

**CREDIT OPINION**

26 November 2024

Update

Send Your Feedback

**RATINGS**

**Telekom Austria AG**

Domicile	Vienna, Austria
Long Term Rating	A3
Type	LT Issuer Rating
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**

Carlos Winzer +34.91.768.8238  
Senior Vice President  
carlos.winzer@moodys.com

Miriam Franceschinelli +39.29.148.1993  
Ratings Associate  
miriam.franceschinelli@moodys.com

Ivan Palacios +34.91.768.8229  
Associate Managing Director  
ivan.palacios@moodys.com

**Telekom Austria AG**

Update to credit analysis

**Summary**

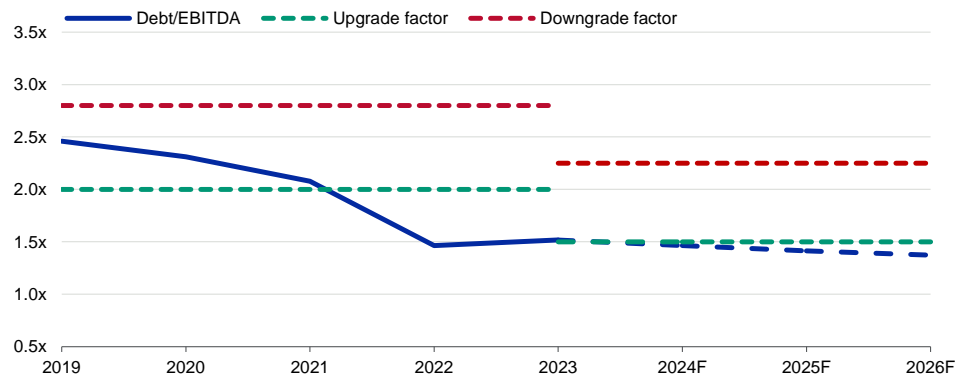
[Telekom Austria AG's](#) A3 rating is supported by its moderate scale; its position as a strong integrated company in the highly competitive Austrian telecommunications market; its geographical diversification in a number of Eastern European countries, mitigated by the fact that these countries are exposed to higher macroeconomic risk and foreign-currency risks than its core domestic operations; its strong cash flow generation and strong credit metrics; the company's commitment to a conservative financial strategy; and the benefits resulting from [America Movil, S.A.B. de C.V.'s](#) (America Movil, Baa1 stable) 60% shareholding in Telekom Austria.

Telekom Austria is a government-related issuer (GRI) and its A3 rating benefits from a one-notch uplift from its baa1 BCA as a result of the group being 28.42% government-owned.

Exhibit 1

**We expect Telekom Austria's leverage to stay at the lower end of the expectations for the rating category**

Moody's-adjusted debt/EBITDA over 2019-26E [1]



[1] Forecasts for 2024-26 do not consider accelerated capital spending programs, M&A or extraordinary shareholder remuneration. We acknowledge Telekom Austria's current financial flexibility and expect its management to preserve the group's financial strength, managing its strategic investments in capital spending and M&A, as well as shareholder remuneration in line with its stated commitment to an A3 rating.

Sources: Moody's Financial Metrics™ and Moody's Ratings

## Credit strengths

- » Leading market position in Austria and in a number of Central and Eastern European (CEE) countries, although in competitive environments
- » Commitment to an A3 rating
- » Support from the Government of Austria, which translates into a one-notch uplift to the final rating
- » Strong implicit support from America Movil

## Credit challenges

- » Very competitive domestic and international markets
- » Country and foreign-exchange risks in Belarus
- » Highly capital-intensive investments as a result of the acceleration in the fibre rollout

## Rating outlook

The stable outlook reflects our expectation that Telekom Austria will maintain its strong financial metrics and business position in Austria and within its international footprint. As a result, we expect the company's leverage, measured as Moody's-adjusted gross debt/EBITDA, to remain below 2.0x on a sustained basis and its retained cash flow (RCF)/net debt to remain above 35%.

The stable outlook also reflects our expectation that the company will maintain a conservative financial policy, balancing creditor protection and shareholder remuneration, and prudent liquidity risk management.

## Factors that could lead to an upgrade

Upward rating pressure could develop if the company's credit metrics were to strengthen as a result of sustained improvements in its operating performance and cash flow generation. This improvement would be reflected in its Moody's-adjusted RCF/net debt exceeding 45% and its adjusted gross debt/EBITDA remaining below 1.5x on a sustained basis.

## Factors that could lead to a downgrade

The rating could come under downward pressure if Telekom Austria's underlying operating performance weakens as a result of more adverse macroeconomic, regulatory or competitive environments; the group's liquidity profile deteriorates; or the group makes significant debt-financed acquisitions or increases shareholder remuneration, such that its credit metrics deteriorate, with its adjusted RCF/net debt remaining below 35% and its adjusted gross debt/EBITDA remaining above 2.25x, both on a sustained basis.

In addition, we would most likely no longer apply the GRI methodology to Telekom Austria or incorporate an uplift into its final rating if the government reduces its stake in the group to below 20% or if the support assumption for the group is lowered. Although either one of these factors would likely result in a one-notch downgrade, there is no indication that either will occur.

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.com> for the most updated credit rating action information and rating history.

## Key indicators

Exhibit 2

### Telekom Austria AG

(in € billions)	2019	2020	2021	2022	2023	LTM Jun-24	2024F	2025F	2026F
Revenue	4.5	4.5	4.7	4.9	5.2	5.2	5.3	5.5	5.7
Debt / EBITDA	2.5x	2.3x	2.1x	1.5x	1.5x	1.5x	1.5x	1.4x	1.4x
RCF / Net Debt	33.4%	37.2%	43.9%	54.6%	52.3%	64.3%	56.3%	62.2%	73.3%
(EBITDA - CAPEX) / Interest Expense	4.7x	6.0x	6.6x	12.3x	7.6x	6.8x	9.1x	9.7x	10.7x
EBITDA Margin %	34.3%	34.8%	36.5%	37.4%	37.3%	37.9%	37.4%	37.6%	37.5%
EBITA / Interest Expense	8.0x	8.0x	9.6x	17.7x	11.6x	10.7x	11.0x	11.6x	13.5x
FCF / Debt	4.9%	9.2%	8.9%	15.1%	8.5%	14.0%	8.9%	10.8%	13.5%

Source: Moody's Financial Metrics™

## Profile

Headquartered in Vienna, Austria, Telekom Austria AG is the leading integrated telecommunications provider in the country, providing 2.8 million fixed-line connections (as of September 2024) and serving 5.1 million mobile customers (as of September 2024). The group has a nationwide presence, delivering a full range of services and products, including telephony, data exchange, interactive content, TV, and information and communications technology solutions. The group has also expanded its mobile operations outside Austria, where its customer base accounts for more than 15.3 million subscribers. Telekom Austria is one of the leading mobile operators in Bulgaria, Belarus and Croatia, and is also present in Slovenia, North Macedonia and Serbia.

Telekom Austria's main shareholders are America Movil, with a ~60% holding (fully consolidating Telekom Austria), and the Austrian government, through Oesterreichische Beteiligungs AG (OBAG), with a 28.42% holding. For the 12 months that ended September 2024, the company reported revenue and EBITDA of €5.3 billion and €1.9 billion, respectively.

## Detailed credit considerations

### Leading market position, although Telekom Austria operates in very competitive environments

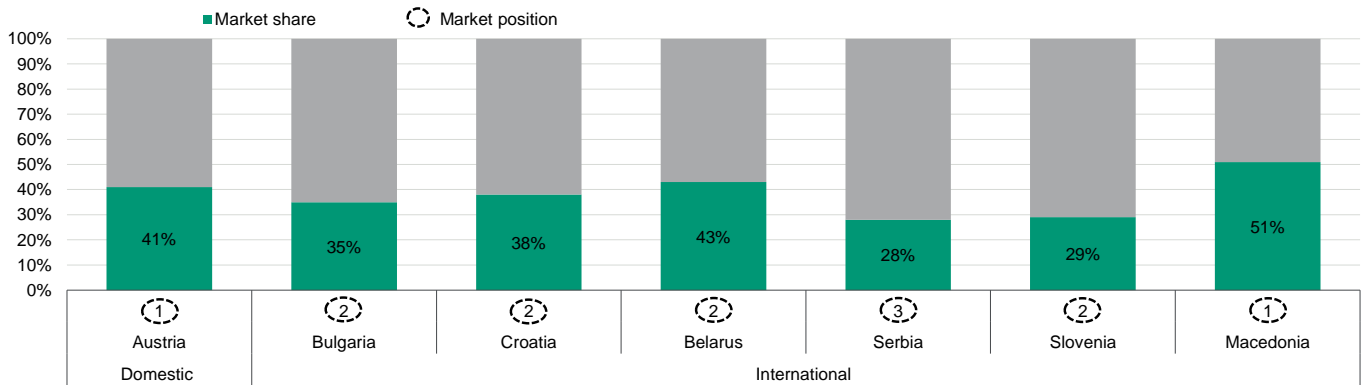
Telekom Austria has a stable, leading position in the Austrian mobile market, both in wireline and wireless, with a market share of more than 40% (see Exhibit 3), followed by T-Mobile Austria GmbH and Hutchison Drei Austria GmbH.

Telekom Austria's main markets are characterised by fierce competition in both mobile and fixed communications. In Austria, the company continues to experience constant pressure on prices, mainly in the lower end of the market, as a result of the aggressive pricing policies implemented by mobile virtual network operators.

As of June 2024, Telekom Austria was one of the leading mobile operators in Bulgaria (number two by mobile market share), Croatia (number two by mobile market share) and Belarus (number two by mobile market share) (see Exhibit 3). In the first nine months of 2024, CEE markets exhibited a strong increase in revenue and EBITDA of 3.2% and 6.9%, respectively.

Exhibit 3

**Telekom Austria is the market leader in Austria and the challenger in most of its international operations**  
**Market share in mobile and market position as of H1 2024**

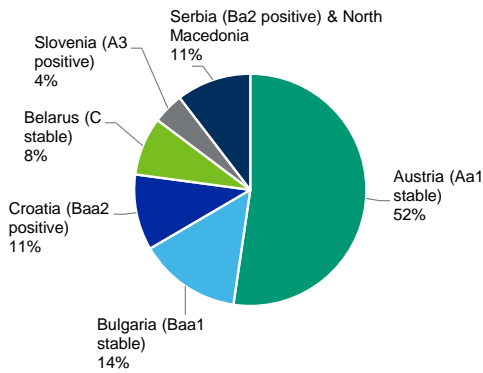


Source: Company

The positive aspects of Telekom Austria's diversification in a number of Eastern European countries are mitigated by its exposure to higher macroeconomic and foreign-currency risks. Moreover, as Exhibit 5 shows, 37% of its operating cash flow was generated in Austria in H1 2024.

Exhibit 4

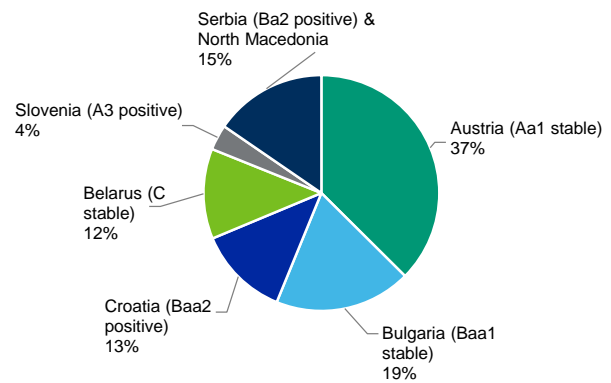
**Austria accounted for 52% of revenue**  
**External revenue by geography as of year-to-date September 2024 [1]**



[1] Corporate, other and eliminations are excluded from the calculation.  
 Source: Company

Exhibit 5

**Austria accounted for 37% of operating free cash flow**  
**Operating free cash flow breakdown by geography as of H1 2024 [1]**



[1] Corporate, other and eliminations are excluded from the calculation.  
 Source: Company

**Solid operating performance despite the negative foreign-currency impact**

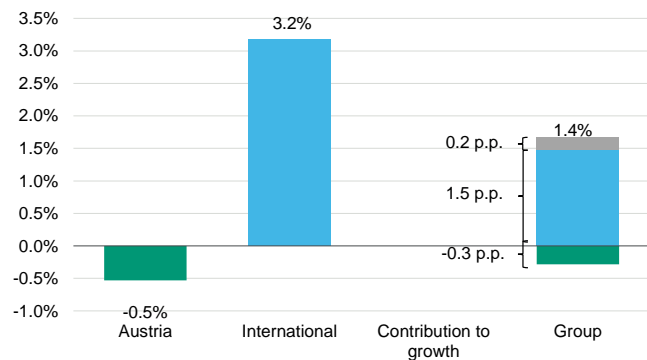
Telekom Austria's revenue grew 1.4% to €3.9 billion in the first nine months of 2024. Growth was boosted by performance in the international operations (mainly Croatia), which reported 3.2% revenue growth, while the domestic business was flattish at -0.5% (see Exhibit 6). Service revenue grew 3.4% to €3.3 billion during the same period, while equipment revenue decreased by -9% (see Exhibit 7).

Telekom Austria is exposed to price fatigue in Austria, which is leading to higher competition and pressures on revenue in the domestic market. Despite of this pressure in the domestic market, management has guided for a 3-4% revenue growth driven by the performance in some of the international subsidiaries.

Exhibit 6

**Telekom Austria's revenue grew 1.4%, boosted by international operations**

Reported revenue growth and contributions by geography - the first nine months of 2024

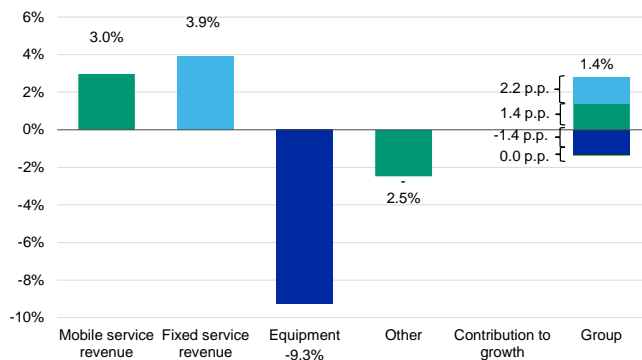


Sources: Company

Exhibit 7

**Telekom Austria's revenue grew 1.4%, supported by mobile and fixed**

Reported revenue growth and contributions by business segments - the first nine months of 2024



Source: Company

Reported EBITDA was up 4.4% to €1.5 billion as of September 2024, although it reflected restructuring and negative foreign-currency movements in Belarus.

For 2024, the company expects total revenue growth of 3%-4% and around €800 million in capital spending. This is in line with the strategic plan for 2024-26, which included 3%-4% growth in revenue per year, 4%-5% growth in EBITDA per year, capital spending of €2.8 billion for the period and a dividend baseline of €0.32 per share, which will be maintained or increased based on the group's operational and financial development.

**Credit metrics to remain solid**

We expect Telekom Austria to maintain its strong market position in Austria and continue its good operating performance, despite facing competitive and macroeconomic pressures in the markets in which it operates.

Leverage, measured as adjusted gross debt/EBITDA, remained stable at 1.5x as of December 2023 (including the impact of IFRS 16) compared with the peak of 3.5x in 2013. We expect leverage to continue to decline in the next 12-18 months because of solid free cash flow generation.

The recent tower transaction was leverage neutral. We view it as being marginally credit negative. Its business profile has weakened because it no longer owns a valuable asset that could be monetised in case of need. While shareholders now own shares in both entities, Telekom Austria's creditors see no benefit because leverage remains broadly unchanged compared with the level before the spinoff. In addition, the shareholder base of the tower entity could evolve over time, potentially leading to a misalignment of interests between Telekom Austria and the tower entity.

We acknowledge Telekom Austria's current financial flexibility and expect management to preserve the group's financial strength, managing its strategic investments in capital spending and M&A, as well as shareholder remuneration in line with its stated commitment to an A3 rating.

America Movil, as Telekom Austria's major shareholder with a 60% stake, is instrumental in this leverage reduction process. As part of the shareholder agreement, Telekom Austria successfully completed a capital increase in November 2014, which amounted to €1 billion. This improved Telekom Austria's capital structure and financial position, and provided additional financial flexibility for investments. America Movil increased its stake in Telekom Austria from 51% to 56.55% first in July 2023 and further up to 60% in 2024.

America Movil has also had a positive impact on Telekom Austria's overall strategic execution, broadly because of the possibility of the Austrian operator leveraging the size of its main shareholder to gain substantial purchasing power with vendors or to enhance its

relationships with financial institutions; the shift from a marketing to a revenue-oriented approach; and the strong focus on the business and cost savings.

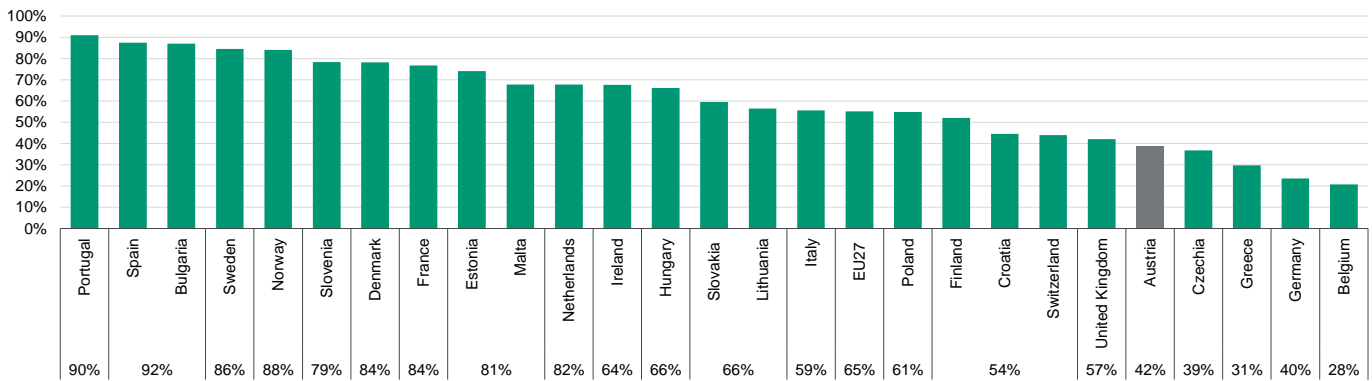
**High capital spending for investments in fibre and 5G**

The group's key areas of investment include the development of the 5G mobile network across its markets and the acceleration of the fibre rollout in Austria.

Telekom Austria will continue to upgrade its fixed network infrastructure to meet the growing demand for high-bandwidth broadband solutions. Telekom Austria needs to continue to invest in FTTH coverage in order to improve its network compared to other EU companies.

Telekom Austria expects its capital spending, excluding spectrum, to reduce to around €800 million from €950 million in 2023 and €945 million in 2022. The decrease results both from lower investments in Austria and CEE, as the company has made good progress in its 5G rollout. Capital spending will represent the principal use of its cash flow generation, subject to any extraordinary dividend or M&A activity.

Exhibit 8  
**Austria lags other European markets in terms of fibre-to-the-home (FTTH) coverage**  
 FTTH coverage as of September 2023

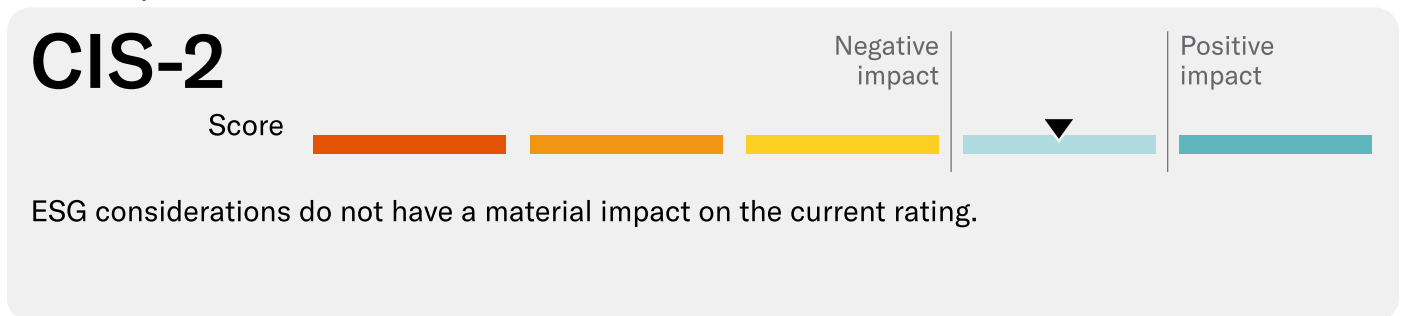


Sources: FTTH Council Europe's Market Intelligence Committee and Moody's Ratings

**ESG considerations**

**Telekom Austria AG's ESG credit impact score is CIS-2**

Exhibit 9  
**ESG credit impact score**

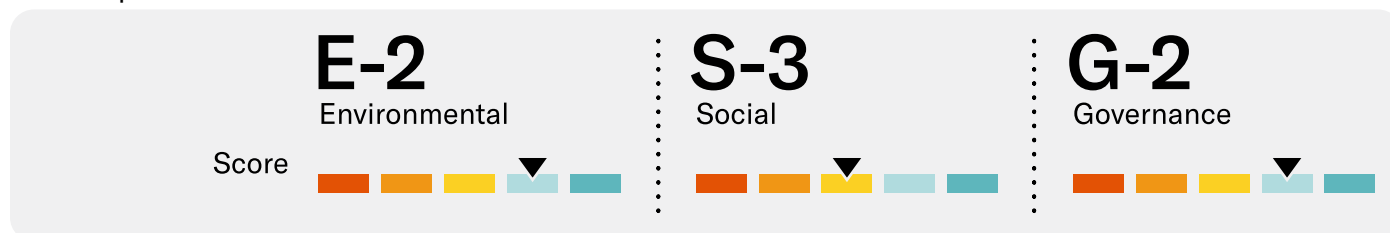


Source: Moody's Ratings

Telekom Austria's **CIS-2** indicates that ESG considerations have low credit impact on Telekom Austria's current rating, as the company has historically maintained a conservative financial policy with a strong track record of managing the environmental and social risks.

Exhibit 10

## ESG issuer profile scores



Source: Moody's Ratings

### Environmental

Telekom Austria's **E-2** is driven by its low exposure to environmental risks and is in line with the overall industry. The company's objectives to increase renewable power usage is in line with telecommunications industry trends. The nature of its telecommunications activities, with limited exposure to physical climate risk and very low emissions of pollutants and carbon, results in low environmental risk.

### Social

Telekom Austria's **S-3** reflects moderate social risks, including exposure to well entrenched labour unions with rigid employee regulations and changing demographic and societal trends towards the use of telecom related technology. This is partially mitigated through Telekom Austria's end products and services which include Telekom Austria's ability to adapt its services to cater to its customers' requirements. Data security and data privacy issues are prominent in the sector. Telecommunications providers exchange large amounts of data, and a breach could cause legal, regulatory or reputation issues. In addition, a breach could result in increased operational costs to mitigate cyberattacks and reduce exposure to the loss of private data.

### Governance

Telekom Austria **G-2** reflects its track record of maintaining a solid balance sheet and conservative financial policies. Telekom Austria is a public company, with the Austrian government owning 28.43% of the company. In addition, America Movil (Baa1 stable), owns a 60% equity stake, controls and fully consolidates Telekom Austria into its accounts.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.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.

### Liquidity analysis

Telekom Austria's liquidity has improved following the spinoff of the mobile towers business, enabling the company to repay around €1 billion in maturing debt.

As of September 2024, Telekom Austria had around €219 million of cash and cash equivalents. In addition, the group has a €1.3 billion undrawn committed credit facility, which is not subject to any significant adverse change clauses or financial covenants.

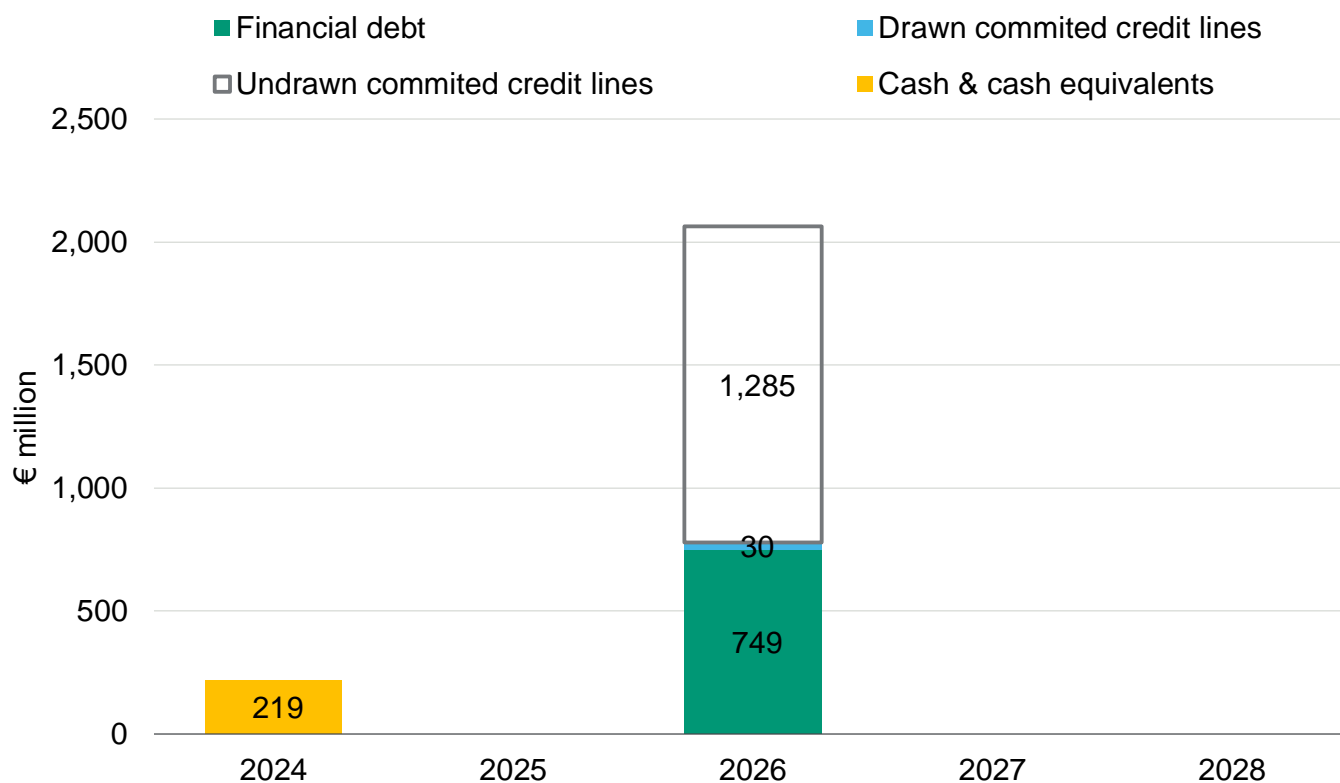
In addition, we expect the company to generate free cash flow of around €260 million and €314 million in 2024 and 2025, respectively.

Telekom Austria's liquidity is sufficient to cover its cash needs over the next 12-24 months. However, the company faces a debt maturity wall in 2026, when its RCF and a €750 million bond mature. While the company has a track record of aggressive management of debt maturities, the rating reflects our expectation that refinancing needs will be addressed at least one year ahead of maturity.

Exhibit 11

**Telekom Austria's debt load has reduced in recent years, but there is a debt maturity wall in 2026**

Telekom Austria's maturity profile as of June 2024



Sources: Moody's and Telekom Austria

**GRI considerations**

Because Telekom Austria is 28.42% owned by the Austrian government, the group is considered a GRI under our methodology. Therefore, we consider the following inputs:

1. A BCA of baa1, reflecting Telekom Austria's underlying credit strength
2. The local-currency rating of Austria (Aa1 stable)
3. The moderate default dependence, reflecting the financial and operational links between the group and the Austrian economy

We have factored into Telekom Austria's rating a moderate level of government support based on the following considerations:

1. There is no explicit expression of support from the government (that is, the government does not guarantee the debt of the GRI).
2. The government's 28.42% ownership of Telekom Austria, coupled with its willingness to act as a rational shareholder, suggests that it is unlikely to be the sole provider of support — instead, it would only consider providing support jointly with other shareholders in the form of a capital increase.
3. There are EU policy barriers to the provision of direct financial support, and the government is likely to obey these rules.
4. We consider the Austrian government's historical approach moderately interventionist — the government reviews and supervises Telekom Austria's business and funding plans, which we consider positive relative to support assumptions, and appoints a number of board members; it is unlikely that the Austrian government's reputation would be damaged in the event of a default by Telekom Austria.





## Methodology and scorecard

### Rating methodology

The A3 forward-looking outcome from the [Telecommunications Service Providers](#) rating methodology scorecard is one notch higher than Telekom Austria's BCA of baa1. The gap reflects the expectation that Telekom Austria may make use of the current financial flexibility while preserving the group's financial strength in line with its stated commitment to an A3 rating. The final rating of A3 benefits from one notch of government support uplift.

Exhibit 12

### Rating factors

Telekom Austria AG

	Current LTM 6/30/2024		Moody's 12-18 Month Forward View As of 11/12/2024 [2]	
Telecommunications Service Providers Industry Scorecard [1]	Measure	Score	Measure	Score
<b>Factor 1 : Scale (10%)</b>				
a) Revenue (USD Billion)	\$5.7	Ba	\$5.9 - \$6.0	Ba
<b>Factor 2 : Business Profile (25%)</b>				
a) Competitive Position	A	A	A	A
b) Market Share	Baa	Baa	Baa	Baa
<b>Factor 3 : Profitability and Efficiency (10%)</b>				
a) Revenue and Margin Sustainability	Baa	Baa	Baa	Baa
<b>Factor 4 : Leverage and Coverage (40%)</b>				
a) Debt / EBITDA	1.4x	A	1.4x	A
b) RCF / Net Debt	56.6%	A	56.3% - 62.2%	A
c) (EBITDA - CAPEX) / Interest Expense	7.1x	Aa	9.1x - 9.7x	Aaa
<b>Factor 5 : Financial Policy (15%)</b>				
a) Financial Policy	Baa	Baa	Baa	Baa
<b>Rating:</b>				
a) Scorecard-Indicated Outcome		Baa1		A3
b) Actual BCA assigned				baa1
Government-Related Issuer	<b>Factor</b>			
a) Baseline Credit Assessment	baa1			
b) Government Local Currency Rating	Aa1			
c) Default Dependence	Moderate			
d) Support	Moderate			
e) Actual Rating Assigned	A3			

[1] All ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] Moody's forward view assumes that Telekom Austria will make use of the current financial flexibility while preserving the group's financial strength in line with its stated commitment to an A3 rating.

Sources: Moody's Financial Metrics™ and Moody's Ratings

## Ratings

Exhibit 13

Category	Moody's Rating
<b>TELEKOM AUSTRIA AG</b>	
Outlook	Stable
Issuer Rating	A3
Senior Unsecured MTN -Dom Curr	(P)A3
Commercial Paper -Dom Curr	P-2
Other Short Term -Dom Curr	(P)P-2
<b>TELEKOM FINANZMANAGEMENT GMBH</b>	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	A3
Bkd Commercial Paper -Dom Curr	P-2
Bkd Other Short Term -Dom Curr	(P)P-2

Source: Moody's Ratings

## Appendix

Exhibit 14

Peer comparison  
Telekom Austria AG

(in \$ millions)	Telekom Austria AG			Deutsche Telekom AG			Swisscom AG			Elisa Corporation			Telia Company AB		
	A3 Stable			Baa1 Positive			A1 Rating(s) Under Review			Baa2 Stable			Baa1 Stable		
	FY	FY	LTM	FY	FY	LTM	FY	FY	LTM	FY	FY	LTM	FY	FY	LTM
	Dec-22	Dec-23	Jun-24	Dec-22	Dec-23	Jun-24	Dec-22	Dec-23	Jun-24	Dec-22	Dec-23	Sep-24	Dec-22	Dec-23	Jun-24
Revenue	5,181	5,579	5,613	120,356	121,083	122,516	11,585	12,328	12,490	2,244	2,358	2,359	8,495	8,374	8,359
EBITDA	1,936	2,080	2,126	41,693	46,264	48,332	4,654	5,146	5,202	773	822	837	2,922	2,827	2,902
Total Debt	2,868	3,223	3,085	163,749	162,241	161,325	8,805	9,167	14,214	1,465	1,519	1,550	8,914	10,370	8,763
Cash & Cash Equivalents	160	186	290	6,062	7,920	9,096	131	176	4,799	91	70	92	877	1,860	558
EBITDA margin %	37.4%	37.3%	37.9%	34.6%	38.2%	39.4%	40.2%	41.7%	41.6%	34.4%	34.8%	35.5%	34.4%	33.8%	34.7%
(EBITDA - Capex) / Interest Expense	12.3x	7.6x	6.8x	2.3x	3.0x	3.3x	17.7x	16.6x	14.5x	30.3x	15.4x	11.0x	3.5x	2.6x	2.8x
Debt / EBITDA	1.5x	1.5x	1.5x	3.9x	3.4x	3.4x	1.8x	1.7x	2.8x	1.9x	1.8x	1.8x	3.2x	3.5x	3.0x
FCF / Debt	15.1%	8.5%	14.0%	4.2%	7.4%	7.7%	2.5%	5.0%	2.2%	-2.3%	-1.7%	9.7%	-3.4%	1.1%	5.1%
RCF / Debt	51.5%	49.3%	58.3%	21.6%	22.8%	22.6%	35.1%	38.0%	22.4%	21.3%	20.8%	32.3%	17.2%	18.0%	17.7%

All figures and ratios are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 15

## Telekom Austria's Moody's-adjusted debt breakdown

(in € millions)	2019	2020	2021	2022	2023	LTM Jun-24
<b>As reported debt</b>	<b>3,603.4</b>	<b>3,397.7</b>	<b>3,366.4</b>	<b>2,549.6</b>	<b>2,763.5</b>	<b>2,724.0</b>
Pensions	164.4	179.5	176.0	137.6	154.2	154.2
Non-Standard Adjustments	1.2	-	-	-	-	-
<b>Moody's-adjusted debt</b>	<b>3,769.0</b>	<b>3,577.2</b>	<b>3,542.4</b>	<b>2,687.2</b>	<b>2,917.8</b>	<b>2,878.2</b>

Source: Moody's Financial Metrics™

Exhibit 16

## Telekom Austria's Moody's-adjusted EBITDA breakdown

(in € millions)	2019	2020	2021	2022	2023	LTM Jun-24
<b>As reported EBITDA</b>	<b>1,538.4</b>	<b>1,555.9</b>	<b>1,708.2</b>	<b>1,845.3</b>	<b>1,932.9</b>	<b>1,974.9</b>
Pensions	(4.5)	(4.4)	(4.6)	(4.2)	(3.1)	(3.1)
Interest Expense	-	-	-	(4.9)	(6.9)	(6.9)
Unusual Items	(0.2)	-	-	-	-	-
Non-Standard Adjustments	0.1	0.1	0.2	0.5	0.5	0.5
<b>Moody's-adjusted EBITDA</b>	<b>1,533.7</b>	<b>1,551.6</b>	<b>1,703.7</b>	<b>1,836.8</b>	<b>1,923.4</b>	<b>1,965.4</b>

Source: Moody's Financial Metrics™

Exhibit 17

**Telekom Austria AG**

Select historical and forecast Moody's-adjusted financial data

(in € millions)	2019	2020	2021	2022	2023	LTM Jun-24
<b>INCOME STATEMENT</b>						
Revenue	4,469	4,464	4,666	4,916	5,159	5,189
EBITDA	1,534	1,552	1,704	1,837	1,923	1,965
<b>BALANCE SHEET</b>						
Cash & Cash Equivalents	140	211	534	150	169	271
Total Debt	3,769	3,577	3,542	2,687	2,918	2,878
<b>CASH FLOW</b>						
Capital Expenditures	(1,023)	(896)	(1,008)	(1,055)	(1,166)	(1,243)
Dividends	(140)	(153)	(167)	(187)	(213)	(0)
Retained Cash Flow (RCF)	1,212	1,254	1,319	1,385	1,437	1,677
RCF / Net Debt	33.4%	37.2%	43.9%	54.6%	52.3%	64.3%
Free Cash Flow (FCF)	186	331	315	405	248	404
FCF / Debt	4.9%	9.2%	8.9%	15.1%	8.5%	14.0%
<b>PROFITABILITY</b>						
EBITDA margin %	34.3%	34.8%	36.5%	37.4%	37.3%	37.9%
<b>INTEREST COVERAGE</b>						
(EBITDA - CAPEX) / Interest Expense	4.7x	6.0x	6.6x	12.3x	7.6x	6.8x
<b>LEVERAGE</b>						
Debt / EBITDA	2.5x	2.3x	2.1x	1.5x	1.5x	1.5x

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™

© 2024 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 OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") 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 MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS 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 MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS 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 OR OTHERWISE MAKES AVAILABLE ITS MATERIALS 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 MATERIALS 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 MATERIALS 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. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS 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 Materials.

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. 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's.com](http://www.moody's.com) under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

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 657AFSL 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 India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.