# Rating Report
# Volkswagen AG

**DBRS Morningstar**
July 28, 2023

**Contents**




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## Ratings

| Debt | Rating Action | Rating | Trend |
|---|---|---|---|
| Volkswagen AG—Issuer Rating | A (low) | Confirmed | Stable |
| VW Credit Canada, Inc.—Senior Unsecured Debt* | A (low) | Confirmed | Stable |
| VW Credit Canada, Inc.—Commercial Paper* | R-1 (low) | Confirmed | Stable |

* Guaranteed by Volkswagen AG.

## Rating Update

On July 24, 2023, DBRS Limited (DBRS Morningstar) confirmed Volkswagen AG's (VW or the Company) Issuer Rating at A (low) with a Stable trend. DBRS Morningstar also confirmed the Senior Unsecured Debt and Commercial Paper ratings of VW Credit Canada, Inc. at A (low) and R-1 (low), respectively, both with Stable trends. The rating confirmations reflect the Company's solid business risk assessment (BRA) as a leading global automotive original equipment manufacturer (OEM) of substantial scale with a highly diversified brand portfolio (that notably includes several strong premium automotive brands). Moreover, VW's financial performance has remained resilient despite extended disruptions in automotive production and volumes, initially attributable to the global progression of Coronavirus Disease (COVID-19) and, subsequently, to the semiconductor shortage. Notwithstanding challenges across certain markets (notably including China) and sizable investment requirements for the foreseeable future, DBRS Morningstar expects VW's financial risk assessment (FRA) to remain strong in the context of the currently assigned ratings. Despite the above, DBRS Morningstar notes that certain environmental, social, and governance (ESG) risk factors continue to negatively affect the ratings.

The 2022 financial performance of VW's Automotive division improved over already solid 2021 results. While volumes remained curtailed as a result of the semiconductor shortage (and other supply base challenges), this was more than offset by a firmer product mix (that reflected the deliberate allocation of available semiconductors to the production of higher-margin vehicles) and strong pricing (facilitated by pent-up demand); higher product development costs and other cost increases represented additional partial offsets. Moreover, profitability of the Company's Financial Services business, while moderately decreasing year over year (YOY) from 2021 record levels, remained very favourable with the segment continuing to benefit from strong demand for used vehicles, thereby benefitting residual value performance. Accordingly, VW's 2022 annual consolidated profit increased YOY, exceeding EUR 22 billion. Earnings continued to trend positively in H1 2023 amid volume growth (reflecting the progressive improvement in the semiconductor shortage) and ongoing strong pricing. The Company also meaningfully bolstered its liquidity position in September 2022 through the initial public offering (IPO) and sale of an approximate 25% stake in Porsche AG (Porsche); (the divestiture generated proceeds of around EUR 16 billion, partly offset by the payment of a special dividend of approximately EUR 6.5 billion in January 2023). For the 2023 full year, amid ongoing improvements in the semiconductor shortage and associated volume growth, VW is projecting consolidated revenues to be higher in the range of 10% to 15% YOY, with the operating margin likely in the range of 7.5% to 8.5% (absent special items). DBRS Morningstar deems the Company's outlook to be attainable. While DBRS Morningstar acknowledges various headwinds, including softening consumer sentiment stemming from inflationary pressures, rising interest rates, and geopolitical tensions, these are estimated to be considerably offset by remaining pent-up demand.

Going forward, reflecting tightening emissions legislation worldwide, the Company is targeting a leadership position in the automotive industry's transition away from internal combustion engines (ICEs) and toward battery electric vehicles (EVs). Additionally, VW is seeking to further transform itself into a major provider of new mobility services. While these objectives are projected to entail substantial financial outlays over the next several years in the form of requisite capital spending and anticipated merger and acquisition activity, DBRS Morningstar expects these to be considerably covered by the Company's legacy ICE business' ongoing free cash flow generation; VW benefits further from its strong presence in the premium automotive segment, which is projected to outgrow the automotive industry as a whole while typically generating considerably stronger margins relative to mainstream brands. DBRS Morningstar notes further that the Company maintains several additional options to further bolster its liquidity position, including the sale of further equity stakes in Porsche or the TRATON GROUP (TRATON), and/or other potential divestitures of noncore assets.

Consistent with the Stable trends, DBRS Morningstar expects the ratings to remain constant over the near to medium term, and DBRS Morningstar notes that VW's FRA provides some cushion against unexpected challenges at the current rating level, rendering a downgrade rather unlikely. Conversely, an upgrade is not anticipated over the aforementioned time horizon given the cost headwinds facing the automotive industry amid the substantial financial outlays projected to be incurred by the Company in pursuit of its strategic objectives.

## Financial Information

| | 3 mos. to Mar 31 | | 12 mos. To Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| (EUR millions) | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| Revenue[1] | 63,463 | 51,210 | 244,638 | 232,385 | 206,237 | 182,106 | 212,473 | 201,067 |
| Core net income | 4,209 | 6,655 | 12,669 | 15,114 | 15,309 | 8,911 | 14,794 | 13,802 |
| Adjusted interest coverage—EBITDA[1] | 40.4 | 31.9 | 43.6 | 40.2 | 22.3 | 16.9 | 22.9 | 22.7 |
| Adjusted debt/EBITDA[1] | 0.8 | 0.7 | 0.8 | 0.8 | 1.0 | 1.0 | 0.8 | 0.9 |
| Adjusted % gross debt in capital structure[1] | 14.7 | 18.0 | 14.7 | 16.3 | 19.8 | 17.8 | 18.0 | 20.8 |

Note: Certain figures in this and subsequent tables are subject to adjustments made by DBRS Morningstar.
1 Excludes Financial Services division.

## Issuer Description

VW is the largest auto manufacturer in Europe and ranks second globally in sales volumes (according to 2022 data). The Company has an extended portfolio of brands that includes Volkswagen, Volkswagen Commercial Vehicles, Porsche, Audi, Skoda, SEAT, Bentley, and Lamborghini, among others. VW's Commercial Vehicles/Truck business, TRATON, features the Scania, MAN, and Navistar brands. VW also has a sizable Financial Services business and operates VW Credit Canada, Inc., its wholly owned subsidiary.

## Rating Considerations

### Strengths

*1. Size provides economies of scale*

VW is among the largest automobile manufacturers in the world and the leader in Europe. VW has the size and critical mass to attain the economies of scale necessary to be cost-competitive.

*2. Above-average financial strength*

The Company has above-average credit metrics and a strong liquidity position. The Company's Automotive operations (excluding Financial Services) had a net cash position of EUR 21.9 billion (as calculated by DBRS Morningstar) as at March 31, 2023.

*3. Market leader in Western Europe; globally diversified*

Notwithstanding VW's diesel issue (the Diesel Issue) and amid ongoing competition across markets worldwide, the Company's competitive position in terms of market share has held essentially firm. VW's worldwide market share in 2022 stood at 11.0% (compared with 11.7% in 2021). In North America, the Company's share decreased slightly while remaining low at 4.6% (compared with 4.9% in 2021). In Western Europe, VW's market share held essentially constant at 23.3% (from a level of 23.5% in 2021), with the Company remaining the region's market leader. VW's market share in Central and Eastern Europe in 2022 increased to 21.7% (from a level of 20.4% in 2021).

*4. Financial Services earnings smooth profitability*

VW's Financial Services business has provided a stable and meaningful source of earnings, with annual operating profit totalling EUR 5.7 billion in 2022 (although this continued to reflect unusually high residual value gains given very strong used vehicle prices). Financial Services earnings help to reduce the volatility of earnings associated with the Company's Automotive operations.

### Challenges

*1. Earnings volatility from cyclical automotive industry conditions*

VW's operating performance is largely dependent on its Automotive business conditions, which fluctuate generally in line with economic cycles.

*2. Significant production in Germany*

DBRS Morningstar notes that Germany, a relatively high-cost jurisdiction, continues to represent a material (albeit declining) source of production for the Company (the country having accounted for approximately 24.2% of VW Group production in Q1 2023). VW is seeking to improve its productivity through greater application of modular architectures, which will make it easier to build a wider variety of cars in future factories. Moreover, VW's existing labour agreement cites specific objectives of the Volkswagen and Audi brands as well as the German production facilities, targeting savings and efficiency improvements and projected declines in head count (primarily through attrition taking into consideration the demographic curve of its labour force).

*3. Corporate/product governance challenges*

DBRS Morningstar considers VW's corporate governance framework suboptimal as indicated by the following characteristics:

A. VW's supervisory board is composed primarily of shareholders and worker representatives, with only a nominal proportion of independent members;
B. The Diesel Issue highlighted the lack of oversight and accountability from VW's management board;
C. External investors have few voting rights as the majority of voting shares are held by a small group of shareholders (as of year-end 2022, Porsche Automobil Holding SE, Stuttgart owns 53.3% of voting shares, the State of Lower Saxony owns 20.0%, and Qatar Holding LLC owns 17.0%). Overall, the challenges in VW's corporate governance, in combination with other ESG risk factors, have resulted in a downward adjustment of the Company's ratings.

*4. Modest U.S. presence*

VW has a modest presence in the United States, which is among the largest automotive markets in the world.

## Earnings and Outlook

| | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| (EUR millions, where applicable) | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| Sales[1] | 63,463 | 51,210 | 244,638 | 232,385 | 206,237 | 182,106 | 212,473 | 201,067 |
| Operating profit[1] | 4,583 | 6,915 | 14,535 | 16,867 | 13,981 | 7,595 | 16,083 | 14,311 |
| Operating profit—Financial Services | 1,164 | 1,544 | 5,276 | 5,656 | 6,045 | 3,012 | 3,212 | 2,793 |
| Equity earnings (i.e., China) | 535 | 629 | 2,301 | 2,395 | 2,321 | 2,756 | 3,349 | 3,369 |
| Net income before nonrecurring items | 4,209 | 6,655 | 12,669 | 15,114 | 15,309 | 8,911 | 14,794 | 13,802 |
| Reported net income | 4,209 | 6,574 | 12,502 | 14,867 | 14,843 | 8,334 | 13,346 | 11,827 |
| Return on equity (%) | 10.9 | 22.5 | 10.2 | 10.3 | 12.1 | 7.7 | 13.2 | 13.0 |
| Return on capital (%) | 6.9 | 13.4 | 6.3 | 6.3 | 7.1 | 4.6 | 7.7 | 7.8 |

1 Excludes Financial Services division and nonrecurring items.

### Summary

VW's financial performance improved in 2022 despite volumes remaining meaningfully constrained by ongoing supply chain challenges, with total annual vehicle sales remaining essentially flat YOY.

Annual revenues for the Automotive operations in 2022 increased by 13% YOY, with firmer product mix, pricing gains and favourable foreign exchange (FX) developments representing contributing factors. Absent special items, the Automotive division's operating profit in 2022 increased significantly to EUR 16.9 billion (from EUR 14.0 billion in 2021). Contributing factors consisted of the aforementioned gains in product mix and pricing, partly offset by higher product development costs and other cost increases. Special items, substantially consisting of ongoing risks related to the Diesel Issue, persisted in 2022 albeit continued to decline YOY to EUR 0.4 billion (from a level of EUR 0.8 billion in 2021).

VW continued to achieve solid results in China (accounted for using the equity method), although the local market remained challenged by the coronavirus and ongoing supply chain challenges. Deliveries in 2022 decreased by 3.6% YOY to 3.2 million units. Proportionate operating profit moderately improved to EUR 3.3 billion (compared with EUR 3.0 billion in 2021), reflecting favourable product mix and efficiency gains, with dividends paid to VW decreasing slightly to EUR 2.8 billion (compared with EUR 3.0 billion in 2021).

Revenues for the Automotive operations in Q1 2023 increased considerably to EUR 63.5 billion (compared with EUR 51.2 billion in Q1 2022). Primary contributing factors included higher volumes and pricing gains, partly offset by unfavourable FX developments. The Automotive segment's profitability, however, decreased to EUR 4.6 billion (from EUR 6.9 billion in Q1 2022), in line with adverse derivative effects and higher product costs, partly offset by higher volumes and pricing.

### Outlook

For 2023, VW has projected that consolidated revenues will be higher in the range of 10% to 15% YOY, with the consolidated operating margin likely in the range of 7.5% to 8.5% (absent special items). Regarding the Financial Services division, while this segment is anticipated to remain a solid contributor to consolidated earnings, VW projects that performance will be significantly lower YOY, substantially reflecting the nonrepeat of released credit loss provisions and favourable residual value performance.

Over the long term, VW is seeking to increase its consolidated operating margin to a target range between 8.0% and 10.0% by 2027, despite meaningful industry headwinds in the form of cost increases attributable to tightening emission requirements and the requisite development of EVs. The Company is looking to more than offset such headwinds through (among other items) firmer product mix and pricing (with VW focusing on specific vehicle categories (i.e. profit pools) that present high earnings potential), complexity reduction, and attained purchasing and productivity efficiencies. Moreover, as with several other OEMs, VW is also looking at emerging businesses (notably in mobility services and solutions) to ultimately represent a meaningful proportion of revenues and earnings.

## Segmented Data

| Key Figures by Brand | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | As at December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Unit Vehicle Sales** | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| VW passenger cars | 731 | 537 | 2,788 | 2,594 | 2,719 | 2,835 | 3,677 | 3,715 |
| Audi | 323 | 244 | 1,149 | 1,070 | 1,024 | 1,028 | 1,212 | 1,477 |
| Skoda | 275 | 231 | 907 | 863 | 784 | 849 | 1,062 | 957 |
| SEAT | 155 | 107 | 516 | 468 | 494 | 484 | 667 | 608 |
| Porsche | 85 | 68 | 331 | 314 | 297 | 265 | 277 | 253 |
| VW commercial vehicles | 104 | 73 | 371 | 340 | 326 | 345 | 456 | 469 |
| TRATON comm. vehicles | 85 | 68 | 323 | 306 | 273 | 191 | 244 | 234 |
| VW China | 609 | 765 | 2,966 | 3,122 | 3,042 | 3,577 | 4,048 | 4,101 |
| Other Automotive | -243 | -96 | -742 | -595 | -385 | -418 | -685 | -912 |
| **Total** | **2,124** | **1,995** | **8,610** | **8,481** | **8,576** | **9,157** | **10,956** | **10,900** |
| | | | | | | | | |
| **Revenue (EUR millions)** | | | | | | | | |
| VW passenger cars | 20,464 | 14,879 | 79,358 | 73,773 | 67,856 | 71,076 | 88,407 | 84,585 |
| Audi | 16,883 | 14,282 | 64,354 | 61,753 | 55,914 | 52,022 | 57,772 | 60,796 |
| Skoda | 6,794 | 5,101 | 22,719 | 21,026 | 17,743 | 17,081 | 19,806 | 17,293 |
| SEAT | 3,562 | 2,404 | 12,099 | 10,941 | 9,614 | 9,198 | 11,496 | 10,202 |
| Porsche | 9,333 | 7,317 | 36,607 | 34,591 | 30,289 | 26,086 | 26,060 | 23,668 |
| VW commercial vehicles | 3,599 | 2,294 | 12,760 | 11,455 | 9,909 | 9,358 | 11,473 | 11,875 |
| TRATON comm. vehicles | 10,938 | 8,353 | 42,101 | 39,516 | 30,092 | 22,359 | 26,597 | 25,085 |
| Other Automotive | -8,110 | -3,421 | -25,360 | -20,671 | -15,179 | -25,074 | -29,136 | -32,439 |
| **Total** | **63,463** | **51,210** | **244,638** | **232,385** | **206,237** | **182,106** | **212,473** | **201,067** |
| | | | | | | | | |
| **Operating Profit* (EUR millions)** | | | | | | | | |
| VW passenger cars | 608 | 513 | 2,742 | 2,647 | 2,160 | 454 | 3,785 | 3,239 |
| Audi | 1,816 | 3,535 | 5,903 | 7,622 | 5,936 | 2,759 | 4,574 | 4,417 |
| Skoda | 542 | 337 | 833 | 628 | 1,083 | 756 | 1,660 | 1,377 |
| SEAT | 144 | 5 | 172 | 33 | -233 | -339 | 445 | 254 |
| Porsche | 1,727 | 1,359 | 6,791 | 6,423 | 5,006 | 4,021 | 4,210 | 4,110 |
| VW commercial vehicles | 171 | 46 | 654 | 529 | 73 | -454 | 510 | 780 |
| TRATON comm. vehicles | 875 | 331 | 2,127 | 1,583 | 161 | 117 | 1,908 | 1,539 |
| Other Automotive | -1,300 | 788 | -4,684 | -2,596 | -205 | 282 | -1,010 | -1,406 |
| **Total** | **4,583** | **6,914** | **14,538** | **16,867** | **13,981** | **7,595** | **16,084** | **14,311** |

Note: Revenue and operating profit exclude VW China data, as this is accounted for using the equity method. Audi includes Lamborghini, Bentley and Ducati. In 2019, power engineering sold intragroup to passenger cars; 2018 figures restated.

* Before special items.

The core Volkswagen brand's 2022 sales and delivery performance remained constrained by supply chain challenges. Reported sales slightly declined to 2.6 million units (this figure excludes sales of VW's Chinese joint ventures (JVs), which are not attributed to the VW passenger cars brand companies). Global deliveries for 2022 were at 4.6 million units, representing a YOY decrease of 6.8%. Regarding major models, demand for the ID. family models, the T-Roc and new Taigo was favourable. VW brand revenues in 2022 increased YOY, with the operating profit (before special items) strengthening to EUR 2.6 billion; (special items attributable to the Diesel Issue persisted in 2022). Volumes in 2022 of the Premium brand group (Audi, consisting of Audi, Bentley, Lamborghini, and Ducati) also remained curtailed because of production difficulties, with total global deliveries amounting to 1.6 million units (including Chinese JV volumes) and reported sales at 1.1 million units. Audi's earnings in 2022, however, improved materially YOY to EUR 7.6 billion (from EUR 5.9 billion in 2021); (special items attributable to the Diesel Issue persisted but were at low levels). Porsche's 2022 sales volumes increased materially YOY, with revenues correspondingly increasing to EUR 34.6 billion. Moreover, the brand's operating margin also improved and was at a very strong level of 18.6%. Skoda's performance in 2022 improved YOY in line with higher unit sales, with revenues increasing by 18.5% YOY to EUR 21.0 billion. However, operating profit decreased YOY to EUR 0.6 billion (from EUR 1.1 billion the prior year), reflecting adverse effects of the Russia-Ukraine conflict as well as higher product costs and negative FX developments. With respect to SEAT, the brand attained a slightly positive operating income of EUR 33 million (compared with a loss of EUR 233 million in 2021) amid revenue growth of 13.8% YOY.

In Q1 2023, amid considerably higher volumes, the Volkswagen brand's revenues increased by 37.5% (compared with Q1 2022) to EUR 20.5 billion, with models such as the T-Roc, Atlas, and the ID family of vehicles remaining popular. The Volkswagen brand's operating profit increased moderately to EUR 0.6 billion (from EUR 0.5 billion in Q1 2022). Audi's unit sales in Q1 2023 decreased by 32.4% compared with Q1 2022, although Audi's operating profit decreased to EUR 1.8 billion (from EUR 3.5 billion in Q1 2022), significantly attributable to negative commodity hedging valuation effects. Porsche continued to perform well, attaining higher sales volumes, with revenues accordingly increasing to EUR 9.3 billion (from EUR 7.3 billion in Q1 2022) and the associated margin being very strong at 18.5%. The Skoda brand reported a significant increase in volumes, with operating earnings in Q1 2023 improving to EUR 542 million (from EUR 337 million in Q1 2022) as a result of gains in volumes, product mix, and pricing. Finally, SEAT's Q1 2023 sales volumes increased by 45.1% compared with Q1 2022, with the brand's operating income for the period accordingly increasing to EUR 144 million.

| **Unit Sales/Revenues by Market** | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | As at December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Unit Vehicle Sales** | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| Europe/Other Markets | 1,050 | 850 | 3,695 | 3,495 | 3,727 | 3,929 | 4,856 | 4,739 |
| North America | 238 | 180 | 926 | 868 | 805 | 744 | 956 | 925 |
| South America | 101 | 74 | 514 | 487 | 503 | 471 | 607 | 596 |
| Asia-Pacific | 735 | 891 | 3,476 | 3,632 | 3,540 | 4,012 | 4,538 | 4,640 |
| **Total** | **2,124** | **1,995** | **8,610** | **8,481** | **8,576** | **9,157** | **10,956** | **10,900** |
| | | | | | | | | |
| **Revenue (EUR millions)** | | | | | | | | |
| Europe/Remaining Markets | 45,729 | 36,444 | 163,814 | 154,529 | 145,570 | 133,499 | 153,999 | 143,089 |
| North America | 15,817 | 12,054 | 63,840 | 60,077 | 45,305 | 36,810 | 43,351 | 37,656 |
| South America | 3,413 | 2,726 | 16,163 | 15,476 | 11,039 | 8,632 | 11,297 | 10,405 |
| Asia-Pacific | 11,618 | 11,802 | 51,260 | 51,444 | 48,672 | 44,288 | 43,974 | 43,166 |
| **Total** | **76,198** | **62,711** | **292,719** | **279,232** | **250,200** | **222,884** | **252,632** | **235,849** |

Note: Revenue by market includes Financial Services division revenue.
Revenue and operating profit excludes VW China data, as this is accounted for using the equity method.
Total revenue data includes hedges on sales revenue (not geographically allocated).

With respect to geographic performance, the Company’s global unit sales in 2022 moderately contracted YOY, reflecting the semiconductor shortage and other supply base challenges. Volume decreases in Europe/Other Markets and South America were partly offset by slight gains in North America and Asia Pacific. The Company's global market share decreased to 11.0% in 2022 from 11.7% in 2021.

In Asia-Pacific, 2022 sales volumes, including those attributable to JVs in China, increased slightly to 3.6 million units (from 3.5 million units in 2021).

For 2022, sales levels in the Europe/Remaining Markets segment declined to 3.5 million units (from 3.7 million in 2021), although VW’s market share in Western Europe remained essentially constant at 23.3% (from 23.5% in 2021). VW’s sales results in North America improved slightly, although the Company’s regional market share in 2022 decreased to 4.6% (compared with the 2021 level of 4.9%).

During Q1 2023, amid moderating (albeit still ongoing) supply chain challenges, the Company’s global volumes increased relative to the similar prior year period, which was particularly adversely affected by the semiconductor shortage and by the Russia-Ukraine conflict. By geography, VW attained sales gains in all segments, with the exception of Asia Pacific. The Company's global market share increased to 10.7% (compared with 10.3% in Q1 2022).

## Financial Profile

| **Automotive Operations** | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| EBITDA | 8,634 | 11,529 | 34,826 | 37,721 | 32,359 | 25,392 | 32,042 | 29,893 |
| Earnings after taxes | 4,730 | 6,824 | 13,988 | 16,083 | 15,894 | 9,401 | 15,477 | 14,128 |
| Depreciation | 4,051 | 4,614 | 20,291 | 20,854 | 18,378 | 17,798 | 15,958 | 15,581 |
| Other items (derivatives, other gains/losses) | 1,502 | (4,036) | 972 | (4,566) | (3,494) | (929) | 1,151 | (1,325) |
| Cash flow from operations | 10,283 | 7,402 | 35,251 | 32,371 | 30,778 | 26,270 | 32,586 | 28,384 |
| Less: capital expenditure | 5,017 | 3,938 | 23,533 | 22,454 | 18,339 | 17,538 | 19,178 | 18,452 |
| Less: dividends | 6,708 | 155 | 10,915 | 4,362 | 3,022 | 2,952 | 2,899 | 2,375 |
| Free cash flow pre-working capital | (1,442) | 3,309 | 603 | 5,555 | 9,417 | 5,780 | 10,509 | 7,557 |
| Changes in working capital | (2,544) | (1,312) | (1,844) | (612) | 3,054 | 1,313 | 43 | (4,344) |
| Free cash flow | (3,986) | 1,997 | (1,041) | 4,942 | 12,470 | 7,093 | 10,552 | 3,213 |
| | | | | | | | | |
| Net debt (cash) position | (21,941) | (14,797) | (21,941) | (25,455) | (9,689) | (16,313) | (8,108) | (15,833) |
| % net debt in capital structure | -15.9 | -11.1 | -15.9 | -19.4 | -7.7 | -16.2 | -7.6 | -16.9 |
| Adjusted % debt in capital structure | 14.7 | 18.3 | 14.7 | 16.3 | 19.8 | 17.8 | 18.0 | 20.8 |
| Adjusted interest coverage—EBITDA | 40.4 | 31.9 | 43.6 | 40.2 | 22.3 | 16.9 | 22.9 | 22.7 |
| Adjusted cash flow/total debt | 1.5 | 0.9 | 1.3 | 1.1 | 0.9 | 1.0 | 1.3 | 1.0 |

Note: Figures adjusted to exclude effects of the Diesel Issue.

### Summary

Automotive cash flow from operations in 2022 increased YOY in line with improved earnings.

Capital expenditures (capex) in 2022 increased significantly YOY and amounted to EUR 22.5 billion, with investments primarily allocated to VW's production facilities and models slated to launch in 2022 or 2023. These include the Company's ID family of EVs, reflecting the increasing environmental focus across its product range and the ongoing development of modular toolkits, digitalization, and electric powertrains. Dividend payments in 2022 amounted to EUR 4.4 billion and were higher YOY (consistent with VW's YOY earnings growth the prior year).

Significantly reflecting the higher capex and dividends, gross free cash flow (i.e., before working capital items) in 2022 declined YOY albeit remained sizably positive at EUR 5.6 billion. Working capital represented a use of cash in the amount of EUR 0.6 billion, significantly reflecting higher inventories. Accordingly, net free cash flow (i.e., after working capital items) for 2022 decreased considerably YOY, amounting to EUR 4.7 billion.

DBRS Morningstar notes that the above amount was reduced by cash outflows associated with the Diesel Issue of roughly EUR 1.3 billion, moderately higher YOY, although the significant majority of financial outlays associated with the Diesel Issue are now likely behind the Company.

Total dividend payments amounted to EUR 4.4 billion, of which EUR 3.8 billion was made to VW shareholders. VW in March 2022 issued EUR 2.25 billion in hybrid notes; the Company called/redeemed notes of a total amount of EUR 2.6 billion in the year. With respect to merger and acquisition (M&A) activities, these resulted in a total outflow of EUR 3.0 billion for the year, notably including an investment in Europcar Mobility Group. Finally, VW received proceeds of EUR 16.1 billion from the Porsche IPO.

Through the first quarter of 2023, Automotive cash flow from operations was higher compared with the prior-year period, with lower earnings being offset by other (noncash) items. Capex increased compared with that of Q1 2022 and totalled EUR 5.0 billion. Dividend payments of EUR 6.7 billion reflect the special dividend paid in January 2023 in connection with the Porsche IPO. Gross free cash flow was therefore negative in the amount of EUR 1.4 billion. Working capital represented a significant use of cash in the amount of EUR 2.5 billion; net free cash flow was therefore at a negative level of EUR 4.0 billion.

Payments associated with the Diesel Issue in Q1 2023 amounted to EUR 0.1 billion.

### Outlook

VW projects its cash flow from operations in 2023 to be significantly higher YOY. However, capex levels for 2023 are estimated to grow considerably YOY, with dividends (absent the special dividend in connection with the Porsche IPO) also likely trending higher. As a function of the above, DBRS Morningstar estimates that the Company's gross free cash flow in 2023 will likely be moderately negative.

Going forward, cash flow from operations is projected to moderately increase over the medium term in line with progressively firmer earnings. Capex is likely to be subject to meaningful increases as a function of additional investments into the progressive electrification of VW's product portfolio as well as additional new mobility business initiatives. Dividends may also progressively increase amid the ongoing growth in earnings. This notwithstanding, the Company's projected free cash flow generation is estimated to remain sufficient to absorb potentially sizable M&A activities in connection with VW's ongoing new mobility business initiatives.

## Debt and Liquidity

Despite substantial prior outlays in connection with the Diesel Issue and amid projected sizable investments associated with the electrification of the product portfolio and significant M&A activity, VW's liquidity position remains strong.

As of March 31, 2023, the Company's Automotive operations had a gross liquidity position (as defined by VW) of EUR 46.1 billion, which included EUR 28.0 billion in cash and cash equivalents and EUR 18.0 billion in securities, loans, and time deposits.

Additionally, the Company has a EUR 10.0 billion syndicated credit facility that matures in December 2026. While this facility was fully drawn in early 2020 because of projected liquidity challenges stemming from the coronavirus, all drawn amounts were repaid within the year, and the facility was unused as of March 31, 2023.

In 2016 through 2022, VW's Automotive liquidity was meaningfully depleted by approximately EUR 31 billion in cash outflows related to the Diesel Issue. However, this was considerably offset by solid net free cash flow generation of roughly EUR 48 billion (absent effects of the Diesel Issue) over this time period, in addition to combined net proceeds of approximately EUR 10 billion from the Company's hybrid bond issuances.

VW faces meaningful industry headwinds over the next several years amid sizable investment requirements in line with the increasing electrification of its product portfolio. The Company is also targeting additional investments into new mobility businesses. However, DBRS Morningstar estimates that VW's liquidity position will remain resilient amid these challenges given its consistent free cash flow generation; DBRS Morningstar notes further that the Company maintains several additional options to further bolster its liquidity position, including the sale of further equity stakes in Porsche or TRATON and/or other potential divestitures of noncore assets.

The Company's consolidated debt maturity schedule (industrial maturity schedule not available) as at December 31, 2022, is outlined in the table immediately below in percentage terms.

| **< 1 year** | **1 to 5 years** | **> 5 years** |
|---|---|---|
| 28% | 53% | 19% |

The debt breakdown (in EUR millions) of the above is as follows:

| | |
|---|---|
| Bonds | 93,119 |
| Commercial paper and notes | 35,273 |
| Loans | 42,105 |
| Direct banking deposits | 26,749 |
| Other | 7,939 |
| **TOTAL** | **205,185** |

Industrial debt is a relatively small component of total consolidated debt (i.e., less than 10%).

**Financial Services Division**

| | For the year ended December 31 | | | | |
|---|---|---|---|---|---|
| (EUR millions) | **2022** | **2021** | **2020** | **2019** | **2018** |
| Revenue | 46,847 | 43,963 | 40,778 | 40,160 | 34,782 |
| Operating profit | 5,656 | 6,045 | 3,012 | 3,212 | 2,793 |
| Debt: equity | 4.6 | 5.3 | 5.9 | 6.2 | 6.3 |
| Receivable portfolio | 148,493 | 141,452 | 140,571 | 145,588 | 132,909 |
| Penetration level (%) | 32.6 | 35.4 | 35.2 | 34.2 | 33.7 |

The Financial Services business in 2022 continued to generate very strong results relative to historical norms, with the segment remaining a significant contributor to consolidated earnings.

Segment revenues for 2022 increased by 6.6% YOY to EUR 46.8 billion. Operating profit slightly declined YOY albeit remained strong at EUR 5.7 billion, with the segment continuing to benefit from strong demand for used vehicles, thereby benefitting residual value performance. However, costs associated with loss allowances and provisions due to the Russia-Ukraine conflict adversely affected earnings.

As of March 31, 2023, the total number of contracts was 24.5 million.

Credit risk within the wholesale portfolio and the retail/fleet portfolio remains at low levels and readily covered by incurred provisions.

Leverage as of December 31, 2022, was moderately lower YOY (and vis-à-vis historical levels), thereby being somewhat conservative compared with industry standards.

VW’s Financial Services business has a strong global presence and was active in 47 markets as of December 31, 2022.

Penetration rates as of Q1 2023 were at an aggregate level of 34.5%. This segment is continuously looking to increase its penetration rate through further product offerings, such as extended warranty programs and short- and long-term vehicle rentals as well as car sharing (i.e., very short-term vehicle rentals). Integrated products are also being launched (i.e., combination of finance, insurance, and service contracts). Additionally, VW is seeking to create additional digital touchpoints with the aim of increasing interaction with existing and prospective customers.

For 2023, the Company projects the Financial Services business' revenues to be considerably higher relative to 2022. While this segment is anticipated to remain a solid contributor to consolidated earnings, VW projects that profitability will be significantly lower YOY (substantially reflecting the nonrepeat of released provisions for credit losses and favourable residual value performance), with annual operating profit estimated by the Company at approximately EUR 3.5 billion.

Funding sources are well diversified and include, among others, bond issuances (28% as of December 31, 2022), asset-backed securitization transactions (21%), customer deposits (15%), credit lines (16%), intercompany financing (14%), and commercial paper (6%).

**Rating Support**

The ratings of VW Credit Canada, Inc. are supported by VW through a Guarantee. Per *DBRS Morningstar Global Criteria: Guarantees and Other Forms of Support* (March 28, 2023), the Guarantee, in combination with DBRS Morningstar's assessment of additional implicit support considerations, including (but not limited to) business, reputational, and financial factors that are deemed likely to motivate a parent or affiliated company to support its subsidiary issuer, result in a flow-through of VW's ratings to VW Credit Canada, Inc.

## ESG Considerations

### Environmental

DBRS Morningstar considered that the Environmental factor related to carbon and greenhouse gas costs represents a relevant negative factor as VW, consistent with its automotive peers, is facing a fundamental transformation process in line with the implementation of ever more stringent emission and fuel consumption regulations across several jurisdictions. Accordingly, the Company is undergoing substantial investments associated with the electrification of its model portfolio, including the further development of modular toolkits for its volume, premium, and sports brands. Similarly, VW is investing in the gradual conversion of its locations for the production of EVs and in the creation of battery manufacturing capacity with the aim of establishing a battery supply chain under its own control.

### Social

DBRS Morningstar considered that the Social factor related to product governance represents a relevant negative factor in connection with VW's diesel issue, which dates back to 2015 and initially spanned 482,000 vehicles in the United States, only to quickly increase to 11 million units globally.

This Social factor has been changed from the prior rating disclosure. DBRS Morningstar notes that this factor was previously deemed to have a significant negative effect on the ratings, with associated costs in the form of vehicle refits, fines, and provisions for legal claims exceeding EUR 30 billion. However, with the considerable majority of such charges now likely behind the Company, the effect of this factor has been revised to relevant.

### Governance

DBRS Morningstar considered that the Governance factor related to corporate/transaction governance, specifically with respect to VW's shareholder structure and distribution of voting rights, represents a relevant negative factor. As of 2022 year end, Porsche Automobil Holding SE, Stuttgart held 53.3% of voting rights. The State of Lower Saxony (the second-largest shareholder) held 20.0% of the voting rights, with Qatar Holding LLC holding 17.0% of voting rights. Accordingly, external shareholders have very few voting rights; these amounted to 9.7% as of 2021 year end. Similarly, VW's supervisory board is composed primarily of shareholders and worker representatives, with only a nominal proportion of independent members; this potentially limits the board's ability to oversee risks.

| ESG Factor | ESG Credit Consideration Potentially Applicable to the Credit Analysis: | Y/N** | Extent of the Effect on the ESG Factor on the Credit Analysis: None (N), Relevant (R) or Significant (S)* |
|---|---|---|---|
| **Environmental** | **Overall:** | **Y** | **R** |
| Emissions, Effluents, and Waste | Do we consider the costs or risks result, or could result in changes to an issuer's financial, operational, and/or reputational standing? | N | N |
| Carbon and GHG Costs | Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs? | Y | R |
| Resource and Energy Management | Does the scarcity of sourcing key resources hinder the production or operations of the issuer, resulting in lower productivity and therefore revenues? | | |
| Land Impact and Biodiversity | Is there a financial risk to the issuer for failing to effectively manage land conversion, rehabilitation, land impact, or biodiversity activities? | | |
| Climate and Weather Risks | Will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact? | | |
| **Social** | **Overall:** | **Y** | **R** |
| Social Impact of Products and Services | Do we consider that the social impact of the issuer's products and services could pose a financial or regulatory risk to the issuer? | N | N |
| Human Capital and Human Rights | Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts that could result in a material financial or operational impact? | N | N |
| Human Capital and Human Rights | Do violations of rights create a potential liability that could negatively affect the issuer's financial wellbeing or reputation? | N | N |
| Human Capital and | **Human Capital and Human Rights:** | N | N |
| Product Governance | Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability? | Y | R |
| Data Privacy and Security | Has misuse or negligence in maintaining private client or stakeholder data resulted, or could result, in financial penalties or client attrition to the issuer? | N | N |
| Occupational Health and Safety | Would the failure to address workplace hazards have a negative financial impact on the issuer? | | |
| Community Relations | Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer? | | |
| Access to Basic Services | Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer? | | |
| **Governance** | **Overall:** | **Y** | **R** |
| Bribery, Corruption, and Political Risks | Do alleged or actual illicit payments pose a financial or reputational risk to the issuer? | N | N |
| | Are there any political risks that could impact the issuer's financial position or its reputation? | N | N |
| Bribery, Corruption, and | **Bribery, Corruption, and Political Risks:** | N | N |
| Business Ethics | Do general professional ethics pose a financial or reputational risk to the issuer? | N | N |
| Corporate / Transaction Governance | Does the issuer's corporate structure limit appropriate board and audit independence? | Y | R |
| Corporate / Transaction Governance | Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation? | N | N |
| Corporate / Transaction | **Corporate / Transaction Governance:** | N | N |
| Institutional Strength, Governance, and Transparency | Compared with other governments, do institutional arrangements provide a similar degree of accountability, transparency, and effectiveness? | | |
| | Are regulatory and oversight bodies protected from inappropriate political influence? | | |
| | Are government officials exposed to public scrutiny and held to high ethical standards of conduct? | | |
| | **Institutional Strength, Governance, and Transparency:** | | |
| | **Consolidated ESG Criteria Output:** | **Y** | **S** |

The combination of the ESG factors cited above negatively affects the ratings.

**Volkswagen AG (Financial Services business on an equity basis)**

**Balance Sheet**

| (EUR millions) | Mar 31 | As at December 31 | | | Mar 31 | As at December 31 | |
|---|---|---|---|---|---|---|---|
| **Assets** | **2023** | **2022** | **2021** | **Liabilities & Equity** | **2023** | **2022** | **2021** |
| Cash & deposits | 49,660 | 55,901 | 43,165 | Accounts payable | 27,216 | 26,106 | 20,977 |
| Accounts receivable | 19,353 | 17,987 | 17,339 | Short-term debt | (11,534) | (10,953) | (10,237) |
| Inventories | 52,992 | 48,768 | 40,361 | Other current liabs. | 59,386 | 62,007 | 53,244 |
| Other assets | 327 | 95 | 674 | **Total Current Liabs.** | **75,067** | **77,161** | **63,984** |
| **Total Current Assets** | **122,333** | **122,751** | **101,539** | Long-term debt | 27,719 | 30,446 | 33,477 |
| Net fixed assets | 62,692 | 62,908 | 62,684 | Pension provision | 27,479 | 27,104 | 40,769 |
| Intangibles | 83,787 | 82,846 | 77,290 | Other liabilities | 38,798 | 39,346 | 33,515 |
| Fin. Services equity | 43,089 | 42,392 | 37,131 | Minority interest | 13,343 | 12,950 | 1,705 |
| Other assets | 30,795 | 32,912 | 30,417 | Shareholders' equity | 160,290 | 156,803 | 135,612 |
| **Total Assets** | **342,696** | **343,810** | **309,061** | **Total Liabilities** | **342,696** | **343,810** | **309,061** |

| **Balance Sheet Ratios** | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| Current ratio | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.3 |
| Inventory turnover (days) | 87 | 100 | 86 | 86 | 86 | 98 | 89 | 88 |
| Receivable turnover (days) | 29 | 34 | 27 | 28 | 30 | 34 | 25 | 26 |
| Accounts payable/inventory | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Adj. Total Debt-to-Capital (%)** | **14.7** | **18.3** | **14.7** | **16.3** | **19.8** | **17.8** | **18.0** | **16.5** |
| Net debt-to-capital (%) | -15.9 | -11.1 | -15.9 | -19.4 | -7.7 | -16.2 | -7.6 | -16.9 |
| Debt/EBITDA | 0.8 | 0.7 | 0.8 | 0.8 | 1.0 | 1.0 | 0.8 | 0.7 |
| **Adj. Debt/EBITDA** | **0.80** | **0.72** | **0.81** | **0.81** | **1.03** | **1.00** | **0.78** | **0.93** |
| EBITDA coverage | 40 | 32 | 44 | 40 | 22 | 17 | 23 | 31 |
| **Adj. EBITDA Coverage** | **40** | **32** | **44** | **40** | **22** | **17** | **23** | **23** |
| EBIT coverage | 21 | 19 | 18 | 18 | 10 | 5 | 11 | 15 |
| Cash flow/total debt | 1.5 | 0.9 | 1.3 | 1.1 | 0.9 | 1.0 | 1.3 | 1.3 |
| **Adj. Cash Flow/Total Debt** | **1.5** | **0.9** | **1.3** | **1.1** | **0.9** | **1.0** | **1.3** | **1.0** |
| Cash flow/capex | 2.0 | 1.9 | 1.5 | 1.4 | 1.7 | 1.5 | 1.7 | 1.5 |

| **Income Statement** | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| (EUR millions) | **2023** | **2022** | **2023** | **2021** | **2021** | **2020** | **2019** | **2018** |
| Sales—Automotive | 63,463 | 51,210 | 244,638 | 232,385 | 206,237 | 182,106 | 212,473 | 201,067 |
| Cost of sales | 46,383 | 37,031 | 178,065 | 168,713 | 149,267 | 132,709 | 154,519 | 145,717 |
| Depreciation | 4,051 | 4,614 | 20,291 | 20,854 | 18,378 | 17,798 | 15,958 | 15,581 |
| Other expenses | 8,446 | 2,650 | 31,747 | 25,951 | 24,611 | 24,005 | 25,912 | 25,457 |
| Operating profit—Automotive[1] | 4,583 | 6,915 | 14,535 | 16,867 | 13,981 | 7,595 | 16,083 | 14,311 |
| Net interest income (expense) | 118 | (159) | 664 | 387 | (639) | (711) | (497) | (24) |
| Other income (expense) | 54 | 118 | (2,928) | (2,863) | (831) | (54) | (1,456) | (1,622) |
| Fin. Services division income | 1,164 | 1,544 | 5,276 | 5,656 | 6,045 | 3,012 | 3,212 | 2,793 |
| Income before taxes | 5,918 | 8,418 | 17,547 | 20,047 | 18,556 | 9,842 | 17,342 | 15,458 |
| Income taxes | 1,723 | 2,223 | 5,860 | 6,360 | 4,983 | 3,197 | 5,214 | 4,699 |
| Income before noncontrolling interest | 4,195 | 6,195 | 11,687 | 13,687 | 13,573 | 6,645 | 12,128 | 10,759 |
| Net income before nonrecurring items | 4,209 | 6,655 | 12,669 | 15,114 | 15,309 | 8,911 | 14,794 | 13,802 |
| Net income | 4,209 | 6,574 | 12,502 | 14,867 | 14,843 | 8,334 | 13,346 | 11,827 |

1 Excludes nonrecurring items.

| **Cash Flow—Automotive Division** | 3 mos. to Mar 31 | | 12 mos. to Mar 31 | For the year ended December 31 | | | | |
|---|---|---|---|---|---|---|---|---|
| (EUR millions) | **2023** | **2022** | **2023** | **2022** | **2021** | **2020** | **2019** | **2018** |
| Earnings after tax | 4,730 | 6,824 | 13,988 | 16,083 | 15,894 | 9,401 | 15,477 | 14,128 |
| Depreciation | 4,051 | 4,614 | 20,291 | 20,854 | 18,378 | 17,798 | 15,958 | 15,581 |
| Other items | 1,502 | (4,036) | 972 | (4,566) | (3,494) | (929) | 1,151 | (1,325) |
| Cash flow from operations | 10,283 | 7,402 | 35,251 | 32,371 | 30,778 | 26,270 | 32,586 | 28,384 |
| Less: capex | 5,017 | 3,938 | 23,533 | 22,454 | 18,339 | 17,538 | 19,178 | 18,452 |
| Less: dividend | 6,708 | 155 | 10,915 | 4,362 | 3,022 | 2,952 | 2,899 | 2,375 |
| Free cash flow before working capital | (1,442) | 3,309 | 803 | 5,555 | 9,417 | 5,780 | 10,509 | 7,557 |
| Changes in working capital | (2,544) | (1,312) | (1,844) | (612) | 3,054 | 1,313 | 43 | (4,344) |
| Free cash flow | (3,986) | 1,997 | (1,041) | 4,942 | 12,470 | 7,093 | 10,552 | 3,213 |

| **Profitability Ratios (%)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| EBITDA margin (%)[1, 2] | 13.6 | 22.5 | 14.2 | 16.2 | 15.7 | 13.9 | 15.1 | 14.9 |
| Operating margin (%)[1, 2] | 7.2 | 13.5 | 5.9 | 7.3 | 6.8 | 4.2 | 7.6 | 7.1 |
| Net margin (%)[1] | 6.6 | 13.0 | 5.2 | 6.5 | 7.4 | 4.9 | 7.0 | 6.9 |
| Return on equity (%)[1] | 10.9 | 22.5 | 10.2 | 10.3 | 12.1 | 7.7 | 13.2 | 13.0 |
| Return on capital (%)[1] | 6.9 | 13.4 | 6.3 | 6.3 | 7.1 | 4.6 | 7.7 | 7.8 |

Note: Certain figures subject to DBRS Morningstar adjustments.
1 Excludes nonrecurring items.
2 Financial Services excluded.

## Rating History

| | **Current** | **2022** | **2021** | **2020** | **2019** | **2018** |
|---|---|---|---|---|---|---|
| Volkswagen AG—Issuer Rating | A (low) | A (low) | A (low) | A (low) | A (low) | BBB (high) |
| VW Credit Canada, Inc.—Senior Unsecured Debt | A (low) | A (low) | A (low) | A (low) | A (low) | BBB (high) |
| VW Credit Canada, Inc.—Commercial Paper | R-1 (low) | R-1 (low) | R-1 (low) | R-1 (low) | R-1 (low) | R-2 (high) |

## Previous Action

- "DBRS Morningstar Confirms Volkswagen AG at A (low); Trend Remains Stable" August 10, 2022.

## Commercial Paper Limit

- CAD 1 billion.

## Previous Report

- Volkswagen AG: Rating Report, August 22, 2022.

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We rate more than 4,000 issuers and nearly 60,000 securities worldwide, providing independent credit ratings for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Market innovators choose to work with us because of our agility, transparency, and tech-forward approach.

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