Creditreform Corporate Issuer / Issue Rating

BMW AG

Creditreform Rating

Rating object	Rating information	
BMW AG	Corporate Issuer Rating: A / stable	Type: Update, Unsolicited, Public rating
Creditreform ID: 8170003036	LT LC Senior Unsecured Issues: A / stable	Short-term rating: L2
Incorporation: 1916		
Based in: Munich, Germany		
Main (Industry): Automotive		
CEO: Oliver Zipse		

Rating date: 26 September 2023
Monitoring until: withdrawal of the rating
Rating methodology: CRA "Corporate Ratings"
CRA "Non-Financial Corporate Issue Ratings"
CRA "Corporate Short-Term Ratings"
CRA "Rating Criteria and Definitions"
Rating history: www.creditreform-rating.de

Rating objects:
Long- and short-term Corporate Issuer Rating: BMW AG
Long-and short-term Corporate Issuer Rating: BMW Finance N.V.
Long-term Local Currency (LT LC) Senior Unsecured Issues

Content

Analysts

Artur Kapica
Lead Analyst
A.Kapica@creditreform-rating.de

Natallia Berthold
Co-Analyst
N.Berthold@creditreform-rating.de

Neuss, Germany

Summary

Company

BMW AG - hereinafter also referred to as BMW, the Group, or the Company - is one of the world's leading premium manufacturers of automobiles and motorcycles, and a provider of premium financial and mobility services. The Company's brand portfolio includes the BMW, MINI and Rolls-Royce brands as well as BMW Motorrad. At the end of 2022, the BMW Group employed around 150,000 people and had 31 production sites worldwide. Its sales network ensures access to customers in over 140 countries. BMW's main markets (in terms of share of sales) are China (29.4%), the USA (20.2%), Germany (10.8%) and other, smaller sales markets (39.6%).

In the fiscal year 2022, the BMW Group generated revenue of EUR 142.6 billion (2021: EUR 111.2 billion) and EBT of EUR 23.5 billion (2021: EUR 16.1 billion), despite declining sales volumes in the Automotive segment. The main reason for the noticeable growth in sales and earnings was the majority acquisition and full consolidation of the Chinese joint venture BMW Brilliance Automotive Ltd, Shenyang (BMW Brilliance). In addition, positive price and product mix effects, as well as increased business with spare parts and accessories, contributed to the positive business performance. In the first half of 2023, the BMW Group also recorded significant growth in revenue and operating profit, although EAT was significantly lower year-on-year due to the positive effects of the revaluation of the shares in BMW Brilliance Automotive Ltd.

Rating result

With an unsolicited corporate issuer rating of A, BMW AG continues to have a high credit rating and a low risk of default. Overall, we consider the operating business development in 2022 and the first half of 2023 to be solid against the backdrop of the difficult market situation and challenges in the course of the ongoing transformation of the BMW Group automotive industry as a whole. The resulting improvement in the results of the financial ratio analysis, in conjunction with the Group's solid liquidity and financial position and long-standing, proven ability to access the capital markets, has a stabilizing effect on the rating. The increasing intensity of competition, particularly in the area of e-mobility, as well as the investment requirements in the course of the ongoing transformation process, continue to represent factors of uncertainty for the BMW Group, especially in connection with increasing (geo-)political conflict and a global economic slowdown.

Outlook

The one-year outlook for the rating is stable. The reason for the adjustment of the outlook (previously negative) is the BMW Group's overall solid business performance, which has led to a noticeable improvement in the result of our financial ratio analysis. Against the backdrop of an improvement in its key figures, we believe the BMW Group to be in a good position, from a rating perspective, to master the current financial, structural and operational challenges arising from the ongoing transformation to e-mobility, the increasing intensity of competition, as well as the challenging market situation.

Reference:

The relevant rating factors (key drivers) mentioned in this section are predominantly based on internal analyses, evaluations from the rating process, the derived valuations of the analysts participating in the rating and, if applicable, other rating committee members. The fundamental external sources used are specified in the sections "Regulatory requirements" and "Rules on the presentation of credit ratings and rating outlooks".

Excerpts from the financial key figures analysis 2022:

+ Sales and earnings growth
+ EBIT(DA) Interest coverage
+ Slight decrease in financial debt
+ Improved equity ratio
+ Liquidity ratios
+ Improved profitability ratios
+ Asset coverage ratio

- Increase in balance sheet total
- Short-term debt ratio
- Disproportionate increase in cost of sales compared to previous year

General rating factors summarize the key issues which – according to the analysts as of the date of the rating – have a significant or long-term impact on the rating, whether positive (+) or negative (-).

Relevant rating factors

Table 1: Financials I Source: BMW AG, Annual Report 2022; standardized by CRA

BMW AG Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IFRS)	CRA standardized figures[1]	
	2021	2022
Sales (EUR billion)	111.24	142.61
EBITDA (EUR billion)	25.16	28.46
EBIT (EUR billion)	13.40	14.0
EAT (EUR billion)	12.46	18.58
EAT w/o non-controlling interests (EUR billion)	12.38	17.94
Total assets (EUR billion)	215.01	229.86
Equity ratio (%)	28.99	33.99
Capital lock-up period (days)	35.87	36.14
Short-term capital lock-up (%)	52.85	44.17
Net total debt / EBITDA adj. (Factor)	5.56	4.72
Ratio of interest expenses to total debt (%)	0.15	0.15
Return on investment (%)	5.54	7.28

General rating factors

+ Global market presence
+ A leading market position in the premium automotive market
+ Strong brand portfolio (BMW, MINI and Rolls Royce)
+ Expanding (financial) services business
+ Solid financial position
+ Good access to capital markets
+ Moderate dividend policy

– Dynamic, structural change in the automotive business
– Risks associated with the transformation of the BMW business model towards electromobility, digitalization and the circular economy
– High investment requirements with increasing project risks
– High intensity of competition and thus also increased pressure to innovate, cut costs and succeed
– Tighter emissions and safety regulations as well as legal and regulatory restrictions
– Market share gains by innovative competitors in the course of technological change
– Increased risks from globalization efforts
– Currency and country risks (political, legal, capital)

[1] For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt considers all balance sheet liabilities. Therefore, the key financial figures shown often deviate from the original values of the company.

Current rating factors are the key factors which, in addition to the underlying rating factors, have an impact on the current rating.

Current rating factors

+ Increase in sales and operating profit in 2022 and H1 2023, despite difficult market environment and ongoing transformation
+ Improved result of our financial ratio analysis for fiscal year 2022
+ Significant improvement in Automotive EBIT margin as of H1 2023 with corresponding increase in full-year guidance for 2023
+ Continued solid liquidity position, partly due to early refinancing/prolongation of syndicated loan

– Economic slowdown in relevant markets, especially Germany and China
– Continuing financial burden in the course of the transformation to electromobility
– Declining number of new contracts with end customers in the Financial Services segment

Prospective rating factors are factors and possible events which – according to the analysts as of the date of the rating – would most likely have a stabilizing or positive effect (+), or a weakening or negative effect (-) on future ratings if they occurred. This is not an exhaustive list of possible future events with potential relevance for future ratings. Circumstances can arise that are not included in the list of prospective factors, whose effects are impossible to assess at the time of the rating, either because these effects are uncertain or because the underlying events are deemed unlikely to occur.

Prospective rating factors

+ Strengthening of market position through successful continuation of the transformation process and rapid expansion of infrastructure required for electromobility.
+ Positive business performance, and improvement in earnings and internal financing capability
+ Improvement in the results of the financial ratio analysis
+ Success in reducing pollutant emissions, electrification and digitalization
+ Cooperations and partnerships in the research and development sector
+ Increased government support for e-mobility

– Deterioration of the result of the financial ratio analysis, e.g., in the course of business development not occurring according to plan
– Self-defined financial ratios will not be achieved
– Market entry of new competitors in the course of technological change
– Declining sales and loss of market share as a result of increasing competitive intensity
– Increasing trade barriers
– Further tightening of regulatory requirements, e.g., emissions and safety regulations
– Anti-globalization tendencies
– Recalls and reputational damage

ESG factors are factors related to environment, social issues and governance. For more information, please see the section "Regulatory requirements". CRA generally takes ESG relevant factors into account when assessing the rating object and discloses them when they have a significant influence on the creditworthiness of the rating object, leading to a change in the rating result or the outlook.

ESG-factors

CRA generally takes ESG factors (environment, social and governance) into account within its rating decisions. In the case of BMW AG we have not identified any ESG factors with significant influence.

Nevertheless, sustainability issues are key elements of the BMW Group's strategic and operational development in the short term, but especially in the medium and long term. The goals pursued by BMW focus in particular on reducing CO_2 emissions, increasing resource efficiency, and significantly improving social and ecological standards. The Company is committed to the Paris Climate Agreement and joined the SBTi's "Business Ambition for 1.5°C Initiative" as early as 2021. Specifically, this means that BMW has committed to reducing scope 1 and 2 emissions (per vehicle produced at its own plants and locations) by an average of 80%, scope 3 emissions by an average of more than 20% in the supply chain (upstream), and by an average of more than 50% in the use phase (downstream) by 2030 (base year 2019). At approximately 70%, emissions in the use phase account for the majority of the BMW Group's total emissions. In the overall view of the life cycle of a vehicle, the individual targets should result in an average CO_2 reduction of more than 40% by 2030. The target is to be achieved primarily through strong growth in sales of electrified vehicles, efficiency improvements in all drive technologies, reduction of energy requirements and increased use of renewable energies, as well as further measures to reduce CO_2 in the supply chain. With the help of these interim targets, the BMW Group aims to achieve CO_2 neutrality across the entire value chain by 2050.

Although we fundamentally derive financial risks for the BMW Group from this area, e.g., from CO_2 emissions and in relation to regulatory-compliant fleet consumption, we see the Company as being on a satisfactory path overall. A key success factor in this context is the consistent electrification of the BMW Group's model portfolio. The share of deliveries accounted for by electrified vehicles totaled 18.1% in 2022, a marked increase on the previous year (2021: 13.0%). The goal is to increase this share to over 30% by 2025, for which the BMW Group has already created a good starting point by investing heavily in the electrification of vehicles.

Despite the progress described above, there is still a risk of possible future fines due to the further tightening of CO_2 limits if the regulatory requirements cannot be met in the future. It should be mentioned here that the BMW Group did meet the regulatory fleet limits in 2022. However, positive credits - obtained from exceeding the limits in previous years or which can be purchased from other manufacturers - had to be used for this purpose in China and the USA. From the fiscal year 2023, the regulatory requirements in China and the USA will be met even without buying in credits.

Overall, in our opinion, various aspects of ESG factors remain to be monitored; however, no effect can currently be derived from this which would have an influence on the rating. In the future, ESG factors may have an impact on our rating assessment, depending on the achievement of the Company's self-imposed targets and on regulatory changes.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found here.

Best-case scenario: A

In our best-case scenario for one year, we assume a stable rating of A. The key factor here is our expectation that the BMW Group's financial position and liquidity will remain solid - even if net profit and operating cash flow, which were positively impacted by the majority acquisition of BMW Brilliance in 2023, are lower than in the previous year. Despite good business performance in the first half of 2023 and a slight increase in the forecast in the Automotive segment for 2023 as a whole, numerous uncertainties and challenges arising from the geopolitical crises, the economic slowdown, increasing competition, and the ongoing transformation to electromobility dampen our assessment for the best-case scenario.

Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

Worst-case scenario: A-

In our worst-case scenario for one year, we assume a negative rating adjustment. This assumes a recessionary economic trend in the BMW Group's main markets combined with a renewed undersupply of intermediate products, especially semiconductors and raw materials, and falling unit sales. The situation outlined would also be exacerbated by the increasing intensity of competition, which would squeeze both margins and market shares, and lead to a sustained impairment of earnings and internal financing power. In addition, a disproportionate increase in debt as a result of the high investment and capital requirements in connection with the transformation process, along with regulatory challenges, could lead to a deterioration in the results of the financial ratio analysis and thus to a deterioration in the outlook, or to a downgrade.

Business development and outlook

The fiscal year 2022 was particularly impacted by the repeated coronavirus-related lockdowns in China, the semiconductor supply shortages and the outbreak of the war between Russia and Ukraine, which noticeably increased the already heightened geopolitical and economic risks and uncertainties. The supply of vendor parts was severely restricted at times by the outbreak of the war, resulting in BMW plants in Germany and other countries having to curtail or temporarily suspend production. As a result, the number of deliveries in the Automotive segment, which is of key importance to the BMW Group, fell by 4.8% to 2,399,632 vehicles (2021: 2,521,514). Deliveries already include the deliveries of BMW Brilliance Automotive Ltd. which has been fully consolidated in the BMW Group since the majority acquisition on February 11, 2022. This transaction had a significant impact on the net assets, financial position and operational results of the BMW Group, which should be borne in mind when making comparisons with previous years.

Table 2: Business development of BMW AG (Group) I Source: Annual Report 2022, own presentation

BMW AG				
in EUR billion	**2021**	**2022**	**Δ**	**Δ %**
Sales	111.2	142.6	31.4	28.2
EBITDA	25.2	28.5	3.3	13.1
EBITDA Margin	*22.6%*	*20.0%*	--	--
EBIT	13.4	14.0	0.6	4.5
EBIT Margin	*12.1%*	*9.8%*	--	--
EBT	16.1	23.5	7.4	46.4
EBT Margin	*14.4%*	*16.5%*	--	--
EAT	12.5	18.6	6.1	49.1

Despite the decline in unit sales in the Automotive segment, the BMW Group recorded significant revenue growth of 28.2% to EUR 142.6 billion in the financial year 2022 (2021: EUR 111.2 billion). This was mainly due to the aforementioned majority acquisition and subsequent full consolidation of BMW Brilliance Automotive Ltd. In addition, positive price and product mix effects, as well as increased business with spare parts and accessories, more than compensated for the decline in unit sales, and thus also contributed to the positive revenue development. On the other hand, the cost of sales rose disproportionately. In addition to the full consolidation of BMW Brilliance and the related effects of initial consolidation - e.g. the amortization of the purchase price allocation and the elimination of intercompany profits - this was due in particular to higher material, logistics and energy costs. Taking into account a disproportionately low increase in selling and general administrative expenses compared to sales, and a slightly positive balance of operating income and expenses, the BMW Group reported a slightly higher operating profit (EBIT) of EUR 14.0 billion compared to the previous year (2021: EUR 13.4 billion). At 9.8%, the EBIT margin was noticeably below the comparative prior-year figure of 12.1%, but still above the pre-Covid level, which is worth emphasizing in view of the challenging market environment. EAT, on the other hand, increased significantly by EUR 6.1 billion, to EUR 18.6 billion (2021: EUR 12.5 billion). This was due to a significant increase in the financial result, which in turn was influenced by the majority acquisition of BMW Brilliance and the gain of EUR 7.7 billion generated from the revaluation of the equity shares previously held by BMW in this company. The financial result also benefited from a positive interest rate change effect in the compounding of other non-current provisions as a result of the general increase in yield curves. Overall, the BMW Group benefited from rising interest rates.

The performance of the individual segments in 2022 can be seen in the following:

Table 3: Segment information of BMW AG (Group) I Source: Annual Report 2022, own presentation

Segment information (EUR billion)	2022		
	Revenue	EBIT	EBT
Automotive	123.6	10.6	18.9
Motorcycles	3.2	0.3	0.3
Financial Services	35.1	3.2	3.2
Other Entities	0.0	-0.2	1.0
Eliminations	-19.3	0.1	0.1
Group	***142.6***	***14.0***	***23.5***

In the Automotive segment, the BMW Group with its BMW, MINI and Rolls-Royce brands achieved an EBIT margin of 8.6%, which was below the previous year's level of 10.3%, but within the forecast target corridor of 7% to 9%. The same development can be noted for the Motorcycles segment, which was also in line with expectations (8-10%) with a slightly reduced EBIT margin of 8.1% (2021: 8.3%). BMW thus remains one of the most profitable carmakers in the world. All main segments were able to make an adequate contribution to this result. It should also be noted that the good geographic diversification in terms of sales shares in the main sales markets contributed significantly to BMW's stable positioning. However, over the last five years, a differentiated regional sales trend should be noted, showing a downward trend in Europe and an upward trend in Asia - especially China. With regard to fiscal 2022, China was by far the largest main market in the automotive segment, accounting for 33.1% of unit sales, which entails increased risks not only due to the current economic situation in China, but also due to the conflict-prone political, economic and social circumstances and the very dynamic competitive situation.

In the first half of 2023, the BMW Group recorded noticeable growth in revenue of 12.4% to EUR 74.1 billion (H1 2022: EUR 65.9 billion) and in operating profit (EBIT) of 42.6% to EUR 9.7 billion (H1 2022: EUR 6.8 billion), although EBT of EUR 9.4 billion was significantly lower than in the same period last year (H1 2022: EUR 16.2 billion). The main reason for the changes in revenue and earnings is the aforementioned majority acquisition of the Chinese joint venture BMW Brilliance, which on the one hand contributed to the increase in revenue through consolidation (full consolidation only since February 11, 2022) and on the other hand is responsible for the decrease in EBT due to the positive one-off effect from the revaluation of the shares in BMW Brilliance Automotive Ltd. in 2022. Sales were also boosted by the ongoing positive product mix effect and a slight year-on-year increase in vehicle sales. By contrast, sales were impacted by currency effects. EBIT growth resulted from a disproportionately low development of cost of sales and selling and administrative expenses, which offset the disproportionately high increase in research and development costs associated with the electrification and digitalization of the vehicle fleet and automated driving, which accounted for EUR 3.4 billion (H1 2022: EUR 2.9 billion) or 4.6% of consolidated net sales as of June 30, 2023.

Table 4: Segment information of BMW AG (Group) I Source: Half-Year Report 2023, own presentation

Segment information (EUR billion)	H1 2023		
	Revenue	EBIT	EBT
Automotive	62.9	6.7	6.6
Motorcycles	1.9	0.3	0.3
Financial Services	17.6	1.7	1.7
Other Entities	0.0	0.0	0.1
Eliminations	-8.4	1.0	0.6
Group	***74.1***	***9.7***	***9.4***

Business development in the current fiscal year prompted BMW to slightly increase its forecast for the full year 2023, especially in the Automotive segment. Thus, the BMW Group expects a solid increase (previously: slight increase) in deliveries in the Automotive segment, as well as an increase in the EBIT margin (from 8-10% to 9-10.5%) and RoCE (from 15-20% to 18-22%), which we have into account in the rating as a favorable factor.

In view of the ongoing, disruptive transformation of the automotive industry towards electrification and digitalization, the availability of materials and raw materials required for this, securing and maintaining supply chains, increasing competition, as well as a continuously tightening regulatory environment, weakening of the Global economy and geopolitical crises, we see numerous challenges for the BMW Group that could impact further business development. Compared to pre-Covid levels, however, the BMW Group as a whole has succeeded in significantly increasing revenues and earnings and improving its operating profit margin despite the currently challenging market situation. This is reflected, among other things, in a marked reduction in sales volumes and a noticeably lower number of new contracts with customers in the Financial Services segment. Against the backdrop of improved earnings and internal financing power, the result of our financial ratio analysis has also improved, contributing to the stabilization of the rating and outlook.

Structural risk

As one of the world's leading premium manufacturers of automobiles and motorcycles, BMW is represented in more than 140 countries. The parent company of the BMW Group is Bayerische Motoren Werke Aktiengesellschaft (BMW AG), headquartered in Munich. Together with a large number of subsidiaries and sub-subsidiaries, the company forms the BMW Group, which has a focused, but also complex, structure. In fiscal year 2022, the number of fully consolidated Group companies totaled 204 (2021: 205). This figure already includes the previous Chinese joint venture, BMW Brilliance Automotive Ltd., which has been fully included in the consolidated financial statements since the majority takeover (through the purchase of a further 25% of the shares) on February 11, 2022. In addition, BMW AG has numerous investments, associates, joint ventures and joint operations.

The objective of the Company is the development, manufacture and sale of automobiles and motorcycles, as well as spare parts, accessories and other mobility services. Its business is supplemented by its Financial Services segment, which, in addition to its cross-brand fleet business, deposit business and the insurance business, finances part of its sales through the leasing of automobiles and motorcycles, and credit financing for customers and dealers. The operating business is therefore divided into the main segments of Automotive, Motorcycles and Financial Services, which are managed centrally by BMW AG. In addition, there is the Other Companies segment, which mainly comprises holding and Group financing companies.

As of July 18, 2023, roughly 48.5% of BMW AG shares were held by the Quandt family, which thus has a considerable influence on the Company. BMW itself holds treasury shares amounting to 0.1%. The remaining BMW shares (approx. 51.4%) are in free float and are attributable to various institutional investors as well as private individuals.

As part of its global presence, BMW has 31 production and 41 sales and financial services locations. The Company also maintains research and development sites in 17 countries. Its automotive sales network comprises approximately 3,600 BMW, 1,600 MINI and 150 Rolls-Royce dealerships. In addition, there are more than 1,200 motorcycle dealers and importers. Against the backdrop of the planned realignment of marketing and sales activities, which is intended to provide the BMW Group with direct customer access via direct sales using an agency model or online sales, structural changes are to be expected in the coming years which harbor a certain potential for conflict.

At the end of 2022, BMW employed 149,475 people, an increase of 25.7% compared to the previous year (2021: 118,909). The main reason for this enormous increase was the full consolidation of BMW Brilliance. In addition, there was a further increase in the workforce in the areas of development and IT, as well as in the global production networks.

A major structural risk for the BMW Group is the ongoing transformation of the automotive industry, which is accompanied by far-reaching to disruptive changes. The restructuring of existing plants and a future-oriented human resources policy are intended to create the conditions for successfully mastering technological and entrepreneurial change. To this end, the production locations have been and will continue to be aligned with the strategic goal of a BMW iFACTORY in terms of electrification, profitability, sustainability and digitalization. In addition, a training initiative was launched in 2021 to promote the development and restructuring of skills in all departments.

Overall, we consider the BMW Group's short- to medium-term structural risk to be slightly elevated against the backdrop of the ongoing transformation and the associated challenges. Based on the structural and personnel adjustments and measures already implemented and initiated, we believe that the BMW Group is fundamentally in a position to meet the challenges in an adequate manner.

Business risk

With its BMW, MINI and Rolls-Royce brands, as well as BMW Motorrad, the BMW Group is one of the world's leading premium manufacturers of automobiles and motorcycles. The Company's business is the development, production and sale of automobiles and motorcycles, as well as spare parts, accessories and other mobility services. The business is supplemented by its Financial Services segment, which, in addition to the cross-brand fleet, deposit, and insurance businesses, finances part of the Company's sales through the leasing of automobiles and motorcycles, and credit financing for customers and dealers. The Group's business activities are divided into the main segments Automotive, Motorcycles, Financial Services and Other Companies (which mainly includes holding and Group financing companies). The BMW Group's most important markets in terms of share of sales are China (29.4%), the USA (20.2%), Germany (10.8%) and the rest of Europe (25.3%).

The BMW Group's strategy is fundamentally geared towards profitability, growth and sustainability, and is continuously being developed, taking into account a variety of influencing factors, some of which are subject to a high level of dynamic change. In particular, it takes into account the ongoing transformation of the automotive industry, which in turn is driven by current megatrends and factors such as climate change, reduction of CO_2 emissions, resource consumption, electrification and digitalization, and autonomous driving. The BMW Group is committed to complying with the Paris Climate Agreement and to driving forward the reduction of CO_2 emissions over the entire life cycle of its products, as well as to the circular economy. The aim is to harmonize economy, ecology and society and to achieve profitable growth with inspiring products and direct customer access.

We consider the Company's strategy to be comprehensible and suitable for successfully managing and shaping the transformation, which we see confirmed, among other things, by the increasing electrification of its vehicle fleet and the growing proportion of BEV (Battery Electric Vehicles) deliveries, as well as compliance with its financial targets. As of the half-year 2023, the required strategic key performance indicators - EBIT margin in the Automotive segment of between 8-10% and RoCE in the Automotive segment of at least 18%, as well as an EBT margin at Group level of more than 10% - were exceeded, resulting in some upward adjustments to the forecasts for the full year 2023. In addition, the share of fully electric vehicles in deliveries rose to 12.6% as of June 30, 2023 (H1 2022: 6.5%). The share is expected to grow to 50% by 2030. In this context, both Rolls-Royce and MINI are to offer only fully electric vehicles from 2030. To achieve its electrification ambitions, BMW wants the "NEUE KLASSE" to set standards in electrification, digitalization and circularity. A new cluster architecture (NCAR) focused exclusively on BEVs and the 6th generation of electric drive, with a newly developed high-voltage storage concept that promises 30% more range, 30% less charging time and 50% lower manufacturing costs, are expected to accelerate market penetration and target achievement.

On the other hand, this technological and entrepreneurial transformation is accompanied by numerous challenges, risks and uncertainties. Competitive pressure is growing, especially in the main market of China, but also in the other main markets of the USA and Europe, and this could be further intensified by the entry of new competitors. In the important Chinese market in particular, more and more competitors are gaining market share, increasing the pressure on prices and consequently on margins for the BMW Group. Although the focus on the premium segment reduces the impact of increasingly intense competition, BMW cannot escape it altogether, especially as Chinese carmakers are increasingly pushing into the European markets.

As a global supplier to the automotive and motorcycle industry, BMW is essentially dependent on well-functioning international economic cooperation. Accordingly, trade barriers resulting, e.g., from increasing protectionism, geopolitical conflicts, or anti-globalization tendencies could have an adverse effect on business activities, thus leading to a decline in sales and earnings. With regard to the cyclically sensitive automotive sector, the current weakening of the economic position in its main target markets could have a negative impact on the further business development of the BMW Group.

There is also a significant risk of increasingly stringent laws and regulations relating to existing emissions and safety requirements for the automotive industry. The resulting higher costs and investment requirements could have a negative impact on the economic situation of the BMW Group. Increasing restrictions on the use of diesel vehicles or new measurement procedures to map a standardized driving cycle - including a tighter Worldwide Harmonized Light Vehicles Test Procedure (WLTP) - could also present the automotive industry and BMW with additional challenges.

Essential business risks for BMW also arise in operational terms. For example, interruptions to production, or additional costs in complying with quality standards can have a negative impact on earnings. BMW has a comprehensive system of preventive measures in place to guard against fire, IT damage and supply disruptions. Nevertheless, in view of the close cooperation between OEMs and suppliers, and the high level of complexity in the supplier network, such risks cannot be ruled out entirely.

In order to maintain its leading market position in the premium car market, BMW is also dependent on its ability to offer innovative products that are in line with the market, and to adequately anticipate consumer habits. Should this only be possible to a limited extent, a loss of market share and a drop in earnings would have to be expected. In this context, the challenges posed by technological change, which places considerable demands on innovation and investment, needs to be mentioned once again. Finally, there are risks arising from the international nature of the business, which BMW faces in the form of currency, commodity price, and legal risks. However, these risks are largely mitigated by the global infrastructure and the use of adequate hedging instruments.

Even though the BMW Group was able to report satisfactory sales and earnings performance in the past crisis years, we believe that BMW's future economic development will be characterized by financial and structural challenges, especially in light of the ongoing transformation process and economic circumstances. Relief with regard to future-related tasks could result from additional cooperations and partnerships, which appear obligatory, especially with regard to battery production and securing the supply of raw materials and supply chains.

Overall, we assess the BMW Group's business risk as average to slightly elevated. As one of the world's leading premium car manufacturers, the BMW Group has a sustainable business model and high market relevance. The focus on the premium segment and the steadily increasing diversification and electrification of the model range have a stabilizing effect, although the Company's business risk is characterized by high and continuous investment and innovation requirements and increasing competitive intensity. Weighing up the potential opportunities and risks, we see the BMW Group as a whole to be comparatively well-positioned to master future challenges.

Financial risk

For analytical reasons, CRA makes adjustments to the original balance sheet values. The following statements refer to the key figures calculated by CRA according to its methods, unless otherwise stated. Due to these adjustments, and the fact that CRA calculates its own key figures, they may differ from the original values and information provided by BMW AG.

Despite numerous challenges, the result of our financial ratio analysis has improved noticeably in the last two years and, based on the quantitative analysis of the 2022 consolidated financial statements, confirms that the BMW Group has highly satisfactory creditworthiness, which is the basis for the current rating level. The analytical equity ratio increased to a solid 34.0% as of December 31, 2022 (2021: 29.0%). Net financial debt totaled EUR 77.3 billion (2021: EUR 87.5 billion), equivalent to 2.7 times EBITDA (2021: 3.5 times). By contrast, the analytical ratio Net total debt / EBITDA adj., which relates to total debt less cash and cash equivalents, had a value of 4.7 (2021: 5.6), somewhat higher for the rating level specified here. However, when interpreting these ratios for specific sectors and business models, it must be taken into account that they include BMW's capital-intensive financial services business, which is subject to regulatory requirements and increases the ratio for specific sectors. We have taken this into account in the overall assessment. Excluding the financial services business, the leverage ratios were significantly lower.

The BMW Group's original financial liabilities totaled EUR 94.2 billion as of December 31, 2022 (2021: EUR 103.5 billion). In terms of debt financing, BMW relied primarily on bonds (EUR 41.1 billion), most of which were issued under a European Medium Term Note program (EMTN) with a maximum issue volume of up to EUR 50 billion. As of December 31, 2022, EUR 24.3 billion of the EMTN program had been drawn. Other financing components include asset-backed financing (EUR 18.7 billion), bank loans (EUR 7.3 billion), and deposit liabilities (EUR 16.5 billion) attributable to the business activities of the Group's own bank. In addition to leasing liabilities of EUR 2.8 billion, commercial paper amounting to EUR 1.7 billion was drawn down as part of short-term financing. The existing commercial paper programs provides the BMW Group with a total financing framework of EUR 13 billion. Both the debtor structure and the maturity structure of the financing are well diversified overall, although we consider the financial liabilities due within one year to be higher at EUR 40.7 billion.

In addition, there are contingent liabilities of EUR 1.4 billion (2021: EUR 1.5 billion), which in addition to litigation and guarantees primarily include tax and customs risks, as well as other financial obligations for the acquisition of property, plant and equipment and intangible assets totaling EUR 7.7 billion (2021: EUR 5.5 billion).

To safeguard its solvency, the BMW Group had a syndicated credit line of EUR 8.0 billion as of June 30, 2023, in addition to liquidity of EUR 18.6 billion and marketable securities and investments of EUR 3.5 billion. The syndicated credit line was concluded with 43 international banks in June 2023 and replaced the previously existing credit line in the same amount at an early stage. The credit line has not been drawn down to date. In addition, the BMW Group's well-developed internal financing capability and established access to the capital market provide further financial security.

Free cash flow in the Automotive segment increased to a record EUR 11.1 billion as of December 31, 2022, largely due to the full consolidation of BMW Brilliance. Positive factors were the operating cash inflows generated by BMW Brilliance on the one hand, and the acquisition of cash and cash equivalents of EUR 8.7 billion available in this company on the other, which significantly exceeded the purchase price for the acquisition of the additional 25% stake totaling EUR 3.7 billion, and led to a cash inflow from acquisitions in cash flow from investing activities of EUR 5.0 billion. For the current fiscal year 2023, the BMW Group expects free cash flow in the Automotive segment to amount to at least EUR 6 billion, reflecting a normalization at a high level (in a multi-year comparison) compared with 2022. The forecast for 2023 already takes into account higher investments for the transformation to electromobility, as well as higher stockpiling to secure the supply chains.

Liquidity outflows are planned as part of the second share buyback program in 2023/2025, which envisages a buyback of up to EUR 2 billion by the end of 2025. The first share buyback program 2022/2023 of around EUR 2 billion was completed on June 30, 2023. In addition, the irrevocable loan commitments of EUR 16.0 billion (previous year: EUR 18.3 billion) that can be called up at short notice as part of dealer financing may restrict the BMW Group's financial leeway if drawn down.

Overall, the BMW Group is in a sound financial position which provides a solid basis for meeting the high capital requirements and supports the current rating level. Nevertheless, cyclical fluctuations, declines in demand and increased financial requirements must be taken into account in order to cope with current market and future challenges.

Intra-Group cash flow fluctuations are balanced out by daily cash pooling. In the area of currency and interest rate hedging, relevant hedging instruments are used, so that we also assume sufficient hedging in this area. So far, the rise in interest rates has not had a negative impact on the BMW Group's earnings situation.

Overall, we consider the BMW Group's financial and liquidity position to be sufficiently solid and thus a stabilizing factor for the rating. We see potential financial risks in the increased investment and capital requirements that are to be expected, above all in the course of the transformation. The BMW Group's solid earnings and internal financing power, its available financial room for maneuver, the relatively balanced term structure of its financing, and its ability to access the capital markets mean that the resulting risks appear manageable, although negative effects on our overall rating assessment cannot be ruled out with regard to a possible increase in debt and a resulting deterioration in the financial ratios.

Further ratings

In addition to the rating of BMW AG the following Issuer and its issues (see below), has been rated.

- BMW Finance N.V.

Due to the corporate, strategic, liability, financial, economic and performance-related interdependencies of the aforementioned subsidiary (100% subsidiary of BMW AG and consolidated in the group annual accounts) we derive the unsolicited issuer rating of these subsidiary from the unsolicited issuer rating of BMW AG and set it equal to its rating of A / stable.

Based on the long-term issuer rating and taking into account our liquidity analysis, the short-term rating of the BMW AG and the above-mentioned subsidiary was set at L2 (standard mapping), which corresponds to a high level of liquidity assessment for one year.

The rating objects of the issue rating are exclusively long-term senior unsecured issues, denominated in euro, issued by BMW Finance N.V., which are included in the list of ECB-eligible marketable assets.

BMW AG is guarantor of the issues that have been issued under the Euro Medium Term Note Programme (EMTN), with the last basis prospectus dated 10.05.2023 and the first supplement dated 20.09.2023.

We have provided the long-term local currency senior unsecured notes issued by BMW Finance N.V. with an unsolicited issue rating of A / stable.

Long-term local currency senior unsecured notes issued by BMW Finance N.V., which have similar conditions to the current EMTN programme, denominated in Euro and included in the list of ECB-eligible marketable assets, generally receive the same ratings as the current LT LC senior unsecured notes issued under the EMTN programme. Notes issued under the programme in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Table 5: Overview of CRA Ratings I Source: CRA

Rating Category	Details	
	Date of rating committee	Rating
BMW AG	26.09.2023	A / stable / L2
BMW Finance N.V.	26.09.2023	A / stable / L2
Long-term Local Currency (LC) Senior Unsecured Issues issued by BMW Finance N.V.	26.09.2023	A / stable
Other	--	n.r.

Financial ratio analysis

Table 6: Financial key ratios |Source: BMW Group Report 2022, structured by CRA

Asset structure	2019	2020	2021	2022
Fixed asset intensity (%)	32.80	34.19	34.64	36.89
Asset turnover	0.51	0.47	0.53	0.64
Asset coverage ratio (%)	102.12	104.67	111.78	114.10
Liquid funds to total assets	5.59	6.70	7.45	7.34
Capital structure				
Equity ratio (%)	22.25	23.52	28.99	33.99
Short-term debt ratio (%)	38.36	35.59	35.56	36.73
Long-term debt ratio (%)	11.25	12.27	9.73	8.10
Capital lock-up period (in days)	35.66	31.87	35.87	36.14
Trade-accounts payable ratio (%)	4.73	4.28	5.08	6.14
Short-term capital lock-up (%)	62.40	56.39	52.85	44.17
Gearing	3.24	2.97	2.19	1.73
Leverage	4.32	4.37	3.80	3.17
Financial stability				
Cash flow margin (%)	15.85	16.92	18.94	22.37
Cash flow ROI (%)	7.67	8.28	9.80	13.88
Total debt / EBITDA adj.	8.54	9.10	6.22	5.32
Net total debt / EBITDA adj.	7.93	8.31	5.56	4.72
ROCE (%)	7.91	4.99	11.83	12.66
Total debt repayment period	10.30	6.01	6.70	3.61
Profitability				
Gross profit margin (%)	100.00	100.00	100.00	100.00
EBIT interest coverage	14.85	10.55	56.78	60.87
EBITDA interest coverage	36.39	36.69	106.60	123.72
Ratio of personnel costs to total costs (%)	11.95	12.37	11.04	9.77
Ratio of material costs to total costs (%)				
Cost income ratio (%)	92.96	95.17	88.14	90.28
Ratio of interest expenses to total debt (%)	0.16	0.17	0.15	0.15
Return on investment (%)	2.57	2.19	5.54	7.28
Return on equity (%)	10.51	8.08	22.69	26.46
Net profit margin (%)	4.82	3.90	11.20	13.03
Operating margin (%)	7.11	4.88	12.05	9.82
Liquidity				
Cash ratio (%)	14.57	18.81	20.94	19.98
Quick ratio (%)	90.94	92.09	91.39	83.60
Current ratio (%)	175.20	184.89	183.79	171.82

Appendix

Rating history

The rating history is available under https://www.creditreform-rating.de/en/ratings/published-ratings.html.

Table 7: Corporate Issuer Rating of BMW AG

Event	Rating created	Publication date	Result
Initial rating	07.06.2017	14.06.2017	A+ / stable

Table 8: Corporate Issuer Rating of BMW Finance N.V.

Event	Rating created	Publication date	Result
Initial rating	02.11.2018	09.11.2018	A+ / stable

Table 9: LT LC Senior Unsecured Issues issued by BMW Finance N.V.

Event	Rating created	Publication date	Result
Initial rating	02.11.2018	09.11.2018	A+ / stable

Table 10: Short-term Issuer Ratings of BMW AG and BMW Finance N.V.

Event	Rating created	Publication date	Result
Initial rating	26.09.2023	www.creditreform-rating.de	L2

Regulatory requirements

The rating[2] was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating, that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

The rating object participated in the creation of the rating as follows:

Unsolicited Corporate Issuer / Issue Rating	
With rated entity or related third party participation	No
With access to internal documents	No
With access to management	No

[2] In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

A management meeting did not take place within the framework of the rating process.

The documents and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

The rating was conducted based on the following rating methodologies and the basic document.

Rating methodology	Version number	Date
Corporate Ratings	2.4	July 2022
Corporate Short-Term Ratings	1.0	June 2023
Non-financial Corporate Issue Ratings	1.0	October 2016
Rating Criteria and Definitions	1.3	January 2018

The documents contain a description of the rating categories and a definition of default.

The rating was carried out by the following analysts:

Name	Function	Mail-Address
Artur Kapica	Lead-analyst	A.Kapica@creditreform-rating.de
Natallia Berthold	Analyst	N.Berthold@creditreform-rating.de

The rating was approved by the following person (person approving credit ratings, PAC):

Name	Function	Mail-Address
Tobias Stroetges	PAC	T.Stroetges@creditreform-rating.de

On 26 September 2023, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 26 September 2023. There has not been a subsequent change to the rating.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring, if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found here.

Conflict of interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

Creditreform Rating AG ensures that the provision of ancillary services does not present conflicts of interest with its credit rating activities and discloses in the final rating reports any ancillary services provided for the rated entity or any related third party. The following ancillary services were provided for the rating entity or for third parties associated with the rated entity:

Credit Service ancillary services for the rated entity and related third parties.

For the complete list of provided rating and credit service ancillaries services please refer to the Creditreform Rating AG's website: https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html#non-core-business-activities."

Rules on the presentation of credit ratings and rating outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

Corporate issuer rating:

1. Annual report

2. Website

3. Internet research

Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating

2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a "rating action"; initial release is indicated as "initial rating", other updates are indicated as an "update", "upgrade" or "downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the ESMA website.

An explanatory statement of the meaning of Creditreform Rating AG's default rates are available in the credit rating methodologies disclosed on the website.

Creditreform Rating

Disclaimer

Any rating performed by Creditreform Rating AG is subject to the Creditreform Rating AG Code of Conduct, which has been published on the web pages of Creditreform Rating AG. In this Code of Conduct, Creditreform Rating AG commits itself – systematically and with due diligence – to establish its independent and objective opinion as to the sustainability, risks and opportunities concerning the enterprise or the issue under review.

Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. This rating is therefore no statement of fact, but an opinion. For this reason, Creditreform Rating AG cannot be held liable for the consequences of decisions made on the basis of any of their ratings. Neither should these ratings be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings are not meant to be used as substitutes for one's own research, inquiries and assessments.

We have assumed that the documents and information made available to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

Creditreform Rating AG

Contact information

Creditreform Rating AG

Europadamm 2-6
D-41460 Neuss

Phone: +49 (0) 2131 / 109-626
Telefax: +49 (0) 2131 / 109-627

E-Mail: info@creditreform-rating.de
Web: www.creditreform-rating.de

CEO: Dr. Michael Munsch
Chairman of the Board: Michael Bruns

HR Neuss B 10522