ALTANA

Consolidated Financial Statements 2019

Consolidated Financial Statements

Management Board Responsibility Statement

The consolidated financial statements of the annual report 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 16 - 19 of the Corporate Report 2019.

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 26, 2020

ALTANA AG
The Management Board

Martin Babilas Stefan Genten Dr. Christoph Schlünken

Independent Auditors' 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, 2019, 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, 2019 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, 2019. 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, 2019, and of its financial performance for the financial year from January 1 to December 31, 2019, 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 declaration of corporate governance pursuant to § 289f Abs. 4 HGB included in section "Innovation and Employees" of the group management report
- the corporate governance 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 and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or 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, 2020

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Jörg Sechser	ppa. Carsten Manthei
German Public Auditor	German Public Auditor

ALTANA Group Consolidated Income Statement

	Notes	2018	2019
in € thousand			
Net sales	4	**2,307,399**	**2,248,943**
Cost of sales	5	(1,463,627)	(1,424,750)
Gross profit		**843,772**	**824,193**
Selling and distribution expenses	6	(291,228)	(290,285)
Research and development expenses		(154,127)	(165,572)
General administration expenses		(108,571)	(105,090)
Other operating income	7	16,737	14,250
Other operating expenses	8	(10,825)	(15,011)
Operating income (EBIT)		**295,758**	**262,485**
Financial income	9	4,898	19,871
Financial expenses	10	(12,110)	(11,983)
Financial result		**(7,212)**	**7,888**
Income from at equity accounted investments		(24,460)	(39,090)
Income before income taxes (EBT)		**264,086**	**231,283**
Income taxes	11	(77,097)	(62,234)
Net income (EAT)		**186,989**	**169,049**
thereof attributable to non-controlling interests		1,975	1,620
thereof attributable to the shareholder of ALTANA AG		185,014	167,429

ALTANA Group Consolidated Statement of Comprehensive Income

	2018	2019
in € thousand		
Net income (EAT)	**186,989**	**169,049**
Remeasurement of the net defined employee benefit obligation	5,311	(29,460)
Income taxes	(1,502)	8,856
Items that will not be reclassified subsequently to profit or loss	**3,809**	**(20,604)**
Translation adjustments	23,913	37,077
thereof attributable to non-controlling interests	(370)	(91)
Gains and losses from derivative financial instruments	(2,425)	2,513
Change in fair value of derivative financial instruments	(4,360)	(3,364)
Income taxes	2,060	231
Items that may be reclassified subsequently to profit or loss	**19,188**	**36,457**
Other comprehensive income	**22,997**	**15,853**
Comprehensive income	**209,986**	**184,902**
thereof attributable to non-controlling interests	1,602	1,520
thereof attributable to the shareholder of ALTANA AG	208,384	183,382

ALTANA Group Consolidated Statement of Financial Position

Assets	Notes	Dec. 31, 2018	**Dec. 31, 2019**
in € thousand			
Intangible assets	13	1,044,217	1,023,882
Property, plant and equipment	14	868,162	970,837
Long-term investments	15	22,323	45,732
Investments in at equity accounted companies	16	117,869	138,316
Deferred tax assets	11	20,496	21,980
Other non-current assets	21	10,667	10,900
Total non-current assets		**2,083,734**	**2,211,647**
Inventories	17	373,027	348,847
Trade accounts receivable	18	384,180	380,644
Income tax refunds		12,832	15,361
Other current assets	21	103,836	97,521
Marketable securities	19	21,907	19,961
Short-term financial assets	20	2,690	4,768
Cash and cash equivalents		239,652	264,556
Total current assets		**1,138,124**	**1,131,658**
Total assets		**3,221,858**	**3,343,305**

Liabilities, provisions and shareholders' equity	Notes	Dec. 31, 2018	Dec. 31, 2019
in € thousand			
Share capital[1]		136,098	136,098
Additional paid-in capital		151,276	151,276
Retained earnings		1,974,331	2,071,165
Accumulated other comprehensive income		71,359	107,907
Equity attributable to the shareholder of ALTANA AG		**2,333,064**	**2,466,446**
Non-controlling interests		11,553	12,960
Shareholders' equity	22	**2,344,617**	**2,479,406**
Non-current debt	24	62,959	50,793
Employee benefit obligations	25	220,429	255,974
Other non-current provisions	26	20,331	20,894
Deferred tax liabilities	11	85,462	68,721
Other non-current liabilities	27	27,862	28,941
Total non-current liabilities		**417,043**	**425,323**
Current debt	24	82,641	62,489
Trade accounts payable		195,351	182,457
Current accrued income taxes		41,212	42,513
Other current provisions	26	87,479	93,592
Other current liabilities	27	53,515	57,525
Total current liabilities		**460,198**	**438,576**
Total liabilities, provisions and shareholders' equity		**3,221,858**	**3,343,305**

[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	Remeasurement of the net defined employee benefit obligation
in € thousand					
Balance at Jan. 1, 2018	**136,097,896**	**136,098**	**151,276**	**1,969,445**	**(104,647)**
Change in accounting policies				709	
Adjusted balance at Jan. 1, 2018	**136,097,896**	**136,098**	**151,276**	**1,970,154**	**(104,647)**
Other comprehensive income					3,812
Net income (EAT)				185,014	
Comprehensive income				**185,014**	**3,812**
Dividends paid				(80,000)	
Change in reporting entities				(2)	
Balance at Dec. 31, 2018	**136,097,896**	**136,098**	**151,276**	**2,075,166**	**(100,835)**
Other comprehensive income					(20,595)
Net income (EAT)				167,429	
Comprehensive income				**167,429**	**(20,595)**
Dividends paid				(50,000)	
Change in reporting entities					
Balance at Dec. 31, 2019	**136,097,896**	**136,098**	**151,276**	**2,192,595**	**(121,430)**

	Accumulated other comprehensive income				Non-controlling interests		
	Financial assets available-for-sale	Derivative financial instruments	Translation adjustments	Equity attributable to the shareholder of ALTANA AG	Shareholders' equity	Translation adjustments	Shareholders' equity
	162	**3,128**	**48,673**	**2,204,135**	**12,645**	**(2,580)**	**2,214,200**
	(162)			547	(3)		544
	0	**3,128**	**48,673**	**2,204,682**	**12,642**	**(2,580)**	**2,214,744**
		(4,725)	24,283	23,370	(3)	(370)	22,997
				185,014	1,975		186,989
		(4,725)	**24,283**	**208,384**	**1,972**	**(370)**	**209,986**
				(80,000)	(111)		(80,111)
				(2)			(2)
	n.a.	**(1,597)**	**72,956**	**2,333,064**	**14,503**	**(2,950)**	**2,344,617**
		(620)	37,168	15,953	(9)	(91)	15,853
				167,429	1,620		169,049
		(620)	**37,168**	**183,382**	**1,611**	**(91)**	**184,902**
				(50,000)	(113)		(50,113)
	n.a.	**(2,217)**	**110,124**	**2,466,446**	**16,001**	**(3,041)**	**2,479,406**

ALTANA Group Consolidated Statement of Cash Flows

	Notes	2018	2019
in € thousand			
Net income (EAT)		**186,989**	**169,049**
Depreciation and amortization of intangible assets and property, plant and equipment	13, 14	134,842	149,241
Impairment of intangible assets and property, plant and equipment	13, 14		4,068
Change in fair value of financial assets and securities	10	(27)	(2,851)
Net result from the disposal of intangible assets and property, plant and equipment	7, 8	(1,414)	433
Net result from the disposal of long-term investments and marketable securities	9	(55)	17
Change in inventories	17	(40,369)	29,572
Change in trade accounts receivable	18	(11,379)	6,265
Change in income taxes	11	1,723	(12,341)
Change in provisions	25, 26	(14,411)	12,058
Change in trade accounts payable		2,367	(14,156)
Change in other assets and other liabilities	21, 27	11,804	9,561
Other	16	26,165	35,425
Cash flow from operating activities		**296,235**	**386,341**
Capital expenditure on intangible assets and property, plant and equipment	13, 14	(186,988)	(157,180)
Proceeds from the disposal of intangible assets and property, plant and equipment	13, 14	5,843	798
Acquisitions, net of cash acquired	3	(3,126)	(8,587)
Purchase of long-term investment and investments in at equity companies	15, 16	(54,901)	(47,569)
Proceeds from the disposal of long-term investments	15	54	26
Payments on long-term loans		(23,010)	(16,000)
Proceeds from long-term loans		71,014	
Purchase of marketable securities	19	(31,339)	(42,500)
Proceeds from the disposal of marketable securities	9, 10	27,462	44,296
Change in short-term financial assets		(700)	(2,131)
Cash flow from investing activities		**(195,691)**	**(228,847)**

	Notes	2018	2019
in € thousand			
Dividends paid		(80,111)	(50,113)
Proceeds from issuance of long-term debt	24	8,383	3,924
Repayment of long-term debt	24	(67)	
Net increase / decrease in short-term debt	24	(64,144)	(88,455)
Cash flow from financing activities		**(135,939)**	**(134,644)**
Effect of exchange rate changes		(624)	2,054
Change in cash and cash equivalents		**(36,019)**	**24,904**
Cash and cash equivalents as of January 1	2	275,671	239,652
Cash and cash equivalents as of December 31	2	**239,652**	**264,556**
Additional information on cash flows included in the cash flows from operating activities			
Income taxes paid		(80,603)	(86,590)
Interest paid		(3,916)	(3,621)
Income taxes received		5,966	16,365
Interest received		2,226	10,390
Dividends received		962	809

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, 2019 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 26, 2020 and should be approved by the Supervisory Board in the Supervisory Board meeting on March 18, 2020.

ALTANA as a world-wide 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, 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 22 (prior year: 21) subsidiaries in Germany and 42 (prior year: 42) 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 2019, in the Holding division one existing previously non-operating subsidiary in Germany was initially consolidated.

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

The following three investments are accounted for by applying the equity method of accounting (see note 16): 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

Only the Standards and Interpretations that have an effect on ALTANA's consolidated financial statements are described below:

In January 2016, the IASB issued IFRS 16, "Leases," effective for annual periods beginning on or after January 1, 2019. The standard was endorsed by the EU on October 31, 2017. ALTANA adopted the standard beginning January 1, 2019. IFRS 16 mainly relates to the lease accounting by the lessee. Generally, all lease transactions are accounted for in accordance with the so-called "right of use approach." For lessors, the classifications of leases in operating and financial lease in accordance with IAS 17, "Leases," remains unchanged under IFRS 16. ALTANA applies the option under IFRS 16 in respect of low value assets, so-called "small-ticket leases", and short-term lease contracts and therefore, does not recognize these in its statement of financial position. ALTANA applies the modified retrospective approach provided for in the transition guidance.

Upon initial adoption of the standard, ALTANA recorded an increase in lease obligations of €44.2 million and a corresponding increase in property, plant and equipment as a result of the recognition of the right of use assets.

Based on the operating lease obligation as of December 31, 2018, the following reconciliation to the opening balance of the lease liability as of January 1, 2019 is presented:

Operating lease obligation as of Dec. 31, 2018	47,563
Finance lease liability as of Dec. 31, 2018	231
Other	2,677
Lease obligation according to IFRS 16 as of Jan. 1, 2019	**50,471**
Discounting	(6,042)
Lease liability as of Jan. 1, 2019	**44,429**

The lease obligation was discounted as of January 1, 2019 using the incremental borrowing rate. The weighted average interest rate was 1.7 %. To determine the incremental borrowing rate, the interest rates of the leases were weighted by the total lease liability.

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, 2018	**Dec. 31, 2019**	2018	**2019**
1 Euro					
Brazil	BRL	4.44	4.52	4.31	4.41
China	CNY	7.88	7.82	7.81	7.74
India	INR	79.73	80.19	80.73	78.84
Japan	JPY	125.85	121.94	130.40	122.01
Switzerland	CHF	1.13	1.09	1.15	1.11
U.S.	USD	1.15	1.12	1.18	1.12

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 of obsolescence and loss, amongst others, 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 26) and other liabilities (see note 27). 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 a contract liability (see note 27). 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.

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 regularly. 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 have been incurred and at the time all the conditions are fulfilled. Until then, government grants received are recorded in deferred income.

Long-term Investments and Marketable Securities

In accordance with IFRS 9 the Company classifies all marketable securities and certain long-term investments (see note 15) 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, 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. Hedge Accounting under IFRS 9 is applied beginning January 1, 2018 prospectively. 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, 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 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. Measured against the carrying amount of the RoU assets, however, 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 have acquisition costs of no more than EUR 5,000, which are typically related to operating and office equipment such as printers, copiers, etc.

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 affects 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 reasonable certain and, in the context of revenue recognition, with regard to the allocation of the transaction price.

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 note 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 25).

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 13 and 14.

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 extent 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 2019

On July 1, 2019, the BYK division acquired the test instruments and other laboratory equipment business of Paul N. Gardner Company, Inc., Pampano Beach, Florida (USA) in an asset deal. The purchase price amounted to €3.1 million and was paid in cash. No goodwill was recognized.

On December 24, 2019, the ELANTAS division acquired the wire enamel business from Hubergroup India Private Ltd., Gujarat (IND) in an asset deal. In 2019, net sales of about €5 million were generated. Of the purchase price of €5.7 million an amount of €4.6 million was paid in cash. The remaining purchase price payment, which is contingent on the occurrence of a non-financial event is reported in financial liabilities until its maturity (see note 24). No goodwill was recognized.

Acquisitions in 2018

In 2018, no acquisitions occurred.

Acquisitions in 2017

As agreed, further payments of €4.3 million were made to Changzhou Hongbo Paint Co. Ltd., in 2019 and 2018 for the acquisition by an asset deal in the ELANTAS division (see note 24).

For the share deal also concluded in the ELANTAS division in 2017 with the American Cytec Industries Inc., which is part of the Belgian chemical group Solvay, the earn-out payment obligations recognized under financial liabilities, were reduced by USD4.2 million (€3.7 million) in 2019 because the relevant sales targets presumably were not met (see note 24).

Acquisitions subsequent to December 31, 2019

On December 6, 2019, ALTANA concluded an agreement with the American Gulf Scientific Inc., Houston, Texas (USA) to acquire their business with innovative additives for the exploration industry. The acquisition was consummated on January 2, 2020. The business generates annual net sales of about USD 30 million and will be integrated into the BYK division.

The following table provides an overview of the provisional allocation of the consideration transferred to the identifiable assets acquired and liabilities assumed by ALTANA as of the acquisition date in 2020:

in € million	
Goodwill	14.4
Other intangible assets	18.8
Inventories	6.8
Consideration transferred	**40.0**

On January 2, 2020, the preliminary purchase price of €40.0 million was paid in cash. Based on the provisional allocation of the consideration transferred, goodwill of € 14.4 million will be recognized.

On December 20, 2019 ALTANA concluded a contract with Conzzeta AG, Zurich (CHE) for the acquisition of all shares in the Swiss Schmid Rhyner AG, Adliswil. Schmid Rhyner is specialized in print finishing solutions and will be integrated into the ACTEGA division. In 2018, net sales of about € 50 million were generated. Closing is expected for the first quarter of 2020.

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	2018	387,870	188,091	129,439	169,566	874,966
	2019	**383,819**	**178,099**	**125,579**	**170,491**	**857,988**
America	2018	302,204	88,103	93,463	140,622	624,392
	2019	**297,018**	**83,391**	**97,643**	**142,520**	**620,572**
Asia	2018	356,000	99,835	280,373	33,179	769,387
	2019	**339,318**	**87,994**	**268,174**	**36,309**	**731,795**
Other regions	2018	19,519	6,599	3,300	9,236	38,654
	2019	**20,448**	**6,669**	**3,133**	**8,338**	**38,588**
Total	2018	1,065,593	382,628	506,575	352,603	2,307,399
	2019	**1,040,603**	**356,153**	**494,529**	**357,658**	**2,248,943**

Due to ALTANA's customer structure and the large number of business activities, there was no significant concentration on individual customers, regions or divisions in the reporting years.

In 2019 and 2018, ALTANA recognized revenue from contracts with customers amounting to €2,248.9 million and €2,307.4 million.

In 2019 and 2018, the refund liabilities from sales reductions amount to €8.5 and €9.3 million, respectively, and are reported in other provisions (see note 26) or other liabilities (see note 27). Prepayments from customers for which the performance obligation has not been fulfilled are recorded as a contract liability in other liabilities (see note 27).

5. Cost of Sales

Cost of sales include the following items:

	2018	2019
Material expenses	1,009,745	960,852
Production expenses		
Personnel expenses	224,579	236,177
Depreciation and amortization	83,851	89,625
Energy expenses	35,983	36,809
Maintenance and repair expenses	35,218	32,639
Other	74,251	68,648
	1,463,627	**1,424,750**

6. Selling and Distribution Expenses

Selling and distribution expenses are as follows:

	2018	2019
Personnel expenses	109,191	114,106
Shipping, duties, insurance	67,927	67,005
Commissions	23,582	21,373
Depreciation and amortization	25,503	29,093
Other	65,025	58,708
	291,228	**290,285**

Selling and distribution expenses reflect the worldwide activities of the distribution network, with specific emphasis on customer, product, and application consulting by own employees, delegates and agents. Selling and distribution expenses also include expenses for the participation in international trade fairs, the preparation of multilingual product information, customer trainings and sample distributions.

7. Other Operating Income

	2018	2019
Reversal of loss allowance	1,152	2,142
Gains on disposal of intangible assets and property, plant and equipment	3,787	186
Government grants	234	377
Insurance reimbursements	1,118	1,187
Other	10,446	10,358
	16,737	**14,250**

8. Other Operating Expenses

	2018	2019
Bad debt expense	3,435	2,527
Write-down of receivables without prior loss allowance		289
Losses from disposal of intangible assets and property, plant and equipment	2,373	619
Foreign exchange gains / (losses), net	1,339	1,381
Exceptional expenses	1,387	8,018
Charitable donations	396	315
Other	1,895	1,862
	10,825	**15,011**

Foreign exchange gains and losses are as follows:

	2018	2019
Foreign exchange gains	9,840	7,480
Foreign exchange (losses)	(11,179)	(8,861)
Net gain / net (loss)	**(1,339)**	**(1,381)**

Exceptional expenses relate to the following:

	Notes	2018	2019
Impairment loss on intangible assets	13		1,209
Impairment loss on property, plant and equipment	14		2,859
Restructuring expenses			3,950
Other		1,387	
		1,387	**8,018**

In 2019, in the BYK division incurred exceptional expenses comprising impairment losses and restructuring expenses of €8.0 million due to the discontinuation of a product group at one U.S and one German production site.

In 2018, in the ACTEGA division, one-off expenses of €2.5 million were incurred for an initially planned but subsequently abandoned new facility in the U.S. These expenses are included in the losses from the disposal of property, plant and equipment and in the exceptional expenses.

9. Financial Income

	2018	2019
Interest income	3,462	11,031
Gains on disposal of marketable securities	58	37
Income from fund-based financial instruments	985	1,276
Gains from the change in fair value of financial assets and securities	74	3,205
Gains from the change in fair value of financial liabilities		3,739
Dividends received	303	196
Other financial income	16	387
	4,898	**19,871**

In 2019, foreign exchange gains of €0.1 million are included in other financial income while in 2018 €1.8 million foreign exchange losses were included in other financial expenses (see note 10)

10. Financial Expenses

	2018	2019
Interest expenses	8,892	10,994
Losses on disposal of marketable securities	3	54
Losses from the change in fair value	46	354
Other financial expenses	3,169	581
	12,110	**11,983**

In 2019, interest expenses include interest from lease contracts in the amount of €0.8 million.

11. Income Taxes

Income tax expense is as follows:

	2018	2019
Current taxes	77,634	72,749
Deferred taxes	(537)	(10,515)
Income taxes	**77,097**	**62,234**

As in 2018, the combined income tax rate, derived from local subsidiaries, is 29 % and consists of the corporate tax rate of 15 %, the solidarity surcharge on corporate tax of 5.5 % and the trade tax of about 13 %. 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:

	2018	2019
Income before income taxes (EBT)	**264,086**	**231,283**
Income from at equity accounted investments	(24,460)	(39,090)
Income before income taxes - adjusted (EBT adjusted)	**288,546**	**270,373**
Tax expense applying the expected average income tax rate of 29 %	83,678	78,408
Non-deductible expenses	2,011	4,343
Tax rate differential	(5,157)	(7,777)
Tax free income	(1,652)	(3,294)
Tax related to prior years	(1,403)	(9,718)
Other	(380)	272
Income taxes	**77,097**	**62,234**
Effective income tax rate[1]	26.7 %	23.0 %

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

In 2019 and 2018, the effective income tax rate based on income before income taxes was 26.9 % and 29.2 %, respectively.

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

		Dec. 31, 2018		**Dec. 31, 2019**
	Assets	Liabilities and provisions	Assets	Liabilities and provisions
Intangible assets	2,607	(89,284)	3,449	(88,446)
Property, plant and equipment	2,079	(44,736)	1,691	(48,540)
Long-term investments	289	(2,270)	338	(2,285)
Inventories	15,641	(251)	14,998	(223)
Receivables and other assets	6,258	(5,830)	1,620	(966)
Employee benefit obligations	45,061	(937)	55,735	(513)
Other provisions	4,960	(703)	5,036	(2,550)
Liabilities	5,261	(4)	11,006	(1,134)
Tax loss carryforwards	3,949		7,803	
Outside bases differences		(7,056)		(3,760)
Netting	(65,609)	65,609	(79,696)	79,696
Deferred taxes, net	**20,496**	**(85,462)**	**21,980**	**(68,721)**

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

	2018	2019
Tax loss carryforwards	**38,358**	**52,309**
unlimited	24,168	39,556
will expire through 2024 (prior year: 2023)	14,190	12,753

Deferred tax assets on tax loss carryforwards of €23.7 million and €25.2 million were not recognized as of December 31, 2019 and 2018, respectively, since the future utilization against taxable income is not probable. Tax loss carryforwards for which no deferred tax assets were recognized amounting to €12.9 million have unlimited carryforward periods, €10.8 million will expire through 2024.

Since the realization of the tax asset is probable based on tax planning a deferred tax asset of €1.3 million (previous year €1.4 million) was recognized for companies that generated a loss in the previous or in the current years.

As of December 31, 2019 and 2018, deferred tax liabilities in the amount of €43.3 million and €33.0 million, respectively, representing the temporary differences between the undistributed earnings 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.

12. Other Information on the Income Statement

Personnel Expenses

Personnel expenses consist of the following items:

	2018	2019
Wages and salaries	389,447	408,565
Social security contributions	72,194	77,863
Expenses for pensions and other post-retirement benefits	20,940	23,368
	482,581	**509,796**

Personnel expenses include expenses for employee incentive plans (see note 23). In 2019, income of €0.3 million and in 2018, expenses of €2.3 million, relate to the compensation plan for key members of the management, "ALTANA Equity Performance (AEP)," and €2.0 million and €2.1 million, respectively, to the compensation plan for employees, "ALTANA Profit Participation."

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

	2018	2019
Number of employees by division		
BYK	2,278	2,325
ECKART	1,706	1,707
ELANTAS	1,072	1,088
ACTEGA	1,123	1,147
Holding[1]	144	191
	6,323	**6,458**

[1] The Holding division comprise 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:

	2018	2019
Amortization of intangible assets	52,353	51,639
Depreciation of property, plant and equipment	82,488	97,603
Impairment loss on intangible assets		1,209
Impairment loss on property, plant and equipment		2,859
	134,841	**153,310**

For information on the impairment loss recognized on intangible assets and property, plant and equipment in 2019 see note 8.

Leases

The following effects occurred in the income statement:

	2019
Depreciation of RoU assets	
RoU assets - Land, leasehold and buildings	6,659
RoU assets - Plant and machinery	303
RoU assets - Equipment	3,067
	10,029
Lease expenses for	
short-term leases	4,088
low value asset leases	957
variable lease payments - not included in the lease liability	1,909
interest	777

13. Intangible Assets

	Patents, licenses and similar rights	Goodwill	Software and others	Total
Cost				
Balance at Jan. 1, 2018	833,960	632,296	114,917	1,581,173
Additions	6,763		8,421	15,184
Disposals			(1,250)	(1,250)
Transfers	10		585	595
Translation adjustments	11,646	18,756	706	31,108
Change in reporting entities		(49)		(49)
Balance at Dec. 31, 2018	**852,379**	**651,003**	**123,379**	**1,626,761**
Additions	1,929		8,386	10,315
Disposals	(344)		(2,839)	(3,183)
Transfers	(139)		2,380	2,241
Translation adjustments	8,096	9,087	357	17,540
Change in reporting entities	7,921			7,921
Balance at Dec. 31, 2019	**869,842**	**660,090**	**131,663**	**1,661,595**
Accumulated amortization				
Balance at Jan. 1, 2018	385,156	49,341	89,733	524,230
Additions	43,006		9,347	52,353
Disposals			(1,246)	(1,246)
Impairment				
Transfers			183	183
Translation adjustments	5,712	789	523	7,024
Balance at Dec. 31, 2018	**433,874**	**50,130**	**98,540**	**582,544**
Additions	43,501		8,138	51,639
Disposals	(344)		(2,767)	(3,111)
Impairment	1,209			1,209
Transfers	(167)		1,111	944
Translation adjustments	3,914	331	243	4,488
Balance at Dec. 31, 2019	**481,987**	**50,461**	**105,265**	**637,713**
Carrying amount				
Dec. 31, 2018	418,505	600,873	24,839	1,044,217
Dec. 31, 2019	**387,855**	**609,629**	**26,398**	**1,023,882**

In 2019, additions to patents, licenses and similar rights in the BYK division related to technologies for color-identification and formulation of inks and coatings in the amount of €1.2 million. Furthermore, an additional amount of €0.7 million related to REACH expenses incurred primarily in the BYK and ELANTAS divisions. The additions to software and others related to the further digitalization and expansion of SAP applications of ALTANA amounting to €3.2 million in the BYK division and to €3.1 million in the Holding division.

In 2019, changes in reporting entities related to the acquisition of the Hubergroup India in the ELANTAS division with €5.7 million and the acquisition of Paul N. Gardner in the BYK division with €2.2 million (see note 3).

In 2018, additions to patents, licenses and similar rights in the BYK and ECKART division related to acquired customer lists and to an agreement on non-competition with a former business partner amounting to €3.6 million as well as REACH expenses amounting to €3.2 million, which are mainly attributable to the BYK division. Additions of €2.2 million related to SAP projects, carried out in the BYK division, the ACTEGA division and the Holding division.

In 2019, the BYK division recognized an impairment loss of €1.2 million in connection with the discontinuation of a product group (see note 8). The residual carrying amount of the impaired assets based on value in use is €0.2 million. In 2018, no impairment loss was recognized.

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:

2020	45,133
2021	43,265
2022	38,970
2023	36,715
2024	31,239
Thereafter	190,060

As of December 31, 2019, and 2018, patents, licenses and similar rights include brand names with indefinite useful lives of €24.7 million and €24.6 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.

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

	Dec. 31, 2018	**Dec. 31, 2019**
BYK	351,148	356,894
ECKART	82,183	83,865
ELANTAS	101,157	101,970
ACTEGA	66,385	66,900
	600,873	**609,629**

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 2020 to 2024. 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 7.4 % (2018: 7.5 %); growth rates: BYK 1.75 % (2018: 2.0 %); ECKART, ELANTAS and ACTEGA 1.5 % (unchanged to 2018). 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 calculated the value in use for each cash-generating unit.

In both years reported, no impairment losses on goodwill were recognized. 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, 2019, no impairment indicators were identified.

Impairment Test for Intangible Assets with an indefinite useful life.

In 2019 and 2018, no impairment losses on intangible assets with an indefinite useful life were recognized.

14. Property, Plant and Equipment

	Land, leasehold and buildings	Plant and machinery	Equipment	Advances/ construction in progress	Total
Cost					
Balance at Jan. 1, 2018	586,919	730,706	227,105	76,144	1,620,874
Additions	37,841	28,790	18,217	86,956	171,804
Disposals	(2,623)	(17,092)	(8,099)	(2,201)	(30,015)
Transfers	19,745	18,748	4,524	(43,611)	(594)
Translation adjustments	4,135	8,166	2,175	1,131	15,607
Change in reporting entities	(75)				(75)
Balance at Dec. 31, 2018	**645,942**	**769,318**	**243,922**	**118,419**	**1,777,601**
Change in accounting policies	37,122	1,112	5,963		44,197
Additions	39,302	32,582	14,510	68,034	154,428
Disposals	(4,592)	(6,163)	(7,774)	(426)	(18,955)
Transfers	21,558	19,678	32,841	(76,319)	(2,242)
Translation adjustments	4,001	5,675	1,157	1,134	11,967
Change in reporting entities					
Balance at Dec. 31, 2019	**743,333**	**822,202**	**290,619**	**110,842**	**1,966,996**
Accumulated depreciation					
Balance at Jan. 1, 2018	240,129	457,522	148,495	323	846,469
Additions	20,495	44,417	17,576		82,488
Disposals	(2,283)	(16,149)	(7,914)		(26,346)
Impairment					
Transfers	(2)	356	(534)	(3)	(183)
Translation adjustments	1,451	4,372	1,191	(3)	7,011
Balance at Dec. 31, 2018	**259,790**	**490,518**	**158,814**	**317**	**909,439**
Additions	29,516	45,410	22,677		97,603
Disposals	(4,559)	(5,789)	(7,197)		(17,545)
Impairment	179	2,680			2,859
Transfers	(1,058)	(469)	584		(943)
Translation adjustments	1,029	3,053	662	2	4,746
Balance at Dec. 31, 2019	**284,897**	**535,403**	**175,540**	**319**	**996,159**
Carrying amount					
Dec. 31, 2018	386,152	278,800	85,108	118,102	868,162
Dec. 31, 2019	**458,436**	**286,799**	**115,079**	**110,523**	**970,837**

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 Dec. 31, 2018[1]			**752**	**752**
Change in accounting policies	37,122	1,112	5,963	44,197
Additions	4,419	156	2,987	7,562
Disposals	(8)		(363)	(371)
Translation adjustments	600	7	45	652
Balance at Dec. 31, 2019	**42,133**	**1,275**	**9,384**	**52,792**
Accumulated depreciation				
Balance at Dec. 31, 2018[1]			**526**	**526**
Change in accounting policies				
Additions	6,659	303	3,067	10,029
Disposals	(1)		(120)	(121)
Translation adjustments	(14)	1	4	(9)
Balance at Dec. 31, 2019	**6,644**	**304**	**3,477**	**10,425**
Carrying amount				
Dec. 31, 2018[1]			226	226
Dec. 31, 2019	**35,489**	**971**	**5,907**	**42,367**

[1]In 2018, the amounts related to assets held under finance leases.

The additions to the RoU assets from lease agreements from the initial application of IFRS 16 in the amount of €44.2 million are reported in the line change in accounting policies. The details of the corresponding lease liabilities are disclosed in financial liabilities (see note 24).

In 2019, additions in the BYK division of €34.2 million related to the European facilities, of which Germany accounted for €26.0 million. €43.9 million were invested in U.S. production and research facilities and further €11.8 million were invested in Asia. Additions of €11.9 million in the ECKART division related to its European facilities and additions of €9.1 million related to several U.S. facilities. For the expansion of its production and laboratory capacities, the ELANTAS division invested €7.6 million in Germany and Italy and €4.0 million in its Asian facilities. To expand its production and research capacities the ACTEGA division invested €15.8 million in the European locations, €6.2 million in its locations in Brazil and €3.5 million in its U.S. locations.

In connection with investments ALTANA recognized directly attributable borrowing costs of €0.8 million. The calculation was based on an interest rate of 2.0 %.

In 2018, additions in the BYK division of €44.5 million relate to European facilities and of €40.6 million to U.S. facilities. An additional €22.1 million were invested in the Shanghai facility. Additions of €14.9 million in the ECKART division relate to its European facilities and additions of €5.5 million relate to several U.S. facilities. For the expansion of its production and laboratory capacities, the ELANTAS division invested €9.7 million in Germany and Italy, €7.2 million in the U.S. facility and additional €2.4 million in the Indian facility. To expand its production and research capacities the ACTEGA division invested €14.1 million in the European locations and €3.5 million in its U.S. locations.

In connection with investments ALTANA recognized directly attributable borrowing costs of €0.8 million. The calculation was based on an interest rate of 2.2 %.

As of December 31, 2019 and 2018, respectively, land and buildings with a book value of €0.6 million and €0.1 million related to investment property and had a fair value of €3.8 million and €3.2 million. 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.

The Company did not receive any significant taxable or non-taxable government grants in 2019 and 2018.

In 2019, the BYK division recognized an impairment loss in connection with the discontinuation of a product group in the amount of €2.9 million (see note 8). The residual carrying amount of the impaired assets based on value in use is €1.7 million. In 2018, no impairment loss was recognized.

In 2019 and 2018, no land or other assets served as a collateral for bank borrowings.

15. Long-term Investments

	Other investments	Other long-term financial assets	Total
Cost			
Balance at Jan. 1, 2018	9,713	54,272	63,985
Change in accounting policies	1,570		1,570
Additions	4,398	23,013	27,411
Disposals		(71,068)	(71,068)
Translation adjustments	111	186	297
Change in fair value	74		74
Change in reporting entities		54	54
Balance at Dec. 31, 2018	**15,866**	**6,457**	**22,323**
Change in accounting policies			
Additions	3,609	16,767	20,376
Disposals		(26)	(26)
Translation adjustments	47	121	168
Change in fair value	2,891		2,891
Change in reporting entities			
Balance at Dec. 31, 2019	**22,413**	**23,319**	**45,732**
Accumulated impairment			
Balance at Jan. 1, 2018	758		758
Change in accounting policies	(758)		(758)
Balance at Dec. 31, 2018			
Change in accounting policies			
Balance at Dec. 31, 2019			
Carrying amount			
Dec. 31, 2018	15,866	6,457	22,323
Dec. 31, 2019	**22,413**	**23,319**	**45,732**

In 2019, ALTANA granted a long-term loan of €16.0 million to Israeli Landa Labs. In 2018, the remaining amount of €54.0 million of the in 2017 granted long-term loan of €70.0 million was repaid. These loans were and are fully secured by shares in Landa and Landa Labs.

In 2019, the change in the fair value of more than €2.9 million mainly relates to the interest in CiDRA Holdings LLC, USA. Additionally, the interest in CiDRA was increased to 4.8 %.

In the years reported, no impairment losses were recognized.

As of December 31, 2019 and 2018, an amount of €0.1 million of other long-term financial assets related to employee loans bearing a weighted average interest rate of 4.0 %.

In 2019, a funding agreement was signed to finance another Israeli investment of €0.7 million. This is recorded in other long-term financial assets.

In 2018, ALTANA granted a long-term loan of €6.2 million to an unrelated U.S. investment fund as part of a U.S. development program. The loan is included in other long-term financial assets. In return, ALTANA has received a loan of €8.8 million (see note 24).

16. Investments in at Equity Accounted Companies

	Investments in at equity accounted companies
Balance at Jan. 1, 2018	96,705
Additions	50,500
Result from associates	(24,460)
Dividends	(660)
Translation adjustments	(4,216)
Balance at Dec. 31, 2018	**117,869**
Additions	46,387
Result from associates	(39,090)
Dividends	(613)
Translation adjustments	13,763
Balance at Dec. 31, 2019	**138,316**

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. This include the capital increase agreed in June 2018 in which ALTANA participated with the amount of USD 100 million and paid the first tranche of USD 50 million (€42.5 million) in June 2018. The remaining payment in the amount of USD 50 million (€43.2 million) in June 2018 was made in January 2019. Landa develops printing presses and consumables for the new nanography technology for water-based digital printing. Following the delivery of the first beta machines in 2018, 2019 saw the start of the market launch with the delivery of the first non-beta machines. Accordingly, pro rata 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 pro rata result of €-0.4 million (previous year: €-0.3 million), the carrying amount is €6.0 million (previous year: €3.2 million).

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. For the first time in 2019, the presentation includes the fair value adjustments of the assets and liabilities made by ALTANA when applying the equity method. The comparative information was adjusted accordingly:

	Dec. 31, 2018	**Dec. 31, 2019**
Financial statement		
Non-current assets	287,810	338,894
Current assets	101,706	141,825
Total assets	**389,515**	**480,719**
Non-current liabilities	11,042	20,183
Current liabilities	21,647	43,711
Total liabilities and provisions	**32,689**	**63,894**
Net assets	**356,827**	**416,825**
Income statement		
Net sales	14,887	22,346
Net income (EAT)	(71,634)	(109,089)
Comprehensive income	(71,634)	(109,089)

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

	Dec. 31, 2018	**Dec. 31, 2019**
Net assets (100 %)	**356,827**	**416,825**
The Group's share of net assets	119,895	139,894
Other	(5,190)	(7,578)
Carrying amount	**114,705**	**132,316**

Other changes mainly relate to effects from the local share-based payment plan of an associated company. 2019, the increase in the carrying amount of the investment mainly relates to additional capital contributions.

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

17. Inventories

	Dec. 31, 2018	Dec. 31, 2019
Raw materials and supplies	135,656	118,298
Work in progress	33,066	33,011
Finished products and goods	203,810	197,083
Prepayments	495	455
	373,027	**348,847**

In 2019 and 2018, inventories are stated net of write-downs of €23.1 million and €20.7 million, respectively.

18. Trade Accounts Receivable

	Dec. 31, 2018	Dec. 31, 2019
Trade accounts receivable	391,427	387,849
Loss allowance	(7,247)	(7,205)
	384,180	**380,644**

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

	2018	2019
Allowance at the beginning of the year	4,193	7,247
Change in accounting policies (see note 28, credit risk)	1,672	
Translation adjustments	49	39
Additions	3,278	2,527
Reversal	(1,152)	(2,142)
Utilization	(793)	(466)
Allowance at the end of the year	**7,247**	**7,205**

Impairment expenses recognized in profit or loss are as follows:

	2018	2019
Amounts written off	157	289
Addition to loss allowance	3,278	2,527
Reversal of loss allowance	(1,152)	(2,142)
	2,283	**674**

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

	2018	2019
Trade accounts receivable (gross) at Jan. 1	376,104	391,427
Translation adjustments	2,610	2,768
Additions	2,390,235	2,395,191
Disposals	(2,376,572)	(2,400,782)
Utilization of loss allowance	(793)	(466)
Amounts written off	(157)	(289)
Trade accounts receivable (gross) at Dec. 31	**391,427**	**387,849**

As of December 31, 2019 and 2018, 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, 2018							
Carrying amount - gross	**391,427**	**5,447**	**385,980**	**337,246**	**34,509**	**10,095**	**4,130**
Expected loss rate			0.56 %	0.18 %	1.61 %	6.59 %	7.87 %
Loss allowance	7,247	5,092	2,155	608	557	665	325
Net book value	**384,180**	**355**	**383,825**	**336,638**	**33,952**	**9,430**	**3,805**
Dec. 31, 2019							
Carrying amount - gross	**387,849**	**6,475**	**381,374**	**337,601**	**31,643**	**9,477**	**2,653**
Expected loss rate			0.34 %	0.14 %	1.04 %	2.97 %	8.33 %
Loss allowance	7,205	5,903	1,302	471	329	281	221
Net book value	**380,644**	**572**	**380,072**	**337,130**	**31,314**	**9,196**	**2,432**

As of December 31, 2019 and 2018, respectively, the maximum carrying amount subject to credit risk amounts to €387.8 million and €391.4 million.

19. Marketable Securities

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

	Dec. 31, 2018	Dec. 31, 2019
Money market funds	21,782	19,934
Share and equity funds	125	27
	21,907	**19,961**

20. Short-term Financial Assets

ALTANA invested in cash equivalents with a remaining maturity of more than three months but less than one year. As of December 31, 2019 and 2018, €4.8 million and €2.7 million, respectively, were invested.

21. Other Assets

	Dec. 31, 2018		**Dec. 31, 2019**	
	Other non-current assets	Other current assets	Other non-current assets	Other current assets
Balances due from employees	43	279	32	209
Cash surrender value of life insurance	1,976		1,865	
Balances due from fiscal authorities	253	27,174	250	18,984
Prepayments	3	3,090	45	2,702
Receivables from related parties				72
Prepaid expenses	479	6,393	246	8,871
Derivative financial instruments	605	70	848	359
Notes receivable		59,056		59,664
Other	7,308	7,774	7,614	6,660
	10,667	**103,836**	**10,900**	**97,521**

22. 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 2019, a dividend of €50.0 million was distributed to the shareholder. The Management Board and the Supervisory Board propose to the Annual General Meeting to carry forward the unappropriated retained earnings as of December 31, 2019 of €1,188 million of ALTANA AG.

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.

In addition, the translation adjustment of consolidated subsidiaries where the functional currency is a currency other than the Euro is included in the item "Translation adjustments".

Notes on Other Comprehensive Income

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

	2018			2019		
	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	5,311	(1,502)	3,809	(29,460)	8,856	(20,604)
Items that will not be reclassified subsequently to profit or loss	**5,311**	**(1,502)**	**3,809**	**(29,460)**	**8,856**	**(20,604)**
Translation adjustments (including non-controlling interests)	23,913		23,913	37,077		37,077
Gains and losses from derivative financial instruments	(2,425)	728	(1,697)	2,513	(778)	1,735
Change in fair value of derivative financial instruments	(4,360)	1,332	(3,028)	(3,364)	1,009	(2,355)
Items that may be reclassified subsequently to profit or loss	**17,128**	**2,060**	**19,188**	**36,226**	**231**	**36,457**
Other comprehensive income	**22,439**	**558**	**22,997**	**6,766**	**9,087**	**15,853**

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 Group. The majority of ALTANA's operations are financed by the Company's operating cash flows. Excess funds required are financed by borrowings.

In 2019, ALTANA's shareholders' equity increased by €134.8 million to €2,479.4 million. The debt to asset ratio was at 26 %. Long-term and short-term debt represented 13 % of each total liabilities and equity.

Of the promissory note loans issued in prior periods totaling €350 million, €80 million were further repaid in 2019 resulting in a balance of €48 million. The loans have a term until 2020. In addition, a syndicated credit line of €250 million with a term until 2022 is available to ALTANA.

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, 2018	**Dec. 31, 2019**
Assets	57,683	62,748
Non-current assets	*14,777*	*20,934*
Current assets	*42,906*	*41,814*
Liabilities	11,471	10,908
Non-current liabilities	*3,708*	*3,092*
Current liabilities	*7,763*	*7,816*
Net sales	50,512	49,811
Net income (EAT)	7,900	6,481

In 2019 and 2018, respectively, net income of €1.6 million and €2.0 million related to non-controlling interests and dividends of €0.1 million were distributed to them in both years. On December 31, 2019 and 2018, non-controlling interests held 25.0 % of the shares.

23. 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.

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. Furthermore, there will be no subsequent payment, as this was not yet provided for the 2015 tranche.

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

	Awards granted[1]	Initial fair value in € per award[1]	Fair value in € per award as of Dec.31, 2019	End of term
Tranche AEP 2016	8,821	242.93	272.94	31.12.2019
Tranche AEP 2017	10,288	293.58	215.68	31.12.2020
Tranche AEP 2018	10,515	299.12	244.22	31.12.2021
Tranche AEP 2019	11,700	279.07	320.53	31.12.2022

[1] Adjusted due to new computation logic

In 2019, income for all plans amounted to €0.3 million while in 2018 expenses for all plans of €2.3 million were recognized. Provisions amounted to €6.4 million and €6.0 million, as of December 31, 2019 and 2018, respectively. Total personal investment, which is reported in other liabilities, was measured at €4.4 million and €5.0 million as of December 31, 2019 and 2018 (see note 27).

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 of 3 % per year of the debt instrument is granted as well as an additional bonus interest rate if applicable. This 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.

As of December 31, 2019 and 2018, €36.3 million and €31.7 million, respectively, were recognized in other liabilities for the APPRs issued in 2019 and previous years. In 2019 and 2018, the one-time payment and the interest incurred resulted in an expense of €2.0 million and €2.1 million, respectively, which was recognized in personnel expenses.

24. Debt

	Dec. 31, 2018		**Dec. 31, 2019**	
	Non-current debt	Current debt	Non-current debt	Current debt
Borrowings from banks	268	101	4,193	1,137
Promissory note loans (German Schuldscheine)	48,000	80,000		48,000
Lease obligations	46	183	34,227	8,679
Other	14,645	2,357	12,373	4,673
	62,959	**82,641**	**50,793**	**62,489**

For general corporate financing purposes ALTANA uses different financing instruments. Currently, ALTANA has one promissory note loan (German Schuldschein) for a total amount of

€48 million outstanding. In addition, as of December 31, 2019, ALTANA has an undrawn syndicated credit line of €250 million which was issued by seven banks. Furthermore, as of December 31, 2019, largely unused lines of credit in the amount of €9.7 million were available to ALTANA. The terms and conditions are based on market conditions and no collateral is provided.

As of December 31, 2019, no foreign currency denominated bank borrowings existed. As of December 31, 2018, bank borrowings included €0.1 million in foreign currencies denominated exclusively in USD.

The item Other includes the earn-out liability from the previous year's acquisition of all shares in Cytec Olean Inc. from Cytec Industries Inc. The unpaid purchase price of Changzhou Hongbo Paint was settled in full in 2019 (see note 3). Also included is a loan of €8.8 million which ALTANA received from an U.S. investment fund (see note 15). It also includes the remaining purchase price payment of €1.1 million related to the acquisition of the Hubergroup India (see note 3) and €3.2 million from the capital increase in the investment in dp polar (see note 16).

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

	Non-current debt	Current debt
Balance at Dec. 31, 2017	134,973	69,269
Changes in financial liabilities affecting cash flow	8,316	(64,144)
Acquisitions		(3,453)
non-cash changes		
Translation adjustments	534	105
Changes in maturity	(80,864)	80,864
Balance at Dec. 31, 2018	**62,959**	**82,641**
Changes in financial liabilities affecting cash flow	3,924	(88,455)
Acquisitions		265
non-cash changes		
Translation adjustments	(1,862)	2,597
Change in fair value	(2,563)	(1,177)
Changes in maturity	(49,177)	49,177
Leasing	37,512	14,247
Other		3,195
Balance at Dec. 31, 2019	**50,793**	**62,489**

The item Other exclusively relates to liabilities resulting from the capital increase in dp polar.

As of December 31, 2019 and 2018, 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, 2018	101	172	97	370
	Dec. 31, 2019	**1,137**	**4,072**	**121**	**5,330**
Promissory note loans (German Schuldscheine)	Dec. 31, 2018	80,000	48,000		128,000
	Dec. 31, 2019	**48,000**			**48,000**
Other	Dec. 31, 2018	2,356	5,999	8,646	17,001
	Dec. 31, 2019	**4,673**	**3,561**	**8,812**	**17,046**
Total	Dec. 31, 2018	82,457	54,171	8,743	145,371
	Dec. 31, 2019	**53,810**	**7,633**	**8,933**	**70,376**
Lease obligations	Dec. 31, 2018				229
	Dec. 31, 2019				**42,906**
Total debt	Dec. 31, 2018				145,600
	Dec. 31, 2019				**113,282**

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

	Dec. 31, 2018	**Dec. 31, 2019**
Due within one year	185	11,810
Due within two to five years	46	18,333
Due after five years		18,758
Total minimum lease payments	**231**	**48,901**
Less amount representing interest	2	5,995
Present value of the lease liability	**229**	**42,906**
Less current portion	183	8,679
Non-current lease liability	**46**	**34,227**

With the initial application of IFRS 16 as of January 1, 2019, additional lease liabilities were recognized. The previous year's figures only represent liabilities from finance leases in accordance with IAS 17.

In 2019, cash payments from lease agreements amounted to €15.5 million, of which €9.7 million were attributable to the repayment of lease liabilities, €0.8 million to interest payments and €5.0 million to the exercise of recognition assumptions. In 2018, applying IAS 17, the total rental and lease expenses amounted to €18.8 million. The expenses from lease contracts in 2019 are presented in note 12.

Potential future cash payments in the amount of €0.6 million were not included in the lease obligations as it is not reasonably certain that the corresponding lease agreements will be extended (or not terminated).

Lease agreements entered into by ALTANA as lessee but not yet commenced will result in future cash outflows of €0.2 million.

25. Employee Benefit Obligations

Defined Benefit Plans

The defined benefit obligation comprises unfunded and funded plans. Of these plans approximately 95 % relate to obligations in Germany, the Netherlands, and the U.S. as follows:

	Dec. 31, 2018	**Dec. 31, 2019**
Germany	284,407	340,407
The Netherlands	28,868	33,273
U.S.	15,979	17,817
Other	20,300	21,748
Defined benefit obligation	**349,554**	**413,245**

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 life-time 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 Netherlands, one plan is offered whereby benefits depend on the years of service and the salaries received during those years of service. Upon retirement, guaranteed pension payments are granted. Additionally, the plans also cover benefits in case of death or invalidity. The employer pays premiums to an insurance company to finance these plans. Pension increases to be made are covered, on the one hand by surpluses of the insurer and, on the other hand, by further employer contributions, insofar ALTANA bears the risk of additional funding obligations.

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. None of the 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.

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

			Dec. 31, 2018			**Dec. 31, 2019**
	Domestic	Foreign	Total	Domestic	Foreign	Total
Defined benefit obligation - funded	75,311	62,387	137,698	95,827	69,537	165,364
Fair value of plan assets	75,309	53,914	129,223	95,827	61,562	157,389
Funded status	**2**	**8,473**	**8,475**		**7,975**	**7,975**
Defined benefit obligation - unfunded	209,095	2,761	211,856	244,580	3,301	247,881
Net defined benefit obligation	**209,097**	**11,234**	**220,331**	**244,580**	**11,276**	**255,856**
Provision for other post-retirement benefits		**98**	**98**		**118**	**118**
Reported amount	**209,097**	**11,332**	**220,429**	**244,580**	**11,394**	**255,974**

	Present value of the defined benefit obligation	Fair value of plan assets	Total
Balance at Jan. 1, 2018	**345,236**	**(121,231)**	**224,005**
Service cost			
Current service cost	12,985		12,985
Past service cost	(616)		(616)
Interest expense/(income)	7,312	(2,664)	4,648
Administration cost		249	249
	19,681	**(2,415)**	**17,266**
Remeasurement			
Return on plan assets excluding amounts included in interest income		6,911	6,911
Gains/(losses) from changes in demographic assumptions	1,781		1,781
Gains/(losses) from changes in financial assumptions	(8,130)		(8,130)
Experience-based adjustments	(5,866)		(5,866)
	(12,215)	**6,911**	**(5,304)**
Translation adjustment	1,333	(1,176)	157
Contributions:			
Employer		(10,781)	(10,781)
Beneficiaries of the plan	4,372	(4,372)	
Pension payments	(8,853)	3,841	(5,012)
Balance at Dec. 31, 2018	**349,554**	**(129,223)**	**220,331**
Service cost			
Current service cost	13,104		13,104
Past service cost	751		751
Interest expense/(income)	7,944	(3,128)	4,816
Administration cost		245	245
	21,799	**(2,883)**	**18,916**
Remeasurement			
Return on plan assets excluding amounts included in interest income		(17,355)	(17,355)
Gains/(losses) from changes in demographic assumptions	(362)		(362)
Gains/(losses) from changes in financial assumptions	39,529		39,529
Experience-based adjustments	7,648		7,648
	46,815	**(17,355)**	**29,460**
Translation adjustment	793	(681)	112
Contributions:			
Employer		(8,194)	(8,194)
Beneficiaries of the plan	3,489	(3,489)	
Pension payments	(9,205)	4,436	(4,769)
Balance at Dec. 31, 2019	**413,245**	**(157,389)**	**255,856**

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

	Dec. 31, 2018			Dec. 31, 2019		
	German plans	Dutch plans	U.S. plans	German plans	Dutch plans	U.S. plans
Discount rate	2.2 %	2.2 %	4.3 %	1.5 %	1.5 %	3.0 %
Rate of pension increase	1.8 %	0.5 %		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.

As in the previous year, for the Netherlands, the most recent mortality table, "AG Prognosetafel 2018," is used, which is subject to age-related adjustments. The "RPI2012 Mortality Tables" are applied in the U.S. with appropriate updates and projections taken into account.

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 Netherlands and the U.S. an age-independent shift in the employees' life expectancy is assumed as of the reporting date:

		Dec. 31, 2018		Dec. 31, 2019	
		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]		329,253		391,497	
Discount rate	Increase by 50 basis points	307,267	(6.7)	364,271	(7.0)
	Decrease by 50 basis points	354,549	7.7	422,478	7.9
Rate of pension increase	Increase by 50 basis points	340,007	3.3	404,138	3.2
	Decrease by 50 basis points	318,975	(3.1)	382,605	(2.3)
Life expectancy	Increase by 1 year	336,826	2.3	402,323	2.8
	Decrease by 1 year	321,585	(2.3)	380,621	(2.8)

[1] Present value of the German, Dutch and U.S. 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, 2018			**Dec. 31, 2019**		
	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	7,667		7,667	7,909		7,909
Money market funds	4,384		4,384	5,963		5,963
Mixed funds	70,850		70,850	89,865		89,865
Shares	7,271		7,271	8,664		8,664
Insurances		37,862	37,862		44,515	44,515
Cash and cash equivalents	977		977	398		398
Other		212	212		75	75
Fair value of plan assets	**91,149**	**38,074**	**129,223**	**112,799**	**44,590**	**157,389**

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 2019, the actual return on the plan assets amounted to €20.2 million while in 2018 a loss of €4.5 million was incurred.

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

In 2020, the Company expects to pay benefits of €12.9 million to retirees compared to €10.6 million in 2019 and expects payments from plan assets of €7.7 million compared to €5.4 million in 2019. Contributions to plan assets by the employer are expected to be paid in an amount of €9.4 million in 2020 compared to €8.5 million in 2019. The expected expense for defined benefit plans including net interest expenses for 2020 is estimated to amount to €18.2 million compared to €17.9 million in 2019.

As of December 31, 2019 and 2018, the weighted average duration of the German, Dutch and U.S. employee benefit obligation is 20 and 19 years, respectively.

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 €26.9 million and €26.0 million in 2019 and 2018, respectively. No further obligations exist besides the contributions paid.

26. Other Provisions

	Employees	Sales and marketing	Warranty	Other	Total
Balance at Jan. 1, 2019	**64,861**	**21,993**	**4,097**	**16,859**	**107,810**
Additions	42,875	16,606	1,742	15,269	76,492
Accretion	292				292
Utilization	(38,107)	(17,959)	(1,572)	(6,390)	(64,028)
Reversal	(2,442)	(1,532)	(1,423)	(1,280)	(6,677)
Translation adjustments	355	146	1	95	597
Balance at Dec. 31, 2019	**67,834**	**19,254**	**2,845**	**24,553**	**114,486**
Thereof non-current					
at Dec. 31, 2018	17,281	248		2,802	20,331
at Dec. 31, 2019	**18,024**	**172**		**2,698**	**20,894**

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, 2019 and 2018, provisions for sales bonuses amounted to €7.4 million and €8.2 million, respectively. In 2019 and 2018, €6.3 million and €8.4 million were used and €1.0 million and €0.3 million were released.

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 2019.

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

27. Other Liabilities

Other liabilities consist of the following:

	Dec. 31, 2018		Dec. 31, 2019	
	Other non-current liabilities	Other current liabilities	Other non-current liabilities	Other current liabilities
Balances due to fiscal authorities (incl. payroll taxes)		11,733		11,763
Personnel-related liabilities		13,332		13,285
Social security contributions	446	3,502	464	3,701
Employee incentive plans	25,338	11,383	26,642	14,020
Credit notes to customers		1,598		1,628
Balances due to related parties		83		93
Derivative financial instruments	206	4,022	131	2,807
Deferred income	1,871	1,441	1,613	1,162
Contract liability				1,390
Refund liability		1,062		1,056
Other	1	5,359	91	6,620
	27,862	**53,515**	**28,941**	**57,525**

28. 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. As a result of the initial application of IFRS 9 in 2018, 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.

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, 2019 and 2018.

	Dec. 31, 2018			Dec. 31, 2018
	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	**239,652**			**239,652**
thereof in				
Cash and cash equivalents	239,652			239,652
Short-term financial assets	**2,690**			**2,690**
thereof in				
Short-term financial assets	2,690			2,690
Trade accounts receivable	**384,844**			**384,844**
thereof in				
Trade accounts receivable	384,180			384,180
Other current assets	663			663
Other interest-bearing non-derivative financial assets	**6,273**			**4,736**
thereof in				
Long-term investments	6,273			4,736
Other current assets				
Other non-interest-bearing non-derivative financial assets	**59,816**	**250**		**60,066**
thereof in				
Long-term investments				
Other non-current assets		250		250
Other current assets	59,816			59,816
Marketable securities and long-term investments		**37,957**		**37,957**
thereof in				
Long-term investments		16,050		16,050
Marketable securities		21,907		21,907
Derivative financial assets - hedge accounting			**8**	**8**
thereof in				
Other current assets			8	8
Derivative financial assets - without hedge accounting		**667**		**667**
thereof in				
Other non-current assets		605		605
Other current assets		62		62
	693,275	**38,874**	**8**	**730,620**

	Dec. 31, 2019			Dec. 31, 2019
	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	**264,556**			**264,556**
thereof in				
Cash and cash equivalents	264,556			264,556
Short-term financial assets	**4,768**			**4,768**
thereof in				
Short-term financial assets	4,768			4,768
Trade accounts receivable	**381,049**			**381,049**
thereof in				
Trade accounts receivable	380,644			380,644
Other current assets	405			405
Other interest-bearing non-derivative financial assets	**22,913**			**22,675**
thereof in				
Long-term investments	22,366			22,128
Other current assets	547			547
Other non-interest-bearing non-derivative financial assets	**60,459**	**913**		**61,372**
thereof in				
Long-term investments		717		717
Other non-current assets		196		196
Other current assets	60,459			60,459
Marketable securities and long-term investments		**42,610**		**42,610**
thereof in				
Long-term investments		22,649		22,649
Marketable securities		19,961		19,961
Derivative financial assets - hedge accounting			**39**	**39**
thereof in				
Other current assets			39	39
Derivative financial assets - without hedge accounting		**1,168**		**1,168**
thereof in				
Other non-current assets		848		848
Other current assets		320		320
	733,745	**44,691**	**39**	**778,237**

	Dec. 31, 2018 Carrying amount			Dec. 31, 2018 Fair value
	Financial liabilities		Hedging instruments (hedge accounting)	
	at amortized cost	at fair value	at fair value	
Trade accounts payable	**196,260**			**196,260**
thereof in				
Trade accounts payable	194,662			194,662
Other current liabilities	1,598			1,598
Other interest-bearing non-derivative financial liabilities	**137,097**			**137,764**
thereof in				
Non-current debt	56,913			56,901
Current debt	80,101			80,780
Other current liabilities	83			83
Other non-interest-bearing non-derivative financial liabilities	**5,479**	**8,357**		**13,836**
thereof in				
Non-current debt		6,000		6,000
Current debt		2,357		2,357
Other current liabilities	5,479			5,479
Derivative financial liabilities - hedge accounting			**2,795**	**2,795**
thereof in				
Other non-current liabilities			206	206
Other current liabilities			2,589	2,589
Derivative financial liabilities - without hedge accounting		**1,433**		**1,433**
thereof in				
Other current liabilities		1,433		1,433
	338,836	**9,790**	**2,795**	**352,088**

	Dec. 31, 2019			Dec. 31, 2019
	Carrying amount			Fair value
	Financial liabilities		Hedging instruments (hedge accounting)	
	at amortized cost	at fair value	at fair value	
Trade accounts payable	**184,085**			**184,085**
thereof in				
Trade accounts payable	182,457			182,457
Other current liabilities	1,628			1,628
Other interest-bearing non-derivative financial liabilities	**62,235**			**62,390**
thereof in				
Non-current debt	13,005			12,235
Current debt	49,137			50,062
Other current liabilities	93			93
Other non-interest-bearing non-derivative financial liabilities	**11,618**	**3,917**		**15,535**
thereof in				
Non-current debt		3,561		3,561
Current debt	4,317	356		4,673
Other current liabilities	7,301			7,301
Derivative financial liabilities - hedge accounting			**2,166**	**2,166**
thereof in				
Other non-current liabilities			131	131
Other current liabilities			2,035	2,035
Derivative financial liabilities - without hedge accounting		**772**		**772**
thereof in				
Other current liabilities		772		772
	257,938	**4,689**	**2,166**	**264,948**

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 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) at the reporting date. Investments not traded on the stock exchange amounting to €22.6 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 non-interest-bearing non-derivative financial assets, correspond to their fair values and are allocated to hierarchy level 3. The fair value can increase by a maximum of €0.2 million and relates to the funding agreement described in note 15.

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 acquisition of Cytec Olean Inc. and represent fair values which are largely assigned to hierarchy level 3. The fair value of the earn-out payment depends on the achievement of certain sales targets. If the estimated sales change by +/- 10 %, the financial liability and the financial result will change by +/- €2.0 million (2018: +/- €3.8 million). As of December 31, 2019 and 2018, these debts amount to €3.9 million and €8.4 million. In 2019, the decrease of the liability results from the change in the fair value measurement of €3.7 million, from payments amounting to €0.9 million and from exchange-rate effects of €0.2 million. In 2018, the decrease of the liabilities results from payments amounting to €3.5 million and from exchange-rate effects of €0.3 million. Exchange rate effects are reported in other comprehensive income.

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 Magrabe-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 a determined as multiple of a profit target considering different scenarios.

The options have a term of multiple years.

As of December 31, 2019 and 2018, the carrying amount of the derivative share option was €0.8 million and €0.6 million, respectively. Unrealized gains of €0.2 million and €0.4 million are reported in the financial result.

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 includes losses on trade accounts receivable.

	Net financial result	Net operating result	Net result
Dec. 31, 2018			
at amortized cost	**4,518**	**(2,437)**	**2,082**
thereof from:			
Financial assets	8,463	(2,437)	6,026
Financial liabilities	(3,945)		(3,945)
at fair value through profit or loss	**1,507**		**1,507**
thereof from:			
Financial assets	1,507		1,507
Financial liabilities			
Derivatives at fair value through profit and loss	**(6,994)**		**(6,994)**
Total	**(968)**	**(2,437)**	**(3,405)**

	Net financial result	Net operating result	Net result
Dec. 31, 2019			
at amortized cost	**1,166**	**(648)**	**519**
thereof from:			
Financial assets	3,736	(648)	3,089
Financial liabilities	(2,570)		(2,570)
at fair value through profit or loss	**8,274**		**8,274**
thereof from:			
Financial assets	4,535		4,535
Financial liabilities	3,739		3,739
Derivatives at fair value through profit and loss	**114**		**114**
Total	**9,555**	**(648)**	**8,907**

In 2019 and 2018, the net financial result includes interest income generated by financial instruments measured at amortized cost amounting to €3.5 million and €3.2 million and interest expense incurred by financial instruments measured at amortized cost amounting to €2.6

million and €3.9 million. Interest income and interest expense are measured by applying the effective interest method. In 2019 and 2018, no gains and losses from the disposal of financial instruments at amortized cost were realized.

In 2019 and 2018, impairment losses on financial instruments at amortized cost amount to €2.8 million and €3.5 million. Of these amounts €2.8 million and €3.4 million relate to trade accounts receivable.

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 and derivative financial instruments with a positive and a negative fair value. All non-derivative and derivative financial instruments as of December 31, 2019 and 2018, 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, 2018	196,260		
	Dec. 31, 2019	**184,085**		
Other interest-bearing non-derivative financial liabilities	Dec. 31, 2018	82,202	49,341	8,743
	Dec. 31, 2019	**50,459**	**4,137**	**8,934**
Other non-interest-bearing non-derivative financial liabilities	Dec. 31, 2018	7,836	6,000	
	Dec. 31, 2019	**11,974**	**3,561**	
Irrevocable credit commitments and other financial contingent liabilities	Dec. 31, 2018	4,003		
	Dec. 31, 2019	**3,430**		
Total	Dec. 31, 2018	290,301	55,341	8,743
	Dec. 31, 2019	**249,948**	**7,698**	**8,934**

		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, 2018	14,785	4,065	
Cash outflow	Dec. 31, 2018	(14,757)	(4,182)	
Net	Dec. 31, 2018	28	(117)	
Cash inflow	**Dec. 31, 2019**	**25,444**	**2,016**	
Cash outflow	**Dec. 31, 2019**	**(25,224)**	**(1,985)**	
Net	**Dec. 31, 2019**	**220**	**31**	
Forward foreign exchange contracts with negative fair value				
Cash inflow	Dec. 31, 2018	82,870	16,198	
Cash outflow	Dec. 31, 2018	(87,039)	(17,061)	
Net	Dec. 31, 2018	(4,169)	(863)	
Cash inflow	**Dec. 31, 2019**	**76,526**	**6,248**	
Cash outflow	**Dec. 31, 2019**	**(79,669)**	**(6,476)**	
Net	**Dec. 31, 2019**	**(3,143)**	**(228)**	

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 18), 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 January 1, 2018, this resulted in an effect from the initial application of €1.7 million.

As of December 31, 2019 and 2018, other receivables and assets include bills receivable from Chinese customers in the amount of €59.8 million and €59.2 million for which a risk provision of €0.2 million was recognized in both years reported. 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, 2018	**Dec. 31, 2019**
Exposure applying the impairment model		
Financial assets - at amortized cost	693,275	733,745
Exposure without application of the impairment model		
Financial assets - at fair value through profit or loss	38,874	44,691
Total	**732,149**	**778,436**

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, 2018	(109)	109	3,945	(3,945)
	Dec. 31, 2019	**2,525**	**(2,525)**	**2,672**	**(2,672)**
JPY	Dec. 31, 2018	477	(477)	3,479	(3,479)
	Dec. 31, 2019	**246**	**(246)**	**2,891**	**(2,891)**
CHF	Dec. 31, 2018	801	(801)		
	Dec. 31, 2019	**1,016**	**(1,016)**		
CNY	Dec. 31, 2018	373	(373)		
	Dec. 31, 2019	**1,386**	**(1,386)**		
Total	Dec. 31, 2018	1,541	(1,541)	7,424	(7,424)
	Dec. 31, 2019	**5,173**	**(5,173)**	**5,563**	**(5,563)**

		Effect on profit or loss	
		exchange rate plus 10 %	exchange rate minus 10 %
Other financial instruments			
USD	Dec. 31, 2018	(6,107)	6,107
	Dec. 31, 2019	**(4,107)**	**4,107**
JPY	Dec. 31, 2018	(1,504)	1,504
	Dec. 31, 2019	**(1,042)**	**1,042**
CNY	Dec. 31, 2018	(446)	446
	Dec. 31, 2019	**(1,416)**	**1,416**
Total	Dec. 31, 2018	(8,057)	8,057
	Dec. 31, 2019	**(6,565)**	**6,565**

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, 2018	117	(117)
	Dec. 31, 2019	**109**	**(109)**

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, accounts receivable and forecast transactions of subsidiaries with external counterparties. Hedging instruments with maximum terms of up to 18 months are used to hedge forecast transactions of subsidiaries in USD and JPY and are recognized as cash flow hedges. In accordance with the ALTANA hedging strategy, 75 % of the forecast transactions of the first six months, 60 % of the following six months, and 30 % of the subsequent six months of the forecast transactions are hedged. The volume of the hedged transactions as described above is reduced when the occurrence of the transactions is not highly probable. Currently, the maturity dates of these contracts are less than two years.

Cash Flow Hedges

Hedging of Anticipated Sales Denominated in Foreign Currencies: 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, 2019 and 2018, the fair values are as follows:

		Positive fair value	Negative fair value	Total fair value
USD	Dec. 31, 2018	7	(1,674)	(1,666)
	Dec. 31, 2019		**(1,277)**	**(1,277)**
JPY	Dec. 31, 2018	1	(1,121)	(1,120)
	Dec. 31, 2019	**39**	**(889)**	**(850)**

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 2019 and 2018 a decrease in fair value of €3.4 million and €4.8 million, respectively, was recognized in other comprehensive income. In 2019 and 2018, respectively, €3.0 million (reduction in net sales), and €2.4 million (increase in net sales) were reclassified 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, 2018	1,501	7	7	(8)	17	(9)		
	Dec. 31, 2019								
JPY	Dec. 31, 2018	1,136	1	1	(1)	3	(2)	26	0
	Dec. 31, 2019	**4,329**	**39**	**39**	**(34)**	**41**	**(2)**		
Derivative liabilities									
thereof									
USD	Dec. 31, 2018	36,241	(1,674)	(1,674)	1,570	(1,008)	(675)	(29)	(135)
	Dec. 31, 2019	**25,412**	**(1,277)**	**(1,277)**	**1,229**	**(527)**	**(836)**	**(405)**	**(242)**
JPY	Dec. 31, 2018	32,493	(1,121)	(1,121)	1,153	(939)	(46)		
	Dec. 31, 2019	**26,505**	**(889)**	**(889)**	**929**	**(973)**	**(12)**	**(206)**	**(5)**

The following table shows the average hedging rate, 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 2020 (prior year: 2019)	Nominal amount due in 2021 (prior year: 2020)	average hedging rate
USD	Dec. 31, 2018	46,126	33,203	12,923	1.22
	Dec. 31, 2019	**30,349**	**26,280**	**4,069**	**1.19**
JPY	Dec. 31, 2018	4,375,000	3,122,000	1,253,000	130.10
	Dec. 31, 2019	**3,863,000**	**3,273,000**	**590,000**	**125.28**

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, 2018	(2,797)	(0)	Other operating expenses/income		2,967	Net sales
	Dec. 31, 2019	**(3,167)**	**(0)**	**Other operating expenses/income**		**(2,994)**	**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, 2018	4,468	0
Change in fair value of derivative financial instruments	(2,973)	(1,386)
Reasons for reclassification:		
Realization of the underlying transaction	(2,943)	518
Balance at Dec. 31, 2018	**(1,448)**	**(868)**
Change in fair value of derivative financial instruments	(2,175)	(1,189)
Reasons for reclassification:		
Realization of the underlying transaction	1,552[1]	961
Balance at Dec. 31, 2019	**(2,071)**	**(1,096)**

[1]This includes a hedging effect of € -481 thousand resulting from a capital increase in the investment in Landa, accounted for applying the equity method.

Hedging of Intercompany Foreign Currency Loans and Receivables

In 2019, ALTANA entered into forward foreign exchange contracts with a nominal value of USD 145.0 million (2018: USD 325.3 million), of JPY 630.0 million (2018: JPY 600.0 million), of CHF 15.0 million (2018: CHF 11.0 million) and of CNY 271.3 million (2018: CNY 66.0 million), (only in 2018: GBP 7.0 million) to hedge intercompany foreign currency loans and receivables 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 that qualifies for hedge accounting and consequently, changes in their fair values are recognized in the financial result.

		Positive fair value	Negative fair value	Total fair value
USD	Dec. 31, 2018	57	(879)	(822)
	Dec. 31, 2019	**288**	**(303)**	**(15)**
JPY	Dec. 31, 2018		(272)	(272)
	Dec. 31, 2019		**(45)**	**(45)**
CHF	Dec. 31, 2018	4	(234)	(230)
	Dec. 31, 2019	**11**	**(367)**	**(356)**
CNY	Dec. 31, 2018	1	(48)	(47)
	Dec. 31, 2019	**21**	**(56)**	**(35)**

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 off-setting amounts, not offset in the statements of financial position	Net amount after potential offsetting
Receivables from forward foreign exchange transactions	Dec. 31, 2018	70		70	21	49
	Dec. 31, 2019	**359**		**359**	**359**	**0**
Trade accounts receivable	Dec. 31, 2018	393,803	9,623	384,180		384,180
	Dec. 31, 2019	**389,261**	**8,618**	**380,644**		**380,644**
Total	Dec. 31, 2018	393,873	9,623	384,251	21	384,229
	Dec. 31, 2019	**389,620**	**8,618**	**381,003**	**359**	**380,644**

		Gross carrying amount	Offsetting amounts, offset in the statements of financial position	Net carrying amount	Potential off-setting amounts, not offset in the statements of financial position	Net amount after potential offsetting
Liabilities from forward foreign exchange transactions	Dec. 31, 2018	4,227	-	4,227	21	4,206
	Dec. 31, 2019	**2,938**	**-**	**2,938**	**359**	**2,579**
Trade accounts payable	Dec. 31, 2018	195,895	1,233	194,662		194,662
	Dec. 31, 2019	**183,550**	**1,093**	**182,457**		**182,457**
Total	Dec. 31, 2018	200,122	1,233	198,889	21	198,868
	Dec. 31, 2019	**186,488**	**1,093**	**185,396**	**359**	**185,037**

29. Commitments and Contingencies

Guarantees and Other Commitments

	Dec. 31, 2018	Dec. 31, 2019
Purchase commitments for intangible assets	1,535	2,463
Purchase commitments for property, plant and equipment	48,016	27,870
Guarantee for pension obligation from divestments	8,434	9,392
Other contingent financial liabilities	4,003	3,430
	61,988	**43,155**

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.

30. Related Party Transactions

Members of the Boards of ALTANA AG and SKion GmbH, the sole shareholder of the Company, as well as their close family members are considered related parties. Apart from the compensation as disclosed in note 31 and the regular dividends distributed to SKion GmbH no other business relationship existed.

Mrs. Susanne Klatten is the sole shareholder of SKion GmbH and deputy chairwoman of the Supervisory Board of ALTANA AG. Mrs. 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.

Other SKion GmbH investments include Envio Group, Eliquo Water Group and SKion Water International Group.

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 and other liabilities.

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

	Dec. 31, 2018	Dec. 31, 2019
Receivables from related parties	84	95
Balances due to related parties	735	3,705

	2018	2019
Related party transactions		
Sales	500	547
Other income	48	36
Services and goods acquired	1,754	1,886
Lease expense / lease payments	2,315	2,529
Interest income		24

In 2019 and 2018, ALTANA purchased or leased company cars from the BMW Group. The relevant lease and purchase contracts were all concluded at arm’s length.

The lease expense respective lease payments relate to lease contracts for company cars with Alphabet Fuhrparkmanagement GmbH (BMW Group). In 2019 and 2018, further transactions with BMW Group are included in revenues in the amount of €0.5 million and €0.4 million, respectively.

In 2019, SKion Digital Printing GmbH, a subsidiary of SKion GmbH, reimbursed costs of EUR 35 thousand and interest of EUR 24 thousand in connection with the loan granted to Landa Labs. In 2018, cost of EUR 47 thousand were refunded in connection with the capital increase at Landa Corp.

31. 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 2019 and 2018, respectively, compensation of the Supervisory Board amounted to €1.0 million and €1.1 million of which €0.4 million and €0.5 million related to variable compensation and €0.6 million related to fixed compensation in both years. The salary paid to employee representatives, in addition to the compensation paid out to them related to their function as Supervisory Board members is at arm’s length.

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 taken into account 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 2019 was determined on a one-year basis. It is based on the development of earnings before interest, taxes and depreciation and amortization (EBITDA) as well as the return on capital employed (ROCE), each in comparison to the respective target values established by the Supervisory Board. The long-term bonus 2019 was calculated based on the development of net income after cost of capital ("ALTANA Value Added") over a period of three years. In 2019, as a component with long-term incentive, the Management Board members were granted AEP Awards under the "ALTANA Equity Performance 2019" (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 2019 and 2018, total compensation paid in cash to the Management Board including remuneration in kind amounted to €3.6 million and €3.7 million, respectively, of which €1.8 million and €1.6 million related to fixed compensation, and €1.8 million and €2.1 million related to variable compensation. On December 31, 2019 and 2018, provisions for post-employment benefits of €4.1 million and €3.3 million were recognized; the corresponding service cost amounted to €0.5 million in both years reported.

In 2019, the Management Board members received AEP Awards as compensation with a long-term incentive effect from the "ALTANA Equity Performance 2019" (AEP) plan. In 2019 and 2018, 2,795 and 2,407 AEP Awards, respectively, were granted to the Management Board, with a value of €0.8 million and €0.7 million, respectively. The final number of 2016 AEP Awards as well as the payout amount at the end of the four-year term of the plan depends on the development of the company value. 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. In 2018, after the end of the term (December 31, 2017) of the AEP Tranche 2014, 2,127 AEP Awards were finally allocated, resulting in payments of €0.7 million to beneficiaries. When the AEP Tranche 2019 was issued, the relevant plan conditions were adjusted and also changed for the current 2017 and 2018 tranches. As of December 31, 2019 and 2018, respectively, provisions for AEP Awards amounted to €0.9 million and €1.3 million; personal investment was measured at €0.7 million and €0.8 million, and is recognized in other liabilities (see note 27). In the years reported, these amounts include deposits made by the members of the Management Board of €0.4 million each. For more details on the AEP see note 23.

For former members of the Management Board and their surviving dependents, a pension provision in the amount of €18.5 million and €18.0 million was recorded as of December 31, 2019 and 2018, respectively. Pension payments totaled €1.1 million and €1.3 million, respectively.

32. Fees Paid to the Auditor

	2019
Audit of the financial statements	1,417
Other assurance services	37
Tax advisory services	8
Other services	34
	1,496

33. Subsequent Events

Besides the acquisitions described in note 3, no further reportable events occurred.

34. Additional Information

Companies that are exempt from publishing their financial statements according to section 264 (3) and section 264b of the German Commercial Code (HGB):
ALTANA Management Services GmbH, Wesel
ALTANA Newco I GmbH, Wesel
ALTANA New Technologies GmbH, Wesel
HELIOSONIC GmbH, Wesel
Eckart International Trading GmbH, Wesel
BYK-Chemie GmbH, Wesel
MIVERA Vermögensanlagen GmbH, Wesel
Weseler Grundstücksverwaltungs B.V. & Co. KG, Wesel
BYK-Gardner GmbH, Geretsried
ECKART GmbH, Hartenstein
ALTANA Chemie Beteiligungs GmbH, Hartenstein
ECKART Beteiligungs GmbH, Hartenstein
Hartensteiner Verwaltungs B.V. & Co. KG, Hartenstein
ELANTAS GmbH, Wesel
ELANTAS Europe GmbH, Hamburg
ACTEGA GmbH, Wesel
ACTEGA DS GmbH, Bremen
ACTEGA Metal Print GmbH, Lehrte
ACTEGA Rhenania GmbH, Grevenbroich
ACTEGA Terra GmbH, Lehrte

Supervisory Board of ALTANA AG

Dr. Klaus-Jürgen Schmieder
Chairman
(appointed until the Annual General Meeting 2020)
Former Member of the Management Board of
L'Air Liquide S.A.

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

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

Dr. Anette Brüne*
(appointed until the Annual General Meeting 2023)
Global Head of Marketing & Sales Services of BYK

Dr. Monika Engel-Bader
(appointed until the Annual General Meeting 2022)
Former Managing Director of Chemetall GmbH
Consultant
Other functions:
Euler Hermes Deutschland AG[1]
OXEA S.à.r.l.[2]
OXEA Holding GmbH[2]

Armin Glashauser*
(appointed until the Annual General Meeting 2023)
Head of works council ECKART GmbH

Klaus Koch*
(appointed until the Annual General Meeting 2023)
Manager operational controlling ECKART GmbH

Beate Schlaven*
(appointed until the Annual General Meeting 2023)
Employee Quality Management
ACTEGA Rhenania GmbH

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

Stefan Soltmann*
(since September 17, 2019 appointed until the Annual General Meeting 2024)
Head of the Labor and Operational Politics Section of the Mining, Chemical and Energy Industrial Union (IG BCE)
Other functions:
Dow Olefinverbund GmbH[1]

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

Stefan Weis*
(until June 28, 2019)
Secretary of the Board of the Mining, Chemical and Energy Industrial Union (IG BCE)

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

* 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. Klaus-Jürgen Schmieder (Chairman)
Ulrich Gajewiak
Susanne Klatten
Beate Schlaven

Audit Committee
Dr. Jens Schulte (Chairman)
Armin Glashauser
Stefan Soltmann (since October 1, 2019)
Dr. Antonio Trius
Stefan Weis (until June 28, 2019)

Mediation Committee
(in accordance with section 27 (3) of the German Codetermination Act)
Dr. Klaus-Jürgen Schmieder (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 Srl.[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]
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

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