ALTANA

Management Board Responsibility Statement
Independent Auditors' Report
Consolidated Financial Statements 2021

Management Board Responsibility Statement

The Consolidated Financial Statements have been prepared by the Management Board of ALTANA AG, which is responsible for the completeness and accuracy of the information contained therein.

The Consolidated Financial Statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), as endorsed by the EU and in accordance with the requirements of German commercial law pursuant to section 315e of the German Commercial Code (HGB).

The information contained in the Consolidated Financial Statements and the Group Management Report is based on the information reported, in accordance with consistent guidelines in force throughout the Group by the companies included in the Consolidated Financial Statements. The integrity of the reporting process is safeguarded by effective internal control systems established at these companies under the direction of the Management Board. This assures a true and fair view of the performance and results of the Group and enables the Management Board to recognize potential investment risks and negative developments at an early stage and take appropriate countermeasures.

By resolution of the Annual General Meeting, the Chairman of the Audit Committee of the Supervisory Board appointed PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft as independent auditors of the Consolidated Financial Statements. The auditors issued an unqualified Auditors' Report on the complete Consolidated Financial Statements and the Group Management Report. The Consolidated Financial Statements, the Group Management Report and the Auditors' Report have been made available to the Supervisory Board for detailed discussion. The report of the Supervisory Board is contained on pages 14 - 18 of the Corporate Report 2021.

To the best of our knowledge and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the net assets, financial position, and results of operations of the Group and the Group Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Wesel, Germany, February 25, 2022

ALTANA AG
The Management Board

Martin Babilas | Stefan Genten | Dr. Christoph Schlünken

Independent Auditor’s Report

To ALTANA Aktiengesellschaft, Wesel

Audit Opinions

We have audited the Consolidated Financial Statements of ALTANA Aktiengesellschaft, Wesel, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2021, and the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in shareholders’ equity and consolidated statement of cash flows for the financial year from January 1 to December 31, 2021 and notes to the Consolidated Financial Statements, including a summary of significant accounting policies. In addition, we have audited the Group Management Report of ALTANA Aktiengesellschaft for the financial year from January 1 to December 31, 2021. In accordance with the German legal requirements, we have not audited the content of those parts of the Group Management Report listed in the “Other Information” section of our auditor’s report.

In our opinion, on the basis of the knowledge obtained in the audit,

– the accompanying Consolidated Financial Statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at December 31, 2021, and of its financial performance for the financial year from January 1 to December 31, 2021, and
– the accompanying Group Management Report as a whole provides an appropriate view of the Group’s position. In all material respects, this Group Management Report is consistent with the Consolidated Financial Statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the Group Management Report does not cover the content of those parts of the Group Management Report listed in the “Other Information” section of our auditor’s report.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the Consolidated Financial Statements and of the Group Management Report.

Basis for the Audit Opinions

We conducted our audit of the Consolidated Financial Statements and of the Group Management Report in accordance with § 317 HGB in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the “Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report” section of our auditor’s report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the Consolidated Financial Statements and on the Group Management Report.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the Group Management Report:

– the statement of corporate governance pursuant to § 289f Abs. 4 HGB included in section "Declaration on Corporate Governance" of the Group Management Report (disclosure on the quota for women on executive boards)
– the Corporate Governance Report included in section "Declaration on Corporate Governance" of the Group Management Report.

Our audit opinions on the Consolidated Financial Statements and on the Group Management Report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

– is materially inconsistent with the Consolidated Financial Statements, with the Group Management Report disclosures audited in terms of content or with our knowledge obtained in the audit, or
– otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the Consolidated Financial Statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the Consolidated Financial Statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of Consolidated Financial Statements that are free from material misstatement, whether due to fraud or error.

In preparing the Consolidated Financial Statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the Group Management Report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the Consolidated Financial Statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a Group Management Report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the Group Management Report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the Consolidated Financial Statements and of the Group Management Report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and whether the Group Management Report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the Consolidated Financial Statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the Consolidated Financial Statements and on the Group Management Report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements and this Group Management Report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

– identify and assess the risks of material misstatement of the Consolidated Financial Statements and of the Group Management Report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
– obtain an understanding of internal control relevant to the audit of the Consolidated Financial Statements and of arrangements and measures (systems) relevant to the audit of the Group Management Report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
– evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
– conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the Consolidated Financial Statements and in the Group Management Report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements present the underlying transactions and events in a manner that the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the Consolidated Financial Statements and on the Group Management Report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- evaluate the consistency of the Group Management Report with the Consolidated Financial Statements, its conformity with German law, and the view of the Group's position it provides.
- perform audit procedures on the prospective information presented by the executive directors in the Group Management Report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Cologne, Germany, February 28, 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Harald Wimmer	ppa. Carsten Manthei
German Public Auditor	German Public Auditor

Consolidated Financial Statements

ALTANA Group Consolidated Income Statement

	Notes	2020	**2021**
in € thousand			
Net sales	4	**2,178,160**	**2,666,539**
Cost of sales	5	(1,357,135)	(1,722,839)
Gross profit		**821,025**	**943,700**
Selling and distribution expenses		(284,838)	(332,983)
Research and development expenses		(163,365)	(179,672)
General administration expenses		(104,805)	(118,561)
Other operating income	6	11,800	16,503
Other operating expenses	7	(94,076)	(6,146)
Operating income (EBIT)		**185,741**	**322,841**
Financial income	8	4,677	8,124
Financial expenses	9	(8,827)	(10,088)
Financial result		**(4,150)**	**(1,964)**
Income from at equity accounted investments		(38,900)	(45,833)
Income before income taxes (EBT)		**142,691**	**275,044**
Income taxes	10	(67,544)	(79,857)
Net income (EAT)		**75,147**	**195,187**
thereof attributable to non-controlling interests		1,872	1,889
thereof attributable to the shareholder of ALTANA AG		73,275	193,298

ALTANA Group Consolidated Statement of Comprehensive Income

	2020	2021
in € thousand		
Net income (EAT)	**75,147**	**195,187**
Remeasurement of the net defined employee benefit obligation	(14,536)	22,875
Income taxes	3,989	(6,424)
Items that will not be reclassified subsequently to profit or loss	**(10,547)**	**16,451**
Translation adjustments	(117,281)	115,035
thereof attributable to non-controlling interests	(1,469)	920
Gains and losses from derivative financial instruments	3,622	(133)
Change in fair value of derivative financial instruments	(308)	(16)
Income taxes	(994)	46
Items that may be reclassified subsequently to profit or loss	**(114,961)**	**114,932**
Other comprehensive income	**(125,508)**	**131,383**
Comprehensive income	**(50,361)**	**326,570**
thereof attributable to non-controlling interests	396	2,813
thereof attributable to the shareholder of ALTANA AG	(50,757)	323,757

ALTANA Group Consolidated Statement of Financial Position

Assets	Notes	Dec. 31, 2020	Dec. 31, 2021
in € thousand			
Intangible assets	12	933,084	995,368
Property, plant and equipment	13	959,476	997,904
Long-term investments	14	48,964	55,286
Investments in at equity accounted companies	15	89,064	47,241
Deferred tax assets	10	29,167	33,724
Other non-current assets	20	10,737	13,795
Total non-current assets		**2,070,492**	**2,143,318**
Inventories	16	336,381	511,475
Trade accounts receivable	17	400,457	473,434
Income tax refunds		12,805	15,895
Other current assets	20	99,285	133,378
Marketable securities	18	24,311	31,056
Short-term financial assets	19	5,699	67,518
Cash and cash equivalents		313,692	259,946
Total current assets		**1,192,630**	**1,492,702**
Total assets		**3,263,122**	**3,636,020**

Liabilities, provisions and shareholders' equity	Notes	Dec. 31, 2020	Dec. 31, 2021
in € thousand			
Share capital[1]		136,098	136,098
Additional paid-in capital		151,276	151,276
Retained earnings		2,103,900	2,263,645
Accumulated other comprehensive income		(5,585)	108,427
Equity attributable to the shareholder of ALTANA AG		**2,385,689**	**2,659,446**
Non-controlling interests		13,240	15,941
Shareholders' equity	21	**2,398,929**	**2,675,387**
Non-current debt	23	48,606	49,453
Employee benefit obligations	24	272,716	253,916
Other non-current provisions	25	28,965	29,645
Deferred tax liabilities	10	71,198	72,541
Other non-current liabilities	26	24,199	26,927
Total non-current liabilities		**445,684**	**432,482**
Current debt	23	10,778	12,846
Trade accounts payable		186,562	247,845
Current accrued income taxes		55,005	55,289
Other current provisions	25	95,745	131,096
Other current liabilities	26	70,419	81,075
Total current liabilities		**418,509**	**528,151**
Total liabilities, provisions and shareholders' equity		**3,263,122**	**3,636,020**

[1] Share capital consists of 136,097,896 no-par value shares.

ALTANA Group Consolidated Statement of Changes in Shareholders’ Equity

	Share capital issued			Retained earnings	
	Number of shares	Share capital	Additional paid-in capital	Retained earnings	Remeasure-ment of the net defined em-ployee benefit obligation
in € thousand					
Balance at Jan. 1, 2020	**136,097,896**	**136,098**	**151,276**	**2,192,595**	**(121,430)**
Other comprehensive income					(10,540)
Net income (EAT)				73,275	
Comprehensive income				**73,275**	**(10,540)**
Dividends paid				(30,000)	
Balance at Dec. 31, 2020	**136,097,896**	**136,098**	**151,276**	**2,235,870**	**(131,970)**
Other comprehensive income					16,447
Net income (EAT)				193,298	
Comprehensive income				**193,298**	**16,447**
Dividends paid				(50,000)	
Change in reporting entities					
Balance at Dec. 31, 2021	**136,097,896**	**136,098**	**151,276**	**2,379,168**	**(115,523)**

Accumulated other comprehensive income			Non-controlling interests		
Derivative financial instruments	Translation adjustments	Equity attributable to the shareholder of ALTANA AG	Shareholders' equity	Translation adjustments	Shareholders' equity
(2,217)	**110,124**	**2,466,446**	**16,001**	**(3,041)**	**2,479,406**
2,320	(115,812)	(124,032)	(7)	(1,469)	(125,508)
		73,275	1,872		75,147
2,320	**(115,812)**	**(50,757)**	**1,865**	**(1,469)**	**(50,361)**
		(30,000)	(116)		(30,116)
103	**(5,688)**	**2,385,689**	**17,750**	**(4,510)**	**2,398,929**
(103)	114,310	130,654	4	920	131,578
		193,298	1,889		195,187
(103)	**114,310**	**323,952**	**1,893**	**920**	**326,765**
		(50,000)	(112)		(50,112)
	(195)	(195)			(195)
	108,427	**2,659,446**	**19,531**	**(3,590)**	**2,675,387**

ALTANA Group Consolidated Statement of Cash Flows

	Notes	2020	**2021**
in € thousand			
Net income (EAT)		**75,147**	**195,187**
Depreciation and amortization of intangible assets and property, plant and equipment	12, 13	154,593	157,566
Impairment of intangible assets and property, plant and equipment	12, 13	85,621	1,325
Change in fair value of financial assets and securities	8, 9	(1,266)	2,150
Net result from the disposal of intangible assets and property, plant and equipment	6, 7	(198)	(1,685)
Net result from the disposal of subsidiaries			(174)
Net result from the disposal of long-term investments and marketable securities	8, 9	(443)	(329)
Change in inventories	16	11,853	(153,379)
Change in trade accounts receivable	17	(26,031)	(54,032)
Change in income taxes	10	8,276	(14,242)
Change in provisions	24, 25	12,455	36,179
Change in trade accounts payable		7,817	53,396
Change in other assets and other liabilities	20, 26	6,549	(24,883)
Other	15	39,271	47,366
Cash flow from operating activities		**373,644**	**244,445**
Capital expenditure on intangible assets and property, plant and equipment	12, 13	(105,223)	(149,334)
Proceeds from the disposal of intangible assets and property, plant and equipment	12, 13	4,380	2,890
Acquisitions, net of cash acquired	3	(106,091)	(27,388)
Purchase of long-term investment and investments in at equity companies	14, 15	(6,314)	(6,073)
Proceeds from the disposal of long-term investments	14	33	31
Payments on long-term loans			(1,500)
Purchase of marketable securities	18	(37,078)	(7,775)
Proceeds from the disposal of marketable securities	8, 9	31,906	3,855
Expenditure on short-term financial assets		(1,575)	(61,513)
Cash flow from investing activities		**(219,962)**	**(246,807)**

	Notes	2020	2021
in € thousand			
Dividends paid		(30,116)	(50,112)
Payments on short-term debt	23	(69,819)	(11,230)
Cash flow from financing activities		**(99,935)**	**(61,342)**
Effect of exchange rate changes		(4,611)	9,958
Change in cash and cash equivalents		**49,136**	**(53,746)**
Cash and cash equivalents as of January 1	2	264,556	313,692
Cash and cash equivalents as of December 31	2	**313,692**	**259,946**
Additional information on cash flows included in the cash flows from operating activities			
Income taxes paid		(78,027)	(105,317)
Interest paid		(3,152)	(1,189)
Income taxes received		14,353	8,139
Interest received		1,228	1,710
Dividends received		782	1,287

Notes to Consolidated Financial Statements

1. Basis of Presentation

The Consolidated Financial Statements of ALTANA AG and its subsidiaries (the "Company" or "ALTANA") as of December 31, 2021 are prepared in accordance with International Financial Reporting Standards (IFRS), issued by the International Accounting Standards Board (IASB) as endorsed by the EU, and in accordance with section 315e of the German Commercial Code (HGB). The Consolidated Financial Statements were authorized for issue by the Management Board on February 25, 2022 and should be approved by the Supervisory Board in the Supervisory Board meeting on March 16, 2022.

ALTANA as a worldwide specialty chemicals group focuses its core activities on demanding markets and customers who require individual solutions to problems. A significant portion of ALTANA's product and service portfolio comprises materials for the production of coatings, printing inks and plastics. In addition, printing inks and coatings for special applications, products for the 3D printing sector, insulating resins for the electrical and electronics industries, sealing compounds for packaging as well as measuring and testing instruments are also produced.

ALTANA AG is incorporated as a stock corporation (“Aktiengesellschaft”) under the laws of the Federal Republic of Germany. The Company is registered in the Commercial Register of the district court in Duisburg under HRB 19496 and has its headquarters at Abelstrasse 43 in 46483 Wesel, Germany.

All amounts are reported in thousands of Euro if not stated otherwise. Rounding may result in minor deviations of totals and percentages.

2. Significant Accounting Policies

Consolidation

The Consolidated Financial Statements of the Company include 23 (prior year: 22) subsidiaries in Germany and 43 (prior year: 46) subsidiaries abroad, over which ALTANA either directly or indirectly exercises control. All consolidated subsidiaries either have the same reporting date or prepare interim financial statements as of the reporting date of the Company.

In 2021, the ECKART division acquired a business through an asset deal. For this purpose, one domestic subsidiary was initially consolidated. One Mexican company was deconsolidated due to materiality reasons. In the BYK division two Mexican subsidiaries were merged and in the ACTEGA division one U.S. subsidiary was liquidated.

ALTANA holds 75.0 % of the listed company ELANTAS Beck India Ltd., Pune (IND). The remaining shares are free float. ALTANA holds 100 % interest in all other consolidated subsidiaries.

The following investments are accounted for by applying the equity method of accounting (see note 15): 39.0 % interest in Aldoro Indústria de Pós e Pigmentos Metálicos Ltda. (Aldoro), São Paulo (BRA), 33.3 % interest in Landa Corporation Ltd. (Landa), Rehovot (ISR), and 49.5 % interest in dp polar GmbH (dp polar), Eggenstein-Leopoldshafen.

All intercompany balances and transactions are eliminated in consolidation. The financial statements of the consolidated subsidiaries are prepared in accordance with the Company’s accounting policies.

The list of all consolidated companies and ALTANA’s full ownership in accordance with section 313 (2) of the German Commercial Code (HGB) is part of the audited Consolidated

Financial Statements published in the Federal Gazette (Bundesanzeiger). This list is also available on the internet at www.altana.com.

New Accounting Pronouncements Endorsed by the EU

For 2021, no new Standards or Interpretations were issued that have an effect on ALTANA's current and from today's perspective also on subsequent Consolidated Financial Statements. ALTANA has not early adopted any new standards or interpretations.

Foreign Currency

The Consolidated Financial Statements of ALTANA are expressed in Euro.

Financial statements of subsidiaries where the functional currency is a currency other than the Euro are translated using the functional currency principle. For these entities, assets and liabilities are translated using the middle rate at year end, while revenues and expenses are translated using the average exchange rates prevailing during the year. Equity is translated at historical exchange rates. Adjustments for cumulative foreign currency translation fluctuations are excluded from profit or loss and are reported in other comprehensive income.

Transactions realized in foreign currencies are translated to the local currency using the exchange rate prevailing at the transaction dates. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are generally included in other operating income or other operating expenses and, if they relate to the translation of financial assets or liabilities, in financial income or expenses.

The following table provides the exchange rates for ALTANA's most important currencies to the Euro:

		Spot rate		Average rate for the years ended Dec. 31	
		Dec. 31, 2020	**Dec. 31, 2021**	2020	**2021**
1 Euro					
Brazil	BRL	6.37	6.31	5.89	6.38
China	CNY	8.02	7.19	7.87	7.63
India	INR	89.66	84.23	84.64	87.44
Japan	JPY	126.49	130.38	121.85	129.88
Switzerland	CHF	1.08	1.03	1.07	1.08
U.S.	USD	1.23	1.13	1.14	1.18

Basis for Presentation of the Consolidated Financial Statements

The Consolidated Financial Statements are generally prepared by applying the historical cost convention. Excluded from this principle are certain financial assets and liabilities (including derivative instruments), assets held for sale, defined benefit obligations and obligations from employee incentive plans.

Revenue Recognition

Revenues include all revenues realized in the ordinary course of business of ALTANA (see note 1). Since revenue is almost exclusively generated from product sales, for which the performance obligations are not fulfilled over time but at a specific point in time, revenue is also recognized at the point in time when control is transferred to the customer. Usually, control is transferred as soon as the products have been delivered to the agreed location and the risk, for example, of obsolescence and loss have passed to the customer and the customer has either accepted the products in accordance with the purchase agreement or ALTANA has obtained objective evidence that all acceptance criteria have been met. Revenue from these sales is recognized in the amount stated in the contract less estimated discounts in the form of customer bonuses and cash discounts. A corresponding refund liability is reported in other provisions (see note 25) and other liabilities (see note 26). Management's best estimate (expected value method) which is based on sales and agreed contractual conditions is used to determine the amount of the refund liability. Once payment has been received, revenue is adjusted for the actual payment. The payment of the transaction price is due in the short term. Prepayments from customers for which the performance obligation has not been fulfilled are recorded as contract liabilities and are reported in other liabilities (see note 26). Transaction prices attributable to unfulfilled or partially unfulfilled performance obligations at the end of a financial year relate to contracts with a maximum term of one year and are therefore not disclosed in accordance with IFRS 15, "Revenue from Contracts with Customers".

Research and Development Expenses

In accordance with IAS 38, "Intangible Assets," research costs, defined as costs of original and planned research performed to gain new scientific or technical knowledge and understanding, are expensed as incurred. Development costs are defined as costs incurred to achieve technical and commercial feasibility. When the recognition criteria of IAS 38 are fulfilled, the directly attributable development costs are recognized as intangible assets. In the majority of the cases, the recognition criteria are not completely fulfilled due to the uncertainties regarding the commercialization of products inherent to the development of ALTANA's products.

Personnel and Interest Expenses

The net interest expense from employee benefit obligations is reported under interest expense and not under personnel expense or functional cost.

Income Taxes

Income taxes include current and deferred income taxes. Current income taxes relate to all taxes levied on taxable income of the consolidated companies. Other taxes such as property taxes or excise taxes (power supply, energy) are classified as functional costs.

Under IAS 12, "Income Taxes," deferred tax assets and liabilities are recognized in the Consolidated Financial Statements for all temporary differences between the carrying amounts of assets and liabilities and their tax bases, for tax credits and operating loss carryforwards.

For purposes of calculating deferred tax assets and liabilities, the Company applies the tax rates that have been enacted or substantively enacted at the reporting date. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the period the legislation is substantively adopted. Deferred tax assets are recognized only to the extent that it is probable that future taxable income will be available against which the tax credits and tax loss carryforwards can be used.

Fair Value

IFRS 13, "Fair Value Measurement," applies to IFRS that require or permit fair value measurement or disclosure and provides a single IFRS framework for measuring fair value and requires disclosures about fair value measurement. The fair value is the price that would be received to sell an asset or paid to transfer a liability. The three-level fair value hierarchy in accordance with IFRS 13 is applied. Fair value hierarchy level 1 is assigned to financial assets or liabilities for which quoted market prices for identical assets or liabilities in active markets exist. The allocation to fair value hierarchy level 2 is applied when valuation models are used or prices are derived from similar transactions. Financial assets and liabilities are measured at fair value hierarchy level 3 if unobservable input factors are applied to determine fair value. When measuring assets and liabilities the effect of non-performance risk is also reflected in the fair value.

Intangible Assets

Intangible assets, including software, are accounted for in accordance with IAS 38, and are recognized if (a) the intangible asset is identifiable (i.e., it is separable or arises from contractual or other legal rights), (b) it is probable that the expected future economic benefits (e.g., cash or other benefits such as cost savings) that are attributable to the asset will flow to the entity, and (c) the cost of the intangible asset can be measured reliably.

Intangible assets with definite useful lives are measured at cost less accumulated amortization. Borrowing costs that are directly attributable to qualifying assets are capitalized.

Intangible assets are amortized straight-line over the shorter of their contractual term or their estimated useful lives.

The following useful lives are applied:

	Years
Patents, licenses and similar rights	3 to 25
Other intangible assets	1 to 25

Amortization expense relates to intangible assets with definite useful lives and is recorded based on its function in cost of sales, selling and distribution expenses, research and development expenses or general administration expenses.

Intangible assets with indefinite useful lives as well as goodwill are not amortized but tested for impairment at least annually. Impairment losses on these assets are recorded in other operating expenses (see "Impairments of Intangible Assets and Property, Plant and Equipment").

Property, Plant and Equipment

Property, plant and equipment are measured at acquisition or manufacturing cost less accumulated depreciation. Cost includes certain costs that are capitalized during construction, including material, payroll and direct overhead costs. Borrowing costs that are directly attributable to qualifying assets are capitalized. Government grants are deducted from the acquisition or manufacturing costs.

Property, plant and equipment are depreciated on a straight-line basis over the estimated useful lives of the assets. Not included are the "Right of Use assets" (RoU assets) from lease contracts:

	Years
Buildings and leasehold	2 to 75
Plant and machinery	2 to 30
Equipment	2 to 30

The RoU assets from lease agreements are depreciated on a straight-line basis over the shorter of its useful life or the term of the agreement, including any renewal options. The fixed lease terms are applied as follows:

	Years
Buildings and leasehold	> 1 to 79
Plant and machinery	> 1 to 10
Equipment	> 1 to 10

Maintenance and repairs are expensed as incurred while replacements and improvements are capitalized, if the item qualifies for recognition as an asset, as well as asset retirement obligations. Gains or losses resulting from the sale or retirement of assets are recognized in other operating income or expenses.

Depreciation expense of property, plant and equipment is recorded based on its function in cost of sales, selling and distribution expenses, research and development expenses or general administration expenses.

Investment property comprises land and buildings not used in the production or for administrative purposes and is measured at amortized cost.

Impairment of Intangible Assets and Property, Plant and Equipment

Irrespective of whether there is any indication of impairment, the Company tests goodwill acquired in a business combination and intangible assets with an indefinite useful life for impairment at least annually. For the purpose of testing goodwill for impairment, such goodwill is allocated to cash-generating units that are expected to benefit from the synergies of the business combination. In accordance with IAS 36, "Impairment of Assets," an impairment loss is recognized when the carrying amount of the cash-generating unit, to which goodwill was allocated, exceeds the higher of its fair value less costs of disposal or its value in use.

In the event that facts and circumstances indicate that the Company's property, plant and equipment or intangible assets including goodwill, may be impaired, an impairment test is performed. This is the case regardless of whether they are to be held and used or to be disposed of. An impairment loss is recognized when an asset's carrying amount exceeds the higher of its fair value less costs of disposal and its value in use. Value in use is based on the discounted cash flows expected to arise from the continued use of the asset or from its eventual disposal.

Any impairment loss resulting from this test is reported in other operating expenses.

If there is any indication that the considerations which led to an impairment of property, plant and equipment or intangible assets no longer exist, the Company considers the need to reverse all or a portion of the impairment loss except for goodwill.

Government Grants

Taxable and non-taxable government grants for the acquisition of certain non-current assets are recognized as a reduction of the cost basis of the acquired or constructed assets. Non-refundable reimbursement of cost is recognized in other operating income to the extent the cost has been incurred and at the time all the conditions are fulfilled. Until then, government grants received are recorded in deferred income. Government grants received in connection with the coronavirus pandemic are recognized in profit or loss as a reduction of the related expenses, mainly personnel expenses (see note 11).

Long-term Investments and Marketable Securities

In accordance with IFRS 9 the Company classifies all marketable securities and certain long-term investments (see note 14) as fair value through profit or loss (FVtPl). At the reporting date these financial instruments are carried at fair value.

Long-term investments and marketable securities are recognized on the settlement date. The Company derecognizes these assets when the contractual right to the cash flows expires or the assets are transferred, and the Company retains no contractual rights to receive cash and assumes no obligations to pay cash from the assets.

Investments Accounted for at Equity

Associated companies are companies over which ALTANA can exercise significant influence, which is generally the case when it holds between 20 % and 50 % of the voting power of the investee.

Joint ventures are joint arrangements of which two or more parties have joint control, meaning that decisions about the relevant activities require unanimous consent of the parties sharing control. Neither party has sole control, directly or indirectly.

Investments in associated companies and joint ventures are accounted for by applying the equity method in accordance with IAS 28, "Investments in Associates and Joint Ventures." The respective investment is initially recognized at cost and the carrying amount is increased or decreased to recognize ALTANA's share of changes in the investee's equity after the acquisition. ALTANA's share of profit or loss of the investee is recognized in the profit or loss while changes in the investee's other comprehensive income are recognized in the other comprehensive income. An impairment test is performed for investments in associated companies and joint ventures if there is an indication of impairment. Goodwill included in such investments is not tested for impairment separately. Instead, the entire carrying amount of the investment is tested for impairment. Therefore, impairment losses recognized are not allocated to goodwill but included in the investment and may be reversed completely in subsequent reporting periods.

Inventories

Inventories are measured at the lower of acquisition or manufacturing costs or net realizable value at the reporting date. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and the estimated selling expense. Acquisition and manufacturing costs are determined based on weighted average costs. Manufacturing costs comprise material, payroll and directly attributable overhead costs, including depreciation and amortization. Write-downs are reported in Material expenses.

Trade Accounts Receivable

Trade accounts receivable are initially recognized at their fair values. Subsequently, accounts receivable are measured at amortized cost.

ALTANA applies the simplified approach (expected credit loss model) pursuant to IFRS 9 to determine the expected credit loss, according to which the default is based on the lifetime expected credit loss. If there is objective evidence of a credit default (e.g. insolvency or delivery stop), an individual loss allowance for the respective receivables is recorded, although ALTANA further asserts the claim. In the event that receivables which have already been written off are recovered, this amount is recognized in profit or loss. Risk provisions for expected credit losses on receivables not individually impaired are determined based on the customer group-specific maturity profile of trade accounts receivables. Receivables are grouped in time bands according to risk level and overdue periods. The historical default rates applied for this purpose are adjusted for forward-looking information such as economic market conditions and general future risks. ALTANA assumes an increased default risk in the valuation of receivables 30 days past due or more. The positive correlation between overdue payments and the probability of default is considered by the definition of time bands in the calculation of risk provisions per portfolio.

Cash and Cash Equivalents

ALTANA considers cash on hand and in banks and highly liquid investments with maturities of three months or less from the date of acquisition as cash and cash equivalents. The components of cash and cash equivalents are consistent with the financial resource fund in the cash flow statement.

Financial Instruments

In accordance with IFRS 9, "Financial Instruments", the Company recognizes all financial assets and liabilities, as well as all derivative financial instruments, as assets or liabilities in the statement of financial position and measures all at fair value or amortized cost. Derivative financial instruments are initially recognized on their trade date, all other financial instruments on their settlement date. For financial instruments measured at fair value the following rules apply: The fair value of marketable securities corresponds to prices quoted for identical financial assets in active markets (hierarchy level 1). The fair value of derivative financial instruments and debts, allocated to other non-interest bearing non-derivative financial liabilities, is determined by applying valuation techniques for which inputs are based on observable market data (hierarchy level 2) or on unobservable input factors (hierarchy level 3).

Changes in the fair value of financial assets and financial liabilities not accounted for as a hedging instrument are recognized in profit or loss.

Changes in the fair value of existing equity instruments are not recognized in other comprehensive income; hence the measurement option provided by the standard is not applied.

Changes in the fair value of derivative financial instruments qualifying for hedge accounting are recognized in profit or loss or in other comprehensive income depending on whether the derivative is designated as a fair value or a cash flow hedge. For derivatives designated as fair value hedges, changes in the fair value of the hedged item and the derivative financial instrument are recognized in profit or loss.

For derivative financial instruments designated as cash flow hedges, changes in the fair value of the effective portion of the hedging instrument are recognized in other comprehensive income until the hedged item is recognized in profit or loss. The ineffective portion of derivative financial instruments designated as cash flow hedges and fair value changes of derivative financial instruments which do not qualify for hedge accounting are recognized in profit or loss immediately. The change in the spot element of a forward contract is designated as a hedging instrument in a hedging relationship. ALTANA elected to account for the cost of hedging in other comprehensive income. These are the forward element of a forward transaction and the foreign currency basis spreads.

At the inception of a hedge ALTANA documents the hedging relationship between the hedged item and the hedging instrument. Additionally, at the inception of the hedge and on an ongoing basis, the Company documents its assessment of whether the hedging instrument actually compensates the change in the fair value of the hedged item (assessing hedge effectiveness).

Share-based Employee Incentive Plans

In line with long-term incentive programs, ALTANA has issued share-based instruments to employees and accounts for them in accordance with IFRS 2, "Share-based Payment." These instruments are therefore measured at fair value at the grant date (fair value hierarchy level 3), considering the vesting conditions upon which those instruments were granted. The cost of employee compensation is expensed over the required service period. Until settlement of the instruments in cash, the liability is remeasured at its fair value at each reporting date as well as at the exercise date. Changes in the fair value are recognized in profit or loss.

Employee Benefit Obligations

The accounting for pension liabilities is based on the projected unit credit method in accordance with IAS 19, "Employee Benefits," and the liabilities are measured based on actuarial valuations. Remeasurement gains or losses of the net benefit employee obligations are fully recognized in other comprehensive income in the period they occur (see Consolidated Statement of Comprehensive Income). The provisions therefore generally equal the fair value of the obligations at the respective reporting dates.

Other Provisions

In accordance with IAS 37, "Provisions, Contingent Liabilities and Contingent Assets," the Company recognizes other provisions when it has a present legal or constructive obligation as a result of a past event, it is more likely than not that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The warranty provision is estimated based on the average warranty expenses of the last two to three years, depending on the division they relate to. Based on this experience, the Company calculates a warranty percentage, applies it to net product sales and recognizes the estimated obligation in the warranty provision. The provision is adjusted to reflect changes in estimates. Other provisions also include personnel related obligations measured in accordance with IAS 19.

Leases

ALTANA leases land and buildings, technical equipment and machinery as well as operating and office equipment. The majority of the lease portfolio consists of lease contracts for vehicles. However, in relation to the carrying amount of the RoU assets, leased land and buildings account for the largest portion.

Lease contracts are usually concluded for a fixed term but can also include renewal and termination options. The leased assets do not serve as collateral and the lease contracts do not contain any specific covenants. The lease contracts are negotiated individually and contain various different terms and conditions.

Leases are recognized as RoU assets and a corresponding liability at the date on which the lessor makes the underlying asset available for use by the lessee. The RoU asset is depreciated on a straight line basis over the shorter of its useful life or the term of the contract.

Under the effective interest method, each payment is divided into payments on principal and interest. Interest expense is recognized in profit or loss over the term of the contract.

Assets and liabilities arising from a lease are initially recognized at their present value.

RoU assets are measured at cost and include the following: (a) the amount of the initial measurement of the lease liability, (b) any lease payments made on or before the commencement date less any lease incentives received, (c) any initial direct costs, and (d) costs of restoring the site.

The lease liabilities include the present value of the following lease payments: (a) fixed payments (including in-substance fixed payments), less any lease incentives; (b) variable lease payments that depend on an index or rate; (c) amounts expected to be paid by the lessee under residual value guarantees; (d) the exercise price of a purchase option if it is reasonably certain that the option will be exercised; and (e) payments of penalties for early termination of the lease.

Lease payments are discounted at ALTANA's incremental borrowing rate.

Payments made under short-term leases and under lease agreements for low-value assets are recognized immediately in profit or loss. Short-term lease contracts are leases with a term of 12 months or less. Low-value assets are typically operating and office equipment such as printers, copiers, etc. which have acquisition costs of no more than EUR 5,000.

Use of Estimates, Assumptions and Judgements

The preparation of the Consolidated Financial Statements requires management to make estimates, and assumptions as well as exercise judgements which affect the amounts of assets, liabilities and disclosure of contingent assets and liabilities reported at the end of any given period and the amounts of revenues and expenses for that reported period. Actual results may differ from estimates made.

Management's judgement apart from estimates is based on expectations regarding future events and historical experience. This applies, for example, to the assessment of whether assets fulfill all conditions to be classified as assets held for sale, the assessment of the term of lease contracts in respect of whether the option to renew or terminate a lease is reasonably certain and, in the context of revenue recognition, with regard to the allocation of the transaction price.

Due to the coronavirus pandemic, estimation uncertainties have increased. To address this, the instruments for impairment testing and determining impairment losses on goodwill, intangible assets and property, plant and equipment were supplemented by weighted scenario-based valuations already in 2020. Likewise, the instruments used to determine the loss allowance on trade receivables were adjusted in 2020. The adjustment of these instruments was maintained in 2021.

At the reporting date, management mainly made the following key assumptions concerning the future and identified key sources of estimation uncertainty that might pose a risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

Revenue recognition: Revenue and related rebates are determined on the basis of estimates relating to sales and agreed contractual conditions (see Revenue recognition).

Employee Benefit Obligations: The measurement of the pension plans is based on the projected unit credit method applying current parameters as of the reporting date, including the expected discount rate, the rate of compensation and pension increase, and the return on plan assets as of the reporting date. A significant change in the underlying parameters could have a material impact on the defined benefit obligations (see note 24).

Impairments: Impairment testing for goodwill, other intangible assets and property, plant and equipment is generally based on discounted estimated future cash flows generated from the continuing use and ultimate disposal of the assets. Factors such as lower than anticipated operating income (EBIT) and resulting reduced net cash flows as well as changes in the discount rates used could lead to impairments. For information on the carrying amounts of goodwill, other intangible assets and property, plant and equipment see notes 12 and 13.

Taxes: The recognition of deferred tax assets requires that sufficient taxable income will be generated in the future that can be offset against tax credits and tax loss carryforwards. The recognition of deferred tax assets is subject to an estimate of various factors. Tax matters are subject to uncertainties regarding their assessment by the tax authorities and therefore it cannot be precluded that in individual cases tax authorities may conclude on these matters differently than ALTANA. If changes in the assessment are probable, a corresponding provision is recorded.

Leasing: In determining the term of a lease, management considers all facts and circumstances that provide an economic incentive to exercise an option to extent or terminate a lease. Renewal and termination options allow for operational flexibility in designing the terms of the contract and, by exercising or not exercising them, a certain extend of flexibility in the event of changed market conditions.

Due to ALTANA's financing structure, the lease liability is determined by applying a Group-wide yield curve, which is subject to an annual review.

3. Business Combinations and Disposals

In accordance with IFRS 3, "Business Combinations," the Company accounts for business combinations by applying the acquisition method as of the date when control over the financial and operating policies is effectively obtained. Any excess of the consideration transferred over the fair value of the net assets acquired is recorded as goodwill, which is allocated to those cash-generating units that are expected to benefit from the business combination. The results of operations of the acquired businesses are included in the Company's Consolidated Financial Statements from the respective dates of acquisition until the dates of sale. Fair value measurement of assets acquired and liabilities assumed in a business combination is performed in the course of the allocation of the consideration transferred by using standard discounted cash flow methods based on input factors of fair value hierarchy level 3.

Acquisitions in 2021

On September 9, 2020 ALTANA concluded a contract for the acquisition of the business of TLS Technik GmbH & Co. Spezialpulver KG (TLS), Bitterfeld. TLS is a leading manufacturer of metal powders for 3D printing. The acquisition was consummated on February 1, 2021. In 2020, the business generated net sales of about €9 million and was integrated into the ECKART division.

The following table provides an overview of the final allocation of the consideration transferred to the assets acquired and liabilities assumed by ALTANA at the acquisition date in 2021:

in € million	
Goodwill	5.2
Other intangible assets	13.1
Property, plant and equipment	5.2
Inventories	6.4
Trade accounts receivable	0.6
Deferred tax assets	2.2
Provisions	(0.1)
Other liabilities	(0.2)
Consideration transferred	**32.4**

Of the purchase price of €32.4 million an amount of €27.4 million was paid in cash. Payment of the remaining purchase price is contingent on the achievement of gross profit targets within 24 months after acquisition and is reported in financial liabilities until maturity (see note 23). The recognized liability corresponds to the expected earn-out payments which are limited to €7.0 million. A stay-bonus of a maximum of €3.0 million was also agreed, which is contingent on the fulfillment of a service contract of the managing director. It is recognized in personnel expenses on an accrual basis. The final allocation of the consideration transferred results in goodwill of €5.2 million of which an amount €0.3 million is tax deductible. Since the acquisition the business has contributed €8.3 million to consolidated net sales and €-3.5 million to consolidated net income. Had the acquisition been consummated on January 1, 2021, the business would have contributed €8.5 million to consolidated net sales and €-3.6 million to consolidated net income.

The acquisition provides the ECKART division a strategic expansion of its product portfolio in the area of additive manufacturing for the 3D application market. The expected synergies from the utilization of the worldwide distribution network of ALTANA, new technologies and the utilization of joint research activities mainly contribute to the goodwill resulting from this acquisition.

Acquisitions in 2017

For the share deal concluded in the ELANTAS division with the American Cytec Industries Inc., the earn-out payment obligation recognized in financial liabilities, was reduced by USD 4.2 million (€3.7 million) in 2019 and by USD 3.6 (€3.0 million) in 2021 because the relevant sales targets presumably will not be met.

4. Net Sales

The methodology of the application of IFRS 15 is disclosed in note 2. Net sales are allocated to the divisions of ALTANA as follows:

		BYK	ECKART	ELANTAS	ACTEGA	ALTANA Group
Europe	2020	366,028	155,086	120,693	200,685	842,492
	2021	**443,367**	**196,221**	**151,198**	**238,569**	**1,029,355**
thereof Germany	*2020*	*102,094*	*70,413*	*24,375*	*47,642*	*244,524*
	2021	***125,690***	***87,363***	***27,732***	***54,471***	***295,256***
America	2020	292,877	69,548	84,955	138,552	585,932
	2021	**342,419**	**81,262**	**99,892**	**157,999**	**681,572**
thereof U.S.	*2020*	*217,898*	*54,518*	*48,983*	*75,212*	*396,611*
	2021	***246,044***	***65,131***	***58,280***	***76,047***	***445,502***
Asia	2020	330,361	84,639	254,686	42,155	711,841
	2021	**416,349**	**97,365**	**338,368**	**53,465**	**905,547**
thereof China	*2020*	*149,103*	*39,429*	*182,351*	*14,304*	*385,187*
	2021	***194,224***	***45,070***	***252,099***	***23,601***	***514,994***
Other regions	2020	19,404	5,926	2,970	9,595	37,895
	2021	**25,080**	**7,913**	**4,173**	**12,899**	**50,065**
Total	2020	1,008,670	315,199	463,304	390,987	2,178,160
	2021	**1,227,215**	**382,761**	**593,631**	**462,932**	**2,666,539**

Due to ALTANA's customer base and the large number of business activities, there was no significant concentration on individual customers, regions or divisions in the reporting years. The coronavirus pandemic had no impact on the principles of revenue recognition and related discounts.

In 2021 and 2020, ALTANA recognized revenue from contracts with customers amounting to €2,666.5 million and €2,178.2 million, respectively.

In 2021 and 2020, the refund liabilities from sales reductions amount to €17.2 million and €12.8 million, respectively, and are reported in other provisions (see note 25) or other liabilities (see note 26). Prepayments from customers for which the performance obligation has not been fulfilled are recorded in contract liabilities (see note 26).

5. Cost of Sales

Cost of sales include the following items:

	2020	2021
Material expenses	899,328	1,209,304
Production expenses	457,807	513,535
	1,357,135	**1,722,839**

6. Other Operating Income

	2020	2021
Reversal of loss allowance, net		444
Gains on disposal of intangible assets and property, plant and equipment	756	2,369
Government grants	489	1,698
Foreign exchange gains / (losses), net		599
Insurance reimbursements	482	484
Other	10,073	10,909
	11,800	**16,503**

7. Other Operating Expenses

	2020	2021
Bad debt expense, net	5,555	
Write-down of receivables without prior loss allowance	214	498
Losses from disposal of intangible assets and property, plant and equipment	558	685
Foreign exchange gains / (losses), net	670	
Exceptional expenses	85,621	1,325
Charitable donations	265	479
Other	1,193	3,159
	94,076	**6,146**

In 2020, bad debt expense includes a risk provision for potentially increased insolvency risks resulting from the coronavirus pandemic (see note 17).

Foreign exchange gains and losses are as follows:

	2020	2021
Foreign exchange gains	7,491	2,770
Foreign exchange (losses)	(8,161)	(2,171)
Net gain / net (loss)	**(670)**	**599**

Exceptional expenses relate to the following:

	Notes	2020	**2021**
Impairment of goodwill	12	85,621	
Impairment loss on intangible assets	12		416
Impairment loss on property, plant and equipment	13		909
		85,621	**1,325**

In 2021, the impairment of intangible assets (see note 12) relates to the Holding division and the impairment of property plant and equipment (see note 13) relates to the ELANTAS division. In 2020, the impairment of goodwill relates to the ECKART division (see note 12).

8. Financial Income

	2020	**2021**
Interest income	2,225	2,733
Gains on disposal of marketable securities	449	329
Income from fund-based financial instruments	154	4
Gains from the change in fair value of financial assets and securities	1,283	1,068
Gains from the change in fair value of financial liabilities		3,044
Dividends received	356	414
Other financial income	210	532
	4,677	**8,124**

9. Financial Expenses

	2020	**2021**
Interest expenses	7,399	5,268
thereof negative interest		*243*
Losses on disposal of marketable securities	6	
Losses from the change in fair value of financial assets and securities	18	3,218
Other financial expenses	1,404	1,602
	8,827	**10,088**

In 2021 and 2020, foreign exchange losses of €0.7 million and €0.8 million, respectively, are included in other financial expenses,

In 2021 and 2020, reported interest expenses include interest from lease contracts in the amount of €0.6 million and €0.8 million.

10. Income Taxes

Income tax expense is as follows:

	2020	2021
Current taxes	76,407	90,571
Deferred taxes	(8,863)	(10,714)
Income taxes	**67,544**	**79,857**

In 2021 and 2020, the combined income tax rate, derived from local subsidiaries, is 29.5 % and consists of the corporate tax rate of 15 %, the solidarity surcharge on corporate tax of 5.5 % and the trade tax of about 14 %. The trade tax rate is based on the weighted average of the collection rate of all German municipalities in which ALTANA operates business premises.

The following table provides the reconciliation between the expected and the effective income tax rate:

	2020	2021
Income before income taxes (EBT)	**142,691**	**275,044**
Income from at equity accounted investments	(38,900)	(45,833)
Income before income taxes - adjusted (EBT adjusted)	**181,591**	**320,877**
Tax expense applying the expected average income tax rate of 29.5 % (Dec. 31, 2020: 29.5 %)	53,569	94,659
Impairment of goodwill	17,869	
Non-deductible expenses	4,778	4,193
Tax rate differential	(311)	(8,500)
Tax free income	(1,617)	(2,692)
Tax related to prior years	(6,276)	168
Other	(468)	(7,971)
Income taxes	**67,544**	**79,857**
Effective income tax rate[1]	37.2 %	24.9 %

[1]Based on the income before income taxes adjusted for the income from at equity accounted investments.

In 2021 and 2020, the effective income tax rate based on income before income taxes was 29.0 % and 47.3 %, respectively. In 2021, the increase in the item other relates to a one-off effect from the step up in the tax base of property, plant and equipment in Italy. In 2020, the effective tax rate was in particular effected by the impairment losses in the ECKART division, which are not tax deductible and therefore no related deferred tax assets were recognized.

Deferred tax assets and liabilities related to the following items in the statement of financial position:

	Dec. 31, 2020		Dec. 31, 2021	
	Assets	Liabilities and provisions	Assets	Liabilities and provisions
Intangible assets	3,112	(84,325)	5,427	(82,096)
Property, plant and equipment	1,861	(56,617)	6,058	(57,242)
Long-term investments	341	(2,217)	386	(2,279)
Inventories	16,875	(786)	19,016	(599)
Receivables and other assets	4,725	(1,564)	3,222	(1,088)
Marketable securities				(499)
Employee benefit obligations	59,800	(350)	54,461	(259)
Other provisions	5,369	(3,075)	6,942	(3,207)
Liabilities	7,599	(792)	7,817	(722)
Tax loss carryforwards	10,774		10,205	
Outside bases differences		(2,761)		(4,360)
Netting	(81,289)	81,289	(79,810)	79,810
Deferred taxes, net	**29,167**	**(71,198)**	**33,724**	**(72,541)**

The periods in which the tax loss carryforwards may be used are as follows:

	2020	2021
Tax loss carryforwards	**55,928**	**44,406**
unlimited	49,201	42,160
will expire through 2026 (prior year: 2025)	6,727	2,246

Deferred tax assets on tax loss carryforwards of €6.4 million and €14.7 million were not recognized as of December 31, 2021 and 2020, respectively, since the future utilization against taxable income is not probable. Tax loss carryforwards for which no deferred tax assets were recognized amounting to €5.2 million have unlimited carryforward periods, €1.2 million will expire through 2026.

For companies that generated a loss in the current year or in previous years, deferred tax assets of €1.5 million (previous year €0.9 million) were recognized since their realization is probable based on tax planning.

As of December 31, 2021 and 2020, deferred tax liabilities in the amount of €38.3 million and €40.8 million, respectively, representing the temporary differences between the net assets of certain investments in subsidiaries and its tax bases, were not recorded, as the timing of their reversal can be controlled and is not probable in the foreseeable future.

11. Other Information on the Income Statement

Personnel Expenses

Personnel expenses consist of the following items:

	2020	2021
Wages and salaries	412,812	452,252
Social security contributions	75,962	81,323
Expenses for pensions and other post-retirement benefits	20,447	24,502
	509,221	**558,077**

Personnel expenses include expenses for employee incentive plans (see note 22). In 2021 and 2020, expenses of €4.5 million and of €5.8 million, respectively, relate to the compensation plan for key members of the management, "ALTANA Equity Performance (AEP)," and €3.6 million and €2.4 million, respectively, to the compensation plan for employees, "ALTANA Profit Participation." In 2021 and 2020, personnel expenses were reduced by government grants due to the coronavirus pandemic by €0.3 million and €3.0 million, respectively.

Personnel expenses were incurred for the following average number of employees:

	2020	2021
Number of employees by division		
BYK	2,328	2,372
ECKART	1,693	1,725
ELANTAS	1,078	1,067
ACTEGA	1,222	1,268
Holding[1]	212	226
	6,533	**6,658**

[1] The Holding division comprises next to the Group Holding company service and technology companies.

Amortization, Depreciation and Impairment Loss

Amortization, depreciation and impairment charges for intangible assets and property, plant and equipment are as follows:

	2020	2021
Amortization of intangible assets	52,477	54,659
Depreciation of property, plant and equipment	102,116	102,907
Impairment of goodwill	85,621	
Impairment loss on intangible assets		416
Impairment loss on property, plant and equipment		909
	240,214	**158,891**

For information on the impairment loss recognized in 2021 on intangible assets see note 12 and for property plant and equipment see note 13. For information on the impairment loss recognized on goodwill in 2020 see note 12.

Leases

The following effects occurred in the income statement:

	2020	**2021**
Depreciation of RoU assets		
RoU assets - Land, leasehold and buildings	6,765	6,699
RoU assets - Plant and machinery	326	337
RoU assets - Equipment	3,395	3,173
	10,486	**10,209**
Lease expenses for		
short-term leases	1,962	2,095
low value asset leases	708	560
variable lease payments - not included in the lease liability	2,074	2,789
interest	773	605

12. Intangible Assets

	Patents, licenses and similar rights	Goodwill	Software and others	Total
Cost				
Balance at Jan. 1, 2020	869,842	660,090	131,663	1,661,595
Additions	632		8,243	8,875
Disposals	(2,272)		(995)	(3,267)
Transfers	1,185		(229)	956
Translation adjustments	(34,724)	(41,840)	(2,097)	(78,661)
Change in reporting entities	56,733	37,265	138	94,136
Balance at Dec. 31, 2020	**891,396**	**655,515**	**136,723**	**1,683,634**
Additions	46,436		8,309	54,745
Disposals	(1,449)		(3,197)	(4,646)
Transfers			51	51
Translation adjustments	26,508	37,536	1,636	65,680
Change in reporting entities	13,133	5,171	3	18,307
Balance at Dec. 31, 2021	**976,024**	**698,222**	**143,525**	**1,817,771**
Accumulated amortization				
Balance at Jan. 1, 2020	481,987	50,461	105,265	637,713
Additions	44,237		8,240	52,477
Disposals	(2,272)		(927)	(3,199)
Impairment		85,621		85,621
Transfers			438	438
Translation adjustments	(18,271)	(2,692)	(1,537)	(22,500)
Change in reporting entities				
Balance at Dec. 31, 2020	**505,681**	**133,390**	**111,479**	**750,550**
Additions	46,419		8,240	54,659
Disposals	(1,449)		(3,176)	(4,625)
Impairment			416	416
Transfers			3	3
Translation adjustments	15,310	4,771	1,319	21,400
Change in reporting entities				
Balance at Dec. 31, 2021	**565,961**	**138,161**	**118,281**	**822,403**
Carrying amount				
Dec. 31, 2020	385,715	522,125	25,244	933,084
Dec. 31, 2021	**410,063**	**560,061**	**25,244**	**995,368**

In 2021, additions to patents, licenses and similar rights of €45.2 million related to the acquisition of technologies, customer relationships and brand names from Henkel in the ACTEGA division. At the same time, technical equipment and machinery of €1.1 million was acquired in this transaction.

The additions to software and others related to digitalization projects and the further expansion of ERP systems and amount to €3.0 million in the Holding division, to €1.9 million in the BYK division, to €1.4 million in the ECKART division, to €1.0 million in the ELANTAS division and to €0.9 million in the ACTEGA division.

In the Holding division, a software license in the amount of €0.4 million was impaired as it is no longer used.

The change in reporting entities relate to the acquisition of TLS in the ECKART division (see note 3).

In 2020, additions to patents, licenses and similar rights of €0.6 million related to REACH expenses incurred primarily in the BYK and ECKART divisions.

The additions to software and others related to digitalization projects and the further expansion of SAP applications within ALTANA and amount to €4.9 million primarily in the BYK division and Holding division.

In 2020, changes in reporting entities related to the acquisition of Gulf Scientific in the BYK division with €34.5 million, the acquisition of Schmid Rhyner in the ACTECA division with €54.6 million and the acquisition of Aluminium Materials Technologies Ltd., Worcester (GBR) in the ECKART division with €5.1 million.

The following table presents expected amortization expense related to patents, licenses and similar rights as well as software for each of the following periods. The actual amortization expense may differ from the expected amortization expense:

2022	53,308
2023	51,013
2024	44,703
2025	40,380
2025	32,110
Thereafter	182,446

As of December 31, 2021 and 2020, patents, licenses and similar rights include brand names with indefinite useful lives of €24.6 million and €24.3 million, respectively, mainly relating to the brand name ECKART. The brand name was acquired in a business combination and the indefinite useful life was identified in the course of the allocation of the consideration transferred. They continue to be used and as in 2020 there was no need to recognize an impairment loss.

The following table presents the carrying amount of goodwill by cash-generating unit:

	Dec. 31, 2020	**Dec. 31, 2021**
BYK	347,631	373,258
ECKART		5,171
ELANTAS	96,357	100,185
ACTEGA	78,137	81,447
	522,125	**560,061**

Impairment Test for Goodwill

The Company performed impairment tests on goodwill. Impairment tests are performed at least once a year in the fourth quarter based on long-term planning. The recently performed tests were based on the financial budgets for the years 2022 to 2026. These budgets were based on historical experience and represent management's best estimates about future developments. The weighted average growth rates used in the budgets were derived from corresponding industry forecasts. In order to perform impairment tests, the Company estimated cash flows beyond the planning period by extrapolating the projections using a steady growth rate for subsequent years. The Company then calculated the fair value less costs of disposal for each cash-generating unit by applying the discounted cash flow method based on input factors of fair value hierarchy level 3. The following parameters were applied: discount rate after income taxes of 7.0 % (2020: 6.8 %); growth rates: BYK 1.75 %; ECKART, ELANTAS and ACTEGA 1.5 %, both unchanged to 2020. The fair value calculated was then compared to the carrying amount of the cash-generating unit.

The impairment tests were performed based on fair values less costs of disposal. Furthermore, to support the results of these impairment tests, the Company calculates the value in use for each cash-generating unit. If the impairment test indicates a need for an impairment, the exact amount of the impairment is determined based on a weighted scenario-based valuation.

In 2021, no impairment loss was identified on goodwill. In 2020, as a result of impairment testing of the ECKART division based on value in use, an impairment loss on goodwill amounting to €85.6 million was identified and recognized in other operating expenses.

Sensitivity analyses indicated that even a reasonably likely change in the significant underlying parameters would not result in an impairment loss in any division.

In the period since the performance of the impairment test until December 31, 2021, no impairment indicators were identified.

13. Property, Plant and Equipment

	Land, leasehold and buildings	Plant and machinery	Equipment	Advances/ construction in progress	Total
Cost					
Balance at Jan. 1, 2020	743,333	822,202	290,619	110,842	1,966,996
Additions	22,187	25,394	16,406	46,395	110,382
Disposals	(6,082)	(2,171)	(7,177)	(691)	(16,121)
Transfers	18,228	48,067	(1,862)	(65,388)	(955)
Translation adjustments	(19,567)	(25,431)	(7,285)	(2,690)	(54,973)
Change in reporting entities	11,058	5,567	221	298	17,144
Balance at Dec. 31, 2020	**769,157**	**873,628**	**290,922**	**88,766**	**2,022,473**
Additions	10,252	20,319	21,243	52,385	104,199
Disposals	(5,574)	(13,038)	(10,144)	(931)	(29,687)
Transfers	4,684	33,866	13,126	(51,727)	(51)
Translation adjustments	22,982	28,597	7,159	3,375	62,113
Change in reporting entities	2,519	2,423	290		5,232
Balance at Dec. 31, 2021	**804,020**	**945,795**	**322,596**	**91,868**	**2,164,279**
Accumulated depreciation					
Balance at Jan. 1, 2020	284,897	535,403	175,540	319	996,159
Additions	31,427	47,037	23,652		102,116
Disposals	(3,076)	(1,739)	(6,754)		(11,569)
Impairment					
Transfers	(130)	(2,702)	2,394		(438)
Translation adjustments	(6,005)	(13,608)	(3,657)	(8)	(23,278)
Change in reporting entities	7				7
Balance at Dec. 31, 2020	**307,120**	**564,391**	**191,175**	**311**	**1,062,997**
Additions	30,822	49,341	22,744		102,907
Disposals	(4,888)	(12,535)	(9,642)	(909)	(27,974)
Impairment				909	909
Transfers		1,226	(1,220)	(9)	(3)
Translation adjustments	7,563	16,104	3,836	36	27,539
Change in reporting entities					
Balance at Dec. 31, 2021	**340,617**	**618,527**	**206,893**	**338**	**1,166,375**
Carrying amount					
Dec. 31, 2020	462,037	309,237	99,747	88,455	959,476
Dec. 31, 2021	**463,403**	**327,268**	**115,703**	**91,530**	**997,904**

The following table presents the RoU assets resulting from leases that are recognized in property, plant and equipment:

	Land, leasehold and buildings	Plant and machinery	Equipment	Total
Cost				
Balance at Jan. 1, 2020	42,133	1,275	9,384	52,792
Additions	9,729	185	4,133	14,047
Disposals	(1,705)	(14)	(1,518)	(3,237)
Translation adjustments	(3,743)	(15)	(292)	(4,050)
Change in reporting entities	72		72	144
Balance at Dec. 31, 2020	**46,486**	**1,431**	**11,779**	**59,696**
Additions	6,636	81	3,037	9,754
Disposals	(3,941)	(160)	(2,664)	(6,765)
Translation adjustments	2,449	20	246	2,715
Change in reporting entities	62	90		152
Balance at Dec. 31, 2021	**51,692**	**1,462**	**12,398**	**65,552**
Accumulated depreciation				
Balance at Jan. 1, 2020	6,644	304	3,477	10,425
Additions	6,765	326	3,395	10,486
Disposals	(1,604)	(13)	(1,183)	(2,800)
Translation adjustments	(726)	(7)	(109)	(842)
Change in reporting entities	7			7
Balance at Dec. 31, 2020	**11,086**	**610**	**5,580**	**17,276**
Additions	6,699	337	3,173	10,209
Disposals	(3,578)	(160)	(2,498)	(6,236)
Translation adjustments	591	10	111	712
Change in reporting entities				
Balance at Dec. 31, 2021	**14,798**	**797**	**6,366**	**21,961**
Carrying amount				
Dec. 31, 2020	35,400	821	6,199	42,420
Dec. 31, 2021	**36,894**	**665**	**6,032**	**43,591**

In 2021, additions in the BYK division of €22.5 million related to European facilities and €10.4 million to Asian facilities. An additional €9.0 million related to U.S. facilities and €0.4 million to the Mexican facility. In the ECKART division additions of €11.1 million related to European facilities and €12.9 million related to the U.S. facility. For the expansion of its production and laboratory capacities, the ELANTAS division invested €5.1 million in Germany and Italy, €1.8 million in its U.S. facility, €3.8 million in Asia and €0.4 million in Brazil. To expand its production and research capacities the ACTEGA division invested €16.1 million in its European locations, of which €1.1 million relate to technical equipment and machinery from the acquisition of a group of assets from Henkel (see note 12). An additional €4.1 million were invested in its U.S. location and €1.9 million in its location in Brazil.

The change in the reporting entities relate to the acquisition of TLS in the ECKART division.

In connection with capital expenditures ALTANA recognized directly attributable borrowing costs of €0.3 million. The calculation was based on an interest rate of 1.6 %.

In 2020, additions in the BYK division of €20.2 million related to European facilities and of €17.2 million to U.S. facilities. An additional €9.2 million related to Asian and €2.1 million to Mexican facilities. In the ECKART division additions of €15.5 million related to European facilities and €9.7 million related to U.S. facilities. For the expansion of its production and laboratory capacities, the ELANTAS division invested €7.5 million in Germany and Italy, €2.1 million in its U.S. facility, €4.5 million in Asia and €0.2 million in Brazil. To expand its production and research capacities the ACTEGA division invested €11.8 million in its European locations, €6.3 million in its U.S. locations and €1.3 million in its location in Brazil.

In connection with capital expenditures ALTANA recognized directly attributable borrowing costs of €0.3 million. The calculation was based on an interest rate of 2.1 %.

In both years reported land and buildings with a book value of €0.6 million related to investment property and had a fair value of €0.7 million as of December 31, 2021 and €4.2 million as of December 31, 2020. The decrease in fair value relates to the disposal of one investment property in the ELANTAS division. The fair value is measured using the discounted cash flow method or external expert appraisals, by applying input factors for comparable assets not traded on active markets (fair value hierarchy level 3). No contractual obligations or disposal restrictions exist for land and buildings held as investment property.

In 2021 and 2020, ALTANA did not receive significant taxable and nontaxable government grants.

In 2021, in the ELANTAS division an investment project in a location in India was discontinued and an impairment of €0.9 million was recognized. In 2020, no impairment was recognized (see note 7).

14. Long-term Investments

	Other investments	Other long-term financial assets	Total
Cost			
Balance at Jan. 1, 2020	22,413	23,319	45,732
Additions	2,250	1,682	3,932
Disposals		(33)	(33)
Translation adjustments	(212)	(540)	(752)
Change in fair value	41		41
Change in reporting entities		44	44
Balance at Dec. 31, 2020	**24,492**	**24,472**	**48,964**
Additions	2,761	7,157	9,918
Disposals		(1,523)	(1,523)
Translation adjustments	191	650	841
Change in fair value	(2,891)		(2,891)
Change in reporting entities		(23)	(23)
Balance at Dec. 31, 2021	**24,553**	**30,733**	**55,286**
Carrying amount			
Dec. 31, 2020	24,492	24,472	48,964
Dec. 31, 2021	**24,553**	**30,733**	**55,286**

In 2021, ALTANA participated in a capital increase of TAU ACT GmbH, Berlin, which was acquired in 2020, in the amount of €1.1 million, which increased its interest from 13.5 % to 13.7 %.

In 2019, ALTANA granted a long-term loan of €16.0 million to Israeli Landa Labs. In 2021 and 2020, total interest in the amount of €1.7 million accrued. This loan is fully secured by shares in Landa and Landa Labs.

As part of the carve-out transaction in 2020, the existing shares in CiDRA Holdings LLC, USA were divided into CiDRA Holdings LLC (4.8 %) and CiDRA Concrete Holdings LLC (3.9 %). The transaction did not result in a material impact on the carrying amount of the investment.

In 2021, the investment in Melior Innovations Inc., USA of €3.2 million reported at fair value in other long-term financial assets was impaired in full. In 2020, no change in the fair value was recognized.

ELANTAS Beck India Ltd. invested €4.3 million of free cash and cash equivalents in a medium-term interest-bearing financial asset.

As of December 31, 2021 and 2020, an amount of €24 thousand and €78 thousand of other long-term financial assets related to employee loans bearing a weighted average interest rate of 3.0 % in 2021 and 3.3 % in 2020.

In 2021, a loan with a conversion option in the amount of €1.5 million was granted to the joint venture dp polar, which is accounted for using the equity method. The investment is reported in other long-term financial assets. The amount of the shares to be acquired depends on the valuation of dp polar at the time of conversion.

In 2021 and 2020, several funding agreements were signed to finance another Israeli investment of €2.2 million. In 2021, €1.4 million from this financing agreement was converted into equity and is reported in other investments. The remaining unconverted portion is continued to be reported in other long-term financial assets.

In 2018, ALTANA granted a long-term loan, due at maturity, of USD 7.1 million to an unrelated U.S. investment fund as part of a U.S. development program. The loan is reported in other long-term financial assets. In return, ALTANA has received a loan of USD 9.9 million, also due at maturity (see note 23).

The Taunus Treuhandgesellschaft m.b.H. Steuerberatungsgesellschaft and the Seedamm-Versicherungs-Vermittungs GmbH are reported in long-term financial assets and not in investments in at equity accounted companies, due to their insignificance.

15. Investments in at Equity Accounted Companies

	Investments in at equity accounted companies
Balance at Jan. 1, 2020	138,316
Proportionate result from associates	(38,900)
Dividends	(426)
Translation adjustments	(9,926)
Balance at Dec. 31, 2020	**89,064**
Proportionate result from associates	(45,833)
Dividends	(873)
Translation adjustments	4,883
Balance at Dec. 31, 2021	**47,241**

Investments in associated companies are accounted for by applying the equity method.

Upon initial recognition in 2005, ALTANA's share in the net assets relating to its 39.0 % investment in Aldoro amounted to €2.8 million, which resulted in the recognition of goodwill of €4.4 million. In Brazil Aldoro produces metallic effect pigments and distributes them worldwide. The main emphasis of the business lies in the South American region.

At the time of acquisition of ALTANA's 33.3 % investment in Landa its share in the net assets amounted to €28.9 million. An amount of €75.1 million was allocated to development cost and no goodwill was identified. From 2016 until 2019, capital increases were effected, in which ALTANA participated with an amount of €134.4 million. Landa develops printing presses and consumables for the new nanography technology for water-based digital printing. Amortization of the development costs identified at the time of acquisition started in 2019.

Investments in joint ventures are accounted for by applying the equity method of accounting.

At the date of acquisition of dp polar in 2017 for a purchase price of €3.5 million ALTANA's share of equity of its 43.8 % interest amounted to €1.5 million. From the total purchase price an amount of €2.0 million was allocated to development cost and no goodwill was recognized. After the capital increase in 2019, in which ALTANA participated with €3.2 million, ALTANA's share of equity amounts to 49.5 %. Since the acquisition €3.4 million has been allocated to development costs. Pro rata amortization of the identified development costs has not yet commenced. Based on the proportionate result of €-1.2 million (previous year: €-36 thousand), the carrying amounts to €4.8 million in 2021 and to €6.0 million in 2020.

The following financial information relates to all associated companies and represents the amounts reported in the financial statements of the relevant associated companies and not ALTANA's proportionate share of these amounts.

	Dec. 31, 2020	**Dec. 31, 2021**
Financial statement		
Non-current assets	245,235	281,202
Current assets	77,871	39,473
Total assets	**323,106**	**320,675**
Non-current liabilities	19,717	113,717
Current liabilities	30,950	28,206
Total liabilities and provisions	**50,667**	**141,923**
Net assets	**272,439**	**178,752**
Income statement		
Net sales	27,625	38,352
Net income (EAT) / Comprehensive income	(117,006)	(134,384)

The following table reconciles ALTANA's share in the net assets to the carrying amount of the investments in associated companies:

	Dec. 31, 2020	**Dec. 31, 2021**
Net assets (100 %)	**272,439**	**178,752**
The Group's share of net assets	91,291	60,061
Proportionate goodwill	1,823	1,841
Other	(10,013)	(19,464)
Carrying amount	**83,101**	**42,437**

Other changes mainly relate to effects from a local equity-settled share-based payment plan of an associated company.

The line item Other in the consolidated Statement of Cash Flows mainly relates to results from at equity accounted investments.

16. Inventories

	Dec. 31, 2020	**Dec. 31, 2021**
Raw materials and supplies	117,150	196,661
Work in progress	30,850	47,504
Finished products and goods	187,782	264,391
Prepayments	599	2,919
	336,381	**511,475**

In 2021 and 2020, inventories are stated net of write-downs of €29.4 million and €25.9 million, respectively.

17. Trade Accounts Receivable

	Dec. 31, 2020	Dec. 31, 2021
Trade accounts receivable	412,581	484,694
Loss allowance	(12,124)	(11,260)
	400,457	**473,434**

The following table presents the roll-forward of the loss allowance:

	2020	2021
Allowance at the beginning of the year	7,205	12,124
Translation adjustments	(232)	192
Additions	7,000	1,439
Reversal	(1,445)	(1,883)
Utilization	(450)	(612)
Change in reporting entities	46	
Allowance at the end of the year	**12,124**	**11,260**

In 2020, additions include a risk provision for potentially increased insolvency risks resulting from the coronavirus pandemic of €4.1 million, which was retained unchanged in 2021.

Impairment losses recognized in profit or loss are as follows:

	2020	2021
Amounts written off	214	498
Addition to loss allowance	7,000	1,439
Reversal of loss allowance	(1,445)	(1,883)
	5,769	**54**

The following table presents the roll-forward of the gross carrying amounts of accounts receivable:

	2020	2021
Trade accounts receivable (gross) at Jan. 1	387,849	412,581
Translation adjustments	(14,767)	18,561
Additions	2,366,605	2,642,582
Disposals	(2,334,805)	(2,588,495)
Utilization of loss allowance	(450)	(612)
Amounts written off	(214)	(498)
Change in reporting entities	8,363	575
Trade accounts receivable (gross) at Dec. 31	**412,581**	**484,694**

As of December 31, 2021 and 2020, the exposure to credit risk was as follows:

Trade accounts receivable (including long-term portion)	Carrying amount	Individually impaired receivables	Not individually impaired receivables	Thereof at the reporting date			
				not past due	0-30 days past due	31-90 days past due	> 90 days past due
Dec. 31, 2020							
Carrying amount - gross	**412,581**	**8,159**	**404,422**	**371,828**	**23,551**	**5,647**	**3,396**
Expected loss rate			1.32 %	1.14 %	2.01 %	5.42 %	9.39 %
Loss allowance	12,124	6,769	5,355	4,257	473	306	319
Carrying amount	**400,457**	**1,390**	**399,067**	**367,571**	**23,078**	**5,341**	**3,077**
Dec. 31, 2021							
Carrying amount - gross	**484,694**	**10,163**	**474,531**	**424,484**	**37,269**	**10,261**	**2,517**
Expected loss rate			1.18 %	1.02 %	1.85 %	4.17 %	6.44 %
Loss allowance	11,260	5,668	5,592	4,312	690	428	162
Carrying amount	**473,434**	**4,495**	**468,939**	**420,172**	**36,579**	**9,833**	**2,355**

As of December 31, 2021 and 2020, respectively, the maximum carrying amount subject to credit risk amounts to €484.7 million and €412.6 million.

18. Marketable Securities

Marketable securities are measured at fair value through profit or loss. The carrying amounts per category which equal their fair value were as follows:

	Dec. 31, 2020	**Dec. 31, 2021**
Money market funds	24,284	31,029
Share and equity funds	27	27
	24,311	**31,056**

19. Short-term Financial Assets

ALTANA invested in cash equivalents with a term of more than three months but less than one year. As of December 31, 2021 and 2020, €67.5 million and €5.7 million, respectively, were invested.

20. Other Assets

	Dec. 31, 2020		**Dec. 31, 2021**	
	Other non-current assets	Other current assets	Other non-current assets	Other current assets
Balances due from employees	35	341	31	316
Cash surrender value of life insurance	1,860		1,824	
Balances due from fiscal authorities	232	18,449	965	23,914
Prepayments	19	3,239	7	4,990
Receivables from related parties		215		57
Prepaid expenses	728	10,357	1,935	15,946
Derivative financial instruments	918	2,443	1,238	65
Notes receivable		56,718		77,595
Other	6,945	7,523	7,795	10,495
	10,737	**99,285**	**13,795**	**133,378**

21. Shareholders' Equity

Issued Share Capital

The share capital was €136,097,896, represented by 136,097,896 no-par value shares representing €1 per share. The share capital is fully paid in.

Additional Paid-in Capital

The additional paid-in capital contains excess amounts over the calculated value resulting from the issuance of shares of ALTANA AG and from equity-settled share-based payment transactions of previous years. Cash-inflows from the sale of shares to non-controlling interests are also included.

Dividends

In 2021, a dividend of €50.0 million was distributed to the shareholder. The Management Board proposes to the Annual General Meeting to distribute dividends in the amount of €70.0 million from unappropriated retained earnings as of December 31, 2021 of €1,338.9 million of ALTANA AG and to carry forward the remaining amount of €1.268.9 million.

Accumulated Other Comprehensive Income

Changes in the fair value of derivative financial instruments qualifying as cash flow hedges are recognized, net of income taxes, in the item "Derivative financial instruments" if all hedge accounting criteria under IFRS 9 are met.

Furthermore, accumulated other comprehensive income includes the translation adjustment of consolidated subsidiaries where the functional currency is a currency other than the Euro.

Notes on Other Comprehensive Income

The following table shows the income and expenses recognized in other comprehensive income and the income tax effects thereon:

			2020			**2021**
	Before income taxes	Income taxes	Net of income taxes	Before income taxes	Income taxes	Net of income taxes
Remeasurement of the net defined employee benefit obligation	(14,536)	3,989	(10,547)	22,875	(6,424)	16,451
Items that will not be reclassified subsequently to profit or loss	**(14,536)**	**3,989**	**(10,547)**	**22,875**	**(6,424)**	**16,451**
Translation adjustments (including non-controlling interests)	(117,281)		(117,281)	115,035		115,035
Gains and losses from derivative financial instruments	3,622	(1,086)	2,536	(133)	41	(92)
Change in fair value of derivative financial instruments	(308)	92	(216)	(16)	5	(11)
Items that may be reclassified subsequently to profit or loss	**(113,967)**	**(994)**	**(114,961)**	**114,886**	**46**	**114,932**
Other comprehensive income	**(128,503)**	**2,995**	**(125,508)**	**137,761**	**(6,378)**	**131,383**

Additional Disclosures on Capital Management

The capital management of ALTANA comprises the management of cash and cash equivalents, long-term investments, short-term financial assets and marketable securities, shareholders' equity and debt. The main objective is to ensure the availability of financial funds within the Company. The majority of ALTANA's operations are financed by the Company's operating cash flows. Excess funds required are financed by borrowings.

In 2021, ALTANA's shareholders' equity increased by €276.5 million to €2,675.4 million. The debt to asset ratio was at 26 %. Long-term debt represented 12 % and short-term debt represented 15 % of total liabilities and equity.

The remaining amount of €48 million of the promissory note loans issued in prior periods totaling €350 million, was repaid in 2020. In 2021, a new syndicated credit line of €250 million with a minimum term until 2026 was issued by an international bank consortium. Additionally, ALTANA has access to a credit commitment from the European Investment Bank (EIB) in the amount of €200 million which can be used for the development of climate-friendly, digital and sustainable products.

The Company aims for a balance between equity and liabilities, which allows for further growth either through operational growth or acquisitions. Currently, the Company is not externally rated by a rating agency. The existing and the aspired financing structure – including bolt-on acquisitions – should be adequate for the requirements of an investment grade rating.

Foreign exchange restrictions exist for subsidiaries located in Brazil, India and China.

Non-controlling Interests

The following table provides financial information for the subsidiary ELANTAS Beck India. The amounts reported refer to 100 % and not to the share of 75 % held by ALTANA:

	Dec. 31, 2020	**Dec. 31, 2021**
Assets	64,827	78,674
Non-current assets	*19,161*	*23,549*
Current assets	*45,666*	*55,125*
Liabilities	11,869	14,910
Non-current liabilities	*2,821*	*3,241*
Current liabilities	*9,048*	*11,669*
Net sales	44,986	59,548
Net income (EAT)	7,488	7,554

In 2021 and 2020, respectively, cash and cash equivalents of ELANTAS Beck India amounted to €0.4 million and €1.4 million. In both years reported net income of €1.9 million related to non-controlling interests and dividends of €0.1 million were distributed to them. On December 31, 2021 and 2020, non-controlling interests held 25.0 % of the shares.

22. Employee Incentive Plans

ALTANA Equity Performance (AEP)

Since 2010, ALTANA has offered a long-term share-based incentive plan for key members of the management every year. Each of these programs begins on January 1 and has a term of four years. The incentive plans provide for the issuance of so-called ALTANA Equity Performance Awards (AEP rights). ALTANA AG issues these debt instruments; their value develops relative to the value of ALTANA's shareholders' equity. At the beginning of each incentive plan AEP rights, so-called AEP Awards, are granted to the key management members. The awards will be settled at the value determined at the end of the respective plan's term. Payment is limited to a maximum of 250 % of the value of the preliminary awards granted. No payment is made in the event of a negative performance. In case of a positive performance over the subsequent period of four years, catch up payments are made for the respective plan.

The precondition for participating in the incentive plans is a personal investment in AEP rights, which is determined based on the key management category to which the beneficiary belongs. The participant must hold the personal investments for the entire duration of the plan. These AEP rights are subject to the same performance as the AEP Awards, however their increase in value is limited to a maximum of 20 % per year.

For the AEP tranche 2017, no payments were made in 2021 because the required performance was not achieved as of December 31, 2020. For the AEP tranche 2016 10,365 AEP Awards were finally allocated at the end of the term on December 31, 2019 and the resulting payment of €2.9 million was made in 2020.

The following table provides the main parameters of the incentive plan:

	Awards granted	Initial fair value in € per award	Fair value in € per award as of Dec.31, 2021	End of term
Tranche AEP 2017	10,249	293.58	323.54	31.12.2020
Tranche AEP 2018	10,356	299.12	321.80	31.12.2021
Tranche AEP 2019	11,192	279.07	353.66	31.12.2022
Tranche AEP 2020	11,529	276.28	395.09	31.12.2023
Tranche AEP 2021	11,908	287.42	451.47	31.12.2024

In 2021 and 2020, expenses for all plans including personal investments of €4.5 million and €5.8 million, respectively, were recognized. Provisions amounted to €13.2 million and €8.9 million, as of December 31, 2021 and 2020, respectively and include €6.6 million and €3.3 million for the fully vested AEP tranche 2018 and 2017. Total personal investment, which is reported in other liabilities, was measured at €4.7 million and €4.6 million as of December 31, 2021 and 2020 (see note 26).

ALTANA Profit Participation (APP)

At the end of 2010 ALTANA initiated an incentive plan for employees not eligible for the AEP plan. This incentive plan allows for annual purchases of ALTANA Profit Participation Rights (APPR).

The APPRs are debt instruments issued by ALTANA AG with a minimum term of four years. A basic interest rate per year of the debt instrument is granted as well as an additional bonus interest rate if applicable. For the APPRs 2010 until 2020, the basic interest rate was 3 %. With the launch of the APPR plan 2021, the basic interest rate for all new programs was reduced to 2 %. The bonus interest represents 150 % of the relative ALTANA Value Added. The latter corresponds to the excess return on capital employed (ROCE) generated by ALTANA in the respective financial year over the average cost of capital. Additionally, subscribers of APPRs were granted a one-time earnings-related country-specific payment. On December 31, 2021, the APPR plans for 2010 und 2011 were terminated and the nominal amounts were repaid in January 2022.

As of December 31, 2021 and 2020, €47.6 million and €40.7 million, respectively, were recognized in other liabilities for the APPRs issued in 2021 and previous years. In 2021 and 2020, the one-time payment and the interest incurred resulted in an expense of €3.6 million and €2.4 million, respectively, which was recognized in personnel expenses.

23. Debt

	Dec. 31, 2020		**Dec. 31, 2021**	
	Non-current debt	Current debt	Non-current debt	Current debt
Borrowings from banks	2,688	1,567	1,212	1,609
Lease obligations	34,591	8,886	36,104	8,931
Other	11,327	325	12,137	2,306
	48,606	**10,778**	**49,453**	**12,846**

For general corporate financing purposes ALTANA uses different financing instruments. The promissory note loans (German Schuldschein) issued in previous years totaling €350 million were repaid in full in 2020 for the remaining outstanding amount of €48 million. As of December 31, 2021, ALTANA has an undrawn syndicated credit line of €250 million which was issued by eight banks and has obtained a credit commitment of €200 million from EIB in 2021, which is undrawn as of December 31, 2021. Furthermore, as of December 31, 2021, largely unused lines of credit in the amount of €10.9 million were available to ALTANA. The terms and conditions are based on market conditions and no collateral is provided.

As of December 31, 2021 and 2020, no foreign currency denominated bank borrowings existed.

The item Other includes the earn-out liability from the previous years acquisition of all shares in Cytec Olean Inc. from Cytec Industries Inc. and the earn-out liability from the acquisition of the business of TLS in 2021 (see note 3). Also included is a loan of €8.7 million (USD 9.9 million) which ALTANA received from a U.S. investment fund (see note 14).

The following table provides information about the change in financial liabilities considering cash and non-cash effects:

	Non-current debt	Current debt
Balance at Jan. 1, 2020	50,793	62,489
Changes in financial liabilities affecting cash flow		(69,819)
Acquisitions		9,959
Changes in investments affecting cash flow		(3,195)
non-cash changes		
Translation adjustments	(1,046)	(3,396)
Change in fair value		
Changes in maturity	(1,505)	1,505
Leasing	364	13,235
Other		
Balance at Dec. 31, 2020	**48,606**	**10,778**
Changes in financial liabilities affecting cash flow		(11,230)
Acquisitions	3,548	1,600
Changes in investments affecting cash flow		
non-cash changes		
Translation adjustments	1,966	948
Change in fair value	(2,477)	(567)
Changes in maturity	(1,476)	1,476
Leasing	(714)	9,797
Other		44
Balance at Dec. 31, 2021	**49,453**	**12,846**

As of December 31, 2021 and 2020, the maturity of total debt was as follows:

		Due within one year	Due within two to five years	Due after five years	Total
Borrowings from banks	Dec. 31, 2020	1,567	2,555	133	4,255
	Dec. 31, 2021	**1,609**	**1,048**	**164**	**2,821**
Other	Dec. 31, 2020	326	1,915	9,412	11,653
	Dec. 31, 2021	**2,306**	**3,396**	**8,741**	**14,443**
Total	Dec. 31, 2020	1,893	4,470	9,545	15,908
	Dec. 31, 2021	**3,915**	**4,444**	**8,905**	**17,264**
Lease obligations	Dec. 31, 2020				43,476
	Dec. 31, 2021				**45,035**
Total debt	Dec. 31, 2020				59,384
	Dec. 31, 2021				**62,299**

In the following table the maturity of the lease obligation is presented:

	Dec. 31, 2020	**Dec. 31, 2021**
Due within one year	9,080	8,833
Due within two to five years	17,937	17,287
Due after five years	22,078	23,936
Total minimum lease payments	**49,095**	**50,056**
Less amount representing interest	5,619	5,021
Present value of the lease liability	**43,476**	**45,035**
Less current portion	8,886	8,931
Non-current lease liability	**34,590**	**36,104**

In 2021 and 2020, respectively, cash payments from lease agreements amounted to €13.0 million and €13.8 million, of which €9.7 million and €10.3 million were attributable to payments of principal of lease liabilities, €0.6 million and €0.8 million payments of interest and in both years reported €2.7 million to the exercise of recognition assumptions. The expenses from lease contracts in 2021 and 2020 are presented in note 11.

In both years reported, potential future cash payments in the amount of €0.4 million, respectively, were not included in the lease obligations as it is not reasonably certain that the corresponding lease agreements will be extended (or not terminated).

As of December 31, 2021 and 2020, lease agreements entered into by ALTANA as lessee but not yet commenced will result in future cash outflows of €1.6 million and €0.3 million, respectively.

24. Employee Benefit Obligations

Defined Benefit Plans

The defined benefit obligation comprises unfunded and funded plans. Of these plans approximately 90 % relate to obligations in Germany and the U.S. as follows:

	Dec. 31, 2020	**Dec. 31, 2021**
Germany	366,581	374,509
The Netherlands	34,004	381
U.S.	17,358	17,163
Other	42,292	44,686
Defined benefit obligation	**460,235**	**436,739**

Domestic plans: Certain executives located in Germany are entitled to post-employment benefits ("Ruhegeldendbetrag"). The benefit is agreed individually and is paid out as a life-time pension upon reaching the age of 65, upon early retirement in accordance with statutory retirement provisions or in case of disability. The plan also covers surviving dependents' pension. All other German employees with an employment start date before January 1, 2010, participate in a post-employment benefit plan which also covers old age, disability and surviving dependents' pensions. The plan is basically based on a benchmark model considering length of service and salary with life-time pension payments beginning at the age of 65. Benefits granted from January 1, 1999 include a fixed annual increase of 1 % of the benefits, plans before that date grant compensation for inflation in accordance with section 16 of the German Company Pension Laws (BetrAVG). For ALTANA, the risk is mainly represented by the development of life expectancy and inflation since the obligations resulting from these plans represent lifetime pension payments.

All employees with an employment start date after December 31, 2009 are in a plan which is based on a capital commitment (ALTANA Vorsorgekapital/AVK). ALTANA pays the employer's contributions into external investment funds until the benefits are paid out. ALTANA also offers an employee-funded plan that grants the employees the right to have part of their earnings paid into a company pension scheme (AltersvorsorgeAktiv mit ALTANA/AAA) which are increased by employer's contributions, as necessary. For this plan, too, the contributions are invested in external investment funds until pay-out (cf. AVK). The two post-employment benefit plans at ALTANA, AVK and AAA basically have the same features. ALTANA offers two models: a fixed income based model, where the Company guarantees a minimum interest yield on the contributions paid-in, corresponding to the interest rate of life insurance contracts of 0.9 % as of the reporting date, and an equity-based model, where ALTANA guarantees the payment contributions made, but without any additional interest guarantee. Obligations under the AVK and AAA plans are linked to the development of the fund assets, which results in a reduction of the overall business risk exposure. The remaining risk ALTANA is exposed to, is represented by the risk that the performance of the funds does not cover the guaranteed minimum interest yield or the capital commitment.

Foreign plans: In the U.S., ALTANA basically offers two employee benefit plans which are financed by funds and one additional defined benefit plan for executive employees, which is unfunded. These plans provide for pension payments upon retirement. New employees cannot participate in these plans. Since their closure none of these three funded plans provide for additional benefits in future years of service. The two funded defined benefit plans are managed by trustees. These plans are subject to minimum funding requirements. The risks related to these plans are represented by the change in actuarial assumptions and life expectancy. For example, a lower interest rate will result in higher pension obligations due to lower discounting, which in turn could result in higher fund provisioning. For the two funded plans, shares account for a relatively large portion of plan assets, in which case a higher return may be expected in the long-term, but which also bears a volatility risk. If the interest yield is lower than planned, fund financing will decrease, and higher contributions might be required.

In the Netherlands, a defined benefit plan was closed as of December 31, 2020 and settled as of January 1, 2021. A defined contribution plan was established instead as of January 1, 2021, and contributions will be made into this new defined contribution plan. In 2020, the closure of the plan resulted in income of €2.8 million from past service cost.

Post-employment benefit obligations, similar obligations and pension liabilities are rolled-forward as follows:

			Dec. 31, 2020			**Dec. 31, 2021**
	Domestic	Foreign	Total	Domestic	Foreign	Total
Defined benefit obligation - funded	105,524	90,368	195,892	127,114	58,592	185,706
Fair value of plan assets	105,523	82,132	187,655	127,082	57,815	184,897
Funded status	**1**	**8,236**	**8,237**	**32**	**777**	**809**
Defined benefit obligation - unfunded	261,057	3,286	264,343	247,396	3,637	251,033
Net defined benefit obligation	**261,058**	**11,522**	**272,580**	**247,428**	**4,414**	**251,842**
Effect on asset ceiling limitation					1,925	**1,925**
Provision for other post-retirement benefits		**136**	**136**		**149**	**149**
Reported amount	**261,058**	**11,658**	**272,716**	**247,428**	**6,488**	**253,916**

	Present value of the defined benefit obligation	Fair value of plan assets	Effect on asset ceiling limitation	Total
Balance at Jan. 1, 2020	**413,245**	**(157,389)**		**255,856**
Service cost				
Current service cost	14,785			14,785
Past service cost	(2,609)			(2,609)
Effects of settlement	(456)			(456)
Interest expense/(income)	6,272	(2,516)		3,756
Administration cost		243		243
	17,992	**(2,273)**		**15,719**
Remeasurement				
Return on plan assets excluding amounts included in interest income		(4,722)		(4,722)
Gains/(losses) from changes in demographic assumptions	(1,271)			(1,271)
Gains/(losses) from changes in financial assumptions	19,231			19,231
Experience-based adjustments	1,322			1,322
Change in the asset ceiling limitation excluding amounts recognized in interest income				
	19,282	**(4,722)**		**14,560**
Translation adjustment	(2,066)	1,930		(136)
Contributions:				
Employer		(9,264)		(9,264)
Beneficiaries of the plan	4,314	(4,314)		
Pension payments	(10,535)	5,614		(4,921)
Settlements				
Change in reporting entities	18,003	(17,237)		766
Other				
Balance at Dec. 31, 2020	**460,235**	**(187,655)**		**272,580**
Service cost				
Current service cost	13,621			13,621
Past service cost				
Effects of settlement				
Interest expense/(income)	4,957	(1,772)		3,185
Administration cost		136		136
	18,578	(1,636)		16,942
Remeasurement				
Return on plan assets excluding amounts included in interest income		(16,833)		(16,833)
Gains/(losses) from changes in demographic assumptions	(1,755)			(1,755)
Gains/(losses) from changes in financial assumptions	(16,088)			(16,088)
Experience-based adjustments	9,982			9,982
Change in the asset ceiling limitation excluding amounts recognized in interest income			1,925	1,925
	(7,861)	**(16,833)**	**1,925**	**(22,769)**
Translation adjustment	2,831	(2,735)		96
Contributions:				
Employer		(7,840)		(7,840)
Beneficiaries of the plan	4,478	(4,478)		
Pension payments	(7,909)	2,703		(5,206)
Settlements	(33,623)	33,623		
Change in reporting entities				
Other	10	(46)		(36)
Balance at Dec. 31, 2021	**436,739**	**(184,897)**	**1,925**	**253,767**

The following table presents the significant actuarial assumptions of the pension plans:

	Dec. 31, 2020			**Dec. 31, 2021**		
	German plans	Dutch plans	U.S. plans	German plans	Dutch plans	U.S. plans
Discount rate	1.2 %	1.2 %	2.1 %	1.5 %	n.a.	2.5 %
Rate of pension increase	1.8 %			1.8 %		

As in the previous year, the discount rate for employee benefit and similar obligations was determined based on the "Mercer Yield Curve Approach."

The life expectancy in Germany is based on the "Richttafeln 2018 G," which were developed by Prof. Dr. Klaus Heubeck and is unchanged to the previous year.

The "U.S. PRI2012 Mortality Tables" are applied in the U.S. with appropriate updates and projections considered.

The following table shows the changes in the present value of the defined benefit obligation resulting from changes in the relevant actuarial assumptions with the other assumptions remaining unchanged. This means no possible correlation effects were considered. For the German plans an increase or decrease of life expectancy of one year is assumed for a person who is exactly 65 years old. For employees who are either younger or older than 65, a corresponding adjustment is made, i.e. the change in life expectancy of younger employees is more than one year and that of older employees is less than one year. For the plans in the U.S. an age-independent shift in the employees' life expectancy is assumed as of the reporting date:

		Dec. 31, 2020		**Dec. 31, 2021**	
		Effect on defined benefit obligation		Effect on defined benefit obligation	
	Change in actuarial assumption	Defined benefit obligation	Change	Defined benefit obligation	Change
		in € thousand	in %	in € thousand	in %
Present value of the defined benefit obligation[1]		417,943		391,672	
Discount rate	Increase by 50 basis points	389,493	(6.8)	368,818	(5.8)
	Decrease by 50 basis points	450,362	7.8	417,248	6.5
Rate of pension increase	Increase by 50 basis points	431,358	3.2	401,255	2.4
	Decrease by 50 basis points	408,430	(2.3)	382,676	(2.3)
Life expectancy	Increase by 1 year	430,129	2.9	402,285	2.7
	Decrease by 1 year	405,512	(3.0)	380,729	(2.8)

[1] Present value of the German, the U.S. and in 2020 the Dutch plans applying the actuarial assumptions as stated in the table above

The following table shows the fair values of the plan assets per category:

			Dec. 31, 2020			**Dec. 31, 2021**
	Price quotation in an active market	No price quotation in an active market	Total	Price quotation in an active market	No price quotation in an active market	Total
Bonds	13,426		13,426	21,826		21,826
Money market funds	6,101		6,101	9,246		9,246
Mixed funds	99,422		99,422	117,837		117,837
Shares	14,284		14,284	10,466		10,466
Insurances		47,980	47,980		7,385	7,385
Cash and cash equivalents	1,411		1,411	6,480		6,480
Other	389	4,642	5,031		11,657	11,657
Fair value of plan assets	**135,033**	**52,622**	**187,655**	**165,855**	**19,042**	**184,897**

The domestic plan assets mainly comprise money market funds and mixed funds, while the foreign plan assets mainly comprise shares, debt instruments and insurances.

ALTANA aims to hedge future payments under the pension obligation with long-term returns from the portfolio of the plan assets. Therefore, the composition of the plan assets is geared to the sustainability of the income generated by increases in market values of the assets as well as dividends and interest income.

In 2021 and 2020, the actual return on the plan assets amounted to €18.5 million and €7.0 million, respectively.

Plan assets do not include financial instruments issued by ALTANA or other assets or property used by the Company itself.

In 2022, the Company expects to pay benefits of €17.4 million to retirees compared to €13.8 million in 2021 and expects payments from plan assets of €11.5 million compared to €8.2 million in 2021. Contributions to plan assets by the employer are expected to be paid in an amount of €7.8 million in 2022 and in 2021. The expected expense for defined benefit plans including net interest expenses for 2022 is estimated to amount to €16.7 million compared to €17.4 million in 2021.

In 2021, the weighted average duration of the German and U.S. employee benefit obligation is 19 years and in 2020, including the Dutch plans it was 20 years.

Defined contribution plans

Defined contribution plans mainly exist in non-German subsidiaries. Additionally, the Company pays contributions to domestic and foreign governmental and private pension insurance organizations in accordance with legal regulations. The contributions are recognized as expense based on their function in the respective year and amounted to €28.7 million and €25.6 million in 2021 and 2020, respectively. No further obligations exist besides the contributions paid.

25. Other Provisions

	Employees	Sales and marketing	Warranty	Other	Total
Balance at Jan. 1, 2021	**75,713**	**20,724**	**2,678**	**25,595**	**124,710**
Additions	65,737	29,284	786	12,020	107,827
Accretion	235				235
Utilization	(47,612)	(16,627)	(316)	(6,353)	(70,908)
Reversal	(1,381)	(1,227)	(708)	(1,596)	(4,912)
Translation adjustments	2,070	956	22	735	3,783
Change in reporting entities	23		46	(63)	6
Balance at Dec. 31, 2021	**94,785**	**33,110**	**2,508**	**30,338**	**160,741**
Thereof non-current					
at Dec. 31, 2020	20,252	673		8,040	28,965
at Dec. 31, 2021	**21,609**	**530**		**7,506**	**29,645**

The employee-related provisions include provisions for employee incentive plans and bonuses. The non-current portion mainly relates to partial retirement (Altersteilzeit), anniversary benefits and employee incentive plans.

Provisions for sales and marketing pertain primarily to sales bonuses (refund liability from revenues) and commissions. As of December 31, 2021 and 2020, provisions for sales bonuses amounted to €16.1. million and €8.2 million, respectively. In 2021 and 2020, €7.1 million and €6.0 million were used and €0.5 million were released in both years reported.

Provisions for warranty cover commitments in connection with goods delivered and services rendered. ALTANA expects that the current portion of the provisions will be utilized during 2022.

The item Other includes litigation, legal cost and professional fees, provision for taxes other than income taxes and contributions.

26. Other Liabilities

Other liabilities consist of the following:

	Dec. 31, 2020		Dec. 31, 2021	
	Other non-current liabilities	Other current liabilities	Other non-current liabilities	Other current liabilities
Balances due to fiscal authorities (incl. payroll taxes)		15,256	304	16,285
Personnel-related liabilities		11,345		13,284
Social security contributions		4,494		4,917
Employee incentive plans	23,047	22,221	25,610	26,663
Credit notes to customers		1,677		2,117
Liabilities due to related parties		93		
Derivative financial instruments		67		2,913
Deferred income	1,152	1,546	1,013	2,563
Contract liability		1,756		4,394
Refund liability		4,599		1,109
Other		7,365		6,830
	24,199	**70,419**	**26,927**	**81,075**

27. Additional Disclosures for Financial Instruments

Measurement of Financial Instruments Based on Categories

ALTANA uses different financial instruments. In accordance with accounting regulations for financial instruments, these financial instruments are classified based on their nature and function into several measurement categories. Financial assets are classified as follows: Debt instruments are classified as carried at amortized cost if the underlying business model objective is to hold assets to collect contractual cash flows and these cash flows are solely payments for principal and interest on the outstanding amount.

Financial instruments are classified as at fair value through profit or loss if the classification criteria of a debt instrument for amortized cost under IFRS 9 is not fulfilled, the financial instrument is a derivative financial instrument for which hedge accounting is not applied to or in case of an equity instrument for which the option to recognize changes in fair value in other comprehensive income (OCI option) is not exercised.

The carrying amounts of cash and cash equivalents, short-term financial investments and trade accounts receivable approximate their fair values due to the short-term maturities of these instruments.

The carrying amounts of marketable securities and equity investments equal their fair values. For marketable securities traded on the stock exchange the fair values correspond to the quotation on the stock exchange (hierarchy level 1). As of December 31, 2021 and 2020, ALTANA does not hold marketable securities. In both years reported investments not traded on the stock exchange amounting to €24.8 million and €24.7 million, are measured at fair value (hierarchy level 3). A sale of these investments is currently not planned.

The carrying amounts of the long-term investments, which are allocated to the other interest-bearing non-derivative financial assets and are not measured at amortized cost correspond to their fair value and are allocated to hierarchy level 3. The fair value can increase by a maximum of €0.1 million and relates to a loan with a conversion option described in note 14.

The carrying amounts of the long-term investments, which are allocated to the other non-interest-bearing non-derivative financial assets, are measured at their fair value and are allocated to hierarchy level 3. The fair value can increase by a maximum of €0.6 million and relates to the funding agreement for another investment in Israel described in note 14.

The carrying amounts of derivative financial assets and liabilities equal their fair values. These are generally measured as the present value of the expected future cash inflows and outflows of the financial instruments in consideration of the credit risk and are allocated to hierarchy level 2.

The fair values of interest bearing other non-derivative financial assets and liabilities measured at amortized cost equal the present values of their future estimated cash flows. The present values are calculated taking the currency, interest rates and duration parameters at each reporting date into consideration (hierarchy level 2). The fair value of the other non-interest-bearing non-derivative financial liabilities allocated to other non-current liabilities is also determined as the present value of the expected future cash inflows and outflows of the financial instruments and is allocated to hierarchy level 2.

Trade accounts payable and other non-interest bearing non-derivative liabilities allocated to other current liabilities, generally have a short remaining maturity; therefore, their carrying amount approximates their fair value. Debt allocated to other non-interest bearing non-derivative financial liabilities essentially relate to earn-out payments in connection with the acquisitions of Cytec Olean Inc. and TLS and represent fair values which are largely assigned to hierarchy level 3. The fair values of the earn-out payments depend on the achievement of certain sales and gross profit targets. If the estimated sales or gross profit change by +/- 10 %, the financial liability and the financial result will change by +/- €2.3 million (2020: +/- €1.1 million). As of December 31, 2021 and 2020, these debts amount to €5.7 million and €3.6 million. In 2021, an adjustment of the liability from fair value measurement of €-3.0 million and additions through acquisitions of €5.0 million occurred. A change of the liabilities also results from exchange rate losses of €0.2 million in 2021 and exchange rate gains of €0.3 million in 2020, which were recognized in other comprehensive income. In 2021 and 2020 no payments were made.

Share options are measured at fair value through profit or loss and are assigned to hierarchy level 3. The fair value is determined using an option pricing model because the underlying value of the option is not a listed company and therefore no market-oriented volatilities or correlations are available. The Company uses the Black-Scholes-Modell employing the Margrabe-Formula to determine the fair value.

In measuring the options, the company value and the variable purchase price are compared. The company value is determined based on discounted estimated future cash flows using an interest rate representing a market interest. The variable purchase price is determined as a multiple of a profit target considering different scenarios.

The options have a term of multiple years.

As of December 31, 2021 and 2020, the carrying amount of the derivative share option was €1.2 million and €0.9 million, respectively. Unrealized gains of €0.3 million and €0.1 million are reported in the financial result.

The following tables provide a reconciliation of the items in the statement of financial position to the different categories of financial instruments, their carrying amounts and fair values as of December 31, 2021 and 2020.

	Dec. 31, 2020			Dec. 31, 2020
	Carrying amount			Fair value
	Financial assets		Hedging instruments (hedge accounting)	
	at amortized cost	at fair value through profit or loss	at fair value	
Cash and cash equivalents	**313,692**			**313,692**
thereof in				
Cash and cash equivalents	313,692			313,692
Short-term financial assets	**5,699**			**5,699**
thereof in				
Short-term financial assets	5,699			5,699
Trade accounts receivable	**401,056**			**401,056**
thereof in				
Trade accounts receivable	400,457			400,457
Other current assets	599			599
Other interest-bearing non-derivative financial assets	**23,235**			**24,466**
thereof in				
Long-term investments	22,661			23,892
Other current assets	574			574
Other non-interest-bearing non-derivative financial assets	**57,718**	**1,842**		**59,560**
thereof in				
Long-term investments		1,586		1,586
Other non-current assets		256		256
Other current assets	57,718			57,718
Marketable securities and long-term investments		**49,028**		**49,028**
thereof in				
Long-term investments		24,717		24,717
Marketable securities		24,311		24,311
Derivative financial assets - hedge accounting			**277**	**277**
thereof in				
Other current assets			277	277
Derivative financial assets - without hedge accounting		**3,084**		**3,084**
thereof in				
Other non-current assets		918		918
Other current assets		2,166		2,166
	801,400	**53,954**	**277**	**856,862**

			Dec. 31, 2021	Dec. 31, 2021
			Carrying amount	Fair value
		Financial assets	Hedging instruments (hedge accounting)	
	at amortized cost	at fair value through profit or loss	at fair value	
Cash and cash equivalents	**259,946**			**259,946**
thereof in				
Cash and cash equivalents	259,946			259,946
Short-term financial assets	**67,518**			**67,518**
thereof in				
Short-term financial assets	67,518			67,518
Trade accounts receivable	**474,167**			**474,167**
thereof in				
Trade accounts receivable	473,434			473,434
Other current assets	733			733
Other interest-bearing non-derivative financial assets	**28,830**	**1,500**		**30,813**
thereof in				
Long-term investments	28,226	1,500		30,209
Other current assets	604			604
Other non-interest-bearing non-derivative financial assets	**79,583**	**1,067**		**80,650**
thereof in				
Long-term investments		794		794
Other non-current assets		273		273
Other current assets	79,583			79,583
Marketable securities and long-term investments		**55,822**		**55,822**
thereof in				
Long-term investments		24,766		24,766
Marketable securities		31,056		31,056
Derivative financial assets - hedge accounting				
thereof in				
Other current assets				
Derivative financial assets - without hedge accounting		**1,303**		**1,303**
thereof in				
Other non-current assets		1,238		1,238
Other current assets		65		65
	910,044	**59,692**		**970,219**

	Dec. 31, 2020			Dec. 31, 2020
	Carrying amount			Fair value
	Financial liabilities		Hedging instruments (hedge accounting)	
	at amortized cost	at fair value	at fair value	
Trade accounts payable	**188,239**			**188,239**
thereof in				
Trade accounts payable	186,562			186,562
Other current liabilities	1,677			1,677
Other interest-bearing non-derivative financial liabilities	**12,415**			**12,711**
thereof in				
Non-current debt	10,755			11,051
Current debt	1,567			1,567
Other current liabilities	93			93
Other non-interest-bearing non-derivative financial liabilities	**10,437**	**3,586**		**14,023**
thereof in				
Non-current debt		3,260		3,260
Current debt		326		326
Other current liabilities	10,437			10,437
Derivative financial liabilities - hedge accounting			**18**	**18**
thereof in				
Other current liabilities			18	18
Derivative financial liabilities - without hedge accounting		**49**		**49**
thereof in				
Other current liabilities		49		49
	211,091	**3,635**	**18**	**215,040**

	Dec. 31, 2021			Dec. 31, 2021
	Carrying amount			Fair value
	Financial liabilities		Hedging instruments (hedge accounting)	
	at amortized cost	at fair value	at fair value	
Trade accounts payable	**249,962**			**249,962**
thereof in				
Trade accounts payable	247,845			247,845
Other current liabilities	2,117			2,117
Other interest-bearing non-derivative financial liabilities	**11,562**			**11,380**
thereof in				
Non-current debt	9,953			9,771
Current debt	1,609			1,609
Other current liabilities				
Other non-interest-bearing non-derivative financial liabilities	**9,871**	**5,702**		**15,573**
thereof in				
Non-current debt		3,396		3,396
Current debt		2,306		2,306
Other current liabilities	9,871			9,871
Derivative financial liabilities - hedge accounting				
thereof in				
Other current liabilities				
Derivative financial liabilities - without hedge accounting		**2,913**		**2,913**
thereof in				
Other current liabilities		2,913		2,913
	271,395	**8,615**		**279,828**

Income Effect According to Measurement Categories

The following table provides the net result from financial instruments according to the measurement categories. The net financial result contains interest income, interest expense, gains and losses from the sale of financial instruments, dividends received and, additionally, changes in the fair value of derivative financial instruments not designated in a hedging relationship. The net financial result reported only includes income and expense related to financial instruments and their categories. Interest expense from employee benefit and lease obligations as well as changes in the fair values and interest recognized in connection with hedge accounting are therefore not included. The net operating result mainly includes impairment losses on trade accounts receivable.

	Net financial result	Net operating result	Net result
Dec. 31, 2020			
at amortized cost	**(4,026)**	**(5,753)**	**(9,779)**
thereof from:			
Financial assets	(539)	(5,753)	(6,292)
Financial liabilities	(3,487)		(3,487)
at fair value through profit or loss	**1,824**		**1,824**
thereof from:			
Financial assets	1,824		1,824
Financial liabilities			
Derivatives at fair value through profit and loss	**4,173**		**4,173**
Total	**1,971**	**(5,753)**	**(3,782)**

	Net financial result	Net operating result	Net result
Dec. 31, 2021			
at amortized cost	**5,350**	**(138)**	**5,211**
thereof from:			
Financial assets	9,145	(138)	9,007
Financial liabilities	(3,795)		(3,795)
at fair value through profit or loss	**2,299**		**2,299**
thereof from:			
Financial assets	(745)		(745)
Financial liabilities	3,044		3,044
Derivatives at fair value through profit and loss	**(4,458)**		**(4,458)**
Total	**3,190**	**(138)**	**3,052**

In 2021 and 2020, the net financial result includes interest income generated by financial instruments measured at amortized cost amounting to €2.5 million and €2.0 million and interest expense incurred by financial instruments measured at amortized cost amounting to €0.8 million and €1.7 million. Interest income and interest expense are measured by applying the effective interest method.

In 2021 and 2020, impairment losses on financial instruments at amortized cost amount to €2.0 million and €7.2 million. Of these amounts €1.9 million and €7.2 million relate to trade accounts receivable.

The risk provisions recognized in 2020 for potentially increased insolvency risks resulting from the coronavirus pandemic amounting to €4.1 million was retained in 2021 due to the unchanged risk situation.

Risk Analysis

Liquidity Risk: To assure the solvency and financial flexibility of ALTANA, the Company retains a liquidity reserve through cash and cash equivalents and lines of credit.

The following tables show the contractual amortization including the undiscounted interest payments for non-derivative (for lease liabilities not included in the following table see separate disclosure in note 23) and derivative financial instruments with a positive and a negative fair value. All non-derivative and derivative financial instruments as of December 31, 2020 and 2019, respectively, for which contractual payments had already been agreed, are included. Variable interest payments resulting from non-derivative financial instruments were estimated based on the interest rates applicable at the respective reporting dates. Budgeted amounts for future expected liabilities were not considered. Foreign currency amounts were translated based on the exchange rates as of the reporting dates. The cash flows attached to the foreign currency derivatives were calculated based on the respective forward rates.

		Due within one year	Due within two to five years	Due after five years
Trade accounts payable	Dec. 31, 2020	188,239		
	Dec. 31, 2021	**249,962**		
Other interest-bearing non-derivative financial liabilities	Dec. 31, 2020	1,701	2,580	8,201
	Dec. 31, 2021	**1,631**	**1,052**	**8,905**
Other non-interest-bearing non-derivative financial liabilities	Dec. 31, 2020	10,763	1,915	1,345
	Dec. 31, 2021	**12,177**	**3,396**	
Irrevocable credit commitments and other financial contingent liabilities	Dec. 31, 2020	9,764		
	Dec. 31, 2021	**72,042**		
Total	Dec. 31, 2020	210,467	4,495	9,546
	Dec. 31, 2021	**335,812**	**4,448**	**8,905**

		Due within one year	Due within two to five years	Due after five years
Forward foreign exchange contracts with positive fair value				
Cash inflow	Dec. 31, 2020	97,314		
	Dec. 31, 2021	**10,537**		
Cash outflow	Dec. 31, 2020	(95,005)		
	Dec. 31, 2021	**(10,228)**		
Net	Dec. 31, 2020	2,309		
	Dec. 31, 2021	**309**		
Forward foreign exchange contracts with negative fair value				
Cash inflow	Dec. 31, 2020	9,037		
	Dec. 31, 2021	**89,421**		
Cash outflow	Dec. 31, 2020	(9,136)		
	Dec. 31, 2021	**(93,009)**		
Net	Dec. 31, 2020	(98)		
	Dec. 31, 2021	**(3,588)**		

Credit Risk: The Company is exposed to credit risk if business partners do not fulfill their obligations. ALTANA continuously analyzes the creditworthiness of significant debtors. Based on its international operations and a diversified customer structure ALTANA has no concentration of credit risk. The Company does not generate sales of more than 3 % with one single customer and generates less than 20 % with its ten most significant customers combined. Receivables are monitored locally in the operating subsidiaries on an ongoing basis. Financing transactions are mainly carried out with contractual partners who have a credit rating of "Investment Grade." Furthermore, rating-based credit limits are defined for each contracting party that ALTANA invests with.

The carrying amount of all trade accounts receivable (see also note 17), marketable securities, long-term investments, cash and cash equivalents and other current and non-current assets represents ALTANA's maximum credit risk.

IFRS 9 requires the calculation of the expected credit risk for financial assets measured at amortized cost.

ALTANA considers an expected credit loss on trade accounts receivables on the basis of the lifetime expected credit loss as these receivables do not contain a significant financing component.

As of December 31, 2021 and 2020, other receivables and assets include bills receivable from Chinese customers in the amount of €77.8 million and €56.8 million for which a risk provision of €0.2 million and €0.1 million was recognized. Due to this low credit risk, ALTANA uses this option: The expected credit default is determined based on an expected loss within 12 months ("low credit risk assets").

The maximum credit risk exposure for each measurement category is as follows:

	Dec. 31, 2020	**Dec. 31, 2021**
Exposure applying the impairment model		
Financial assets - at amortized cost	801,400	910,044
Exposure without application of the impairment model		
Financial assets - at fair value through profit or loss	53,954	59,692
Total	**855,354**	**969,736**

As of the reporting date no significant agreements reducing the maximum credit risk and no financial assets existed, that were credit-impaired when purchased.

Currency Risk: The Company is subject to currency risk associated with its international operations. Currency risk occurs for financial instruments which are denominated in another than the functional currency. Foreign currency translation risk resulting from the consolidation of foreign subsidiaries is not considered. For hedging instruments used by the Company to limit the exposure to foreign currency rate fluctuations see "Hedging."

The main currency fluctuation risks relate to exchange rate changes of the USD, JPY, CHF and CNY compared to the Euro.

The following table provides the effects of a 10 % quantitative change of currency exchange rates on profit or loss and other comprehensive income for the item "Derivatives" and "Other financial instruments" (see table "Foreign Currency" in note 2):

		Effect on profit or loss		Change in other comprehensive income	
		exchange rate plus 10 %	exchange rate minus 10 %	exchange rate plus 10 %	exchange rate minus 10 %
Derivatives					
USD	Dec. 31, 2020	3,026	(3,026)	302	(302)
	Dec. 31, 2021	**4,051**	**(4,051)**		
JPY	Dec. 31, 2020	949	(949)	191	(191)
	Dec. 31, 2021	**1,185**	**(1,185)**		
CHF	Dec. 31, 2020	595	(595)		
	Dec. 31, 2021	**528**	**(528)**		
CNY	Dec. 31, 2020	1,040	(1,040)		
	Dec. 31, 2021	**1,706**	**(1,706)**		
Total	Dec. 31, 2020	5,610	(5,610)	493	(493)
	Dec. 31, 2021	**7,470**	**(7,470)**		

		Effect on profit or loss	
		exchange rate plus 10 %	exchange rate minus 10 %
Other financial instruments			
USD	Dec. 31, 2020	(3,645)	3,645
	Dec. 31, 2021	**(4,613)**	**4,613**
JPY	Dec. 31, 2020	(1,228)	1,228
	Dec. 31, 2021	**(1,987)**	**1,987**
CNY	Dec. 31, 2020	(1,028)	1,028
	Dec. 31, 2021	**(1,902)**	**1,902**
Total	Dec. 31, 2020	(5,901)	5,901
	Dec. 31, 2021	**(8,502)**	**8,502**

Interest Rate Risk: ALTANA is exposed to changes in interest rates. The majority of interest-sensitive assets and liabilities are marketable securities (money market funds) and debt. For those assets or liabilities that are variable rate instruments, changes in the interest rate will result in changes in the expected cash flows and will affect profit or loss. The fair value of fixed interest rate financial assets and liabilities measured at fair value through profit and loss is affected by changes in the interest rate and the resulting change in the fair value is reported in profit or loss. This has no effect on the other comprehensive income.

The following table shows the profit or loss effect on interest-bearing assets and liabilities resulting from a change in the average market rate of interest of 50 basis points. The sensitivity analysis was performed under the assumption that the interest rate may decrease to below zero percent.

		Effect on profit or loss	
		plus 50 basis points	minus 50 basis points
Other financial instruments	Dec. 31, 2020	131	(131)
	Dec. 31, 2021	**160**	**(160)**

Hedging

ALTANA has established policies and procedures for assessing risks related to derivative financial instrument activities and uses derivative financial instruments exclusively for hedging purposes.

Forward Foreign Exchange Contracts: The Company uses forward foreign exchange contracts to hedge foreign currency exchange risks, resulting from intercompany loans, In-house bank accounts as well as accounts receivable and accounts payable.

ALTANA centralizes the foreign currency exposures of the Group companies by using In-house bank accounts. ALTANA AG determines its foreign currency exposure daily through the ALTANA In-house bank and hedges this exposure by foreign currency balances and forward transactions considering natural hedges. The focus is placed on the major foreign group currencies.

Until December 31, 2019 forecast transactions of subsidiaries with external counterparties were hedged as follows: Hedging instruments with maximum terms of up to 18 months were used to hedge forecast transactions of subsidiaries in USD and JPY and were recognized as cash flow hedges. In accordance with the ALTANA hedging strategy, 75 % of the forecast transactions not hedged by natural offsetting items of the first six months, 60 % of the following six months, and 30 % of the subsequent six months of the forecast transactions were hedged. The volume of the hedged transactions as described above was reduced when the occurrence of the transactions was not highly probable. The last forward exchange contracts concluded under this hedging strategy expired in 2021.

Cash Flow Hedges

Hedging of Anticipated Sales Denominated in Foreign Currencies: In previous years, ALTANA has entered into forward foreign exchange contracts for forecast sales transactions denominated in USD and JPY for its subsidiaries and has designated them as cash flow hedges. At December 31, 2021 and 2020, the fair values are as follows:

		Positive fair value	Negative fair value	Total fair value
USD	Dec. 31, 2020	138		138
	Dec. 31, 2021			
JPY	Dec. 31, 2020	140	(18)	121
	Dec. 31, 2021			
Total	Dec. 31, 2020	277	(18)	259
	Dec. 31, 2021			

Amounts relating to forward foreign exchange contracts are reclassified from accumulated other comprehensive income to profit or loss when the hedged item is realized. In 2021 and 2020, a decrease in fair value of €15 thousand and of €0.3 million was recognized in other comprehensive income. In 2021 and 2020, €0.1 million were reclassified as increase and €3.6 million were reclassified as reduction of net sales from other comprehensive income to net sales. Ineffectiveness may occur in the context of hedging relationships. This is of minor importance for ALTANA and results exclusively from credit risk of the counterparties of the hedging transactions.

The following table shows the nominal amount and the carrying amount of the hedging transactions as well as the change in fair value of the underlying transaction and hedging instrument to determine their ineffectiveness. In addition, the amount reported in other comprehensive income for the designated and undesignated components in equity is disclosed.

		Nominal amount	Fair value	Change in fair value to identify ineffectiveness		Hedging/Cost of Hedging Reserve for Cash Flow Hedges			
				hedging instrument	underlying transaction	active		discontinued	
						designated component	non-designated component	designated component	non-designated component
Derivative assets									
thereof									
USD	Dec. 31, 2020	3,745	138	138	(147)	229	(156)	57	(63)
	Dec. 31, 2021								
JPY	Dec. 31, 2020	5,402	140	140	(129)	147	(5)		
	Dec. 31, 2021								
Derivative liabilities									
thereof									
USD	Dec. 31, 2020							42	(73)
	Dec. 31, 2021								
JPY	Dec. 31, 2020	2,194	(18)	(18)	21	(21)	0	(11)	0
	Dec. 31, 2021								

The following table shows the average hedging rate as well as the forecast cash flows of the hedged transactions which correspond to the maturities of the forward foreign exchange transactions.

		Total nominal amount	Nominal amount due in 2021 (prior year: 2020)	Nominal amount due in 2022 (prior year: 2021)	average hedging rate
USD	Dec. 31, 2020	4,430	4,430		1.18
	Dec. 31, 2021				
JPY	Dec. 31, 2020	938,000	938,000		123.49
	Dec. 31, 2021				

The following table shows the gains or losses from cash flow hedges resulting from ineffectiveness, other adjustments (premature termination or rebalancing) and reclassifications to profit and loss due to realizations.

		gains/losses recognized in equity	Ineffectiveness recognized in profit and loss	Item of the statement of comprehensive income for recording ineffectiveness	Reclassification from the CFH reserve to profit or loss due to		Item in the statement of comprehensive income that contains the reclassification
					adjustment of the hedging relationship	realization	
Currency risk hedging	Dec. 31, 2020	148		Other operating expenses/income		(3,622)	Net sales
	Dec. 31, 2021			**Other operating expenses/income**		**133**	**Net sales**

The following table shows the development of other comprehensive income from foreign currency cash flow hedges:

	designated component	non-designated component
Balance at Jan. 1, 2020	(2,071)	(1,096)
Change in fair value of derivative financial instruments	21	(329)
Reasons for reclassification:		
Realization of the underlying transaction	2,494	1,128
Balance at Dec. 31, 2020	**444**	**(297)**
Change in fair value of derivative financial instruments	(10)	(6)
Reasons for reclassification:		
Realization of the underlying transaction	(434)	302
Balance at Dec. 31, 2021		

Hedging of Intercompany Foreign Currency Exposure

Foreign currency loans and foreign currency In-house bank accounts: In 2021, ALTANA entered into forward foreign exchange contracts with a nominal value of USD 62.1 million (2020: USD 176.6 million), of JPY 5,375.0 million (2020: JPY 8,270.0 million) and of CHF 136.0 million (2020: CHF 244.3 million) to hedge intercompany foreign currency loans and In-house bank accounts for which no offsetting items existed. These forward foreign exchange contracts which serve as economic hedge of the foreign currency exchange rate risk are not designated in a hedging relationship and consequently, changes in their fair values are recognized in the financial result.

Foreign currency accounts receivable: In 2021, ALTANA did not enter into forward foreign exchange contracts (2020: CNY 229.7 million) to hedge foreign currency accounts receivable.

Offsetting of Financial Instruments

Under the German Master Agreement for Financial Futures all derivative financial instruments that ALTANA has concluded are subject to offsetting agreements, which allow for offsetting in event of default by one party. The amounts reported in trade accounts receivable and trade accounts payable result from credit notes issued and received.

The following tables present the amounts of the financial assets and financial liabilities actually offset in the statements of financial position as well as potential offsetting amounts under global netting and other offsetting agreements:

		Gross carrying amount	Offsetting amounts, offset in the statements of financial position	Net carrying amount	Potential offsetting amounts, not offset in the statements of financial position	Net amount after potential offsetting
Receivables from forward foreign exchange transactions	Dec. 31, 2020	2,443		2,443	67	2,376
	Dec. 31, 2021	**65**		**65**	**65**	
Trade accounts receivable	Dec. 31, 2020	408,018	7,561	400,457		400,457
	Dec. 31, 2021	**484,619**	**11,185**	**473,434**		**473,434**
Total	Dec. 31, 2020	410,461	7,561	402,900	67	402,833
	Dec. 31, 2021	**484,684**	**11,185**	**473,500**	**65**	**473,434**

		Gross carrying amount	Offsetting amounts, offset in the statements of financial position	Net carrying amount	Potential offsetting amounts, not offset in the statements of financial position	Net amount after potential offsetting
Liabilities from forward foreign exchange transactions	Dec. 31, 2020	67		67	67	
	Dec. 31, 2021	**2,913**		**2,913**	**65**	**2,848**
Trade accounts payable	Dec. 31, 2020	187,866	1,304	186,562		186,562
	Dec. 31, 2021	**249,846**	**2,001**	**247,845**		**247,845**
Total	Dec. 31, 2020	187,933	1,304	186,629	67	186,562
	Dec. 31, 2021	**252,759**	**2,001**	**250,758**	**65**	**250,692**

28. Commitments and Contingencies

Guarantees and Other Commitments

	Dec. 31, 2020	**Dec. 31, 2021**
Purchase commitments for intangible assets	2,339	1,161
Purchase commitments for property, plant and equipment	26,043	19,705
Guarantee for pension obligation from divestments	8,869	7,502
Other contingent financial liabilities	6,677	76,842
	43,928	**105,210**

In 1995, the Company sold its Dietetics business line. In accordance with the German Civil Code, the Company remains liable for the pension commitments for holders of annuities and prospective beneficiaries since the sale was consummated as an asset deal. The Company is obliged to make payments on demand of the former employees but has the right of refund from the acquirer according to the purchase agreement. No payments have been requested so far.

In 2021, the increase in Other contingent financial liabilities results mainly from a bank guarantee issued for Landa in the amount of USD 76.3 million.

29. Related Party Transactions

In accordance with IAS 24 the following persons or entities are considered related parties: Mrs. Susanne Klatten, entities controlled by her, members of the Board of ALTANA AG and its sole shareholder SKion GmbH as well as their close family members, their associates, joint ventures or affiliated, non-consolidated subsidiaries.

In addition to her function as deputy chairwoman of the Supervisory Board of ALTANA AG Mrs. Susanne Klatten is also shareholder and member of the Supervisory Board of Bayerische Motoren Werke AG (BMW) and shareholder and chairwoman of the Supervisory Board of SGL Carbon SE.

Apart from her Supervisory Board remuneration and the payment of the regular dividend to SKion GmbH, of which she is the sole shareholder, no other business relationships exist.

Regarding the disclosure on key management personnel compensation see note 30. The employee representatives elected to the Supervisory Board of ALTANA AG are entitled to a regular salary as part of their employment contract. The amount of their salary corresponds to an appropriate remuneration for the respective function of activity in the Company.

Associated companies in which ALTANA holds an ownership interest but which are not included in the Consolidated Financial Statements and investments accounted for at equity are also considered related parties. Receivables and liabilities resulting from transactions with those related parties are reported in other assets (note 20) and other liabilities (note 26).

The following table presents all balances and transactions with related parties:

		Accounts receivables	Liabilities
Unconsolidated subsidiaries	Dec. 31, 2020	152	93
	Dec. 31, 2021	**1**	
Joint ventures	Dec. 31, 2020	58	
	Dec. 31, 2021	**1,547**	**51**
Associated companies	Dec. 31, 2020	0	
	Dec. 31, 2021		**12**
Other related parties	Dec. 31, 2020	85	384
	Dec. 31, 2021	**54**	**316**
Total	Dec. 31, 2020	295	477
	Dec. 31, 2021	**1,603**	**379**

		Sales	Other income	Services and goods acquired	Lease expense / lease payments
Unconsolidated subsidiaries	Dec. 31, 2020		2		
	Dec. 31, 2021		**3**		
Joint ventures	Dec. 31, 2020		178	335	
	Dec. 31, 2021	**6**	**130**	**34**	
Associated companies	Dec. 31, 2020	22			
	Dec. 31, 2021				
Other related parties	Dec. 31, 2020	315		1,877	2,425
	Dec. 31, 2021	**293**		**1,963**	**2,572**
Total	Dec. 31, 2020	336	180	2,211	2,425
	Dec. 31, 2021	**298**	**133**	**1,997**	**2,572**

In 2021 and 2020, ALTANA purchased or leased company cars from the BMW Group.

The lease expense respectively lease payments relate to lease contracts for company cars with Alphabet Fuhrparkmanagement GmbH (BMW Group). In both years reported further transactions with BMW Group are included in revenues in the amount €0.3 million.

All transactions with related parties are concluded at arm’s length.

30. Compensation of the Supervisory Board and Management Board

The compensation of the Supervisory Board is governed by section 18 of ALTANA AG's articles of association. The amount of the compensation is based on the tasks and responsibilities of the Supervisory Board members and on the size and economic success of the Company. The compensation is comprised of a fixed and a variable component. The variable component is determined based on the operating income (EBIT) of ALTANA.

In 2021 and 2020, respectively, compensation of the Supervisory Board amounted to €1.1 million and €0.9 million of which €0.5 million and €0.3 million related to variable compensation and €0.6 million related to fixed compensation in both years.

The amount of the compensation of the Management Board members of ALTANA AG is based on the size of the Company, its economic and financial situation, as well as on the amount and structure of the management board compensation in comparable companies. In addition, the scope of duties, the experience and the contribution of the respective Management Board member, as well as the compensation structure that otherwise exists in the Company are considered when assessing compensation. In the process of determining the compensation, the Supervisory Board uses compensation studies and works with an independent expert.

The compensation of the Management Board is largely based on performance. It consists of a fixed component, variable bonuses (short-term bonus and long-term bonus) and a component with a long-term incentive. The predominant part of the variable compensation of the Management Board has a multi-year assessment basis. In addition to the compensation in cash, the Management Board members are entitled to post-employment benefits and receive compensation in kind, primarily in the form of company car usage and insurance premiums.

The short-term bonus for 2021 was determined on a one-year basis. It is based on the development of earnings before interest, taxes and depreciation and amortization (EBITDA) and EBITDA in relation to consolidated sales (EBITDA margin), each in comparison to the respective target values established by the Supervisory Board. The long-term bonus 2021 was calculated based on the nominal sales development in relation to a group of comparable chemical companies, the operating sales development and the development of net income after cost of capital ("ALTANA Value Added") over an assessment period of three years, each in comparison to the respective target values established by the Supervisory board. In 2021, as a component with long-term incentive, the Management Board members were granted AEP Awards under the "ALTANA Equity Performance 2021" (AEP) plan. None of the members of the Management Board was entitled to special benefits in the case of premature or regular termination of their engagement.

In 2021 and 2020, total compensation paid in cash to the Management Board including remuneration in kind amounted to €5.9 million and €4.5 million, respectively, of which €1.9 million and €1.8 million related to fixed compensation, and €4.0 million and €2.7 million, respectively, related to variable compensation. On December 31, 2021 and 2020, provisions for post-employment benefits of €4.2 million and €4.5 million were recognized; in 2021 and 2020, the corresponding service cost amounted to €0.7 million and €0.6 million.

In 2021, the Management Board members received AEP Awards as compensation with a long-term incentive effect from the "ALTANA Equity Performance 2021" (AEP) plan. In 2021 and 2020, 2,714 and 2,823 AEP Awards, respectively, were granted to the Management Board, with a value of €0.8 million in both years reported. At the end of the term of the AEP Tranche 2017 on December 31, 2020, no payment was made in 2021, as the required performance was not achieved. 2019, at the end of the term of the AEP Tranche 2016 1,544 AEP Awards were finally allocated and payments of €0.5 million were paid to the beneficiaries in 2020. In 2019, after the end of the term (December 31, 2018) of the AEP Tranche 2015, no AEP Awards were finally allocated and no payment was made to the beneficiaries. When the

AEP Tranche 2019 was issued, the relevant plan conditions were adjusted and changed for the current 2017 and 2018 tranches. As of December 31, 2021 and 2020, respectively, provisions for AEP Awards amounted to €3.1 million and €2.1 million; personal investment was measured at €0.9 million and €0.8 million and is recognized in other liabilities (see note 26). In both years reported, these amounts include deposits made by the members of the Management Board of €0.5 million. For more details on the AEP see note 22.

For former members of the Management Board and their surviving dependents, a pension provision in the amount of €17.1 million and €18.7 million was recorded as of December 31, 2021 and 2020, respectively. Pension payments totaled €1.0 million in both years reported.

31. Fees Paid to the Auditor

The fees paid to the auditor pursuant to section 314 (1) no. 9 of the German Commercial Code (HGB) are as follows:

	2021
Audit of the financial statements	1,498
Other assurance services	53
Tax advisory services	105
Other services	529
	2,185

32. Subsequent Events

On January 27, 2022, contingent financial liabilities increased by USD 15.7 million due to the issuance of a bank guarantee for Landa.

33. Additional Information

The financial statements of ALTANA AG and its subsidiaries are included in the Consolidated Financial Statements of SKion GmbH, Bad Homburg v.d.H. SKion GmbH is the parent company which prepares the Consolidated Financial Statements for the smallest and the largest group of companies to which ALTANA AG belongs as a subsidiary. The Consolidated Financial Statements are filed with the commercial register of Bad Homburg v.d.H., HRB 7569 and are published in the Federal Gazette.

Companies that are exempt from publishing their financial statements according to section 264 (3) and section 264b of the German Commercial Code (HGB):

ACTEGA DS GmbH, Bremen
ACTEGA GmbH, Wesel
ACTEGA Metal Print GmbH, Lehrte
ACTEGA Rhenania GmbH, Grevenbroich
ACTEGA Terra GmbH, Lehrte
ALTANA Chemie Beteiligungs-GmbH, Hartenstein
ALTANA Management Services GmbH, Wesel
ALTANA New Technologies GmbH, Wesel
ALTANA Newco I GmbH, Wesel
BYK-Chemie GmbH, Wesel
BYK-Gardner GmbH, Geretsried
Eckart Beteiligungs GmbH, Hartenstein
Eckart GmbH, Hartenstein
ECKART International Trading GmbH, Hartenstein
Eckart TLS GmbH, Bitterfeld-Wolfen
ELANTAS Europe GmbH, Hamburg
ELANTAS GmbH, Wesel
Hartensteiner Verwaltungs B.V. & Co. KG, Hartenstein
HELIOSONIC GmbH, Wesel
MIVERA Vermögensanlagen GmbH, Wesel
Weseler Grundstücksverwaltungs B.V. & Co. KG, Wesel

Wesel, Germany, February 25, 2022

ALTANA AG
The Management Board

Martin Babilas	Stefan Genten	Dr. Christoph Schlünken

Supervisory Board of ALTANA AG

Dr. Matthias L. Wolfgruber
Chairman
(appointed until the Annual General Meeting 2024)
Former Chairman of the Management Board of ALTANA AG
Member of the Supervisory Board since 2016
Other functions:
ARDEX GmbH[2] (Chairman until March 31, 2021)
Cabot Corporation[2]
Grillo Werke AG[1] (until March 31, 2021)
LANXESS AG[1] (Chairman)

Ulrich Gajewiak*
Deputy Chairman
(appointed until the Annual General Meeting 2023)
Chairman of the works council at the Wesel site
Chairman of the Group's works council
Member of the Supervisory Board since 2003

Susanne Klatten
Deputy Chairwoman
(appointed until the Annual General Meeting 2023)
Entrepreneur
Member of the Supervisory Board since 1993
Other functions:
Bayerische Motoren Werke AG[1]
SGL Carbon SE[1] (Chairwoman)
SprinD GmbH[2]
UnternehmerTUM GmbH[2] (Chairwoman)

Jürgen Bembenek*
(since February 16, 2021, appointed until the Annual General Meeting 2023)
Process Optimization Engineer ACTEGA Rhenania GmbH

Dr. Anette Brüne*
(appointed until the Annual General Meeting 2023)
Global Head of Marketing & Sales Services of BYK-Chemie GmbH
Member of the Supervisory Board since 2013

Dr. Monika Engel-Bader
(appointed until the Annual General Meeting 2022)
Former Managing Director of Chemetall GmbH
Consultant
Member of the Supervisory Board since 2012
Other functions:
OQ Chemicals International Holding GmbH[2]
OQ Chemicals Holding GmbH[2]

Armin Glashauser*
(appointed until the Annual General Meeting 2023)
Head of works council Eckart GmbH
Member of the Supervisory Board since 2007

Klaus Koch*
(appointed until the Annual General Meeting 2023)
Manager operational controlling Eckart GmbH
Member of the Supervisory Board since 2010

Prof. Dr. Frank Richter
(appointed until the Annual General Meeting 2025)
Managing Director of SKion GmbH
Member of the Supervisory Board since 2020
Other functions:
Landa Corporation Ltd. [2]

Beate Schlaven*
(retired on February 16, 2021)
Employee Quality Management
ACTEGA Rhenania GmbH
Member of the Supervisory Board since 2018

* Employee representative
[1] Membership in other statutory supervisory boards
[2] Membership in other comparable domestic and foreign supervisory bodies

Dr. Jens Schulte
(appointed until the Annual General Meeting 2023)
Member of the Management Board of Schott AG
Member of the Supervisory Board since 2018
Other functions:
NNAISENSE S.A.[2]

Stefan Soltmann*
(appointed until the Annual General Meeting 2023)
Head of the Labor and Operational Politics Section of
the Mining, Chemical and Energy Industrial Union (IG BCE)
Member of the Supervisory Board since 2019
Other functions:
Dow Olefinverbund GmbH[1]

Dr. Antonio Trius
(appointed until the Annual General Meeting 2022)
Former Managing Director of Cognis GmbH
Member of the Supervisory Board since 2012
Other functions:
Arxada AG[2]
Azelis Finance Sarl[2]
Cuantum Medical Cosmetics S.L.[2]
Igenomix SL[2]

* Employee representative
[1] Membership in other statutory supervisory boards
[2] Membership in other comparable domestic and foreign supervisory bodies

Supervisory Board Committees

The Supervisory Board of ALTANA AG has established the following committees:

Human Resources Committee
Dr. Matthias L. Wolfgruber (Chairman)
Jürgen Bembenek (since March 17, 2021)
Ulrich Gajewiak
Susanne Klatten
Beate Schlaven (until February 2, 2021)

Audit Committee
Dr. Jens Schulte (Chairman)
Armin Glashauser
Stefan Soltmann
Dr. Antonio Trius

Mediation Committee
(in accordance with section 27 (3) of the German Codetermination Act)
Dr. Matthias L. Wolfgruber, Chairman
Ulrich Gajewiak
Susanne Klatten
Klaus Koch

Management Board of ALTANA AG

Martin Babilas
Chairman (appointed until April 30, 2025)
Other functions:
ACTEGA North America Inc.[2]
BYK-Chemie GmbH[1] (Chairman)
Eckart GmbH[1] (Chairman)
ELANTAS Beck India Ltd.[2] (Chairman)
ELANTAS EUROPE S.R.L..[2]
ELANTAS PDG Inc.[2] (Chairman)
ELANTAS Tongling Co., Ltd. [2]

Stefan Genten
(appointed until July 31, 2023)
Other functions:
ELANTAS Beck India Ltd.[2]

Dr. Christoph Schlünken
(appointed until October 31, 2022)
Other functions:
ACTEGA Metal Print GmbH[2]
ALTANA Químicos México S. Servicios de R.L. de C.V.[2]
(until December 31, 2021)
BYK Additives (Shanghai) Co., Ltd.[2] (Chairman)
BYK USA Inc.[2] (Chairman)
Eckart GmbH[1]
Landa Corporation Ltd.[2]

* Employee representative
[1] Membership in other statutory supervisory boards
[2] Membership in other comparable domestic and foreign supervisory bodies

Contact

ALTANA AG
Corporate Communications
Abelstr. 43
46483 Wesel, Germany
Tel +49 281 670 - 10900
Fax +49 281 670 - 10999
press@altana.com

Credits

Publisher
ALTANA AG
Abelstr. 43, 46483 Wesel, Germany
Tel +49 281 670 - 8
Fax +49 281 670 - 10999
info@altana.com
www.altana.com

This report was prepared with the support of the editorial system of the firesys GmbH.

ALTANA AG
Abelstr. 43
46483 Wesel, Germany
Tel +49 281 670 - 10900
Fax +49 281 670 - 10999

www.altana.com

ALTANA