3.2.4 Financial Risk

3.2.4.1 Operational Capacity Risk

Compared with other competitors in the industry, Midea has a lower inventory turnover rate and a higher inventory turnover day (Table 1.2). This shows that Midea still has problems in managing survival and cannot well predict revenue and inventory and balance the supply and demand of inventory, which leads to inventory backlogs and higher inventory storage costs.

3.2.4.2 Risk of Profitability Fluctuations

Midea's operating margin and net profit margin in 2015-2023 generally exceeded the industry average. However, it still has a large gap compared with Gree. At the same time, the stability of the profit ratio during this period is also lacking, which shows that Midea's cost control still needs to be improved, so as to increase Midea's profitability and reduce Midea's profit fluctuations.

3.2.5 Regulatory Risk

3.2.5.1 Environmental Policy Risks

The Chinese government has proposed a "dual carbon" policy, requiring manufacturing companies to improve energy efficiency and control emissions. Otherwise, they will face fines, suspension of production or being eliminated by the market. In the future, in response to environmental policies, Midea needs to further achieve energy conservation and emission reduction, reduce the pollution of the products produced to the environment, which can meet the industry standards.

3.2.5.2 Data Compliance and Privacy Regulatory Risks

Since Midea is transforming from traditional home appliances to smart home appliances, developing smart home appliance business will involve relevant data security risks. The "Personal Information Protection Law" and "Data Security Law" proposed by regulatory agencies require companies to reasonably protect consumers' personal information and personal privacy, otherwise they will be fined. Therefore,

Midea needs to further improve its information system to help companies improve data protection and meet regulatory requirements.

3.2.5.3 Industry Access and Technology Licensing Risks

As one of the home appliance companies, Midea needs to obtain special certifications, production licenses, etc. when developing new technologies, which is closely related to regulatory policies. If the policy is updated, it will affect Midea's product design and market launch.

3.3 Conclusions

It is recommended to sell Midea's stock currently.

According to the valuation results, Midea's implied stock value is less than the stock price on December 31, 2024. This shows that Midea's stock is overvalued and not worth investing now. The reason for its overvaluation is mainly due to investors' uncertainty about the current market, and investors are rushing to buy leading companies in defensive industries. At the same time, the overall home appliance industry is currently in a sluggish and recession, mainly due to the low willingness of residents to consume and the downturn in the related real estate industry (Midea, 2024). Therefore, it is recommended to sell Midea's stock in the short term, but it can wait until the emotional impact disappears and the stock price returns to the real value level before investing.

According to the risks of investing in Midea, it is not suitable to invest in the short term. Midea has many existing risks. Investing in Midea is affected by various regulatory risks. It is necessary to consider the Chinese government's environmental protection policies, data security requirements and technology licensing regulations. In addition, Midea is transforming from traditional home appliances to smart home appliances, and the future situation is not particularly clear. At the same time, there are many home appliance brands in the industry, which also poses a great threat to Midea's development.

Therefore, from a valuation and risk perspective, selling Midea's stock is an option currently.

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