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Financial Analysis and Valuation on BMW

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Abstract: The BMW Group is currently top producers of luxury automobiles. The BMW Group is renowned for its dedication to technological advancement, as well as its emphasis on environmental responsibility and sustainability. This essay aims to figure out whether investing in BMW Group is a good choice or not. The author analyses the 2021 annual report of BMW Group from 3 aspects: accounting analysis, strategy objective and risk management. The recommendation is BMW Group is a good choice to invest in because it has strong good operations, profitability and a risk management system. Moreover, the transformation plan has made BMW Group even more growth-oriented and the return on investment is expected to improve in the future. BMW Group focused on the reduction of CO2 emissions and the electricity vehicle transformation plan in 2021, and the sale volume was quite considerable. The dividend will grow in the future, more shareholders may invest in BMW Group.

Keywords: automotive industry, financial analysis, forecast and valuation

1. Introduction

German multinational company, BMW Group, makes high-end cars and motorcycles. With a variety of models, including sedans, coupes, SUVs, and electric vehicles, the BMW Group is currently one of the world's top producers of premium automobiles [1]. It holds €66.314 billion market capitalization and 4.78% market share [2, 3]. The corporation has its headquarters in Munich, Germany, and has manufacturing sites in many nations - the US, China mainland, and South Africa. BMW Group is renowned for its dedication to technological advancement, as well as for putting a priority on sustainability and environmental responsibility [4].

Three recent news stories, which deeply influence BMW Group's performance and objectives, are described first. As the biggest change in 2021, BMW Group announced plans to shift towards electric vehicles. By 2030, the company wants 50% of its global sales to come from electric vehicles, according to BMW Group CEO, Oliver Zipse, who made this announcement in March 2021. Moreover, the business presented the iX electric SUV, slated for late 2021 arrival [5].

In terms of financial performance and outlook, a key highlight was BMW Group achieved its best sales in 2021. In spite of the COVID-19 epidemic's challenges, BMW Group recorded a net revenue of €111,239 million in 2021, ranking first in the world's premium market. This success was largely attributed to strong operational performance and an outstanding product line-up [6].

In 2020, BMW Group and other companies in this market experienced supply chain disruptions as a result of the global semiconductor shortage. For some BMW Group models, this resulted in production reductions and delays. BMW Group solved this problem in 2021, it entered into a direct

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supply assurance contract with feature-rich semiconductor producer GlobalFoundries and high-tech microchip developer INOVA Semiconductors. Supply chains are secured, and more new car models can be introduced [7].

2. Accounting Analysis

Accounting policy of BMW is the International Sustainability Standards Board (ISSB), which operates under the auspices of the IFRS Foundation, the (EU Taxonomy) Regulation, and the Sustainability Accounting Standards Board were all followed by BMW Group [4]. A higher degree of judgment or considerable estimations had to be used by management in three areas: revenue recognition, PPE & leased products, and intangible assets. So, in its 2021 Annual Report, BMW Group referred to them as an essential accounting policy.

2.1. Revenue Recognition

BMW Group outperformed its rivals in 2021, with revenues of €111,239 million. The company's operations are complicated because each of its four revenue streams—customer contracts, product sales for repurchasing, lease of its own-manufactured vehicles, and interest income from financial services—includes a wide range of goods and services [4]. Also, the income statement's sales figure is crucial since it affects key metrics for investors like operating profit (OP), profit before taxes (PBT), and net income (NI). If revenue cannot be identified and quantified fairly, analysts will place an excessive value on BMW Group and choose the incorrect investment. As a result, the assessment and acknowledgment of revenue require considerable judgment.

Revenues from customer contracts for a dealership or retail client include income from services as well as sales of items like new and used vehicles and related products. When control is given to the client, whether at the point of sale for goods or overtime for services, revenue is realized. Revenues are reported before deductions for discounts, bonuses, and subsidies. Payment for sales and services is typically expected either right away or within 30 days. In the scenario of agreements with numerous components, revenues are postponed and recorded throughout the course of the service period. Unless specifically related to the sale of a vehicle, Variable consideration components, such as bonuses, are measured at their projected value and applied to all performance obligations unless particularly connected to the sale of a vehicle [4].

Repurchase agreements affect the timing of the full recognition of revenues from the sale of certain products. Instead, they are either recognized proportionately or in installments over the course of the contract, depending on the type of arrangement. If vehicles are sold to a dealership with a planned repurchase, revenues are not reported at the group level as part of lease activities. As an alternative, assets, and liabilities associated with the right of return vehicles are recognized [4].

According to the specifications for manufacturer or dealer leases, leases income of privately built automobiles are recognized by the group management. For the duration of an operational lease, lease payment revenues are recorded on a straight-line basis. Sales for financial leases are recorded. Any unguaranteed residual value of any vehicles that are anticipated to be returned to the Group at the end of the lease term is deducted from the fair value of the leased asset at the lease commencement date before revenues are recognized. At the lease start date, first direct charges are also included in the cost of sales [4]. Interest is included in the financial services revenue as well. The effective interest technique recognizes and presents interest income on credit financing as part of revenues for finance leasing, retail customer financing, and dealership financing [4].

By describing several sources of revenue and explaining how to account under specific conditions, BMW Group clearly differentiates the methods of revenue recognition. It seems logical that BMW

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Group's revenue recognition accounting approach. Nonetheless, due to BMW Group's intricate operations, extensive judgment and estimates are needed.

2.2. PPE & Leased Products

PPE and its leasing were recorded by BMW Group in compliance with IFRS. All items of property, plant, and equipment have their acquisition or production costs subtracted from the total depreciation and impairment losses. Depreciation is listed as an item in the cost of sales on the income statement. The usable plants and equipment are periodically assessed and modified as essential. Depreciation rates are raised for machinery utilized in multiple-shift operations to reflect the higher usage. An impairment test is carried out when there is any evidence that the PPE is impaired [4].

By leasing out real estate, machinery, and equipment, the BMW Group records an asset for the right-of-use and an obligation for unpaid rent as of the asset's availability for use. The key line items for property, plant, and equipment are where the right of use asset is listed on the balance sheet. The cost of sales and selling and administrative charges are added to the income statement after right-of-use asset depreciation is declared [4]. The lease liability for the BMW Group at the time of initial recognition is calculated using the present value of the anticipated lease payments. Notwithstanding the fact that interest expense is stated as a component of the net interest result, these leasing liabilities are nonetheless portrayed as financial liabilities. Both the interest and repayment portions of lease payments are displayed as cash outflows from finance operations in the cash flow statement [4].

Fixed leases, variable lease expenditures depending on an index or a rate of interest, and sums expected to be paid under residual value insurance are among the lease payments that must be taken into account in assessing the right-of-use asset and the lease liabilities. The BMW Group considers all information that would have an impact on the decision to exercise or not exercise an option when evaluating options [4].

Lease payments must typically be discounted under IFRS 16 using the implicit interest rate in the lease. Since it is difficult to establish this rate, the BMW Group uses the increasing borrowing rate, which combines the risk-free interest rate in the relevant currency for corresponding maturities and a premium for credit risk, in circumstances when this rate cannot be easily determined. Due to the fact that collateral obtained through alternative financing arrangements is irrelevant to the BMW Group, specific risks associated with the asset are often not taken into account [4]. The BMW Group has utilized the appropriate exemptions for temporary leases and leases of low-value assets as a lessee. However, the COVID-19-related rent exemptions that are authorized under IFRS 16 adjustments enacted on March 31 and May 28, 2021 have not been used by the company [4]. This leads to an increase in non-current assets.

2.3. Intangible Assets

Intangible assets are valued at the cost of acquisition or manufacture and amortized over their useful life, with impairment losses recorded as necessary. Annually, the usefulness of intangible assets is evaluated for impairment. If certain requirements are fulfilled, internally produced intangible assets, such as development expenditures, are capitalized and amortized through the projected lifecycle of the product on a straight-line basis starting on the day production starts. Goodwill is produced when the expenses associated with buying a business surpasses the Group's share of the total fair value of all assets, liabilities, and accrued liabilities determined during the acquisition [4]. Emission permits and other rights resulting from initiatives to reduce carbon or other climate-damaging emissions are also considered intangible assets (for instance, in conjunction with China's or the USA's vehicle-related emissions restrictions or the EU's emissions trading system). BMW Group aligned to IAS 37,

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which corresponds to the size of requirements anticipated to result from the relevant emission laws [4].

If there is any sign that intangible assets are being depreciated, BMW Group will conduct an impairment test. Each asset is tested independently, unless the cash flows it produces are not sufficiently independent. The BMW Group has a custom of evaluating impairment in certain circumstances at the level of a cash-generating unit [4]. The value in use is determined by the BMW Group based on a present value calculation. These long-term projections are based on in-depth estimates created by management at an operational level over a six-year planning horizon. BMW Group used various assumptions in order to calculate cash flows beyond the planning period, such as the assumption of a perpetual annuity return that excludes growth. The assumptions utilized consider future and macroeconomic trends, the legal context, as well as prior experience and forecasts for the profitability of the product portfolio. The impact of climate change and other environmental considerations concerns and the product offering is also taken into consideration in the assumptions [4].

3. Performance Evaluation

In 2021, the world economy recovered from the pandemic-related downturn in 2020. Although the eurozone was more severely affected by the coronavirus outbreak than other significant regions, the worst-affected European nations had a more marked recovery. Notwithstanding the effects of the lack of semiconductor components supply, the BMW Group still recorded higher group net profit in the fiscal year 2021 (up 207.5% from the prior year) [4]. The operating results, fiscal situation, and asset value of the BMW Group demonstrate that the company is in sound financial standing and that operations have gone according to schedule. To compare financial performance, three peers, including Informa, Stellantis, Volkswagen, and Mercedes-Benz Group, are identified by reasonable judgments.

3.1. Liquidity

A liquidity strategy that is applied consistently throughout the BMW Group ensures liquidity. Hence, the liquidity position provided by BMW Group AG represents both the domestic and international operations of BMW Group AG and other Group members. BMW Group has a relatively solid liquidity position in 2021. Due primarily to operating activity surpluses, cash and cash equivalents rise by € 6,822 million. Investments in fixed assets required cash withdrawals, although this effect was compensated. Table 1 makes it clear that BMW Group has a better current ratio than most of its competitors, with the exception of Volkswagen and the Mercedes-Benz Group. However, BMW Group underperformed in its fast ratio after accounting for inventories (€15,928 billion) [4].

From the knowledge obtained during the global financial crisis, BMW Group established a concept about liquidity risk that is rigorously followed and continually improved. The "matching financing principle" is used in the Financial Services segment to ensure that liquidity issues are often avoided. Opportunities related to liquidity are not currently anticipated to have a substantial influence on BMW Group’s earnings [4].

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Table 1: Liquidity ratios of BMW Group and its competitors.

%	BMW Group	Stellantis	Volkswagen	Mercedes-Benz Group
Current ratio	1.1269	1.1224	1.2187	1.1740
Quick ratio	0.9186	0.9472	0.9527	0.9291

3.2. Solvency

As BMW Group manages and monitors the liquidity position based on a rolling cash flow forecast, BMW Group has a strong ability to meet debt repayment obligations, and its solvency is always guaranteed. Table 2 shows the fact that BMW Group's long-term debt-to-assets ratio (51%) and total debt ratio (67%) are considerably lower than those of its competitors in this market indicating that the company is safe and secure and that its level of risk is not particularly high. BMW Group can handle debt payments without sapping its income sources, which is encouraging long-term solvency. This is demonstrated by the strong times-interest-earned and cash coverage ratios [4].

Table 2: Solvency ratios of BMW Group and its competitors.

	BMW Group	Stellantis	Volkswagen	Mercedes-Benz Group
Long-term debt ratio	51%	47%	60%	57%
Total debt ratio	67%	67%	72%	72%
Times-interest-earned	81.2121	12.1451	11.0704	37.3613
Cash coverage ratio	120.5758	17.0996	23.3289	106.0276

3.3. Efficiency

The efficiency of BMW Group is high. According to Table 3, BMW Group has superior receivables turnover (48 times) and a shorter average collection duration (7.5 days) than its competitors, which suggests that a large percentage of its customers are trustworthy and prompt with their payments. BMW Group's assets and inventory turnover, except for Stellantis, are at market average levels. In the car industry, BMW Group may make 0.5134 revenue from its assets, which is a significant amount. Because of the pandemic-related shop closures, the inventory turnover ratio for the BMW Group, VW, and Mercedes-Benz Group does not appear to be high.

BMW Group sets a high priority on efficiency, and it often looks at how to take advantage of synergies and economies across the organization to reduce the complexity caused by escalating and diverse regulatory requirements. Systematically utilizing efficiencies requires lean structures with faster, digitalized operations. We see a lot of potential for digitalization to shorten process times in areas like vehicle development. BMW Group is also embracing the expanded consumer interaction opportunities given by digitalization through combined goods and services, advancements, and customer service to differentiate itself from its competitors [4].

BMW Group has a favorable profitability ratio. BMW Group has a greater operational profit margin (14.00%) and profit margin (11.20%) than other companies. According to the BMW Group, a company's operations must be in line with external economic, ecological, and social goals for it to be profitable. On the other hand, a company must be profitable in order to be able to develop new, sustainable technologies, provide job security, and work with all of its business partners to improve the sustainability of the entire value chain. The identified main performance metrics are linked to the financial goals of the BMW Group to emphasize the significance of its economic performance capabilities: automotive segment EBIT margin (between 8% and 10%) [4].

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Table 3: Efficiency ratios of BMW Group and its competitors.

	BMW Group	Stellantis	Volkswagen	Mercedes-Benz Group
Asset turnover	0.5134	1.9847	0.5095	0.4686
Inventory turnover	5.9917	22.3524	4.6313	3.9033
Days in turnover	60.9172	16.3293	78.8110	93.5114
Receivables turnover	48.4069	30.3512	15.4036	12.5733
Average collection period	7.5403	12.0259	23.6958	29.0298
Profit margin	11.20%	9.51%	6.17%	11.20%
Operating profit margin	14.00%	10.12%	7.70%	14.00%

3.4. Return on Investment

BMW Group has strengthened the short-term outlook for the future dividends it can pay to shareholders as a result of the sharp increase in earnings and sales in 2021; the dividend increased to €5.8 for common stock and €5.82 for preferred stock [4]. According to Table 4, BMW Group is positioned at market average in terms of return on investment, whereas Stellantis and Mercedes-Benz Group are market leaders. Except for Volkswagen, they are all very good at effectively using their shareholder equity, revenue, and assets to generate money.

Operational performance is handled at the segment level utilizing a combined strategy focused on returns on capital. Either return on equity or return on total capital, depending on the company model, is used to examine the segments. To evaluate segment performance and the rise in enterprise value, these indicators include a wide range of pertinent economic data, such as profitability (return on sales) and capital efficiency (capital turnover) [4]. RoCE is the most comprehensive KPI utilized for the Automotive segment and the Motorcycle segment. It offers data on corporate operations and the profitability of capital utilized. The new strategic objective for RoCE is 18% (instead of 40% under the previous definition). In essence, the new target exceeds the one that was used to calculate the return on capital utilized by a large margin. To increase value for BMW Group AG shareholders, the RoCE has to be higher than the cost of capital. Return on equity (RoE), a crucial performance statistic that is widely used in the banking industry, is used to evaluate the achievement of the Financial Services business. At least 14% return on equity is the aim. [4].

The integration of connectivity and digitization is a major growth for the BMW Group. So, it becomes sense to predict that in the future, the value added from digital company models will increase. Particularly in China, digitization is being done to new heights. Consumer electronics are increasingly influencing customer needs, which play a significant role in purchasing decisions [4]. The performance management system used by the BMW Group is built on a multi-layered architecture. At the segment level, operational performance is often managed. Value added is one measure that is used in this context to evaluate how the enterprise value has changed over the course of the fiscal year. By using the important financial and non-financial performance metrics, this objective to offer value is assessed at both the Group level and segment level (value drivers) [4].

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Table 4: Return on investment ratios of BMW Group and its competitors.

	BMW Group	Stellantis	Volkswagen	Mercedes-Benz
Market value added	52,657million	39,138million	65,662million	74,867million
Market-to-book ratio	5.660	3.757	8.52	3.354
Return on capital	8.14%	13.29%	6.11%	13.59%
Return on equity	22.60%	25.23%	10.56%	31.98%
Return on assets	5.43%	8.27%	2.92%	9.00%
Market value added	52,657 million	39,138 million	65,662 million	74,867 million
Market-to-book ratio	5.660	3.757	8.52	3.354

4. Forecast and Valuation

4.1. Strategic Objectives

The BMW Group works in an environment that is difficult, getting more complicated, and differentiating itself globally. The integrated strategy of the BMW Group is founded on core concepts like the honesty of deeds [4]. The integrated and continuous strategy process, target system, and corporate management make up the majority of the strategy, which was developed after looking at the major global megatrends that have shaped the growth of the automotive industry.

Climate change and the reduction of carbon dioxide emissions, electromobility, digitalization and connectivity, including automated and autonomous driving, as well as societal mobility patterns, are currently the most important megatrends with long-term implications for the business model of the BMW Group.

4.2. Risk Management

The business of BMW Group is subject to several uncertainties and changes. There are three important changes: supply shortages, coronavirus variation and strict vehicle emissions rules. Some BMW Group companies have already had to change their production schedules and experience pauses as a result of supply restrictions caused by the Russian invasion of Ukraine, among other things [8]. There is a chance that the war would worsen, which would lead to supply shortages worldwide, especially for semiconductors. A coronavirus variation that is very contagious and could eventually cause serious illness could emerge as a result of mutation [9]. The BMW Group is continuously monitoring the situation and acting appropriately as needed.

In an effort to enhance air quality, particularly in metropolitan areas, the European Union is now researching a proposed law for the updated Euro 7 emissions standard [10]. The Company's reputation could be impacted by a conversation about fuel usage and carbon emissions. In light of the Paris Climate Accord, European policymakers are gradually addressing the problems of sustainability and climate protection. The BMW Group should therefore gradually include environmental, social, and governance (ESG) concerns when making investment recommendations and decisions.

5. Conclusion

BMW Group is an international business with a large market capitalization, it focuses on sustainable development and environmental protection. The BMW Group is implementing a transformation program in which it is shifting its core resources to the manufacture and production of trams and has set itself the goal of reducing CO2 emissions. These moves are in line with the plans of the governments and therefore make BMW Group a development company worthy of being invested in.

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From an accounting point of view, BMW Group has good solvency and efficiency, which are evidence of its good operations. Furthermore, even with the impact of the COVID-19, BMW Group's sales are at an all-time high and an industry high, which is evidence of strong profitability. The current transformation plan has made BMW Group even more growth-oriented and the return on investment is expected to improve in the future. From a risk perspective, the risk management system is strictly monitored by BMW Group. Moreover, there is a systemic nature to the risks mentioned in the article; if these risks were to arise, it is not just BMW Group that would be affected, the entire market would be affected. In conclusion, according to the accounting analysis and the strategy of BMW Group, it is valuable to invest.

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