

Operating and Financial Review

The following discussion should be considered together with our unaudited financial information included with this review and the periodic reports we file with the Securities and Exchange Commission, including the section contained in our Annual Report on Form 20-F for the fiscal year ended December 31, 2021, “Item 5. Operating and Financial Review and Prospects.” Certain information and disclosures normally included in consolidated financial statements prepared in accordance with U.S. Generally Accepted Accounting Principles (“U.S. GAAP”) have been omitted from this review. The unaudited information included with this review is derived from our preliminary internal financial reports and is subject to revision based on the completion of our year-end processes necessary to finalize our audited financial statements as of and for the year ended December 31, 2022.

As used herein, references to “we,” “us,” the “company,” or “trivago,” or similar terms shall mean trivago N.V. and, as the context requires, its subsidiaries.

Overview

trivago is a global hotel and accommodation search platform. We are focused on reshaping the way travelers search for and compare different types of accommodations, such as hotels, vacation rentals and apartments, while enabling our advertisers to grow their businesses by providing them with access to a broad audience of travelers via our websites and apps. Our platform allows travelers to make informed decisions by personalizing their search for accommodations and providing them with access to a deep supply of relevant information and prices. As of December 31, 2022, we offered access to more than 5.0 million hotels and other types of accommodation in over 190 countries, including over 3.8 million units of alternative accommodation, such as vacation rentals and apartments.

Our search platform forms the core of our user experience and can be accessed globally via 53 localized websites and apps available in 31 languages. Our users initially search via a text-based search function, which supports searches across a broad range of criteria. This leads through to a listings page that displays search results and allows for further refinement based on more nuanced filters. Additionally, we enhance our users’ experience by giving them the option to display their search results in listing or map formats. Users can search our platform on desktop and mobile devices, and benefit from a familiar user interface, resulting in a consistent user experience.

Financial Summary & Operating Metrics (€ millions, unless otherwise stated)

	Three months ended December 31,			Twelve months ended December 31,		
	2022	2021	Δ Y/Y	2022	2021	Δ Y/Y
Total revenue	104.9	89.1	18%	535.0	361.4	48%
Qualified Referrals (in millions)	57.6	62.4	(8)%	311.6	282.2	10%
Revenue per Qualified Referral (in €)	1.76	1.34	31%	1.67	1.24	35%
Operating income/(loss)	17.8	13.2	35%	(120.3)	10.1	n.m.
Net income/(loss)	10.4	15.2	(32)%	(127.2)	10.7	n.m.
Return on Advertising Spend	180.4%	198.6%	(18.2) ppts	164.4%	156.3%	8.1 ppts
Adjusted EBITDA ⁽¹⁾	22.6	19.6	15%	107.5	34.6	211%

n.m. not meaningful

⁽¹⁾ “Adjusted EBITDA” is a non-GAAP measure. Please see “Definitions of Non-GAAP Measures” and “Tabular Reconciliations for Non-GAAP Measures” on pages 20 to 21 herein for explanations and reconciliations of non-GAAP measures used throughout this review.

Recent Trends

In the fourth quarter of 2022, total revenue increased by €15.8 million, or by 18%, to €104.9 million compared to the same period in 2021. Average booking values¹ continued to be positively impacted by increased average daily hotel rates and were, as a result, significantly higher compared to the prior year period. This was a key driver of our financial performance, which is reflected in the increase of our Revenue-Per-Qualified-Referral (RPQR) year-over-year. We have observed the first signs of consumers attempting to mitigate increasing average daily hotel rates by, for example, shortening their length of stay or looking for cheaper destinations and accommodations. Volumes were impacted by a variety of factors. The significant decrease in Qualified Referrals in Americas of 20% year-over-year was mostly driven by a large-scale full market test in Brazil. While this led to a significant decrease in click-outs and Qualified Referrals, overall booking volume in that segment increased year-over-year. In our segment Rest of World, Qualified Referrals were negatively impacted by a decline in volumes in certain Asian geographic markets, as well as the negative impact of the war in Ukraine in Russia and Central Eastern European markets. In Developed Europe, Qualified Referrals increased slightly year-over-year, driven by a recovery in travel demand.

For the full year 2022, net loss was €127.2 million, mainly driven by the impairment charges recorded in the second and third quarters of 2022 totaling €184.6 million. In the same period, we achieved a record Adjusted EBITDA of €107.5 million, more than 50% above our 2019 pre-COVID result, with an Adjusted EBITDA margin of 20.1%². In 2022, revenue grew by 48% compared to 2021, while cash and cash equivalents and short-term investments increased to €293.9 million.

2023 began with a year-over-year Referral Revenue increase in January of 34%, which partly reflects the weak travel demand in the same period a year ago when, in particular, Europe had travel restrictions in place due to the impact of the Omicron variant of COVID-19. We have increased our marketing spend year-over-year in anticipation of stronger travel demand at the beginning of the year and are encouraged by the current trends in our branded traffic.

¹ Average booking value is the the average amount our advertisers obtain from Qualified Referrals as a result of hotels and other accommodation booked on their sites. We estimate this amount from data voluntarily provided to us by certain advertisers.

² Adjusted EBITDA margin is calculated as Adjusted EBITDA of €107.5 million divided by total revenue of €535.0 million for the twelve months ended December 31, 2022. Please see "Definitions of Non-GAAP Measures" and "Tabular Reconciliations for Non-GAAP Measures" on pages 20 to 21 herein for explanations and reconciliations of non-GAAP measures used throughout this review.

Revenue

Referral Revenue & Other Revenue

We match our users' searches with large numbers of hotel and other accommodation offers through our auction platform, which we call our marketplace. With our marketplace, we provide advertisers a competitive forum to access user traffic by facilitating a vast quantity of auctions on any particular day. Advertisers submit hotel room and other accommodation rates and participate in our marketplace primarily by making bids for each user click on an advertised rate for a hotel or other accommodation on a cost-per-click, or CPC, basis. We also offer the option for our advertisers to participate in our marketplace on a cost-per-acquisition, or CPA, basis.

We earn substantially all of our revenue when users of our websites and apps click on hotel and accommodation offers or advertisements in our search results and are referred to one of our advertisers. We call this our Referral Revenue.

Management has identified three reportable segments, which correspond to our three operating segments: the Americas, Developed Europe and Rest of World (RoW). Our Americas segment is comprised of Argentina, Brazil, Canada, Chile, Colombia, Ecuador, Mexico, Peru, the United States and Uruguay. Our Developed Europe segment is comprised of Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Our RoW segment is comprised of all other countries. In the fourth quarter of 2022, the most significant countries by revenue in that segment were Japan, Australia, Turkey, Israel and India.

We also earn revenue by offering our advertisers business-to-business (B2B) solutions, such as display advertisements and white label services, and from subscription fees earned from advertisers for the trivago Business Studio PRO Package. These revenues do not represent a significant portion of our revenue.

Referral Revenue by Segment & Other Revenue (€ millions)

	Three months ended December 31,				Twelve months ended December 31,			
	2022	2021	Δ €	Δ %	2022	2021	Δ €	Δ % Y/Y
Americas	€ 41.8	€ 36.2	5.6	15%	€ 216.4	€ 140.1	76.3	54%
Developed Europe	43.9	35.7	8.2	23%	237.7	163.7	74.0	45%
Rest of World	15.7	11.9	3.8	32%	67.7	45.6	22.1	48%
Total Referral Revenue	€ 101.4	€ 83.7	17.7	21%	€ 521.8	€ 349.4	172.4	49%
Other revenue	3.4	5.4	(2.0)	(37)%	13.2	12.0	1.2	10%
Total revenue	€ 104.9	€ 89.1	15.8	18%	€ 535.0	€ 361.4	173.6	48%

Note: Some figures may not add due to rounding.

In the fourth quarter of 2022, total revenue increased by €15.8 million, or by 18%, compared to the same period in 2021. In the twelve months ended December 31, 2022, total revenue increased by €173.6 million, or by 48%, compared to the same period in 2021.

In the fourth quarter of 2022, Referral Revenue increased to €41.8 million, €43.9 million and €15.7 million, or by 15%, 23% and 32% in Americas, Developed Europe and RoW, respectively, compared to the same period in 2021. This increase was mainly driven by an increase in RPQR across all segments, which was partly offset by a decrease in Qualified Referrals in Americas and RoW. In the twelve months ended December 31, 2022, Referral Revenue increased to €216.4 million, €237.7 million and €67.7 million, or by 54%, 45% and 48% in Americas, Developed Europe and RoW, respectively. This increase was driven by an increase in both RPQR and Qualified Referrals across all segments.

Other revenue decreased by €2.0 million, or 37%, during the fourth quarter of 2022, and increased by €1.2 million, or 10%, during the twelve months ended December 31, 2022. The decrease in the fourth quarter of 2022 was driven by our decision in the second quarter of 2022 to discontinue some of our B2B products. In the twelve months ended December 31, 2022, the increase in other revenue was mainly driven by our B2B products, particularly until the end of the third quarter of 2022.

Qualified Referrals

Qualified Referrals indicate the number of unique visitors per day that generate at least one referral. The following table sets forth the Qualified Referrals for our reportable segments:

Qualified Referrals by Segment (in millions)

	Three months ended December 31,				Twelve months ended December 31,			
	2022	2021	Δ	Δ %	2022	2021	Δ	Δ % Y/Y
Americas	16.4	20.4	(4.0)	(20)%	87.3	82.6	4.7	6%
Developed Europe	23.9	23.3	0.6	3%	139.0	119.6	19.4	16%
Rest of World	17.3	18.6	(1.3)	(7)%	85.3	80.0	5.3	7%
Total	57.6	62.4	(4.8)	(8)%	311.6	282.2	29.4	10%

Note: Some figures may not add due to rounding.

In the fourth quarter of 2022, total Qualified Referrals decreased by 8%, as they decreased by 20% and 7% in Americas and RoW, respectively, while they increased by 3% in Developed Europe compared to the same period in 2021. The decline in Qualified Referrals in Americas was mostly driven by a large-scale market test in Brazil. The decrease in RoW was driven by traffic declines in certain Asian markets as well as declines in Russia and Central Eastern European markets resulting from the war in Ukraine, which was partly offset by a significant recovery in Qualified Referrals in Japan compared to the same period in 2021. The increase in Developed Europe was driven by the recovery in travel demand, considering the weak comparative period in 2021, when COVID-19 mobility restrictions were in place.

During the twelve months ended December 31, 2022, total Qualified Referrals increased by 10% compared to the same period in 2021. Qualified Referrals increased by 6%, 16% and 7% in Americas, Developed Europe and RoW respectively, compared to the same period in 2021. Qualified Referrals increased across all regions in the first half of 2022 due to the increase in traffic volumes, reflecting the easing of COVID-19 related mobility restrictions, compared to the same period in 2021. This increase was partly offset by the market test in Brazil and increased competition to acquire traffic in Developed Europe.

Revenue Per Qualified Referral

We use RPQR to measure how effectively we convert Qualified Referrals to revenue. RPQR is calculated as Referral Revenue divided by the total number of Qualified Referrals in a given period. RPQR is a key financial metric that describes the quality of our referrals, the efficiency of our marketplace and, as a consequence, how effectively we monetize the referrals we provide our advertisers. Furthermore, we use RPQR to help us detect and analyze changes in market dynamics. The following table sets forth the RPQR for our reportable segments for the periods indicated:

RPQR by Segment (in €)

	Three months ended December 31,			Twelve months ended December 31,		
	2022	2021	Δ %	2022	2021	Δ % Y/Y
Americas	€ 2.55	€ 1.77	44%	€ 2.48	€ 1.70	46%
Developed Europe	1.84	1.53	20%	1.71	1.37	25%
Rest of World	0.91	0.64	42%	0.79	0.57	39%
Consolidated RPQR	€ 1.76	€ 1.34	31%	€ 1.67	€ 1.24	35%

In the fourth quarter of 2022, consolidated RPQR increased by 31% as RPQR increased by 44%, 20% and 42% in Americas, Developed Europe and RoW, respectively, compared to the same period in 2021. These increases in RPQR were driven by higher bidding levels. RPQR was positively impacted by a significant increase in average booking values across all segments and, in Americas, by the strengthening of the U.S. dollar against the euro.

In the twelve months ended December 31, 2022, consolidated RPQR increased by 35% as RPQR increased by 46%, 25% and 39% in Americas, Developed Europe and RoW respectively, compared to the same period in 2021. The increase in RPQR in the twelve months ended December 31, 2022, was mainly driven by the significant increase in bidding levels (mainly driven by better booking conversion and higher average booking values) and by a positive foreign exchange rate impact resulting from the strengthening of the U.S. dollar against the euro throughout the year 2022.

Advertiser Concentration

We generate the majority of our Referral Revenue from online travel agencies, or OTAs. For brands affiliated with Expedia Group, including Brand Expedia, Hotels.com, Orbitz, Travelocity, Hotwire, Wotif, Vrbo and ebookers, the share of our Referral Revenue was 37% and 33% for the three and twelve months ended December 31, 2022, respectively, compared to 33% and 26% in the same periods in 2021. For brands affiliated with Booking Holdings, including Booking.com, Agoda and priceline.com, the share of our Referral Revenue was 46% and 49% for the three and twelve months ended December 31, 2022, respectively, compared to 49% and 55% in the same periods in 2021.

Return on Advertising Spend (ROAS)

We track the ratio of our Referral Revenue to our Advertising Spend, or ROAS. We believe that ROAS is an indicator of the efficiency of our advertising and it is our primary operating metric. The following table sets forth the ROAS for our reportable segments:

ROAS by Segment (in %)

	Three months ended December 31,			Twelve months ended December 31,		
	2022	2021	Δ ppts	2022	2021	Δ ppts
ROAS						
Americas	191.8%	209.6%	(17.8) ppts	164.4%	148.9%	15.5 ppts
Developed Europe	170.1%	183.5%	(13.4) ppts	158.6%	153.0%	5.6 ppts
Rest of World	182.3%	217.7%	(35.4) ppts	188.8%	202.9%	(14.1) ppts
Consolidated ROAS	180.4%	198.6%	(18.2) ppts	164.4%	156.3%	8.1 ppts

In the fourth quarter of 2022, consolidated ROAS was 180.4%, compared to 198.6% in the same period in 2021. ROAS decreased to 191.8%, 170.1% and 182.3% in Americas, Developed Europe and RoW respectively, compared to the same period in 2021. The ROAS decrease across all segments was driven by a significant increase in Advertising Spend in response to the increase in travel demand, which offset the increase in Referral Revenue.

In the fourth quarter of 2022, Advertising Spend increased by 26%, 33% and 56% or by €4.5 million, €6.4 million and €3.1 million in Americas, Developed Europe and RoW, respectively, compared to the same period in 2021. Advertising Spend increased across all segments, considering a muted level of Advertising Spend in the fourth quarter of 2021 due to COVID-19 related restrictions.

In the twelve months ended December 31, 2022, consolidated ROAS increased to 164.4%, compared to 156.3% in the same period in 2021. ROAS increased by 15.5 pts and 5.6 pts in Americas and Developed Europe, respectively, but decreased by 14.1 pts in RoW. The ROAS increase in Americas and Developed Europe was mainly driven by the increase in Referral Revenue described above. The decrease in RoW was driven by the significant increase in Advertising Spend, particularly in Japan, considering a muted level of Advertising Spend in the fourth quarter of 2021 due to COVID-19 related restrictions.

In the twelve months ended December 31, 2022, Advertising Spend increased by 40%, 40% and 60% or by €37.5 million, €42.8 million and €13.4 million in Americas, Developed Europe and RoW, respectively, compared to the same period in 2021. Advertising Spend was increased across all segments throughout the year in response to the increase in global travel demand compared to the same period in 2021.

Expenses

Expenses by cost category (€ millions)

	Costs and expenses			As a % of revenue		
	Three months ended December 31,			Three months ended December 31,		
	2022	2021	Δ %	2022	2021	Δ in ppts
Cost of revenue	€ 3.5	€ 2.8	25 %	3 %	3 %	— %
<i>of which share-based compensation</i>	0.0	0.1	(100)%			
Selling and marketing	61.5	50.1	23 %	59 %	56 %	3 %
<i>of which share-based compensation</i>	0.1	0.3	(67)%			
Technology and content	12.4	13.2	(6)%	12 %	15 %	(3)%
<i>of which share-based compensation</i>	0.7	1.0	(30)%			
General and administrative	9.7	9.7	— %	9 %	11 %	(2)%
<i>of which share-based compensation</i>	2.8	2.8	— %			
Amortization of intangible assets	0.0	0.0	— %	0 %	0 %	— %
Total costs and expenses	€ 87.1	€ 75.8	15%	83%	85 %	(2)%

	Costs and Expenses			As a % of Revenue		
	Twelve months ended December 31,			Twelve months ended December 31,		
	2022	2021	Δ % Y/Y	2022	2021	Δ in ppts
Cost of revenue	€ 12.7	€ 11.5	10%	2 %	3 %	(1)%
<i>of which share-based compensation</i>	0.2	0.3	(33)%			
Selling and marketing	342.0	249.2	37%	64 %	69 %	(5)%
<i>of which share-based compensation</i>	0.7	1.1	(36)%			
Technology and content	54.9	52.4	5%	10 %	15 %	(5)%
<i>of which share-based compensation</i>	3.0	3.9	(23)%			
General and administrative	60.9	38.2	59%	11 %	11 %	— %
<i>of which share-based compensation</i>	11.4	12.0	(5)%			
Amortization of intangible assets	0.1	0.1	—%	0 %	0 %	— %
Impairment of intangible assets and goodwill	184.6	—	100%	35%	— %	35 %
Total costs and expenses	€ 655.3	€ 351.4	86%	122%	97 %	25 %

Note: Some figures may not add due to rounding.

Cost of revenue

In the fourth quarter of 2022, cost of revenue increased by €0.7 million to €3.5 million, and in the twelve months ended December 31, 2022, increased by €1.2 million to €12.7 million, or 10%, period-over-period.

The increase in the fourth quarter of 2022 was driven by higher cloud-related service provider costs and higher personnel costs mainly due to an increase in salaries compared to the same period in 2021. In the twelve months ended December 31, 2022, the increase was driven by higher cloud-related service provider costs and higher personnel related costs, partly offset by lower data center-related depreciation expenses compared to the same period in 2021.

Selling and marketing

In the fourth quarter of 2022, selling and marketing expense increased by €11.4 million, or by 23%, period-over-period to €61.5 million, of which €56.2 million, or 91%, was Advertising Spend. In the twelve months ended December 31, 2022, selling and marketing expense increased by €92.8 million, or by 37% period-over-period to €342.0 million, of which €317.3 million, or 93%, was Advertising Spend.

Advertising Spend

In the fourth quarter of 2022, Advertising Spend increased to €21.8 million, €25.8 million and €8.6 million in Americas, Developed Europe and RoW, respectively, compared to €17.3 million, €19.4 million and €5.5 million in the same period in 2021. Advertising Spend increased across all segments, considering a muted level of Advertising Spend in the fourth quarter of 2021 due to COVID-19 related restrictions.

In the twelve months ended December 31, 2022 Advertising Spend increased to €131.6 million, €149.8 million and €35.9 million in Americas, Developed Europe and RoW, respectively, compared to €94.1 million, €107.0 million and €22.5 million in the same period in 2021. Advertising Spend was increased across all segments throughout the year in response to the increase in global travel demand compared to the same period in 2021.

Other marketing expense

In the fourth quarter of 2022, other selling and marketing expense decreased by €2.6 million to €5.3 million, or 33%, period-over-period, and in the twelve months ended December 31, 2022, decreased by €0.9 million to €24.7 million, or 3.5%.

The decrease in the fourth quarter of 2022 was mainly driven by lower expenses incurred to acquire traffic and lower television advertisement production costs.

The decrease in the twelve months ended December 31, 2022 was primarily driven by lower television advertisement production costs compared to the same period in 2021, partly offset by higher expenses incurred to acquire traffic and higher digital services taxes.

Technology and content

In the fourth quarter of 2022, technology and content expense decreased by €0.8 million to €12.4 million, or 6%, period-over-period, and in the twelve months ended December 31, 2022, increased by €2.5 million to €54.9 million, or 5%, period-over-period.

The decrease in the fourth quarter of 2022 was primarily driven by lower office related expenses, see "*Costs across multiple categories*" below, and lower share-based compensation expense. These were partly offset by further investments to improve our platform.

The increase in the twelve months ended December 31, 2022 was primarily driven by higher personnel costs resulting from higher salaries and direct employee benefits compared to the same period in 2021, partly offset by lower headcount and increased capitalization of our developers' salaries.

The increase was further driven by an impairment of capitalized software assets in the second quarter of 2022 and by the non-recurrence of a gain realized in the first quarter of 2021 on the modification of the lease for our Düsseldorf campus, see "*Costs across multiple categories*" below. These were partly offset by lower depreciation expense and lower share-based compensation expense.

General and administrative

In the fourth quarter of 2022, general and administrative expense remained stable at €9.7 million, and in the twelve months ended December 31, 2022, increased by €22.7 million to €60.9 million, or 59%, period-over-period.

In the fourth quarter of 2022, a decrease in office related expenses (see "*Costs across multiple categories*" below) was offset by higher professional fees compared to the same period in 2021.

The increase in the twelve months ended December 31, 2022, was mainly driven by the recognition of additional expense of €20.7 million, representing the incremental portion not covered by provisions we had previously established in relation to the proceeding brought by the Australian Competition and Consumer Commission (ACCC) against us.

Costs across multiple categories

In the first quarter of 2021 we reduced our office space in Düsseldorf and recorded a €1.2 million gain on our campus lease modification.

Office-related expenses were lower by €0.9 million in the fourth quarter of 2022 compared to the same period in 2021. The decrease was driven by a campus utilities accrual release due to the settlement of the prior year invoice and the resulting adjustments to the current year accrual.

Share-based compensation decreased by €0.6 million to €3.6 million in the fourth quarter of 2022, compared to the same period in 2021, and decreased by €2.0 million to €15.3 million in the twelve months ended December 31, 2022.

Amortization of intangible assets

Amortization of intangible assets was €34 thousand in both the fourth quarter of 2022 and 2021, and was €0.1 million in both the twelve months ended December 31, 2022 and 2021, as we amortize intangible assets acquired through the weekengo GmbH acquisition.

Impairment of intangible assets and goodwill

We performed a quantitative goodwill impairment analysis in both the second and third quarters of 2022 as a result of deteriorating macroeconomic conditions, including rising interest rates, increased inflation and more uncertainty in the overall economic environment. As a result, we recorded a cumulative impairment charge of €80.0 million on our indefinite-lived intangible assets and a goodwill impairment charge of €104.6 million on our Developed Europe reporting unit.

Income taxes, net income/(loss) and Adjusted EBITDA⁽¹⁾ (€ millions)

	Three months ended December 31,			Twelve months ended December 31,		
	2022	2021	Δ €	2022	2021	Δ €
Operating income/(loss)	€ 17.8	€ 13.2	4.6	€ (120.3)	€ 10.1	(130.4)
Other income/(expense)						
Interest expense	(0.0)	(0.1)	0.1	(0.1)	(0.4)	0.3
Other, net	(0.8)	12.6	(13.4)	0.1	13.6	(13.5)
Total other income/(expense), net	€ (0.8)	€ 12.6	(13.4)	€ 0.0	€ 13.2	(13.2)
Income/(loss) before income taxes	16.9	25.7	(8.8)	(120.2)	23.3	(143.5)
Expense/ (benefit) for income taxes	6.4	10.5	(4.1)	6.6	12.6	(6.0)
Income/(loss) before equity method investment	€ 10.5	€ 15.2	(4.7)	€ (126.8)	€ 10.7	(137.5)
Loss from equity method investment	(0.1)	—	(0.1)	(0.4)	—	(0.4)
Net income/(loss)	€ 10.4	€ 15.2	(4.8)	€ (127.2)	€ 10.7	(137.9)
Adjusted EBITDA⁽¹⁾	€ 22.6	€ 19.6	3.0	€ 107.5	€ 34.6	72.9

Note: Some figures may not add due to rounding.

(1) "Adjusted EBITDA" is a non-GAAP measure. Please see "Definitions of Non-GAAP Measures" and "Tabular Reconciliations for Non-GAAP Measures" on pages 20 to 21 herein for explanations and reconciliations of non-GAAP measures used throughout this review.

Income taxes

Income tax expense was €6.4 million in the fourth quarter of 2022, compared to income tax expense of €10.5 million in the fourth quarter of 2021. The total weighted average tax rate was 31.5%, which was mainly driven by the German statutory tax rate of approximately 31.2%. Our effective tax rate for the fourth quarter of 2022 was 37.9%, compared to 40.9% in the same period in 2021. The difference between the weighted average tax rate of 31.5% and the effective tax rate of 37.9% in the fourth quarter of 2022 is primarily attributable to share-based compensation expense, which is non-deductible for tax purposes.

Income tax expense was €6.6 million in the twelve months ended December 31, 2022, compared to €12.6 million in the twelve months ended December 31, 2021. Our effective tax rate for the twelve months ended December 31, 2022 was (5.5)% compared to 54.0% in the same period in 2021. The difference between the weighted average tax rate and the effective tax rate for the twelve months ended December 31, 2022 is primarily attributable to the goodwill impairment and share-based compensation expense, which are non-deductible for tax purposes.

An uncertain tax position in connection with unrecognized tax benefits relating to the deductibility of expenses amounted to €9.2 million as of December 31, 2022. A liability for these tax benefits was included under other long-term liabilities in the consolidated financial statements.

Net Income/(loss) and Adjusted EBITDA

Net income in the fourth quarter of 2022 was €10.4 million as compared to a net income of €15.2 million in the fourth quarter of 2021. The decrease was mainly driven by the non-recurrence of a €12.0 million COVID-19 subsidy that we had received from the German government in the fourth quarter of 2021 recognized as other income, and was partly offset by the €4.1 million lower income tax expense in the fourth quarter of 2022.

Net loss in the twelve months ended December 31, 2022 was €127.2 million compared to a net income of €10.7 million in the twelve months ended December 31, 2021. The decline was mainly driven by the impairment charges recorded in the second and third quarters of 2022 totaling €184.6 million, the recognition of €20.7 million of additional expense relating to the penalty imposed on us by the Australian Federal Court in the first quarter of 2022 and a €12.0 million COVID-19 government subsidy received in 2021. These were partly offset by the recovery of travel demand, resulting in an increase in Referral Revenue of €172.4 million and in Advertising Spend of €93.7 million.

Adjusted EBITDA increased by €3.0 million to €22.6 million in the fourth quarter of 2022, and increased by €72.9 million to €107.5 million in the twelve months ended December 31, 2022 compared to the same period in 2021, driven by the recovery of travel demand. Adjusted EBITDA excludes the effects of the €184.6 million impairment charge recorded during 2022.

The decision of the Australian Federal Court in the first quarter of 2022 had a significant negative impact on our operating expenses for the twelve months ended December 31, 2022 of €20.7 million. Due to the size and unusual nature of the accrual relating to the judgement of the Australian Federal Court and its distorting effect on the understanding of our underlying business developments, it is also excluded when calculating Adjusted EBITDA.

In the twelve months ended December 31, 2021, a €1.2 million gain on the campus lease modification was excluded from Adjusted EBITDA. The gain was considered as a reconciling adjustment within the certain other items reconciling line as shown in the "*Tabular Reconciliations for Non-GAAP Measures*" on page 21 herein.

Balance sheet and cash flows

Total cash, cash equivalents and restricted cash were €248.9 million as of December 31, 2022, compared to €256.7 million as of December 31, 2021, which includes €0.3 million of long-term restricted cash presented in investments and other assets.

The decrease of €7.8 million during the twelve months ended December 31, 2022 was mainly driven by cash used in investing activities of €54.9 million and cash used in financing activities of €19.6 million, partly offset by cash provided by operating activities of €66.3 million.

Cash used in investing activities during the twelve months ended December 31, 2022 was primarily driven by the purchase of €50.0 million in term deposits, an investment of €5.9 million in an equity-method investee and a €4.0 million net cash outflow related to capital expenditures, including internal-use software and website development. These were partly offset by proceeds from sales and maturities of investments of €5.0 million.

Cash used in financing activities in the twelve months ended December 31, 2022 was primarily driven by the purchase of treasury stock for €19.6 million, which includes the purchase of 20,000,000 Class A shares from Peter Vinnemeier, one of our founders, for €19.3 million in November 2022.

Cash provided by operating activities for the twelve months ended December 31, 2022 was primarily driven by the adjustment of non-cash items totaling €188.1 million included in the period net loss and positive changes in operating assets and liabilities of €5.4 million.

Non-cash items reconciled from net loss include the intangible assets and goodwill impairment charge of €184.6 million, share-based compensation of €15.3 million and depreciation of €6.0 million, partly offset by a reduction of deferred income taxes of €19.7 million.

The positive change in operating assets and liabilities of €5.4 million was primarily due to an increase in taxes payable of €10.6 million and an increase in accounts payable of €5.3 million resulting mostly from

higher Advertising Spend. These were partly offset by an increase in accounts receivable of €10.1 million mostly from higher revenues in the fourth quarter of 2022 compared to same period in 2021.

In the second quarter of 2022, we paid the penalty imposed on us by the Australian Federal Court in an amount of €29.6 million, which was previously accrued for over multiple prior accounting periods.

Our current ratio decreased from 7.3 as of December 31, 2021 to 7.1 as of December 31, 2022, as the relative increase in our current liabilities was higher than the relative increase in our current assets compared to December 31, 2021.

trivago N.V. Condensed consolidated balance sheets
(€ thousands, except per share amounts) (unaudited)

ASSETS	As of December 31, 2022	As of December 31, 2021
Current assets:		
Cash and cash equivalents	€ 248,584	€ 256,378
Restricted cash	342	—
Accounts receivable, net of allowance for credit losses of €418 and €658, respectively	25,679	23,707
Accounts receivable, related party	24,432	16,506
Short-term investments	45,000	—
Tax receivable	498	3,527
Prepaid expenses and other current assets	8,669	10,273
Total current assets	353,204	310,391
Property and equipment, net	13,075	15,905
Operating lease right-of-use assets	45,028	48,323
Deferred income taxes	—	26
Investments and other assets	8,408	3,250
Intangible assets, net	89,950	170,085
Goodwill	181,927	286,539
TOTAL ASSETS	€ 691,592	€ 834,519
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	€ 19,941	€ 14,053
Income taxes payable	12,325	4,358
Deferred revenue	1,689	2,174
Payroll liabilities	2,454	3,289
Accrued expenses and other current liabilities	8,675	16,323
Operating lease liability	4,538	2,269
Total current liabilities	49,622	42,466
Operating lease liability	40,729	45,267
Deferred income taxes	30,050	49,810
Other long-term liabilities	9,455	3,192
Stockholders' equity:		
Class A common stock, €0.06 par value - 700,000,000 shares authorized Shares issued: 124,305,225 and 96,704,815, respectively Shares outstanding: 104,305,225 and 96,704,815, respectively	7,458	5,802
Class B common stock, €0.60 par value - 320,000,000 shares authorized, 237,476,895 and 261,962,688 shares issued and outstanding, respectively	142,486	157,178
Treasury stock at cost - Class A shares, 20,000,000 and nil shares, respectively	(19,960)	—
Reserves	863,987	835,839
Contribution from Parent	122,307	122,307
Accumulated other comprehensive income	54	36
Accumulated deficit	(554,596)	(427,378)
Total stockholders' equity	561,736	693,784
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	€ 691,592	€ 834,519

trivago N.V. Condensed consolidated statements of operations
(€ thousands, except per share amounts) (unaudited)

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
Revenue	€ 67,473	€ 61,363	€ 361,697	€ 270,110
Revenue from related party	37,416	27,763	173,307	91,355
Total revenue	104,889	89,126	535,004	361,465
Costs and expenses:				
Cost of revenue, including related party, excluding amortization ⁽¹⁾	3,492	2,817	12,691	11,500
Selling and marketing, including related party ⁽¹⁾⁽²⁾⁽³⁾	61,533	50,119	342,024	249,196
Technology and content, including related party ⁽¹⁾⁽²⁾⁽³⁾	12,421	13,235	54,921	52,374
General and administrative, including related party ⁽¹⁾⁽²⁾⁽³⁾	9,650	9,739	60,852	38,208
Amortization of intangible assets ⁽²⁾	34	34	136	136
Impairment of intangible assets and goodwill	—	—	184,642	—
Operating income/(loss)	17,759	13,182	(120,262)	10,051
Other income/(expense)				
Interest expense	(5)	(81)	(51)	(389)
Other, net	(833)	12,643	66	13,628
Total other income/(expense), net	(838)	12,562	15	13,239
Income/(loss) before income taxes	16,921	25,744	(120,247)	23,290
Expense/ (benefit) for income taxes	6,412	10,539	6,570	12,586
Income/(loss) before equity method investment	10,509	15,205	(126,817)	10,704
Loss from equity method investment	(88)	—	(401)	—
Net income/(loss)	€ 10,421	€ 15,205	€ (127,218)	€ 10,704
Earnings per share available to common stockholders:				
Basic	€ 0.03	€ 0.04	€ (0.36)	€ 0.03
Diluted	0.03	0.04	(0.36)	0.03
Shares used in computing earnings per share:				
Basic	350,401	358,544	357,551	357,525
Diluted	357,177	367,651	357,551	367,240

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
(1) Includes share-based compensation as follows:				
Cost of revenue	€ 48	€ 68	€ 198	€ 257
Selling and marketing	145	320	737	1,104
Technology and content	655	1,033	2,969	3,897
General and administrative	2,756	2,797	11,438	12,003
(2) Includes amortization as follows:				
Amortization of internal use software costs included in selling and marketing	€ —	€ 16	€ 8	€ 98
Amortization of internal use software and website development costs included in technology and content	815	1,087	4,019	4,566
Amortization of internal use software costs included in general and administrative	—	67	104	313
Amortization of acquired technology included in amortization of intangible assets	34	34	136	136
(3) Includes related party expense as follows:				
Selling and marketing	€ 4	€ 10	€ 97	€ 111
Technology and content	429	8	541	48
General and administrative	—	—	1	—

trivago N.V. Condensed consolidated statements of cash flows
(€ thousands) (unaudited)

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
Operating activities:				
Net income/(loss)	€ 10,421	€ 15,205	€ (127,218)	€ 10,704
Adjustments to reconcile net income/(loss) to net cash provided by/(used in):				
Depreciation (property and equipment and internal-use software and website development)	1,213	1,847	5,996	8,213
Amortization of intangible assets	34	34	136	136
Goodwill and intangible assets impairment loss	—	—	184,642	—
Impairment of long-lived assets including internal-use software and website development	—	—	893	—
Share-based compensation	3,604	4,218	15,342	17,261
Deferred income taxes	(746)	6,768	(19,734)	8,856
Foreign exchange (gain)/loss	1,251	(525)	228	(1,554)
Expected credit losses, net	139	76	228	255
(Gain)/Loss on disposal of fixed assets	(4)	95	(6)	317
Gain from settlement of asset retirement obligation	—	—	—	(5)
(Gain)/loss from lease termination and modification, net	—	—	—	(1,307)
Loss from equity method investment	88	—	401	—
Changes in operating assets and liabilities:				
Accounts receivable, including related party	26,302	35,842	(10,114)	(25,754)
Prepaid expenses and other assets	1,978	246	1,557	(2,510)
Accounts payable	(10,051)	(5,948)	5,291	6,897
Payroll liabilities	(1,185)	20	(835)	297
Accrued expenses and other liabilities	(994)	286	(677)	2,738
Deferred revenue	(289)	412	(485)	(576)
Taxes payable/receivable, net	2,255	3,460	10,623	8,568
Net cash provided by/(used in) operating activities	€ 34,016	€ 62,036	€ 66,268	€ 32,536
Investing activities:				
Purchase of investments	—	—	(50,000)	(1,351)
Proceeds from sales and maturities of investments	5,000	—	5,000	19,338
Business acquisition, net of cash acquired	—	—	—	(4,302)
Capital expenditures, including internal-use software and website development	(645)	(880)	(3,976)	(3,781)
Investment in equity-method investees	—	—	(5,951)	—
Proceeds from sale of fixed assets	5	4	17	114
Net cash provided by/(used in) investing activities	€ 4,360	€ (876)	€ (54,910)	€ 10,018
Financing activities:				
Proceeds from exercise of option awards	28	19	118	1,270
Repayment of other non-current liabilities	(13)	(43)	(112)	(217)
Purchases of treasury stock	(19,328)	—	(19,627)	—
Net cash provided by/(used in) financing activities	€ (19,313)	€ (24)	€ (19,621)	€ 1,053
Effect of exchange rate changes on cash	(1,949)	803	470	2,341
Net increase/(decrease) in cash, cash equivalents and restricted cash	€ 17,114	€ 61,939	€ (7,793)	€ 45,948
Cash, cash equivalents and restricted cash at beginning of the period	231,812	194,780	256,719	210,771
Cash, cash equivalents and restricted cash at end of the period	€ 248,926	€ 256,719	€ 248,926	€ 256,719

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
Supplemental cash flow information:				
Cash paid for interest	€ 5	€ 81	€ 51	€ 383
Cash received for interest	270	97	397	174
Cash paid for taxes, net of (refunds)	4,891	332	9,436	(4,848)
Non-cash investing and financing activities:				
Fixed assets-related payable	€ —	€ 3	€ —	€ 3

Earnings Per Share and Ownership of the Company

Basic and diluted earnings per share of common stock are computed by dividing net income/(loss) by the weighted average number of Class A and Class B shares outstanding during the period.

The following table presents our basic and diluted earnings per share:

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
Numerator (€ thousands)				
Net income/(loss)	€ 10,421	€ 15,205	€(127,218)	€ 10,704
Denominator (in thousands)				
Weighted average number of common shares:				
Basic	350,401	358,544	357,551	357,525
Diluted	357,177	367,651	357,551	367,240
Net income/(loss) per share:				
Basic ⁽¹⁾	€ 0.03	€ 0.04	€ (0.36)	€ 0.03
Diluted ⁽²⁾	€ 0.03	€ 0.04	€ (0.36)	€ 0.03

(1) Basic net income/(loss) per common share is computed by dividing net income/(loss) by basic weighted average common shares outstanding.

(2) Diluted net income/(loss) per common share is computed by dividing net income/(loss) by the diluted weighted average common shares outstanding, which has been adjusted to include potentially dilutive securities. Diluted net income/(loss) per common share for the twelve-month period ended December 31, 2022 does not include the effects of the exercise of then-outstanding stock options as the inclusion of these instruments would have been anti-dilutive.

The split between Class A and Class B shares of trivago N.V. as of December 31, 2022 is as follows:

	Class A shares	Class B shares	Class A shares held as treasury stock	Total
Number of shares	104,305,225	237,476,895	20,000,000	361,782,120
Shares in %	29 %	66 %	5 %	100 %

trivago N.V. Key Metrics

- The following metrics are intended as a supplement to the financial information found in this review and the financial statements included in our filings with the Securities and Exchange Commission ("SEC"). In the event of discrepancies between amounts in these tables and our historical financial statements, readers should rely on our filings with the SEC and our most recent financial statements filed with the SEC.
- We intend to periodically review and refine the definition, methodology and appropriateness of each of our supplemental metrics. As a result, metrics are subject to removal and/or change, and such changes could be material.
- These metrics do not include adjustments for one-time items, acquisitions, foreign exchange or other adjustments.
- Some numbers may not add up due to rounding.

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
ROAS by segment				
Americas	191.8%	209.6%	164.4%	148.9%
Developed Europe	170.1%	183.5%	158.6%	153.0%
Rest of World	182.3%	217.7%	188.8%	202.9%
Consolidated ROAS	180.4%	198.6%	164.4%	156.3%
Qualified Referrals by segment (in millions)				
Americas	16.4	20.4	87.3	82.6
Developed Europe	23.9	23.3	139.0	119.6
Rest of World	17.3	18.6	85.3	80.0
Consolidated Qualified Referrals	57.6	62.4	311.6	282.2
RPQR by segment				
Americas	€2.55	€1.77	€2.48	€1.70
Developed Europe	1.84	1.53	1.71	1.37
Rest of World	0.91	0.64	0.79	0.57
Consolidated RPQR	€1.76	€1.34	€1.67	€1.24

Notes & Definitions:

Current Ratio: The current ratio is used to measure the company's ability to pay off its short-term liabilities with its current assets and is an important measure of liquidity. The current ratio is calculated by dividing the company's total current assets by the company's total current liabilities.

Referral Revenue: We use the term "referral" to describe each time a visitor to one of our websites or apps clicks on a hotel offer or advertisement in our search results and is referred to one of our advertisers. We charge our advertisers for each referral on a cost-per-click (CPC) or cost-per-acquisition (CPA) basis.

ROAS: The ratio of our Referral Revenue to our Advertising Spend in a given period, or **Return On Advertising Spend**. We invest in multiple marketing channels, such as: TV; out-of-home advertising; search engine marketing; display advertising campaigns on advertising networks, affiliate websites, social networking sites and email marketing; online video; mobile app marketing and content marketing; sponsorship and endorsement.

RPQR: We use average **Revenue Per Qualified Referral**, to measure how effectively we convert Qualified Referrals to revenue. RPQR is calculated as Referral Revenue divided by the total number of Qualified Referrals in a given period.

Qualified Referral: We define a Qualified Referral as a unique visitor per day that generates at least one referral. For example, if a single visitor clicks on multiple hotel offers in our search results in a given day, they count as multiple referrals, but as only one Qualified Referral.

Definitions of Non-GAAP Measures

Adjusted EBITDA:

We define Adjusted EBITDA as net income/(loss) adjusted for:

- income/(loss) from equity method investment,
- expense/(benefit) for income taxes,
- total other (income)/expense, net,
- depreciation of property and equipment and amortization of intangible assets,
- impairment of, and gains and losses on disposals of, property and equipment,
- impairment of intangible assets and goodwill,
- share-based compensation, and
- certain other items, including restructuring, significant legal settlements and court-ordered penalties, such as the penalty imposed by the Australian Federal Court in the proceeding brought by the ACCC against us.

From time to time, we may exclude from Adjusted EBITDA the impact of certain events, gains, losses or other charges (such as restructuring charges, significant legal settlements and court-ordered penalties) that affect the period-to-period comparability of our operating performance.

Adjusted EBITDA is a non-GAAP financial measure. A "non-GAAP financial measure" refers to a numerical measure of a company's historical or future financial performance, financial position, or cash flows that excludes (or includes) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with U.S. GAAP in such company's financial statements. We present this non-GAAP financial measure because it is used by management to evaluate our operating performance, formulate business plans, and make strategic decisions on capital allocation. We also believe that this non-GAAP financial measure provides useful information to investors

and others in understanding and evaluating our operating performance and consolidated results of operations in the same manner as our management, and the exclusion of certain expenses in calculating Adjusted EBITDA can provide a useful measure in comparing financial results between periods as these costs may vary independent of core business performance. Our use of Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results reported in accordance with U.S. GAAP, including net income/loss. Some of these limitations are:

- Adjusted EBITDA does not reflect our cash expenditures or future requirements for capital expenditures or contractual commitments;
- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect expenses, such as restructuring and other related reorganization costs;
- Although depreciation, amortization and impairments are non-cash charges, the assets being depreciated, amortized or impaired may have to be replaced in the future, and Adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements; and
- Other companies, including companies in our own industry, may calculate Adjusted EBITDA differently than we do, limiting its usefulness as a comparative measure.

Tabular Reconciliations for Non-GAAP Measures

Adjusted EBITDA (€ millions)

	Three months ended December 31,		Twelve months ended December 31,	
	2022	2021	2022	2021
Net income/(loss)	€ 10.4	€ 15.2	€ (127.2)	€ 10.7
Loss from equity method investment	(0.1)	—	(0.4)	—
Income/(loss) before equity method investment	€ 10.5	€ 15.2	€ (126.8)	€ 10.7
Expense/ (benefit) for income taxes	6.4	10.5	6.6	12.6
Income/(loss) before income taxes	€ 16.9	€ 25.7	€ (120.2)	€ 23.3
Add/(less):				
Interest expense	0.0	0.1	0.1	0.4
Other, net	0.8	(12.6)	(0.1)	(13.6)
Operating income/(loss)	€ 17.8	€ 13.2	€ (120.3)	€ 10.1
Depreciation of property and equipment and amortization of intangible assets	1.2	1.9	6.1	8.3
Impairment of, and gains and losses on disposals of, property and equipment	0.0	0.3	0.9	0.3
Impairment of intangible assets and goodwill	—	—	184.6	—
Share-based compensation	3.6	4.2	15.3	17.3
Certain other items, including restructuring, significant legal settlements and court-ordered penalties	—	—	20.7	(1.3)
Adjusted EBITDA	€ 22.6	€ 19.6	€ 107.5	€ 34.6

Note: Some figures may not add due to rounding.

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

This review contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance. These forward-looking statements are based on management’s expectations as of the date of this review and assumptions which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict. The use of words such as “will,” “intend” and “expect,” among others, generally identify forward-looking statements. However, these words are not the exclusive means of identifying such statements. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements and may include statements relating to future revenue, expenses, margins, profitability, net income / (loss), earnings per share and other measures of results of operations and the prospects for future growth of trivago N.V.’s business. Actual results and the timing and outcome of events may differ materially from those expressed or implied in the forward-looking statements for a variety of reasons, including, among others:

- our ability to grow our revenue in future periods, or at rates deemed sufficient by the market without reducing our profits or incurring losses;
- any acceleration of long-term changes to consumer behavior and industry structure arising from the COVID-19 pandemic that may continue to have a significant adverse effect on our future competitiveness and profitability;
- the potential negative impact of the worsening economic outlook and inflation on consumer discretionary spending;
- geopolitical and diplomatic tensions, instabilities and conflicts, including war, civil unrest, terrorist activity, sanctions or other geopolitical events or escalations of hostilities, such as the war in Ukraine;
- our continued dependence on a small number of advertisers for our revenue and adverse impacts that could result from their reduced spending or changes in their cost-per-click, or CPC, bidding strategy;
- our ability to generate referrals, customers, bookings or revenue and profit for our advertisers on a basis they deem to be cost-effective;
- factors that contribute to our period-over-period volatility in our financial condition and result of operations;
- any additional impairment of intangible assets and goodwill;
- the continuing negative impact of having completely ceased television advertising in 2020 and only having resumed such advertising at reduced levels in 2021 and 2022 on our ability to reach pre-pandemic revenue levels;
- our ability to implement our strategic initiatives;
- increasing competition in our industry;
- our reliance on search engines, particularly Google, which promote its own product and services that competes directly with our accommodation search and may negatively impact our business, financial performance and prospects;
- our ability to innovate and provide tools and services that are useful to our users and advertisers;
- our business' model's dependence on consumer preferences for traditional hotel-based accommodation;
- our dependence on relationships with third parties to provide us with content;
- changes to and our compliance with applicable laws, rules and regulations;
- the impact of any legal and regulatory proceedings to which we are or may become subject;
- potential disruptions in the operation of our systems, security breaches and data protection; and
- impacts from our operating globally

as well as other risks and uncertainties detailed in our public filings with the SEC, including trivago's Annual Report on Form 20-F for the fiscal year ended December 31, 2021, as such risks and uncertainties may be updated from time to time. Except as required by law, we undertake no obligation to update any forward-looking or other statements in this review, whether as a result of new information, future events or otherwise.