Under the Depressed Economic Environment and Covid-19, Is METRO AG Still Worth Being Invested in?

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Abstract. The paper applies several business models such as Porter's Five Forces, Value Chain, and BCG's Matrix to analyze the overall performance of METRO AG under the condition of Covid-19 to solve the problems of whether METRO is still worthy of investing. This paper also applies financial analysis with an appropriate calculation of ratios and comparison of its competitor, Costco. Under Covid-19 and the depressed economic environment, METRO AG's net profit is decreasing and its solvency is also weaker than Costco. However, METRO AG has an efficient value creation process, especially in the inbound logistics and procurement area. METRO AG also set up its team for technology development and takes other effective measures to optimize its operation to enhance its overall competitiveness. In conclusion, although METRO AG suffers some difficulties due to the epidemic and the overall economic condition, it is now taking measures to overcome these problems. Therefore, METRO AG still has great investment potential.

Keywords: Retail industry, Porter's Five Forces, value chain, financial analysis

1 Introduction

METRO AG is the fourth-largest retailer in the world, behind Walmart, Carrefour, and Costco. It comprises four major divisions: "Cash&Carry" stores affiliated with METRO and Makro companies; non-food stores chains Media Market and Saturn; the Real chain of food group. Altogether, METRO Group now has a presence in 32 countries, and its four sales distributions have about 2200 locations with 769 METRO and Makro Cash&Carry outlets in 26 countries [1].

METRO Cash & Carry is positioned in the retail industry uniquely. Because its buyers are all focused on "professional customers," in other words, the Cash & Carry concept is mainly a B2B wholesale format. Its stores prefer buyers that purchase goods permanently and in large quantities.

Although METRO is one of the top 500 companies in the world and has won a worldwide reputation, recently, some investors doubt its bad profit-making ability due to its negative profit of -45000€. Plus, under Covid-19, some people have relatively

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lower disposable income, and some feel it is inconvenient to drive to the suburbs to purchase goods. Additionally, online retailers are becoming stronger and more convenient; they are strong competitors for METRO. Therefore, these investors are wondering whether they should continue to hold some of their shares or not.

Combining the retail industry with the condition of Covid-19 and the economy's recession to assess METRO's operation and financial condition is a unique perspective. Through further analysis of METRO's overall performance applying different models, the problem generated by some investors can be solved.

2 Analysis of Retail Industry

Usually, the retail industry can be divided into two types: food retailing and non-food retailing. The former is mainly focused on selling food and some groceries used in our daily life by supermarkets, convenience stores, etc. The latter retailers consist of apparel outlets, booksellers, and so on [2]. METRO Group is focused on the retail industry, and its Cash&Carry division focuses on the specific area of food retailing.

The retail industry is one of the largest in the world. As table 1 shows below, the GDP growth rate in the retail industry is roughly in line with the growth rate of the gross GDP in the USA, with a proportion of 11.85% for the gross GDP. However, the retail industry's profitability has faced many problems during the several years, especially for the supermarket sector under Covid-19. Therefore, whether the retail industry can keep its GDP growth rate in the future? In this part, Porter's Fives Forces model will be applied to analyze the retail industry, specifically in the physical supermarket types.

Table 1. Comparison of GDP growth between Gross GDP and retail GDP('$1hm)

	GDP in the USA	Growth rate of GDP in the USA
2000	102523.47	
		27.16%
2005	130366.37	
		15.00%
2010	149920.52	
		21.65%
2015	182383.01	
		14.79%
2020	209365.58	

	GDP in retail industry in the USA	Growth rate of GDP in retail industry in the USA
2000	13081.28	
		22.07%
2005	15967.76	
		9.00%
2010	17404.13	
		24.28%
2015	21629.46	
		11.82%
2020	24186.2	

The threat of new entrants is relatively low. For capital requirements, substantial investment in marketing and infrastructure is needed, apart from the warehouses' rental. Moreover, many giants in the retail industry have already established well-structured distribution channels to enhance their competitiveness and form economies of scale. Hence it is hard for a new entrant to find a new relationship with some suppliers under the condition of restricted distribution channels.

Customers' bargaining power is relatively high. In the retail industry, alternative sources of supply are available and easy to find; therefore, they can smoothly change to other supermarkets to purchase goods. Products sold usually have less differentiation hence customers have less brand loyalty, and its switching cost is low.

In contrast, *the bargaining power of suppliers* is low. The customers of the supplier are usually these giants in the retail industry, which can determine the price easily. The switching cost is low since supplier concentration is high, and suppliers usually have to compete with other suppliers to gain contracts from supermarkets to keep their profitability.

The threat of substitutes should also be taken into consideration. Online shopping or virtual supermarket is a substitute for physical stores, especially under the condition of Covid-19. Small shops, for example, high street shops, are also a substitute for supermarket since they are usually located in the living area and is convenient.

Industry rivalry is high. Nowadays, there are many giants in the retail industry, such as Costco, Sam's Club. Costco is the largest wholesale Club in the retail industry, with a sales revenue of $152703m in 2020.SAM's Club, operated by Walmart, is one of Costco's competitors, with more than 800 stores worldwide. They have similar sales revenue and warehouses with homogenous goods sold. For example, customers should pay for a membership card first and then be able to enter the store of Costco. METRO and SAM's Club take the same measures.

Overall, the retail industry is still dynamic since it takes a large proportion of GDP and growth roughly with GDP. Products sold in supermarkets are all necessities in people's daily life hence the demand is always high. However, wholesale stores should pay more attention to the development of online shopping services and their labeled brand to defend against risks from their substitutes.

3 Analysis of METRO's Value Chain

With total revenue of € 24765m in 2021, METRO is one of the largest retailers in the world. One reason for METRO's success is its efficient supply chain. Therefore, value chain models would be applied in this case to understand METRO's value creation further.

The value chain model is a helpful framework for assessing the strategic capabilities of an organization as it offers a bird's eye view of the firm, what it does, and how its activities add value to the end customers. It consists of two types of activities: primary activities and supporting activities. The activities include nine factors: inbound logistics, operation, outbound logistics, marketing and service, after-sales service, procurement, technology development, human resource management, and firm infrastructure.

For a retailer in the grocery sector such as METRO and Costco, inbound logistics, procurement, and technology development are most important. Procuring high-quality, specialized products and then efficiently delivering them with optimization of costs are core competencies for retailers. The development of supporting technologies help retailers to defeat disruptive technological risk and increase the efficiency of daily operation. Hence in this part, the three factors will be discussed in detail.

Inbound logistics. Inbound logistics means receiving, handling, and storing inputs to the production system, such as the warehouse. METRO optimizes the distribution system with three-party logistics and its own logistics channels. One of its developed distribution channels [2]. METRO Group Logistics, is responsible for logistics through worldwide procurement, warehousing, and distribution platform. Metro also acquired some famous distributions in the world. For example, it acquired Aviludo in 2021, one of the leading food distributions in Portugal with strong expertise in meat processing. Aviludo has nine depots and 180 trucks in Portugal, which serves more than 13000 customers [3]. This acquisition enables METRO for better development in Portugal and creates synergies with other distribution channels. 45% of its logistics cooperates externally [2]. They have certificated transport and dispatch partners who have worked with them for many years. The well-structured combination of external logistics and internal distribution network make METRO's delivery of goods more efficient in supporting customers' necessary product demands.

Procurement means all the processes involved in acquiring the resource inputs to the primary activities. METRO gains a competitive advantage by making trade-offs between centralized and decentralized procurement. The centralized procurement of dry and imported goods is through METRO Group Buying, a global sourcing subsidiary of METRO based in Hong Kong [2]. Because this dry food can be reserved for relatively long, there is no need to be concerned about the delivery time. Therefore, more effort and time can be put into selecting higher-quality goods. Moreover, centralized procurement brings considerable advantages such as efficient delivery and centralized replenishment. For fresh or frozen goods, METRO prefers to find reliable local suppliers [1]. This can not only keep goods fresh but also reduce the delivery time, saving transportation costs. Tailored to local people's tastes could also establish a good reputation for METRO's brand.

Technology development includes product design, improving processes, and resource utilization. Nowadays, METRO has set up several technology sectors. For example, METRO Digital is an official representative in all information technology related matters [4]. In 2018, collaborating with Google, METRO.digital set out to establish a METRO Cloud Competence Hub-a center of expertise for all things cloud. METRO's central finance system is migrated through the hub to Google Cloud, so there is no need to handle financial information through local finance systems with different applications depending on the respective country. All accounting can be tackled by one platform, increasing the efficiency of information processing [5]. This hub also provides professional learning opportunities to all colleagues across the METRO board to encourage their comprehensive ability for new knowledge like processing the new financial system to increase their working efficiency. M|Shop, METRO's e-commerce platform, was set to facilitate customers' shopping. This platform is fully personalized: it can recommend products according to individual tastes, and digital invoices would also be generated. Up from now, M|Shop has been widely spread across 18 countries with more than 400000 orders per month and active users per week are more than 60000 [6]. This platform adds excellent flexibility for shopping from any location, especially under the condition of Covid-19.

The remaining parts of the value chain are relatively less significant compared with the former features. But it does not mean that they are trivial to be ignored. These factors can also be helpful to add to METRO's unique value if METRO takes full advantage of them.

Operation means converting resource inputs into a final product; Outbound logistics means storing the product and its distribution to customers. They are relatively insignificant for METRO. Because all goods procured from suppliers are not working in progress (WIP), they are placed in warehouses. Customers usually drive to these warehouses to purchase without the need for delivery. However, there is a suggestion that METRO can input more funds into the outbound logistics since the break of Covid-19 and the rising fossil fuel costs may discourage some customers from driving to the suburbs for massive procurement. METRO's competitor, such as Costco, has already provided the service of delivery; Walmart, for example, in China, has cooperated with local delivery apps such as Eleme to deliver its goods. Therefore, if METRO were weak at this delivery service, its market share would be further eroded.

Marketing and sales mean informing customers about the product and persuading them to buy it. After-sale service means installing products, repairing them, upgrading them, etc. For METRO, both two activities are relatively weak since there is almost no advertising on TV or news. It just sends some emails to its customers, but these emails are not tailored to each individual's taste; hence the effectiveness of advertising is weak [7]. Although METRO has introduced a membership card, there is no unique extra value for its membership. It is just like an admission to enter the store. In contrast, Sam's membership card provides special discounts and more SKUs such as pharmacies, jewelry, and the service of gas and tire changing to attract more customers to become a member and increase its revenue and cultivate customer brand loyalty in the long-term.

In conclusion, METRO performs well in value chain factors of inbound logistics and procurement. It also developed related technologies to enhance its overall value-creation ability. However, METRO attached less importance to the other value chain factors, especially marketing and sales. Its competitors have already applied various approaches to attract its customers. Therefore, METRO should manage to develop comprehensively.

4 Ratio Analysis of METRO AG

After the analysis of the retail industry and METRO's value creation, more detailed research would be made. In this part, some ratios would be presented and compared with its competitor, Costco, to help investors to have a better understanding about METRO's financial condition.

Current ratio indicates the short-term solvency. Usually, a ratio greater than 1 indicates that a company's short-term assets are sufficient to pay off its short-term liabilities. The higher the ratio, the safer the company can pay its liabilities. However, this ratio is too optimistic because many current assets cannot turn into cash immediately. The sale of inventories can be receivables first rather than cash and the period to receive the cash is a question. Therefore, deduction of inventory items might be a more practical, and that is a quick ratio. The interest cover is mainly used to assess whether a company can afford to pay interest expenses. The higher the ratio is, the less financial risk the company suffers.

The current ratio of METRO is decreasing from 0.91 to 0.76 in 2020/21, and the three years figures are below 1. Its quick ratio keeps falling as well and is below 1. Hence it indicates that METRO has bad solvency. Interest cover was 3.36 in 2018/19. However, it decreased to only 0.88 in 2020/21. Therefore, METRO's generated profit cannot pay off its finance cost. This is a financial risk that METRO should notice; because banks and other investors may be unwilling to provide funds for further operation due to its low-interest cover, or the interest rate might be increased to set off the risks. Finally, METRO's interest burden would be higher and less capital could be used for its operation.

Costco's current ratio exceeds or equals 1, and its quick ratios are similar to METRO. Therefore, it indicates that Costco's solvency is slightly better than METRO, but measures should also be taken to improve its ability to pay for a short-term loan. Regarding the interest cover, Costco's figures are all higher than 30, and in 2020/21 it is 39.23, which means Costco's net income can pay for its current finance costs 39.23 times. Compared with METRO, whose interest cover is below 1, Costco has a powerful ability to pay off its interest. Costco's advantage is that banks prefer to provide funds for such a giant with good solvency.

Table 2. Comparison of current ratio, quick ratio and interest cover between METRO and Costco

METRO	2018/19	2019/20	2020/21
current ratio	0.91	0.87	0.76
quick ratio	0.72	0.54	0.45
interest cover	3.36	1.02	0.88

Costco	2018/19	2019/20	2020/21
current ratio	1.01	1.13	1
quick ratio	0.52	0.64	0.52
interest cover	31.58	40.22	39.23

Gross profit margin is the percentage of gross profit to sales revenue, where gross profit is the difference between revenue and its related operating costs. Net profit margin is an essential indicator of a company's profitability, which is the profit after deducting the cost of sales. ROE refers to the ratio of profit amount to average shareholders' equity. The higher the indicator, the higher the return achieved by shareholders. This indicator reflects the ability of a company's capital to earn net income.

During the recent three years, METRO's gross profit has kept stable with a figure of about 17%. However, its operating profit margin falls from 3.58% to only 0.8%, indicating that the cost related to sales increased yearly. This decrease might be due to the rising costs of energy, certain agriculture products, and inflation; hence the burden of cost control is increased. ROE is also problematic since it keeps reducing, and in 2020/21, the figures become negative. This may be an unfavorable indicator because low ROE means that shareholders earned less capital from the investment of METRO. There may be a risk that some shareholders would lose confidence in METRO and withdraw their funds. Overall, METRO has a problem regarding its profitability, and measures should be taken as soon as possible. For example, they are negotiating with reliable suppliers to procure goods in bulk at relatively lower prices or paying accounting payables in advance to gain more discounts to reduce the burden of incurred costs.

Costco's profitability is much better than METRO. Although its profit margin is lower than METRO, it remains stable, and its operating profit keeps positive. Moreover, its ROE is stable and even increased during the recent three years. This indicates that Costco is continuing with huge potential and has a strong ability to attract investors to provide funds or own shares.

Table 3. Comparison of gross profit margin, operating profit margin and ROE between METRO and Costco

profit margin	17.05%	17.01%	17.06%
operating profit margin	3.53%	1.00%	0.80%

ROE	14.36%	21.28%	-2.90%

Costco	2018/19	2019/20	2020/21
profit margin	12.98%	13.09%	12.88%
operating profit margin	3.10%	3.86%	3.42%
ROE	26.10%	23.87%	28.34%

Inventory turnover reflects how long inventory remains in the store before the sale. The higher the ratio, the more competitive advantage companies have because they have less capital used in unsold inventory and have better flexibility to adjust their product combination frequently. In the retail industry, inventory is significant because the primary revenue generates from selling inventories. The lack of inventories or overstock of inventories is unfavorable for a company’s profit-making.

METRO's inventory days are stable at about 30 days per time, and for a year, inventory will be replaced about 11 times. Costco's ratios are also kept stable during the three years. Except for Costco's days in inventory are slightly lower than METRO, their turnover ratios are similar. This indicates that both companies have good inventory control, and the products sold satisfy customers' needs.

Table 4. Comparison of inventory holding period and inventory turnover between METRO and Costco

METRO	2018/19	2019/20	2020/21
days in inventory ratio	32.7	32.41	33.98
inventory turn over	11.16	11.26	10.74

Costco	2018/19	2019/20	2020/21
days in inventory ratio	30.81	29.76	28.29
inventory turnover	11.85	12.26	12.9

In conclusion, although METRO's revenue generation and inventory control are stable, many problems should be solved in time. Compared with Costco, METRO's solvency is weak, and this is bad for METRO's future development since financial risks exist, and fewer funds might acquire from lenders due to its bad solvency. Moreover, cost control is also an issue. For a retailer in the grocery sector, cost leadership matters. A company that can keep its cost of sales to a reliable level is more competitive and has the ability to lower selling prices to squeeze competitors' market shares. METRO's cost of sales is already close to its revenue, leading to ROE decreasing to an even negative figure. This is unfavorable since the low ROE might discourage investors, and they may withdraw the funds to invest in other competitors. Therefore, measures must be taken to improve these current shortcomings.

5 Conclusion

The retail industry is growing stably, roughly in line with the growth of gross GDP in the United States, and its growth rate in the recent decade has been 18.05% (see table 1). METRO is the fourth-largest retailer in the world behind Walmart, Carrefour, and Costco, so its market share is relatively high. Taken that 10% is the boundary of a high growth rate, in BCG's Matrix, METRO can be classified as STAR. Therefore, METRO still has excellent potential for future development.

However, externally, because the threat of new entrants is low and the bargaining power of customers is high, the retail industry is just the competition for several retailer giants. Products they sell are homogeneous; therefore, the one who could sell goods with cheaper prices and higher volumes has more competitive advantages. This needs strong cost control. However, under the condition of Covid-19 and the rising costs of energy, certain agriculture products, and inflation, the burden of cost control is increasing, and retailers' margins could be further eroded. For the minority of the market share in the retail industry, convenience stores and online retailers might also squeeze some margin from the industry. Internally, for METRO's financial condition, although its profit margin keeps stable at around 17%, its operating profit margin decreases to only 0.8%, and its net profit is even at a negative figure. Compared with its competitor, Costco, METRO has weak solvency. All these ratios indicate that METRO itself now has an increasing burden on cost control and pressure on financial risk, despite the fierce competition in the retail industry. Therefore, effective measures should be taken if METRO wants to have further development in this industry.

Nowadays, METRO has already tried to develop its private brands to increase the added value of goods sold. METRO Chef, a brand mainly focuses on selling food grains; Fine Line focuses on selling snacks and bakeries; SIGMA focuses on selling stationery and other office supplies, etc. [8]. Selling its own-brand products effectively establishes customer loyalty and obtains more market shares from its suppliers.

Moreover, METRO in China has expanded its customer groups from B2B to B2C. In 2014, Chinese customers were able to pay for a membership to enter the warehouse for shopping. Statistics show that currently, in China, 2C shares the proportion of nearly 60% percent of METRO's total customers in China [9]. In 2020, during the break of Covid-19, many 2B customers stopped operation and procured from METRO. However, its revenue was still kept stable due to the increased demand from individuals: with the collaboration of Small, a famous chain store in China, an online app was set to deliver goods to individuals' customers, and the revenue generated from 2C offset the losses from 2B [10]. Overall, expansion to 2C is a good way to enhance METRO's competitiveness since, currently, METRO mainly focuses on 2B, and there is a large potential for METRO to excavate customers from 2C.

Although METRO now suffered some pressure from its competitors and the condition of the national economy recession as well as Covid-19, it still has great potential for development. METRO has already taken effective measures such as designing its private brand and expanding its customers to strengthen its market position. These are the transition from cost leadership strategy to differentiation. Overall, METRO deserves further investment if such measures can be implemented effectively.

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