

CREDIT OPINION

4 October 2023

Update



Send Your Feedback

RATINGS

Volkswagen Financial Services AG

Domicile	Braunschweig, Germany
Long Term Rating	A3
Type	LT Issuer Rating - Fgn Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Anna Stark +49.69.86790.2107
AVP-Analyst
anna.stark@moodys.com

Vasil Mrachkov +49.69.70730.867
Associate Analyst
vasil.mrachkov@moodys.com

Laurie Mayers +44.20.7772.5582
Associate Managing Director
laurie.mayers@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Volkswagen Financial Services AG

Update to credit analysis

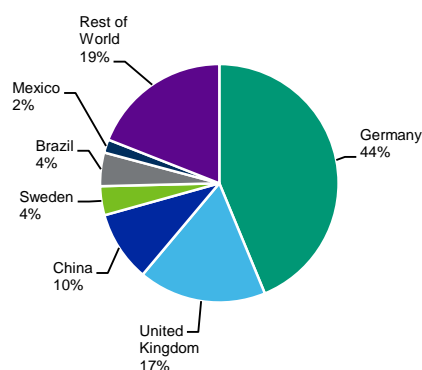
Summary

[Volkswagen Financial Services AG's](#) (VW FS AG) A3 senior unsecured debt and issuer ratings reflect the company's ba2 standalone assessment and strategic importance to its parent [Volkswagen Aktiengesellschaft](#) (Volkswagen, A3 stable). VW FS AG supports the sale of its parent's products as a provider of leasing, financing and mobility services, and has strong contractual and economic links with its parent, such as a long-term control and profit and loss transfer agreement (CPLTA), all of which warrant the alignment of the company's long-term ratings with Volkswagen's A3 issuer rating.

VW FS AG's ba2 standalone assessment incorporates the company's narrow focus on enhancing its parent's vehicle sales, which drives strong portfolio growth and results in asset-class concentration risk; adequate financial profile, characterised by solid profitability and sufficient capitalisation; and geographically diversified and balanced funding mix, which relies significantly on secured (asset-backed) and wholesale market funding.

Exhibit 1

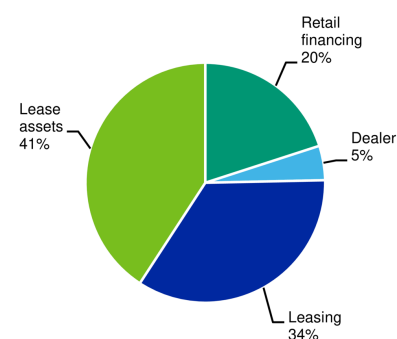
Gross customer loans and leases by country as of December 2022



Source: Company's annual financial report (2022)

Exhibit 2

Gross customer loans and leases by business line as of December 2022



Source: Company's annual financial report (2022)

Credit strengths

- » Solid profitability
- » The transition towards electric vehicles and clients' reluctance to bear eventual technology obsolescence risks accelerate the shift towards leasing
- » Proven access to parental support to strengthen capital and liquidity, if needed
- » Sound asset quality
- » Good leverage ratio, even in the light of expected further portfolio growth

Credit challenges

- » The continued reshaping of the automobile industry towards low-emission, alternative-fuel vehicles could eventually hurt VW FS AG's sound asset quality and profitability in the current volatile economic and geopolitical environment. Especially, if the parent's strategy "Auto 2030" and VW FS and VW Bank's "Mobility 2030" strategy will face execution challenges.
- » VW FS AG's asset and business volume growth could be strained by prolonged supply shortages, which have lowered the production of new cars.
- » Management of residual value (RV¹) risk in its leasing portfolio is generally challenged by macroeconomic and socioeconomic uncertainties, particularly surrounding the ongoing transition to alternative-fuel or battery-electric vehicles.
- » The company relies significantly on wholesale and secured (asset-backed) funding sources.

Outlook

The rating outlook is stable. Based on the support from the ultimate parent Volkswagen, the outlook on VW FS AG's ratings reflects the stable outlook on Volkswagen's long-term issuer rating.

Factors that could lead to an upgrade

- » An upgrade of VW FS AG's ratings could likely follow an upgrade of Volkswagen's rating. Please refer to the [Credit Opinion of Volkswagen](#) for a discussion of the carmaker's rating drivers.
- » VW FS AG's ba2 standalone assessment could improve if the company strengthens its capital ratios, offsetting the strain on its capital adequacy from its strongly growing portfolio; maintains its solid asset-quality and asset-performance indicators in the still-uncertain macroeconomic and geopolitical environment, thereby safeguarding its profitability and capital adequacy metrics; significantly reduces its reliance on secured (asset-backed) debt issuance, thereby decreasing the relatively high encumbrance of its asset base; and maintains stability in its business while its parent manages the long-term challenges of carbon transition, including increasing environmental standards, stricter emissions regulation and electrification.
- » However, a higher standalone assessment would not result in an upgrade of the company's ratings because they are aligned with Volkswagen's ratings.

Factors that could lead to a downgrade

- » VW FS AG's ratings could be downgraded if Volkswagen's ratings were to be downgraded.
- » Although unlikely at present, a downgrade of VW FS AG's ratings could also be triggered if Volkswagen were to loosen its ties with its financial services subsidiary. This loosening could lead to a lowering of our support assumption for VW FS AG and a downgrade of the company's ratings to a level below the parent's issuer ratings.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

- » VW FS AG's ba2 standalone assessment could deteriorate if there is an erosion of the company's capital base beyond our current expectations; the company's asset quality declines significantly, particularly if associated with a significantly lower than expected residual value of its lease assets, leading to additional loan loss charges and lease asset depreciation; there is a higher-than-expected increase in the volume of confidence-sensitive wholesale funding, particularly if the funding no longer matches the maturity of the company's lease and lending assets; there are signs that the company's earnings have become, to a substantial degree, dependent on the support and subsidies provided by Volkswagen; or there are any signs that the internal controls and governance issues at Volkswagen are also a source of risk for VW FS AG.

Key indicators

Exhibit 3

Volkswagen Financial Services AG (Consolidated Financials) [1]

	06-23 ²	12-22 ²	12-21 ²	12-20 ²	12-19 ²	CAGR/Avg. ³
Total managed assets (EUR Million)	138,215.0	133,341.0	124,590.0	117,834.0	112,444.0	6.1 ⁴
Total managed assets (USD Million)	150,792.6	142,307.8	141,173.7	144,176.5	126,218.2	5.2 ⁴
Net Income / Average Managed Assets (%)	0.8	1.4	1.8	0.7	0.9	1.1 ⁵
Tangible Common Equity (Finance) / Tangible Managed Assets (%)	13.1	13.2	11.6	10.9	10.7	11.9 ⁵
Problem Loans / Gross Loans (Finance) (%)	0.0	1.5	1.6	1.8	1.5	1.3 ⁵
Net Charge-offs / Average Gross Loans and Leases (%)	0.5	1.0	0.2	0.9	0.5	0.6 ⁵
Secured Debt / Gross Tangible Assets (%)	--	19.7	22.3	22.3	23.1	21.9 ⁵

[1] All figures and ratios are adjusted using Moody's standard adjustments. [2] IFRS [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime.

Sources: Moody's Investors Service and company filings

Profile

Volkswagen Financial Services AG (VW FS AG) is Volkswagen's captive finance subsidiary, which hosts most of the carmaker's non-banking operations outside North America, that is, mostly its European leasing business; the group's banking activities outside the European Union (EU) and North America; and additional activities, including mobility services and the insurance business. As of 31 December 2022, VW FS AG employed 11,457 people worldwide, and its total assets amounted to €133 billion (2021: €125 billion).

VW FS AG's activities are targeted towards Volkswagen's automotive clients and dealer network, and follow the sales strategy of the carmaker. Customarily, the loan and lease products offered by VW FS AG benefit from the subsidies related to the marketing budgets of the Volkswagen brands. These subsidies are granted to make monthly instalments more accessible to clients than if the products were priced purely on a risk-adjusted basis by the captive.

Following the 2017 [reorganisation](#) of the finance operations within Volkswagen, which led to the separation of VW FS AG's EU banking operations and their subsequent transfer to VW Bank, VW FS AG oversees most of the group's worldwide non-banking operations², except for those entities directly owned by Volkswagen, such as [VW Credit, Inc.](#) (P-2 stable³).

In March 2023, VW FS AG announced a [reorganisation](#) of the subgroups of VW FS AG and VW Bank. The reorganisation is likely to be completed by mid-2024 and is still subject to approvals of the ECB. Under the planned setup, most of the German and European companies will be combined and consolidated under a new financial holding company supervised by the ECB. The current VW FS AG shall act as a holding company for non-European companies.

Detailed credit considerations

Supply chain challenges have eased; volumes have not yet recovered to pre-pandemic levels

For 2023, we expect global light vehicle sales at 85.7 million units (+5.7% versus 2022). Our new forecast for 2024 is 88.9 million (+3.8%), and we continue to expect the recovery to prepandemic levels to take until at least 2025, given the difficult global macroeconomic environment, where growth suffers from higher borrowing costs and tighter lending.

Our outlook on the global automotive industry remains [negative](#) because we expect increasing competition and weakening consumer affordability to weigh on automakers' profit margins.

Asset quality remains exposed to car market cyclicality

We assign a weighted average Asset Risk score of Baa2 to VW FS AG, three notches below the initial score of A3. We continue to make negative adjustments to two components of the Asset Risk subfactor: a negative adjustment to the Problem Loan score, which reflects reduced economic growth forecasts, and a negative adjustment for net charge-offs, which takes into account VW FS AG's policy to also book depreciation on lease assets, which form a part of value adjustments and losses otherwise booked as loan loss provisions or charge-offs against customer loans. With this adjustment, we aim to capture the remaining RV risks and historical real losses through lease depreciations through the cycle.

The Baa2 weighted average Asset Risk score further reflects the close correlation among VW FS AG's asset growth over time, the company's stable credit performance and Volkswagen's production volume growth, although subdued since 2020 given the pandemic-induced challenges. While these trends are mutually supportive in a strong car market, the close relationship among these factors may also prove self-reinforcing in a downward trend.

In 2022, VW FS AG's asset base continued to grow despite the supply shortages, particularly driven by lease asset growth (9% in 2022, 53% since 2019). The growth reflects VW FS AG's business expansion and a continuous shift towards leasing as a result of changing customer preferences. VW FS AG's net charge-off rates/gross loans grew in 2022 to 0.9% from 0.2% (excluding lease depreciations) in the year-earlier period, and provisions for credit risks increased significantly in 2022 to €703 million, although from an unusually very low level of €122 million in 2021.

The future sales performance of cars in general appears significantly less certain and predictable as a result of shifting consumer preferences, tightening disposable incomes and the carbon transition. The ongoing legislation process in the EU on zero emission targets adds to the RV risks in Europe. The difficulty for VW FS AG lies in the unpredictable speed of vehicle depreciation because of the uncertainty surrounding future technology development, such as the speed of the rollout of battery-electric vehicles or alternative-fuel vehicles. In addition, new government policies, such as favourable taxes or high sales incentives for the purchase of new electric vehicles, could accelerate RV deterioration for traditional combustion engines.

To mitigate these risks, VW FS AG has started to increase its penetration into the used cars market through various channels, supported by subsidised vehicle sales and attractive financing/lease packages, all with the aim of safeguarding affordability (and, therefore, its asset quality) for its customer base. At the same time, because Volkswagen plans to involve its captive operations even more intensely in its vehicle distribution approach by raising its used car penetration rate⁴, we expect the resulting asset growth to further expose VW FS AG to RV risk for each newly leased or financed vehicle.

In addition, another risk factor for VW FS AG is the potentially deteriorating creditworthiness of car dealers because Volkswagen's financial services arm also provides day-to-day financing to Volkswagen's vehicle dealers. However, because of the importance of the dealer network to the broader group's value chain, the carmaker has supported car dealers in the past and will likely continue to provide support in case of need, thereby alleviating potential asset-quality and RV risks at the level of its captive finance subsidiary.

For VW FS AG, the RV risk — before any likely support from the carmaker — is the highest in the large German and UK leasing markets. VW FS AG acquired the UK leasing business from VW Bank at the end of Q1 2019 as a part of the reorganisation of the carmaker's captive finance operations. Therefore, VW FS AG will be exposed to the RV risk of this and other affected subsidiaries' leasing operations. In particular, the British captive finance segment of Volkswagen (with a business volume of €16.3 billion), which also includes returnable cars under personal contract purchases and operating lease assets⁵, makes VW FS AG's results potentially more sensitive to car return rates and value fluctuations in the UK used car market.

Solid capital ratio

We assign a Capital score of Ba3 to VW FS AG, three notches below its initial score of Baa3 in 2022. We retain the negative adjustment because we expect further portfolio growth, driven by stronger growth in the leasing business segment. Therefore, we expect VW FS AG's tangible common equity/tangible managed assets (TCE/TMA, our equivalent of the leverage ratio for finance companies) to somewhat decrease over time to around 10%-12% from 13.2% in December 2022 in the absence of capital strengthening measures.

The decline in TCE/TMA will be commensurate with the assigned Ba3 score and the level recorded for most of the company's international peers in terms of TCE/TMA. The assigned score further captures the remaining RV risk from lease contracts, which could, in a highly adverse scenario, lead to larger losses at VW FS AG, temporarily weakening its leverage ratio. However, the profit and loss agreement with Volkswagen serves as a mitigating factor in this adverse scenario.

Profitability declined in 2022 from an extraordinary high level in 2021

We assign a Baa3 Profitability score VW FS AG, in line with its initial score of Baa3 in 2022. VW FS AG's net income from leasing transactions increased by 40.5% year over year to €4,406 million (2021: €3,136 million), driven by strong demand and lower supply of new cars. Net income from service contracts increased to €233 million from €205 million a year earlier, while the insurance business declined to €142 million, from €155 million in the previous year. Provisions for credit risk of €703 million in 2022 were significantly higher than the risk provisions in 2021. Despite this fact, the company reported overall record-high operating profit of €3,207 million in 2022 (2021: €2,987 million).

We expect VW FS AG's net income/average managed assets to decline to 1.00%-1.25% in 2023, but to still be commensurate with the Baa3 score. Strong demand momentum and still-subdued supply should help maintain the profitability margins. However, margins might come under pressure if disposable household incomes become strained by inflation and higher interest rates.

High reliance on wholesale and secured funding

We assign a weighted average Cash Flow and Liquidity Score of Ba2 to VW FS AG. The assigned score captures VW FS AG's substantial reliance on secured and wholesale funding, and our expectation of a further moderate increase in confidence-sensitive funding sources.

Like most finance companies, VW FS AG relies on confidence-sensitive wholesale funding sources, which renders the company vulnerable to market disruptions and illiquidity. However, because of VW FS AG's strategic importance to its parent, we expect the company to continue to exercise good discipline in the management of its liquidity risks.

Following the deconsolidation of the deposit-rich VW Bank in 2017, VW FS AG's dependence on wholesale funding sources has risen. However, VW FS AG has been able to maintain access to a diversified range of funding sources, including senior unsecured debt (€29.6 billion as of December 2022) and intragroup funding (€27.1 billion), followed by asset-backed securities (€26.3 billion) and liabilities to banks (€17.2 billion). In the asset-backed securities category, the company benefits from the established market presence, for example, of its VCL Master Netherlands B.V. lease asset-backed security programme and the non-EU driver auto loan programmes, which can help fill liquidity or funding gaps in local markets.

VW FS AG operates with only limited liquid resources on hand and in the form of securities holdings, with high short-term cash inflow under its lease and loan contracts. In light of the constant portfolio growth at Volkswagen's captives, cash inflow has historically been outweighed by payouts under new loan and lease contracts or renewals. VW FS AG's cash reserve decreased drastically to €2 million in 2022 from €33 million in 2021 and €47 million in 2020. However, in case of need, the company has access to additional funding sources, including a multibillion euro committed standby liquidity facility from its parent.

Operating environment

We assign a Baa3 weighted Operating Environment score to VW FS AG, based on the industry and macro-level risks at its global car financing and leasing operations. The score benefits from VW FS AG's activities in Germany, where the company has most of its total lending and leasing exposures, and to which we assign a Baa2 Operating Environment score.

The Baa3 weighted Operating Environment score is constrained by VW FS AG's exposures to the [United Kingdom](#) (Aa3 negative), [China](#) (A1 stable) and [Brazil](#) (Ba2 stable), all of which have lower Operating Environment scores. However, this has no bearing on VW FS AG's overall Ba2 Financial Profile score.

Macro-level and industry risk indicators for the home market

VW FS AG's exposures primarily relate to the German car financing and leasing markets. The Aa2 German Macro-Level Indicator score reflects the country's very high degree of economic and institutional financial strength, with a low susceptibility to event risk. The overall Home Country Operating Environment score is Baa2.

We assign a Baa Industry Risk score for German car finance and leasing companies. Companies in this sector benefit from relatively high barriers to entry and pricing power. A growing proportion of leases is underwritten at the point of sale, as reflected by rising new and used car penetration rates. Banks in Germany have been slowly building competitive leasing offers, but competition remains limited. In view of this relatively limited competition, VW FS AG has expanded its market penetration and improved manufacturer loyalty.

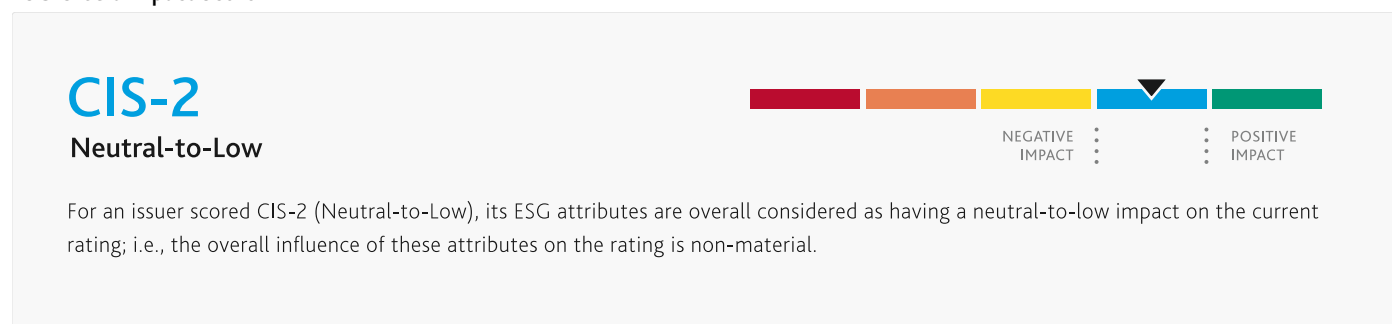
VW FS AG further benefits from exclusive subvention programmes from its parent, Volkswagen, which provide access to loan and lease origination volumes, bolstering the car financier's franchise. Moreover, VW FS AG's diversified and long-standing product suite has a strong track record of low net charge-offs and low net losses.

ESG considerations

Volkswagen Financial Services AG's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 4

ESG Credit Impact Score

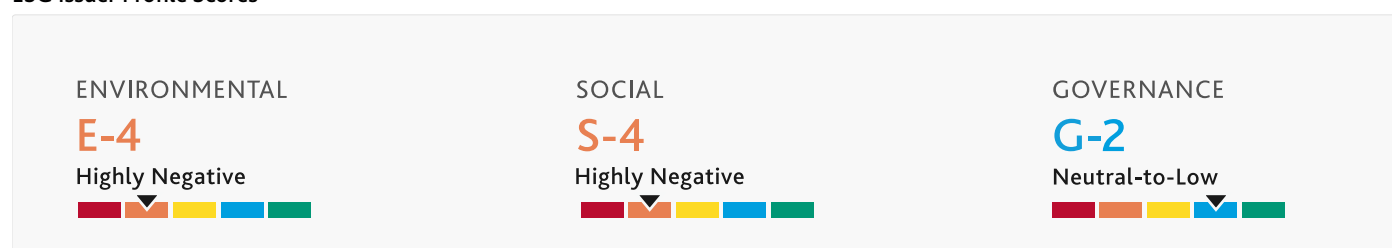


Source: Moody's Investors Service

VW Financial Services' (VW FS) VW Bank's ESG Credit Impact Score is CIS-2 and reflects the mitigating rating impact of support from its automotive parent. VW Bank is exposed to material environmental and social risks, reflecting the high risk exposure of its automotive parent and the bank's role as facilitator of sales. The bank's governance risks are low.

Exhibit 5

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

VW FS faces high environmental risks, primarily related to carbon transition. As a facilitator of sales for its automotive parent, the bank's exposure to carbon transition risk is consistent with that of VW AG and the global auto manufacturing sector because of stricter environmental regulation and the trend towards low and zero emission vehicles. In response VW FS, together with VW Bank, supports Volkswagen AG's electric mobility strategy targeting to provide financing solutions for 80% of Volkswagen Group's electric vehicles in the medium term. VW FS' exposure to other environmental risks is low.

Social

VW FS faces high social risks from customer relations as well as societal trends. VW FS' key product is auto leasing, the demand for which is subject to societal trends like higher adoption of mass transportation and heightened environmental awareness and is

highly correlated to the ability of its parent to meet consumers' demand. In line with other retail consumer-focused banks and leasing companies, VW FS is also exposed to fines and reputational damage due to product mis-selling or other types of misconduct. High cyber and personal data risks are also key considerations as more applications are submitted online.

Governance

VW FS's governance risks are low. VW FS has well-developed risk management and governance practices in place, in line with industry practices. VW FS score for board structure, policies and procedures is aligned with that of its parent, given VW FS strategic importance to its parent and brand sharing.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Support and structural considerations

Affiliate support

VW FS AG has strategic importance to Volkswagen as it controls most of the group's non-banking financial and leasing operations as well as most of the banking operations outside of North America and the EU. The importance is illustrated by a CPLTA, which has been in place since 1995 (modified and revised in 2015) between the companies. According to the agreement, Volkswagen is authorised to issue instructions to the management of VW FS AG, and it is obliged to absorb any net losses of VW FS AG and to provide security to the creditors of VW FS (in accordance with section 303 of AktG). Although the agreement does not constitute a full guarantee of VW FS AG's obligations by Volkswagen, the carmaker has a strong economic incentive to support VW FS AG because of the latter's important role as a leasing and financing provider that supports the group's sales, warranting full uplift to the carmaker's ratings.

VW FS AG's default probability and expected loss are closely linked with those of its parent, Volkswagen. The globally active carmaker has a strong economic incentive to support VW FS AG because of the latter's important role as a leasing and financing provider that supports the carmaker's sales. In 2022, 25.6% of Volkswagen's new car deliveries in countries where VW FS AG operates were accompanied by a financing or leasing contract of the company. In the core market of Germany, this ratio was as high as 51.3%. At the same time, a long-term CPLTA contractually requires Volkswagen to support VW FS AG in case of losses.

Government support considerations

We continue to consider the probability of government support low for VW FS AG, which does not result in any rating uplift for government support. This assumption reflects VW FS AG's relatively small size compared with the German banking system, its insignificant share in the domestic deposit market and its limited degree of systemic interconnectedness.

Methodology and scorecard

The methodologies we use in rating VW FS AG are the [Finance Companies Methodology](#), published in November 2019, and the [Captive Finance Subsidiaries of Nonfinancial Corporations](#) rating methodology, published in August 2019.

Exhibit 6

Volkswagen Financial Services AG

Volkswagen Financial Services AG						
Financial Profile						
	Factor Weights	Historic Ratio	Initial Score	Assigned Score	Key driver #1	Key driver #2
Profitability						
Net Income / Average Managed Assets (%)	10%	1.30%	Baa3	Baa3	Expected trend	
Capital Adequacy and Leverage						
Tangible Common Equity / Tangible Managed Assets (%)	25%	13.08%	Baa3	Ba3	Expected trend	
Asset Quality						
Problem Loans / Gross Loans (%)	10%	1.65%	Baa3	Ba3	Pro-forma adjustments	Expected trend
Net Charge-Offs / Average Gross Loans (%)	10%	0.96%	Aa3	A1	Differences in accounting and reporting	Expected trend
Weighted Average Asset Risk Score			A3	Baa2		
Cash Flow and Liquidity						
Debt Maturities Coverage (%)	10%	-	-	B2	Pro-forma adjustments	Near-to-medium term maturities
FFO / Total Debt (%)	15%	13.40%	Ba3	B2	Pro-forma adjustments	Expected trend
Secured Debt / Gross Tangible Assets (%)	20%	19.71%	Baa1	Baa2	Expected trend	Other adjustments
Weighted Average Cash Flow and Liquidity Score			-	Ba2		
Financial Profile Score	100%		Baa3	Ba2		
Operating Environment						
Home Country	Factor Weights	Sub-factor Score	Score			
Macro Level Indicator	0%		Aa2			
Economic Strength	25%	aa2				
Institutions and Governance Strength	50%	aa1				
Susceptibility to Event Risk	25%	baa				
Industry Risk	100%		Baa			
Home Country Operating Environment Score			Baa2			
				Factor Weights	Score	Comment
Operating Environment Score				0%	Baa3	
ADJUSTED FINANCIAL PROFILE					Score	
Adjusted Financial Profile Score					Ba2	
Financial Profile Weight	100%					
Operating Environment Weight	0%					
Business Profile and Financial Policy				Adjustment	Comment	
Business Diversification, Concentration and Franchise Positioning				0		
Opacity and Complexity				0		
Corporate Behavior / Risk Management				0		
Liquidity Management				0		
Total Business Profile and Financial Policy Adjustments				Ba2		
					Comment	
Sovereign or parent constraint					Aaa	
Standalone Assessment Scorecard-indicated Range					ba1 - ba3	
Assigned Standalone Assessment					ba2	

Source: Moody's Investors Service

Ratings

Exhibit 7

Category	Moody's Rating
VOLKSWAGEN FINANCIAL SERVICES AG	
Outlook	Stable
Issuer Rating	A3
Senior Unsecured	A3
Commercial Paper -Dom Curr	P-2
PARENT: VOLKSWAGEN AKTIENGESELLSCHAFT	
Outlook	Stable
Issuer Rating	A3
Sr Unsec Bank Credit Facility -Dom Curr	A3
Senior Unsecured MTN -Dom Curr	(P)A3
Commercial Paper -Dom Curr	P-2
VOLKSWAGEN FINANCIAL SERVICES AUSTRALIA LTD	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	A3
Bkd Commercial Paper	P-2
Bkd Other Short Term -Dom Curr	(P)P-2
VOLKSWAGEN FINANCIAL SERVICES JAPAN LTD.	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	A3
Bkd Commercial Paper -Dom Curr	P-2
Bkd Other Short Term	(P)P-2
VOLKSWAGEN FINANCIAL SERVICES N.V.	
Outlook	Stable
Bkd Senior Unsecured	A3
Bkd Commercial Paper -Dom Curr	P-2
VOLKSWAGEN LEASING GMBH	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	A3
Bkd Commercial Paper -Dom Curr	P-2
Bkd Other Short Term -Dom Curr	(P)P-2
SKOFIN S.R.O.	
Bkd Commercial Paper -Dom Curr	P-2

Source: Moody's Investors Service

Endnotes

- 1 The RV risk is the risk of a higher-than-expected decline in the price of the leased asset or loan collateral between a contract's conclusion and a pre-agreed repurchase.
- 2 Although costly for the Volkswagen group and in some areas where there is an overlap with the local regulator's supervision, the comprehensive oversight by the European Central Bank (ECB) previously ensured a coordinated central view of VW FS AG's operations, potentially enabling the ECB to initiate swift protective measures for the core lending and leasing business, if required. Following VW FS AG's exit from direct ECB supervision, under which it previously stood jointly with VW Bank, VW FS AG's creditors cannot rely on an early intervention in a crisis because of the central coordination by a sole supervisor. Accordingly, VW FS AG's creditors will face a higher severity of loss in case of default. Despite the higher loss severity, the probability of default remains unaffected based on the contractual commitment and economic incentive for Volkswagen to support its core captive operations.
- 3 The rating shown is VW Credit's backed commercial paper rating.
- 4 This ratio measures the frequency of instances in which a used car sale is accompanied by a captive lease or loan. As of 31 December 2022, VW FS AG's new car penetration rate was 25.6%.
- 5 VW FS UK primarily grants leasing and balloon loan products known as personal contract purchases.

© 2023 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1367148

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454