Manz AG
Reutlingen

Short-form audit report
Annual financial statements and management report
31 December 2019

Translation from the German language

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Building a better
working world

Translation from the German language

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Note:

We have issued the audit opinion presented below in compliance with legal and professional requirements subject to the conditions described in the enclosed “Engagement Terms, Liability and Conditions of Use”.

Translation from the German language

Independent auditor's report

To Manz AG

Report on the audit of the annual financial statements and of the management report

Opinions

We have audited the annual financial statements of Manz AG, Reutlingen, which comprise the balance sheet as of 31 December 2019, and the income statement for the fiscal year from 1 January to 31 December 2019, and notes to the financial statements, including the accounting policies presented therein. In addition, we have audited the management report of Manz AG for the fiscal year from 1 January to 31 December 2019. In accordance with the German legal requirements, we have not audited the content of the statement on corporate governance pursuant to Sec. 289f HGB which is published on a website stated in the management report and is part of the management report.

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

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to business corporations and give a true and fair view of the assets, liabilities and financial position of the Company as at 31 December 2019 and of its financial performance for the fiscal year from 1 January to 31 December 2019 in compliance with German legally required accounting principles, and

- the accompanying management report as a whole provides an appropriate view of the Company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the management report does not cover the content of the statement on corporate governance referred to above.

  Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the opinions

We conducted our audit of the annual financial statements and of the management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No 537/2014, referred to subsequently as "EU Audit Regulation") and 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 annual financial statements and of the management report" section of our auditor's report. We are independent of the Company in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10 (2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the annual financial statements and on the management report.

Key audit matters in the audit of the annual financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the fiscal year from 1 January to 31 December 2019. These matters were addressed in the context of our audit of the annual financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

1. Impairment of shares in affiliates and equity investments

<u>Reasons why the matter was determined to be a key audit matter:</u>

Shares in affiliates and equity investments as of 31 December 2019 reported in the annual financial statements of Manz AG account for approximately 27% (prior year: 28%) of total assets. For the purpose of impairment testing, the Company's executive directors determine the net realizable values for all shares in affiliates and equity investments on an annual basis using a capitalized earnings method.

The result of the valuations depends chiefly on the future cash inflows estimated by the executive directors as well as the discount rate used. Due to the materiality of the shares in affiliates and equity investments as well as the fact that impairment testing involves a large degree of judgment and uncertainties, we determined the impairment testing of shares in affiliates and equity investments to be a key audit matter.

Auditor's response:

We verified the methodology and clerical accuracy of the valuation model used.

We checked on a test basis that the planning used for the impairment tests is in line with the business plan of the Company approved by the Managing Board and ratified by the Supervisory Board. In addition, we examined the growth rates for income and expenses used to roll forward the planning by comparing with internal data. We also analyzed the budgetary planning of individual equity investments with regard to adherence to the planning in the past and obtained evidence substantiating the individual assumptions used in the budgetary planning.

We assessed the individual components used to determine the discount rate with the involvement of our internal experts by analyzing the peer group, comparing market data with external evidence and examining the clerical accuracy of the calculation.

Our audit procedures regarding the impairment of shares in affiliates and equity investments did not lead to any reservations.

Reference to related disclosures:

The disclosures by the Company on the impairment of shares in affiliates and equity investments can be found in the notes to the financial statements in the section "Accounting policies."

2. Accounting for construction contracts

Reasons why the matter was determined to be a key audit matter:

A significant part of the Company’s business activities is processed via construction contracts. Revenue from construction contracts is recognized in accordance with the completed contract method when all primary and significant secondary obligations have been fulfilled. We consider the accounting for construction contracts and especially the resulting revenue recognition to be an area posing a significant risk of material misstatement and thus a key audit matter, as the recognition of revenue from individual projects in the appropriate period has a material impact on the presentation of the Company’s financial performance. Additionally, the valuation of inventories at net realizable value requires the executive directors to exercise judgment and make estimates and assumptions. This particularly applies to the total contract costs, remaining costs to completion, total contract revenue including amendments as well as contract risks.

Auditor’s response:

As part of our audit procedures, we obtained an understanding of the Company’s internally established methods and processes of project management in the bid and execution phase of construction contracts.

As part of our substantive audit procedures, we evaluated the executive directors’ estimates and assumptions based on a risk-based selection of a sample of contracts for projects. Our audit procedures included, among others, a review of the contracts and their terms and conditions including contractually agreed termination rights, penalties for delay and breach of contract as well as damages.

We further performed inquiries of project management with respect to the development of the projects, the reasons for deviations between planned and actual costs, the current estimated costs to complete the projects and the assessments of the executive directors on probabilities that contract risks will materialize. To identify anomalies in margin development throughout the projects’ execution, we also applied data analysis procedures.

In addition, we analyzed billable revenues as of the reporting date and the corresponding cost of sales to be recognized in the income statement in order to evaluate whether income was recognized in the appropriate period. Furthermore, we obtained evidence from third parties for selected projects (e.g., project acceptance documentation, evidence on the transfer of risk and contractual terms and conditions).

Our audit procedures did not lead to any reservations relating to the accounting for construction contracts.

Reference to related disclosures:

We refer to the disclosures in the notes to the financial statements in the "Accounting policies" section with regard to the accounting policies applied in accounting for construction contracts.

Other information

The executive directors are responsible for the other information. The other information comprises the statement on corporate governance referred to above.

Our opinions on the annual financial statements and on the management report do not cover the other information, and consequently we do not express an 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 annual financial statements, with the 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 annual financial statements and the management report

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to business corporations, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German legally required accounting principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German legally required accounting principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the executive directors are responsible for assessing the Company'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, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that, as a whole, provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual 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 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 management report.

The Supervisory Board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and of the management report.

Auditor's responsibilities for the audit of the annual financial statements and of the management report

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the Company's position and, in all material respects, is consistent with the annual 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 opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and the EU Audit Regulation 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 annual financial statements and this 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 annual financial statements and of the 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 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 annual financial statements and of arrangements and measures (systems) relevant to the audit of the management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems of the Company.

- 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 Company'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 annual financial statements and in the management report or, if such disclosures are inadequate, to modify our respective 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 Company to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German legally required accounting principles.

- Evaluate the consistency of the management report with the annual financial statements, its conformity with [German] law, and the view of the Company's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the 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 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.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as auditor by the Annual General Meeting on 2 July 2019. We were engaged by the Supervisory Board on 8 August 2019. We have been the auditor of Manz AG since fiscal year 2018.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Steffen Maurer.

Stuttgart, 13 March 2020

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Matischiok	Maurer
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

MANZ AG, REUTLINGEN

BALANCE SHEET FOR DEZEMBER 31, 2019

A S S E T S

	12/31/2019 euros		12/31/2018 euros
A. NON-CURRENT ASSETS			
I. Intangible assets			
1. Internal generated industrial property, rights and similar rights and assets	16,721,421.94		17,021,503.50
2 Concessions, industrial and similar rights and assets and licences in such rights and assets	754,286.73		439,629.37
		17,475,708.67	17,461,132.87
II. Tangible assets			
1. Land, land rights and buildings including buildings on third party land	275,089.00		329,118.00
2. Technical equipment and machines	834,824.00		1,770,546.00
3. Other equipment, factory and office equipment	620,441.00		723,728.00
		1,730,354.00	2,823,392.00
III. Financial assets			
1. Shares in affiliated companies	49,970,155.12		51,792,155.12
2. Loans to affiliated companies	5,300,618.19		5,733,057.45
3. Participations	11,700,265.11		20,006,265.11
		66,971,038.42	77,531,477.68
		86,177,101.09	97,816,002.55
B. CURRENT ASSETS			
I. Inventories			
1. Raw materials, consumables and supplies	4,491,073.10		3,376,508.99
2. Unfinished goods	233,289,236.07		138,149,654.58
3. Finished goods and merchandise	2,401,190.82		10,502,593.12
4. Prepayments	61,528,307.30		62,040,332.26
5. Payments received on account of orders	-206,078,429.12		-125,845,425.30
		95,631,378.17	88,223,663.65
II. Receivables and other assets			
1. Trade receivables	576,065.36		905,473.53
2. Receivables from affiliated companies	0.00		1,631,563.04
3. Other assets	1,073,841.20		473,478.78
		1,649,906.56	3,010,515.35
III. Cash in hand, bank balances and checks		40,190,264.42	63,340,826.10
		137,471,549.15	154,575,005.10
C. PREPAID EXPENSES		499,369.46	560,842.17
		224,148,019.70	252,951,849.82

L I A B I L I T I E S

	12/31/2019 euros		12/31/2018 euros
A. EQUITY			
I. Issued capital		7,744,088.00	7,744,088.00
II. Capital reserves		51,294,940.98	88,294,940.98
III. Revenue reserves		1,470,601.00	1,470,601.00
IV. Retained earnings		-6,483,671.85	-5,847,990.47
		54,025,958.13	91,661,639.51
B. PROVISIONS			
1. Provisions for pensions and similar obligations	3,065,405.00		3,014,458.00
2. Tax provisions	539,800.98		0.00
3. Other provisions	8,664,015.46		8,186,885.95
		12,269,221.44	11,201,343.95
C. LIABILITIES			
1. Advanced payments received on account of order	107,899,372.74		130,583,973.24
2. Trade payables	12,663,344.09		9,306,435.26
3. Liabilities to affiliated companies	35,253,216.02		9,599,900.73
4. Other liabilities	1,959,664.76		598,557.13
- thereof from taxes: EUR 1.767.022,04 (previous year: EUR 547.980,46):			
		157,775,597.61	150,088,866.36
D. DEFERRED INCOME		77,242.52	0.00
		224,148,019.70	252,951,849.82

MANZ AG, REUTLINGEN

INCOME STATEMENT FOR THE FISCAL YEAR 2019

		2019 euros		2018 euros
1.	Revenues		37,203,720.71	37,806,381.77
2.	Increase or decrease in finished goods and unfinished goods		87,038,179.19	92,247,722.98
3.	Other capitalized internal work		4,183,388.13	4,722,719.37
4.	Other operating income - thereof from currency translation: EUR 38.619,48 (previous year: EUR 128.120,80)		1,995,881.68	3,936,586.42
5.	Cost of materials			
	a) Cost of raw materials, consumables and supplies and of purchased goods	-80,884,069.42		-87,404,764.79
	b) Cost of purchased services	-13,510,052.21		-10,666,863.27
			-94,394,121.63	-98,071,628.06
6.	Personnel expenses			
	a) Wages and salaries	-29,660,784.58		-28,811,973.05
	b) Social security, post-employment and other employee benefit costs	-5,119,912.90		-5,005,672.02
	- thereof for pension provisions: EUR 55.206,37 (previous year: EUR 70.373,58)			
			-34,780,697.48	-33,817,645.07
7.	Depreciation and Amortisation			
	a) Depreciation/Amortisation for intagible fixed assets and property, plant and equipment		-4,805,343.90	-3,640,033.46
8.	Other operating expenses - thereof expenses acc. to section Art. 67 (1) and (2) EGHGB: EUR 51.210,00 (previous year: EUR 51.210,00) - thereof from currency conversion: EUR 33.605,89 (previous year: EUR 20.865,58)		-21,520,104.63	-20,653,213.10
9.	**Operating result**		-25,079,097.93	-17,469,109.15
10.	Other interest and similar income - thereof from affiliated companies: EUR 168.894,01 (Vorjahr: EUR 201.922,17) - thereof from compunding: EUR 5.318,06 (previous year: EUR 5.223,04)		174,615.68	238,877.06
11.	Depreciation of financial assets and of securities held as current assets		-11,653,000.00	-3,579,000.00
12.	Interest and similar expenses - thereof to affiliates: EUR 183.806,47 (previous year: EUR 0,00) - thereof from compounding: EUR 261.770,00 (previous year: EUR 261.621,00)		-460,621.60	-270,637.60
13.	**Financial result**		-11,939,005.92	-3,610,760.54
14.	Income taxes		-17.08	0.00
15.	**Earnings after taxes**		-37,018,120.93	-21,079,869.69
16.	Other taxes		-617,560.45	-15,278.28
17.	**Loss for the year**		-37,635,681.38	-21,095,147.97
18.	Loss carried forward from the previous year		-5,847,990.47	-4,752,842.50
19.	Withdrawals from capital reserves		37,000,000.00	20,000,000.00
20.	**Retained earnings**		-6,483,671.85	-5,847,990.47

Manz AG, Reutlingen notes for financial year 2019

General information

Manz AG has its headquarters in Reutlingen and is registered in the commercial register of the Stuttgart District Court (HRB 353989).

The annual financial statements have been prepared in accordance with the provisions of sections 242 et. seqq. and 264 et. seqq. of the German Commercial Code (HGB) and with the relevant provisions of the German Stock Corporation Act (AktG) and the Articles of Incorporation. The regulation for the large stock corporations are applied.

The income statement is prepared according to the total cost method.

Accounting and Valuation Methods

The presentation, classification, recognition and valuation of the annual financial statements are consistent with the previous year's principles.

Internally generated intangible fixed assets are valued in accordance with section 255 (2a) HGB with the expenses incurred in their development (development costs). If the development is not yet completed, no amortization is charged. The useful life is measured according to its product life cycle or its expected synergy effects, as far as they can be reliably estimated. Otherwise, the useful life is assumed at ten years in accordance with section 253 (3) HGB.

Acquired **intangible assets** are carried at acquisition cost and, if they are subject to wear and tear, are reduced by scheduled amortization over their useful life. Amortization is based on useful lives of three to five years.

Property, plant, and equipment are carried at acquisition or manufacturing cost and, if subject to wear and tear, are depreciated by the standard straight-line depreciation method. Scheduled depreciation is based on useful lives of between three and thirteen years. Low-value assets with acquisition or manufacturing costs up to EUR 800.00 are fully depreciated in the year of acquisition.

In the case of **financial investments**, the shareholdings and investments to affiliated companies are recognized at the lower of their acquisition costs or fair market value if a permanent reduction in value can be assumed. Loans are measured at the lower of nominal value or fair value.

Inventories of **raw materials, consumables, and supplies** are recognized at the lower of average acquisition or manufacturing costs and daily values on the balance sheet date.
Unfinished and finished goods are valued at manufacturing cost on the basis of individual calculations based on current operating accounts. In addition to the directly attributable direct material costs, production wages and special direct costs, manufacturing and material

overhead costs, as well as proportionate administrative costs are also taken into account accordingly.

There were no expected losses in all cases; i.e., deductions were made for the costs still to be incurred from the estimated sales prices.

Merchandise is carried at the lower of acquisition costs or market prices; prepayments made at the nominal amount.

All identifiable risks in **inventories** resulting from above-average storage periods, reduced usability and lower replacement costs are taken into account through appropriate devaluations.

The **prepayments received on orders** are always offset against the stock of unfinished products. If the amount of the advance payments received exceeds the manufacturing costs of inventories, it is reported under Advanced payments received on account of order.

Receivables and other assets are carried at their nominal value. All risky items are accounted by making appropriate individual allowances; the general credit risk was taken into account by a write-down of approximately 1.0 % on the outstanding trade receivables reduced by , the VAT at the balance sheet date.

Liquid assets plus **deferred income** are recognized at their nominal value.

A deferred tax liabilities is recognized for the differences between the commercial and tax valuations of assets, liabilities, and prepaid expenses and deferred income, as well as including of eligible loss and interest carryforwards if the overall tax burden is assumed in future financial years. The deferred tax assets is not recognized due to the existing loss history and the associated non-recoverability of the tax loss carryforwards. Deferred tax assets are offset by existing deferred tax liabilities as long as they correspond to each other. Loss carry forwards are taken into account to the extent that offsets against taxable income appear feasible within the next five years.
Deferred taxes are measured on the basis of the applicable corporate income tax rate and the trade tax rates. The tax rate for the past financial year was 29.13 %,including corporation tax, solidarity surcharge and trade income tax.

The Company introduced a **Performance Share Plan** for members of the Managing Board and other eligible employees for the first time in 2008. Under this plan, stock options are granted with a certain waiting period. The recipient receives a Manz share at the price of EUR 1.00 after expiration of the waiting period. The stock options expire when the employment is terminated or a termination agreement is concluded. A conditional increase in share capital was approved in 2008, 2011, 2012, 2015 and 2019 in order to service the stock options (see also Conditional Capital I, II, III). As in previous years, the issuance of stock options/commitments was not carried on the balance sheet of Manz AG's financial statements prepared according to the German Commercial Code.

The **pension obligations** are measured at the projected unit credit method based on the settlement amount calculated according to the "Mortality tables 2018 G" of Prof. Dr. med. Klaus Heubeck. For discounting purposes, the average market interest rate of 2.71% (previous year: 3.21%) for the past ten years with a remaining term of 15 years was used. Expected pension increases of 1.7 % (previous year: 1.7 %) and salary increases of 2.5 % (previous year: 2,5 %) were taken into account.

Other provisions include all uncertain liabilities and anticipated losses from pending transactions. These are made up to the settlement amount (including future increases in costs and prices) that is necessary based on reasonable business judgment. Provisions with a remaining term of more than one year were discounted using the average market interest rate for the past seven financial years, corresponding to their remaining term. The anniversary provisions are recognized in accordance with section 253 (1) Sentence 2 HGB at the settlement amount required by reasonable commercial judgment. For the discounting, the average market interest rate, of the past seven years, with a remaining term of 15 years, of 1.97 % (previous year: 2.36 %) was used (previous year: 2.36 %). The expected fluctuation of 10.00 % (previous year 10.00 %) was applied. Assets that serve exclusively to fulfill obligations arising from partial retirement and are not accessible to all other creditors are measured at fair value. The assets are offset against the corresponding underlying obligation. If there is an excess of obligations, it is included under the provisions. If the value of the assets exceeds the obligations, they are shown on the assets.

Liabilities are carried at the settlement amount.

Receivables and liabilities in **foreign currencies** with a remaining term of up to one year are measured at the average spot exchange rate on the balance sheet date.

Disclosures for the balance sheet

Fixed assets

The development of the individual items of fixed assets is shown in the statement of development of fixed assets, together with the details of depreciations and amortizations for the financial year.

Internally generated intangible assets

Research and development costs amounted to a total of TEUR 9,242 in the financial year, of which development costs of TEUR 4,183 were capitalized as intangible assets.

Investments

The composition of shareholdings is shown in the following table:

Shares held in affilitated companies	Participation in %	Equity TEUR	Result TEUR
Manz Batterytech Tübingen GmbH [1]	100,00%	1.523	-2
Manz USA Inc., North Kingstown, USA [1]	100,00%	965	246
Manz Hungary Kft., Debrecen, Ungarn [1]	100,00%	1.333	-6
Manz Slovakia, s.r.o., Nove Mesto nad Vahom, Slovakei [1]	100,00%	13.457	2.313
Manz Italy s.r.l., Sasso Marconi, Italien [1]	100,00%	6.585	-399
Suzhou Manz New Energy Equipment Ltd., Suzhou, VR China [1]	56,00%	528	-462
Manz Asia Ltd., Hong-Kong, VR China [1]	100,00%	22.555	125
Manz China Suzhou Ltd., Suzhou, VR China [1]	100,00%	6.302	-693
Manz (Shanghai) Trading Company Ltd., Shanghai, VR China [1]	100,00%	91	124
Manz India Private Limited, New Delhi, Indien [1]	75,00%	170	13
Manz Chungli Ltd., Chungli, Taiwan [1]	100,00%	66.800	361
Manz Taiwan Ltd., Chungli, Taiwan [1][2]	100,00%	64.445	4.209
Manz (B.V.I.) Ltd., Road Town, Britische Virgin Islands [1]	100,00%	11.057	94

Participations	Participation in %	Equity TEUR	Result TEUR
NICE PV Research Ltd., Peking, VR-China [1]	11,10%	152.061	-34.676
Talus Manufacturing Ltd., Chungli, Taiwan [1][2]	80,50%	33.882	10.919

[1] The information relates to the annual financial statements according to IFRS; values converted into euros
[2] Manz Taiwan Ltd, Chungli, Taiwan holds an 80,50% stake in Talus Manufacturing Ltd., Chungli, Taiwan

The following changes were made to financial assets in financial year 2019:

Manz Batterytech Tübingen GmbH, Tübingen, was formed in October 2019, in which Manz AG holds a 100% interest of TEUR 1,525. The object of the company is the operation, lease or transfer of use of production facilities, in particular facilities for the manufacture of lithium-ion battery cells.

As of November 30, 2019, Intech Machines (B.V.I.) Co. Ltd, Road Town, British Virgin Islands, was liquidated. Its assets and liabilities as well as its equity were transferred to Manz Taiwan Ltd. Chungli, Taiwan.

In financial year 2019, a write-down of TEUR 2,072 was recognized for Manz Italy s.r.l., which Manz AG holds 100% of shares.

Manz Hungary Kft., which Manz AG holds 100% of shares, was written down in the amount of TEUR 521.

A write-down of TEUR 754 was recognized for the 56 % shares in Suzhou Manz New Energy Equipment Ltd.

An impairment loss of TEUR 8,306 was recognized on the 11.1 % participation in NICE PV Research Ltd. The participating interest decreased from 15% to 11.1% in 2019 due to a capital increase which Manz AG did not participate.

Inventories

Inventories include prepayments made to affiliated companies in the amount of TEUR 701 (previous year: TEUR 5,429) and prepayments received from affiliated companies in the amount of TEUR 0 (previous year: TEUR 0).

Deferred tax assets

The combined effective tax rate is 29.13 %.

	12-31-2019 TEUR	12-31-2018 TEUR
Resulting deferred tax assets capitalized net	0	0

Deferred tax assets were not recognized as a result of the existing loss history and the associated non-recoverability of tax loss carryforwards.

We refer to page 13 for further details on the distribution restriction in accordance with section 268 (8) HGB.

Receivables and other Assets

Trade receivables, receivables from affiliated companies, and other assets have a remaining term of up to one year, with the following exceptions. This relates to the tenant loan of TEUR 410 (previous year TEUR 291) reported under other assets and the unpledged asset value of pension provisions amounting to TEUR 52 (previous year TEUR 72)., which is also reported under other assets. The asset value is legally created after the balance sheet date. The trade receivables with a residual term of more than one year amounts to TEUR 96 (previous year TEUR 0).

Receivables from affiliated companies only include trade receivables.

Liquid funds

Cash and cash equivalents include cash on hand and bank balances. The bank balances are restricted due to advance payment guarantees of TEUR 5,000 (previous year TEUR 19,934).

Equity

Share capital

The subscribed capital of EUR 7,744,088.00 EUR is unchanged compared to the previous year and is divided into 7,744,088 no-par-value registered shares.

Authorized capital

Based on the resolution passed by the Annual General Meeting of July 12, 2016, the Managing Board is authorized with the approval of Supervisory Board, pursuant to Article 3, Sentence 3 of the Articles of Incorporation, to increase the share capital of the company in the period until July 11, 2021, on a one-time basis or in partial contributions, up to a total of EUR 3,872,044.00 through the issuance of a total of 3,872,044 new registered shares (no-par-value shares) by means of cash or non-cash contributions (Authorized Capital 2016).

In principle, the new shares must be offered to shareholders for subscription. The new shares may also be assumed by banks designated by the Managing Board with the obligation to offer them to the shareholders for subscription (indirect subscription right). However, the Managing Board was authorized, with the approval of Supervisory Board, to exclude shareholders' subscription rights

- in the case of a capital increase in return for cash contributions, if the issue price of the new shares does not significantly lower, within the meaning of section 203 (1) and 2, section 186 (3), sentence 4 of the Stock Corporation Act (AktG), than the stock exchange price of the company's shares with the same term at the time the issue price is determined, which should be as close as possible to the placement of the new shares. This authorization to exclude the subscription right only applies to the extent that shares to be issued in the capital increase do not account for more than EUR 774,408.00 and more than 10% of the share capital at the time the authorization is exercised. The proportionate amount of share capital issued or sold during the period of this authorization based on other authorizations in direct or analogous application of section 186 (3), Sentence 4 of the Stock Corporation Act (AktG) under exclusion of subscription rights shall be offset against this maximum amount for an exclusion of subscription rights;
- in the case of capital increases against contribution in kind for the acquisition of companies, parts of companies or participations in companies or other assets or for the purpose of business combinations;
- to the extent that it is necessary to give holders of bonds with warrants or convertible bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) issued by the company or direct or indirect affiliated companies of the company a subscription right to new shares to the same extent as they would be entitled upon exercising their option or conversion right or after fulfilling their conversion obligation;
- to exclude fractional amounts from the subscription right.

The Managing Board is authorized, with the approval of Supervisory Board, to determine the further details of the implementation of the capital increases based on the authorized capital.

Authorization to issue partial debentures with options or conversion rights or conversion obligations, profit-sharing rights, and profit-sharing bonds (or combinations of these instruments), as well as Conditional Capital I

At the Annual General Meeting on July 2, 2019, a resolution was passed to authorize the Managing Board, with the approval of Supervisory Board, to issue registered bonds with warrant or convertible bonds, profit-sharing rights and/or profit-sharing bonds, or a combination of these instruments (collectively referred to as "bonds"), up to a total nominal value of EUR 150 million, on one or more occasions until July 1, 2024. In addition, the Managing Board was also authorized to grant holders of warrant bonds option rights and holders of convertible bonds conversion rights for registered shares of the company with a proportionate amount of share capital totaling up to EUR 3,100,000.00, in accordance with the detailed terms and conditions of the warrant/convertible bonds.

The statutory subscription right is granted to the shareholders in the way that the bonds are underwritten by a bank or a syndicate of banks with the obligation to offer them to the shareholders for subscription. If bonds are issued by a Manz AG group company within the meaning of section 18 of the Stock Corporation Act (AktG), the company must ensure the statutory subscription rights is granted to the shareholders of Manz AG accordingly.

However, the Managing Board is authorized, with the approval of Supervisory Board, to exclude fractional amounts from shareholders' subscription rights and also to exclude the shareholders' subscription rights to the extent necessary to grant the holders of previously issued bonds with options or conversion rights and/or conversion obligations a subscription right to the extent to which they would be entitled as shareholders after exercising their options or conversion rights or upon fulfilling their conversion obligation.

Furthermore, the Managing Board is authorized, with the approval of Supervisory Board, to completely exclude shareholders' subscription rights to bonds issued with an option and/or conversion right or conversion obligation, provided the Managing Board, after dutiful examination, comes to the conclusion that the issue price of the bonds is not significantly below their hypothetical market value as calculated according to accepted and, in particular, actuarial methods. This authorization to exclude the subscription right applies to bonds issued with an option and/or conversion right or a conversion obligation, with an option and/or conversion right or a conversion obligation for shares with a total proportionate amount of the share capital that may not exceed 10 % of the share capital, either at the time the authorization becomes effective or – in the event that this value is lower – at the time the present authorization is exercised. The following are offset against the aforementioned ten percent limit:

- new shares that are issued from authorized capital under exclusion of the subscription right pursuant to section 186 (3) sentence 4 of the Stock Corporation Act (AktG) during the term of this authorization up to the issue of bonds with option and/or conversion right or conversion obligations without subscription rights in accordance with section 186 (3) sentence 4 of the Stock Corporation Act (AktG), and
- such shares which are acquired on the basis of an authorization granted at the annual general meeting and are disposed in accordance with section 71 (1) no. 8, sentence 5 of the Stock Corporation Act (AktG), in conjunction with Section 186(3), sentence 4 of the Stock Corporation Act (AktG) during the term of this authorization until the issue of bonds with option and/or conversion rights or conversion obligations subject to the

exclusion of subscription rights in accordance with section 186 (3), Sentence 4 of the Stock Corporation Act (AktG).

Where profit-sharing rights or profit-sharing bonds without an option right or conversion right/obligation are issued, the Managing Board is authorized, with the approval of Supervisory Board, to completely exclude shareholders' subscription rights if these profit-sharing rights or profit-sharing bonds have the characteristics of a debenture; i.e., do not establish any membership rights in the company, do not grant a participation in the liquidation proceeds, and the interest payable is not calculated on the annual net income, net retained profit, or the dividend. Furthermore, in such a case, the interest payment and the issue price of the profit-sharing rights or profit-sharing bonds must reflect current market conditions at the time of issue.

Pursuant to Article 3(4) of the Articles of Incorporation, the share capital of the company has been conditionally increased by up to EUR 3,100,000.00 through the issue of up to 3,100,000 no-par value registered shares (Conditional Capital I). The conditional capital increase shall only be carried out to the extent that the holders of option or conversion rights or those obliged to convert from option or convertible bonds, profit sharing rights or profit sharing bonds issued by the Company or a Group company within the meaning of section 18 the Stock Corporation Act (AktG) on the basis of the authorization resolved by the Annual General Meeting on July 2, 2019 under agenda item 5, exercise their option or conversion rights or, if they are obligate to convert, fulfill their obligation to convert, unless a cash settlement is granted or treasury shares or shares of another listed company are used to service the conversion. The new shares shall be issued at the option or conversion price to be determined in each case in accordance with the authorization resolution described above. The new shares shall participate in profit from the beginning of the financial year in which they are created on the basis of the exercise of options or conversion rights or of the fulfillment of conversion obligations. The Managing Board is authorized, with the approval of Supervisory Board, to establish the further details of the execution of the conditional capital increase.

Authorization to issue share subscription rights within the scope of the Manz Performance Share Plan 2019 as well as Conditional Capital III

At the annual general meeting held on July 2, 2019, a resolution was passed to authorize the Managing Board, with the approval of Supervisory Board, to grant a total of up to 95,000 subscription rights for subscription of a total of up to 190,000 shares in the company to members of the management of affiliated companies and to executives below the management board level and executives of affiliated companies, both domestic and abroad, on one or more occasions through June 30, 2024. The Supervisory Board was authorized to grant one or more occasions a total of up to 85,000 subscription rights for subscription of up to 170,000 shares in the company to members of the company's Managing Board until June 30, 2024.

Subscription rights are to be granted, structured and exercised in accordance with the provisions in the resolution of the annual general meeting on July 2, 2019.

The authorization of July 7, 2015 was revoked by resolution passed at the annual general meeting of July 2, 2019, insofar as no subscription rights had yet been issued on the basis of the authorization.

Pursuant to Article 3(6) of the Articles of Incorporation, the company's share capital has been conditionally increased by up to EUR 360,000.00 through the issue of up to 360,000 no-par value registered shares (Conditional Capital III). The conditional capital increase serves to secure the rights of the holders of subscription rights granted on the basis of the authorization of the annual general meeting on July 2, 2019. The shares will be issued at the issue price specified in the authorization adopted at the annual general meeting on July 2, 2019. The conditional capital increase will be carried out only to the extent subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new registered shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are concerned, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

Authorization to issue share subscription rights within the scope of the 2015 Manz Performance Share Plan as well as Conditional Capital II

At the annual general meeting held on July 7, 2015, a resolution was passed authorizing the Managing Board, with approval of Supervisory Board, to grant a total of up to 59,000 subscription rights ("Performance Shares") for a total of up to 118,000 shares in the company to management of affiliated companies as well as to executives below the management board level and managers of affiliated companies, both domestic and abroad, on one or more occasions through June 30, 2020. The Supervisory Board was given authorization to grant a total of up to 56,000 subscription rights ("Performance Shares") for a total of up to 112,000 shares in the company to members of Manz's Managing Board on one or more occasions through June 30, 2020.

Subscription rights are to be granted, structured and exercised in accordance with the provisions in the resolution of the annual general meeting on Tuesday, July 7, 2015.

Pursuant to Article 3(5) of the Articles of Incorporation, the company's share capital has been conditionally increased by up to EUR 230,000.00 through the issue of up to 230,000 no-par value registered shares (Conditional Capital II). The conditional capital increase serves to secure the rights of the holders of subscription rights ("Performance Shares") granted on the basis of the authorization granted by the annual general meeting on July 7, 2015. The shares will be issued at the issue price specified in the authorization adopted at the annual general meeting on Tuesday, July 7, 2015. The conditional capital increase will be carried out only to the extent that subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are concerned, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

Capital reserves

The capital reserves mainly include the contributions of shareholders pursuant to section 272 (2) no. 1 HGB.

In the context of profit appropriation, EUR 37.0 million (previous year: EUR 20.0 million) were withdrawn from capital reserves and used to balance out net losses.

Retained earnings

Retained earnings amount to EUR 1,470,601 (previous year: EUR 1,470,601) and fall under section 266 (3) A. III. no. 4 HGB.

Accumulated loss

Loss carried forward Tuesday, January 1, 2019	-5,847,990.47
Loss for the year 2019	-37,635,681.38
Allocation from the capital reserves	37,000,000.00
Net loss 2019	-6,483,671.85

Treasury Shares

By resolution of the Annual General Meeting on July 2, 2019, the company was authorized in accordance with section 71 (1) no. 8 of the Stock Corporation Act (AktG) to acquire treasury shares with a proportional value of up to 10 % of the share capital until the date of the July 1, 2024.

In the finanical year 2019, the company purchased 203 of its own shares (previous year: 2,522) at an average price of 19.48 EUR (previous year: 32.41 EUR) per share with a market value of TEUR 4 (previous year: TEUR 82). The company purchased its own shares for servicing employee profit sharing and for employee anniversaries. As of December 31, 2019 the company has no further treasury shares in its portfolio.

Provisions

Provisions for Pensions and Similar Obligations

Pension benefit obligations are calculated on the basis of biometric probabilities according to the "2018 G mortality tables" of Prof. Dr. med. Klaus Heubeck with the settlement amount actuarially calculated using the projected unit credit method.

Discounting is based on the respective average market interest rate published by the Deutsche Bundesbank for a remaining term of 15 years.

The revaluation of the pension provisions of the former Manz Tübingen GmbH resulted in an under-funding of TEUR 768 as of January 1, 2010. The option right is exercised in accordance with Art. 67 (1) EGHGB (German Commercial Code) and the required appropriation is distributed over a period of 15 years. In the year under review, TEUR 51 were transferred to pension reserves through profit or loss. As of Tuesday, December 31, 2019, the undervaluation amount of TEUR 102 had not yet been reported in the balance sheet amounts.

Unpledged reinsurance policies were taken out in order to cover the risk arising from the pension obligations from the former Manz Tübingen GmbH. An asset value of TEUR 52 is recognized under other assets for this.

The pension provisions totaled TEUR 3,065 on the reporting date.

In the financial year 2019, the pension provisions were discounted at the average market interest rate over the past ten years. Pursuant to section 253 (6) HGB, the difference between the calculation of reserves using the average market interest rate of the past ten financial years and the calculation of the reserves using the average market interest rate of the past seven financial years must be determined. The resulting difference is subject to a distribution hold.

	EUR
Value of obligation as of December 31, 2019 determined at the average market interest rate of the past seven fiscal years	3,451,959.00
Value of obligation as of December 31, 2019 is calculated using the average discount rate for pension obligations	3,167,811.00
Difference according to Section 253 (6) Sentence 1 HGB as againast December 31, 2019	284,148.00

Other provisions primarily relate to tax provisions for withholding tax in Taiwan from receivables from Manz Taiwan totaling TEUR 540 (previous year 0 TEUR), provisions from earn-out obligations in the amount of TEUR 3,000 (previous year: TEUR 3,106), personnel provisions of TEUR 2,024 (previous year: TEUR 1,776), warranties of TEUR 1,024 (previous year: TEUR 1,428), as well as outstanding invoices of TEUR 786 (previous year: TEUR 565).

Other provisions include partial retirement obligations of TEUR 73 (previous year: TEUR 139), whereby the assets pledges to secure the claims from the partial retirement model in the amount of EUR 46 are offset against the provisions for partial retirement obligations. The fair value of the offset asset amounts to TEUR 46 and corresponds to the acquisition costs. The calculated expenses amount to TEUR 1 and the offset income amounts to TEUR 1.

The residual terms of the **liabilities** are shown in detail in the statement of liabilities.

		12/31/2019 EUR	up to 1 year EUR	over one year EUR	> 5 years EUR
Advance payments received on orders		107,899,372.74	107,899,372.74	0.00	
	Previous year	*130,583,973.24*	*27,694,103.45*	*102,889,869.79*	*0.00*
Liabilities from goods and services		12,663,344.09	12,663,344.09		
	Previous year	*9,306,435.26*	*9,306,435.26*	*0.00*	*0.00*
Liabilities to affiliated companies		35,253,216.02	35,253,216.02		
	Previous year	*9,599,900.73*	*9,599,900.73*	*0.00*	*0.00*
Other liabilities		1,959,664.76	1,959,664.76		
	Previous year	*598,557.13*	*598,557.13*	*0.00*	*0.00*
		157,775,597.61	157,775,597.61	0.00	0.00
	Previous year	*150,088,866.36*	*47,198,996.57*	102,889,869.79	*0.00*

Liabilities to affiliated companies in the amount of TEUR 35,253 (previous year: TEUR 9,600) resulted solely from trade payables.

Contingent liabilities

Manz AG guarantees TEUR 8,000 for bank liabilities for subsidiaries and TEUR 0 for third parties as of the balance sheet date (previous year TEUR 700). Bank liabilities of subsidiaries amount to TEUR 10,350 as of the balance sheet date.

In addition, liability obligations exist for commitments of NICE Solar Energy GmbH, Schwäbisch Hall (formerly Manz CIGS Technology GmbH, Schwäbisch Hall) in the amount of a total of TEUR 3,500.

The contingent liabilities relate to potential future events, the entry of which would lead to an obligation. As of the balance sheet date, these are considered to be unlikely but cannot be ruled out. According to the currently available planning figures of the subsidiaries, there are no indications that the contractual conditions with banks will not be fulfilled.

Other financial obligations

The total amount of payment obligations for rental and leasing contracts amounts to TEUR 20,361 (previous year TEUR 24,148). The rental and leasing contracts end between 2020 and 2028. The contribution for the Suzhou Manz New Energy Equipment Co., Ltd. which has not yet been called amounts to 12.6 million CNY (equivalent to EUR 1.6 million as of 12-31-2019) and is due in 2020.

Payout hold

In accordance with section 268 (8) of the German Commercial Code (HGB), a profit distribution block from capitalization resulted in the following amounts:

		TEUR
Capitalization of internally generated intangible assets		16,721
	Previous year	*17,022*
Difference according to section 253 (6) (1) HGB		284
	Previous year	*492*
Total amount blocked against distribution in the sense of section 268 (8) HGB		17,005
	Previous year	*17,514*

Amount of equity available to cover the amounts within the meaning of section 268 (8) HGB available equity interests.

	2019 TEUR	2018 TEUR
Capital reserves acc. section 272 (2) No. 4 HGB	51,295	88,295
Other revenue reserves	1,471	1,471
Loss carried forward from previous year	-5,848	-4,753
Nett loss for the fiscal year	-37,636	-21,095
Allocation from capital reserves	37,000	20,000
Equity portions availabe for cover	46,282	83,918

Notes to the profit and loss statement

Revenues

Revenues are recognized in accordance with section 277 (1) HGB and are broken down by business segments and region as follows:

	2019 TEUR	2018 TEUR
By business segment		
Electronics	16,303	8,457
Solar	398	3,250
Energy Storage	12,164	16,957
Service	3,191	4,286
Contract Manufacturing	1,167	1,841
Sales with affiliated companies	3,981	3,015
	37,204	37,806

	2019 TEUR	2018 TEUR
By region		
Domestic or Germany	16,127	7,840
Other EU countries	3,694	7,872
China	8,058	14,287
Taiwan	1,046	1,286
USA	3,624	6,242
Other countries	4,655	279
	37,204	37,806

Increase or decrease in the stock of finished and unfinished products

This item includes as extraordinary items the write-down of unfinished and finished goods with a total amount of TEUR 1,300 (previous year EUR 371).

Other operating income

This mainly relates to non-period income of other provisions in the amount of TEUR 1,426 thousand (previous year TEUR 1,116), non-period income from insurance refunds of TEUR 43 (previous year TEUR 0) and non-period income from the reduction of the allowance for receivables of TEUR 206 (previous year: EUR 330). Income from exchange rate differences amounted to TEUR 62 (previous year: TEUR 196). In addition, there is income from the write-up of financial assets of TEUR 9 (previous year: EUR 1,566), which is to be considered extraordinary.

Other operating expenses

Other operating expenses include expenses TEUR 51 (previous year TEUR 51) in accordance with to Art. 67 (1) sentence 1 EGHGB (increase in the pension provision). Expenses relating to previous period is TEUR 0 (previous year TEUR 100).

Depreciation on financial assets

Depreciation on financial assets includes write-downs of Suzhou Manz New Energy Equipment Ltd. by TEUR 754, Manz Italy s.r.l. by TEUR 2,072, Manz Hungary Kft. by TEUR 521, and a write-down of the 11,1% participating interest in NICE PV Research Ltd. by TEUR 8,306.

Other information

Members of the Managing Board

Martin Drasch, Dipl. Ing. (FH), Ehningen, -Chairman of the Managing Board-,
Manfred Hochleitner, Dipl. Math., Munich, -Chief Financial Officer-,
Jürgen Knie, Dipl. Wirt. Ing. (FH), Reutlingen, - Chief Operations Officer - (from July 1, 2019)

Members of the Supervisory Board

Prof. Dr. Heiko Aurenz, Dipl. oec., Managing Director of Ebner Stolz Management Consultants GmbH, Stuttgart, Chairman of the Supervisory Board.

Dieter Manz, Dipl. Eng. (FH), Managing Director of Manz GmbH Management Consulting and Investment, Schlaitdorf, Deputy Chair of the Supervisory Board

Prof. Dr.-Eng. Michael Powalla, Managing Director of Photovoltaics and member of the Managing Board of the Center for Solar Energy and Hydrogen Research Baden-Württem-berg (ZSW), as well as Professor for thin film photovoltaics at the Karlsruhe Institute for Technology (KIT), Lichttechnisches Institut, Faculty of Electrical Engineering and Infor-mation Technology, Deputy Chairman of the Supervisory Board.

Dr. Zhiming Xu, Chief Technical Officer of the Shanghai Electric Automation Group of Shanghai Electric Group Company Ltd, Shanghai, PR China and Managing Director of Shanghai Electric Group Automation Engineering Co, LTD, Shanghai, PR China

The Chairman of the Supervisory Board Prof. Dr. Heiko Aurenz is also Chairman of the Supervisory Board of Know How! Company for continuing education, Leinfelden-Echter-dingen, Germany, Dep. Chairman of the Supervisory Board of MQ Result AG, Tübingen; Member of the Supervisory Board of Anna-Haag-Mehrgenerationenhaus e. V., Stuttgart; Member of the Supervisory Board of Anna Haag Stiftung gGmbH, Stuttgart; Member of the Supervisory Board of TanDiEM gGmbH, Stuttgart; Chairman of the Advisory Board of Monument Vermögensverwaltung GmbH, Stuttgart; Member of the Foundation Board of Stiftung Aufbruch und Chance, Stuttgart and Chairman of the Advisory Board of Bumüller GmbH & Co Backbetriebe KG, Hechingen.

The Deputy Chairman of the Supervisory Board Dieter Manz is a member of the Supervisory Board of TecInvest Holding AG, Puchheim.

The member of the Supervisory Board Prof. Dr.-Eng. Michael Powalla does not hold any mandates in other statutory supervisory boards or comparable domestic and foreign supervisory bodies of commercial entities.

Supervisory Board member Dr. Zhiming Xu is a member of the Supervisory Board of Suzhou Manz New Energy Equipment Co., Ltd., Suzhou, People's Republic of China, Deputy Chairman of the Supervisory Board of NICE PV Research Ltd., Beijing, People' s Republic of China and member of the Supervisory Board of ANWHA(Shanghai) Automation Engineering Co, Ltd, Shanghai, People's Republic of China.

Compensation of the Managing Board

The fundamentals of the compensation system and the amount of the compensation paid to the Managing Board and Supervisory Board and the former members of the Managing Board, are presented in the compensation report, which forms part of the management report.

The total compensation of the Managing Board for financial year 2019 amounts to TEUR 996 (previous year: TEUR 520). The non-performance-related benefits amount to TEUR 742 (previous year: TEUR 418). The performance-related benefits amount to TEUR 254 (previous year 102 TEUR), of which payments due in the long term amount to TEUR 254 (previous year TEUR 102). Long-term benefits are share awards / subscription rights under the performance share plan. In the year under review, a total of 22,327 (previous year: 6,048) subscription rights were granted to members of the Managing Board, with a corresponding fair value of TEUR 254 (previous year: TEUR 102), as well as a performance share bonus with a fair value of TEUR 0 (previous year: TEUR 0).

Managing Board member Martin Drasch has a defined contribution plan. For this purpose, TEUR 12 (previous year: TEUR 12) p.a. are paid into an externally funded pension fund.

Managing Board member Manfred Hochleitner has a defined contribution plan. In financial year 2019, for this purpose, TEUR 12 (previous year: TEUR 6) were paid into an externally re-insured provident fund.

Managing Board member Jürgen Knie has a defined contribution plan. In financial year 2019, for this purpose, TEUR 6 were paid into an externally re-insured provident fund.

Salaries of former members of Managing Board

Former Managing Board member Otto Angerhofer received a pension payment of TEUR 10 during financial year 2019 (previous year: TEUR 10). There is a pension obligation to the former Managing Board member amounting to TEUR 145 (previous year: TEUR 143).

A defined contribution plan existed for former Managing Board member Gunnar Voss von Dahlen in financial year 2018. For this purpose, TEUR 0 was paid in the 2019 reporting year (previous year: TEUR 3) into an external reinsured provident fund.

Compensation of the Supervisory Board

The compensation system for the Supervisory Board is also presented in the compensation report, which is part of the management report.
For the financial year 2019, compensation was paid to members of the Supervisory Board totaling TEUR 237 (previous year: TEUR 142). The Supervisory Board's compensation consists of a fixed component of TEUR 144 (previous year TEUR 104), and the asset value of TEUR 93 (previous year TEUR 38).

Employees

The number of full time equivalent during the financial year 2019 averaged 414 (previous year (previous year: 410), excluding Managing Board members. There were 151 (previous year: 145) employees in production and 263 (previous year: 265) employees in the technical/commercial areas. The annual average was 35 (previous year (previous year: 39) trainees employed. In total, 438 employees were employed at Manz AG as of December 31, 2019.

Business not included in the balance sheet

The production and administration buildings of Manz AG are leased (real estate leasing contract). The purpose of the lease is the financing of fixed assets. Risks resulting from real estate lease arise from the lease installments to be paid (see other financial obligations) and the fixed payment structure. The advantage is the complete elimination of debt financing and the avoidance of the residual value risk. The financial impact is included in other financial obligations.

Consolidated financial statements

As the parent company, Manz AG has prepared consolidated financial statements in accordance with IFRS and a group management report, which is available at the company's headquarters in Reutlingen, or published in the electronic Federal Gazette.

Transactions with related persons

There are no material transactions with related parties and persons that are not conducted at arm’s length and are necessary for the assessment of the financial position.

Auditors total fee

The disclosure of the auditors' fee is waived in accordance with section 285 no. 17 final sentence of the HGB.

Information on the Corporate Governance Code

The Managing Board and the Supervisory Board of the Manz AG have submitted their annual declaration of conformity in accordance with section 161 of the Stock Corporation Act (AktG). The joint declaration of compliance by the Managing Board and the Supervisory Board is published on the Manz AG website at www.manz.com.

Events of significant importance after the balance sheet date

The forecast in the management report takes into account the currently assessable effects of the corona pandemic on the economic development of our company, but is based on the assumption that the further spread of the virus will have no additional negative impact on the development of our business, particularly in the Solar, Electronics and Contract Manufacturing segments, in fiscal year 2020.

Disclosures pursuant to section 160 (1) no. 8 AktG

The following notifications pursuant to the Securities Trading Act (WpHG) were communicated in financial year 2019:

Wednesday, January 9, 2019

Reportable securities transactions (Directors' dealings)

1. Information about persons performing managerial duties and persons closely related to them

a) Name

Title:	Prof. Dr.
Given name:	Heiko
Surname(s):	Aurenz

2. Reason for report

a) Position / Status

Position:	Supervisory Board

b) Initial report

3. Information about the issuer, the participant in the market for emission certificates, the auction platform, the auctioneer, or the auction supervision

a) Name

Manz A G

b) LAW

529900B635NV0KEEOR57

4. Details of the business / businesses

a) Description of the financial instrument, type of instrument, identifier

Product:	Share
ISIN:	DE000A0JQ5U3

b) Type of business

Sales

c) Price(s) and Volume

Price(s)	Volume
EUR 26.00	EUR 65260.00

d) Aggregate information

Price	Aggregate volume
EUR 26.00	EUR 65260.00

e) Business date

1-8-2019; UTC+1

f) Business location

Name:	Stuttgart stock exchange
MIC:	XSTU

Friday, May 31, 2019

Notification of voting rights according to section 40 WpHG

1. Information concerning the issuer

Name:	Manz AG
Street House no.:	Steigäckerstr. 5
ZIP code:	72768
Location:	Reutlingen Germany
Legal Entity Identifier (LEI):	529900B635NV0KEEOR57

2. Reason for the communication

	Acquisition or disposition of shares with voting rights
	Acquisition or disposition of instruments
	Change in total number of voting rights
X	Other reason: Acquisition and merger with Oppenheimer Funds Inc. : see section 10

3. Information about the notifying party

Legal entity: Invesco Ltd.
Registered office, State: Hamilton, Bermuda

4. Names of shareholders

With 3 % or more voting rights, if different from 3.
Invesco Oppenheimer Global Opportunities Fund Short Term

5. Date on which contact with limit occurred:

5-24-2019

6. Total proportion of voting rights

	Proportion of voting rights (Total 7.a.)	Share instruments (Total 7.b.1.+ 7.b.2.)	Total shares (Total 7.a. + 7.b.)	Total number of voting rights in accordance with section 41 of the German Securities Trading Act (WpHG)
new	6.46 %	0.00 %	6.46 %	7,744,088
Last communication	n/a %	n/a %	n/a %	

7. Details regarding existing number of voting rights Voting rights (sections 33, 34 WpHG)

ISIN	Absolute		in %	
	direct (section 33 WpHG)	assigned (section 34 WpHG)	direct (section 33 WpHG)	assigned (section 34 WpHG)
DE000A0J Q5U3	0	500,000	0.00 %	6.46 %
Total	500,000		6.46 %	

b.1. Instruments in the sense of section 38 (1) no. 1 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Voting rights, absolute	Voting rights in %
			0	0.00 %
		Total	0	0.00 %

b.2. Instruments in the sense of section 38 (1) no. 2 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Cash compensation or physical settlement	Voting rights, absolute	Voting rights in %
				0	0.00 %
			Total	0	0.00 %

8. Information relating to the notifying party

	Notifying party (3.) is neither controlled nor does notifying party control other companies which hold voting rights of the issuer (1.) or to which voting rights of the issuer are attributed.
X	Complete chain of subsidiaries starting with the highest controlling person or the highest controlling company:

companies	Voting rights in %, if 3% or higher	Instruments in %, if 5% or higher	Totals in %, if 5 % or higher
Invesco Ltd.	(in %)	(in %)	(in %)
Invesco Holding Company Limited	(in %)	(in %)	(in %)
Invesco Holding Company(US), Inc.	(in %)	(in %)	(in %)
Invesco Group Services, Inc.	(in %)	(in %)	(in %)
Invesco Advisers, Inc.	6.46 %	(in %)	6.46 %

9. For power of attorney pursuant to section 22 (3) WpHG
(only possible with assignments pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of the Annual General Meeting:

Total proportion of voting rights (6.) after the Annual General Meeting:

Proportion of voting rights	Instruments share	Total shares
(in %)	(in %)	(in %)

10. Miscellaneous information:

Acquisition and merger with Oppenheimer Funds Inc. Further information is available under the following link: https://ir.invesco.com/investor-relations/press-releases/default.aspx?_ga=2.153008441.1018859822.1558359393-832691936.1556037780

Thursday, October 10, 2019

Notification of voting rights according to section 40 WpHG

1. Information concerning the issuer

Name:	Manz AG
Street House no.:	Steigäckerstr. 5
ZIP code:	72768
Location:	Reutlingen Germany
Legal Entity Identifier (LEI):	529900B635NV0KEEOR57

2. Reason for the communication

	Acquisition or disposition of shares with voting rights
	Acquisition or disposition of instruments
	Change in total number of voting rights
X	Other reason: Acquisition and merger with Oppenheimer Funds Inc. : see section 10

3. Information about the notifying party

Legal entity: AIM INTERNATIONAL MUTUAL FUNDS (INVESCO INTERNATIONAL MUTUAL FUNDS) Registered office, State: Wilmington, Delaware, United States of America

4. Names of shareholders

With 3 % or more voting rights, if different from 3.

5. Date on which contact with limit occurred:

5-24-2019

6. Total proportion of voting rights

	Proportion of voting rights (Total 7.a.)	Share instruments (Total 7.b.1.+ 7.b.2.)	Total shares (Total 7.a. + 7.b.)	Total number of voting rights in accordance with section 41 of the German Securities Trading Act (WpHG)
new	6.46 %	0.00 %	6.46 %	7,744,088
Last communication	n/a %	n/a %	n/a %	/

7. Details regarding existing number of voting rights
Voting rights (sections 33, 34 WpHG)

ISIN	Absolute		in %	
	direct (section 33 WpHG)	assigned (section 34 WpHG)	direct (section 33 WpHG)	assigned (section 34 WpHG)
DE000A0JQ5U3	500,000	0	6.46 %	0.00 %
Total	500,000		6.46 %	

b.1. Instruments in the sense of section 38 (1) no. 1 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Voting rights, absolute	Voting rights in %
			0	0.00 %
		Total	0	0.00 %

b.2. Instruments in the sense of section 38 (1) no. 2 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Cash compensation or physical settlement	Voting rights, absolute	Voting rights, in %
				0	0.00 %
			Total	0	0.00 %

8. Information relating to the notifying party

X	Notifying party (3.) is neither controlled nor does notifying party control other companies which hold voting rights of the issuer (1.) or to which voting rights of the issuer are attributed.
	Complete chain of subsidiaries starting with the highest controlling person or the highest controlling company:

companies	Voting rights in %, if 3% or higher	Instruments in %, if 5% or higher	Totals in %, if 5 % or higher

9. For power of attorney pursuant to section 22 (3) WpHG
(only possible with assignments pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of the Annual General Meeting:

Total proportion of voting rights (6.) after the Annual General Meeting:

Proportion of voting rights	Instruments share	Total shares
(in %)	(in %)	(in %)

10. Miscellaneous information:

Acquisition and merger with Oppenheimer Funds Inc. Further information is available under the following link: https://ir.invesco.com/investor-relations/press-releases/default.aspx?_ga=2.153008441.1018859822.1558359393-832691936.1556037780

Thursday, October 10, 2019

Notification of voting rights according to section 40 WpHG

1. Information concerning the issuer

Name:	Manz AG
Street House no.:	Steigäckerstr. 5
ZIP code:	72768
Location:	Reutlingen Germany
Legal Entity Identifier (LEI):	529900B635NV0KEEOR57

2. Reason for the communication

	Acquisition or disposition of shares with voting rights
	Acquisition or disposition of instruments
	Change in total number of voting rights
X	Other reason: Acquisition and merger with Oppenheimer Funds Inc.: see section 10

3. Information about the notifying party

Legal entity: Invesco Ltd. Registered office, State: Hamilton, Bermuda

4. Names of shareholders

With 3 % or more voting rights, if different from 3.

AIM INTERNATIONAL MUTUAL FUNDS (INVESCO INTERNATIONAL MUTUAL FUNDS)

5. Date on which contact with limit occurred:

5-24-2019

6. Total proportion of voting rights

	Proportion of voting rights (Total 7.a.)	Share instruments (Total 7.b.1.+ 7.b.2.)	Total shares (Total 7.a. + 7.b.)	Total number of voting rights in accordance with section 41 of the German Securities Trading Act (WpHG)
new	6.46 %	0.00 %	6.46 %	7,744,088
Last communication	n/a %	n/a %	n/a %	/

7. Details regarding existing number of voting rights
Voting rights (sections 33, 34 WpHG)

ISIN	Absolute		in %	
	direct (section 33 WpHG)	assigned (section 34 WpHG)	direct (section 33 WpHG)	assigned (section 34 WpHG)
DE000A0JQ5U3	0	500,000	0.00 %	6.46 %
Total	500,000		6.46 %	

b.1. Instruments in the sense of section 38 (1) no. 1 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Voting rights, absolute	Voting rights in %
			0	0.00 %
		Total	0	0.00 %

b.2. Instruments in the sense of section 38 (1) no. 2 WpHG

Type of instrument	Due date / expiration	Exercise period / term	Cash compensation or physical settlement	Voting rights, absolute	Voting rights, in %
				0	0.00 %
			Total	0	0.00 %

8. Information relating to the notifying party

	Notifying party (3.) is neither controlled nor does notifying party control other companies which hold voting rights of the issuer (1.) or to which voting rights of the issuer are attributed.
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Invesco Ltd.	(in %)	(in %)	(in %)
Invesco Holding Company Limited	(in %)	(in %)	(in %)
Invesco Holding Company (US), Inc.	(in %)	(in %)	(in %)
Oppenheimer Acquisition Corporation	(in %)	(in %)	(in %)
Oppenheimerfunds, Inc.	(in %)	(in %)	(in %)
OFI Global Asset Management, Inc.	(in %)	(in %)	(in %)
Invesco Group Services, Inc.	(in %)	(in %)	(in %)
Invesco Advisers, Inc.	6.46 %	(in %)	6.46 %

9. For power of attorney pursuant to section 22 (3) WpHG

(only possible with assignments pursuant to section 34 (1) sentence 1 no. 6 WpHG)

Date of the Annual General Meeting:

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Proportion of voting rights	Instruments share	Total shares
(in %)	(in %)	(in %)

10. Miscellaneous information:

Acquisition and merger with Oppenheimer Funds Inc. Further information is available under the following link: https://ir.invesco.com/investor-relations/press-releases/default.aspx?_ga=2.153008441.1018859822.1558359393-832691936.1556037780

Proposed appropriation of profit

The annual financial statements of Manz AG as of December 31, 2019, closed with a net loss of EUR 6,483,671.85 (previous year: TEUR 5,847,990.47). The Management Board proposes that this net loss be carried forward to a new account.

Reutlingen, March 13, 2020

Manz AG

Martin Drasch Chief Executive Officer	Manfred Hochleitner	Jürgen Knie

MANZ AG, REUTLINGEN

DEVELOPMENT OF FIXED ASSETS IN THE FISCAL YEAR 2019

	ACQUISITION AND MANUFACTURING COSTS					ACCUMULATED DEPRECIATION					NET BOOK VALUES	
	Jan. 01, 2019 euros	Additions euros	Repostings euros	Disposals euros	Dec. 31, 2019 euros	Jan. 01, 2019 euros	Additions euros	Disposals euros	Attribution euros	Dec. 31, 2019 euros	Dec. 31, 2019 euros	Dec. 31, 2018 euros
INTANGIBLE ASSETS												
Internally generated industrial property rights and similar rights and assets	49,650,516.96	3,518,418.71	0.00	0.00	53,168,935.67	32,629,013.46	3,818,500.27	0.00	0.00	36,447,513.73	16,721,421.94	17,021,503.50
Concessions, industrial property rights and similar right and assets, and licenses for such rights and assets, purchased against payment	12,142,677.23	548,120.18	0.00	14,965.20	12,675,832.21	11,703,047.86	233,462.82	14,965.20	0.00	11,921,545.48	754,286.73	439,629.37
	61,793,194.19	4,066,538.89	0.00	14,965.20	65,844,767.88	44,332,061.32	4,051,963.09	14,965.20	0.00	48,369,059.21	17,475,708.67	17,461,132.87
FIXED ASSETS												
Land, similar rights and buildings, including buildings on third-party land	1,537,000.05	0.00	0.00	0.00	1,537,000.05	1,207,882.05	54,029.00	0.00	0.00	1,261,911.05	275,089.00	329,118.00
Technical equipment and machinery	17,237,726.86	48,052.48	0.00	905,496.91	16,380,282.43	15,467,180.86	394,134.48	315,856.91	0.00	15,545,458.43	834,824.00	1,770,546.00
Other equipment, operating and office equipment	7,742,502.45	202,978.33	0.00	116,942.85	7,828,537.93	7,018,774.45	305,217.33	115,894.85	0.00	7,208,096.93	620,441.00	723,728.00
	26,517,229.36	251,030.81	0.00	1,022,439.76	25,745,820.41	23,693,837.36	753,380.81	431,751.76	0.00	24,015,466.41	1,730,354.00	2,823,392.00
FINANCIAL ASSETS												
Shares held in affiliated companies	51,818,155.12	1,525,000.00	0.00	0.00	53,343,155.12	26,000.00	3,347,000.00	0.00	0.00	3,373,000.00	49,970,155.12	51,792,155.12
Loans to affiliated companies	5,733,057.45	0.00	0.00	432,439.26	5,300,618.19	0.00	0.00	0.00	0.00	0.00	5,300,618.19	5,733,057.45
Participations in joint-stock companies	24,245,265.11	0.00	0.00	0.00	24,245,265.11	4,239,000.00	8,306,000.00	0.00	0.00	12,545,000.00	11,700,265.11	20,006,265.11
	81,796,477.68	1,525,000.00	0.00	432,439.26	82,889,038.42	4,265,000.00	11,653,000.00	0.00	0.00	15,918,000.00	66,971,038.42	77,531,477.68
	170,106,901.23	5,842,569.70	0.00	1,469,844.22	174,479,626.71	72,290,898.68	16,458,343.90	446,716.96	0.00	88,302,525.62	86,177,101.09	97,816,002.55

Manz AG, Reutlingen

Management Report for the Financial Year 2019

1. Business Report

1.1 Company Situation

1.1.1 Corporate structure and shareholdings

Formed in 1987, Manz AG is a global high-tech equipment manufacturing company. Its business activities consist of five segments: Solar, Electronics, Energy Storage, Contract Manufacturing, and Service. With many years of expertise in automation, laser processing, vision and metrology, wet chemistry and roll-to-roll processes, the company offers manufacturers and their suppliers in various industries a broad portfolio of innovative products and solutions. In addition to customized production solutions, this also includes individual machines and modules that can be intelligently linked together to form complete, individual system solutions. The company also offers a comprehensive range of services around Manz AG's core technological competencies: From simulation and factory planning to process and prototype development, customer training and after-sales service. Manz AG is a development partner for industrial companies, and in this role helps to drive new technologies to market maturity.

On the reporting date, as the parent company of the Manz Group, the company held a 100% stake in one new domestic subsidiary in Tübingen, which was founded in 2019. The purpose of the company is to operate, lease or transfer the use of production equipment, in particular equipment for the production of lithium-ion battery cells. On the reporting date, the Company held a 100% stake in five foreign subsidiaries based in Hungary, Italy, the USA, Slovakia and Hong Kong. In addition, the company has a 100 % stake in two second-tier subsidiaries in China and two in Taiwan. A 75% second-tier subsidiary exists in India. There is a great-grandchild company in the British Virgin Islands with a 100% stake. Manz AG holds a 56 % stake in the subsidiary Suzhou Manz New Energy Equipment Co., Ltd. based in China. Via the second-tier subsidiary in Taiwan, there is an 80.5 % stake in the not fully consolidated Talus Manufacturing Ltd. based in Taiwan, which was founded together with a semiconductor manufacturer.
In 2019, a fully consolidated great-grandchild company with a 100% stake, Intech Machines (B.V.I.) Co. Ltd, Road Town, British Virgin Islands, was liquidated. Its assets and liabilities as well as its equity were held by Manz Taiwan Ltd., Chungli, Taiwan.

1.1.2 Business Model

Manz AG has a broad technology portfolio. The core of the company's strategy is to make use of the technology portfolio across all industries and regions. This cross-segment exchange of technology and expertise not only offers a high level of flexibility in the realization of individual customer solutions, but also the possibility of generating internal synergies and making economic use of them.

Manz AG maintains business relationships with manufacturers and their suppliers, particularly in the solar, consumer electronics, displays and printed circuit board, automative and energy storage sectors. As a high-tech equipment manufacturing company, Manz operates internationally and has development and production sites in Germany, Slovakia, Hungary, Italy, China and Taiwan as well as further sales and service branches in India and the US. Manz AG has long-standing customer relationships and a strong presence, above all in the Asian region, which is a key region for the company's target industries: around 600 employees at its locations in Taiwan and China, comprising some 40% of Manz employees in this region, offer excellent access to this growth market.

Manz AG's business model aims at a sustainable increase in competitiveness combined with profit-oriented growth. The strategic cooperation in the solar sector with Shanghai Electric Group and China Energy Investment Corporation Limited (formerly, the "Shenhua Group") is to serve as a significant stability factor in the solar segment. With a strong focus on the development, production and marketing of modules and fully linked, individual system solutions and equipment, as well as the expansion of the worldwide customer base, we intend to increase our competitiveness and profitability. The cross-regional use of technological expertise and its standardization beyond industry boundaries significantly reduces development effort and time and continuously creates new unique selling points, creating opportunities for additional possible applications. Additional growth opportunities likewise arise from individual development projects for customer-specific pilot lines. In addition, continuous targeted organizational, procedural and process improvements in all areas of the Group are intended to contribute to further increasing the competitiveness and profitability of the company.

1.1.3 Control System and Performance Indicators

At the Group level, Manz AG is organized for the purpose of corporate management by product and service segments and consists of the five business segments: Solar, Electronics, Energy Storage, Contract Manufacturing, and Service. In order to decide on the allocation of resources and control the profitability of the divisions, they are monitored separately by management. Details of the course of business are provided to the entire Managing Board through regular reports and management meetings. As a result, it is possible for the respective Managing Board to control the company in a timely manner.

Principles and goals of the financial management

At Group level, Manz AG's key performance indicators comprise revenues, earnings before interest, taxes, depreciation and amortization (EBITDA), earnings before interest and taxes (EBIT) and the equity ratio.

The Managing Board has defined the following target values for the long term (five years):

- Revenue: an annual average revenue increase between 10% and 20% is announced.
- EBIT margin: after application of IFRS 16, a target margin of 10% is defined for the EBIT margin from 2019.
- EBITDA margin: a target of more than 15% is defined for the EBITDA margin after the application of IFRS 16 in 2019.
- Equity ratio: the target corridor for shareholders' equity as a percentage of total assets is between 40% and 60%.
- Gearing: Manz AG has defined gearing as a ratio of net financial liabilities (current and non-current liabilities to banks less cash and cash equivalents) to equity before minority interests of less than 50% as a target.

Group control indicators (IFRS)			Control indicators of Manz AG (HGB)	
in %	2019	2018	2019	2018
Revenue (in millions of EUR)	264.4	296.9	37.2	37.8
EBITDA margin	3.6	3.2	-15.8	-10.3
EBIT margin	-2.9	-1.1	-19.5	-13.0
Equity ratio	38.8	43.4	24.1	36.2
Gearing	10.5	-5.1	-0.74	-0.69

Manz AG's financial management system is centrally organized. To minimize risks and leverage Group-wide optimization potential, the company bundles decisions on financing, cash investments and currency hedges of subsidiaries within the Group. In this context, the company follows value-based financing principles in order to secure its liquidity at all times, limit financial risks and optimize the cost of capital. In addition, Manz strives for a well-balanced debt maturity profile. Further information on the management of the individual financial risks can be found in the notes to the consolidated financial statements under "Reporting on financial instruments".

1.1.4 Research and Development

Research and development also played an important role in financial year 2019 for Manz as a high-tech equipment manufacturer. With over 200 within the company and over 500 engineers, technicians and scientists at its group-wide development sites, Manz AG focuses on the

development of manufacturing, assembly and handling technologies, integrated into modularized individual machines, facilities and linked system solutions. The Manz AG comprehensive "R & D Council" enables internal cross-segment integration of competencies.
Manz maintains numerous cooperative arrangements with research institutions, universities and colleges. The Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) is Manz AG's cooperation and development partner of many years. ZSW in Stuttgart, among others, conducts photovoltaic materials research and development for thin-film technologies and supports Manz in the further development of CIGS technology in the context of strategic cooperation with Shanghai Electric Group and China Energy Investment Corporation Limited. Development activities for CIGS thin-film solar technology were significantly intensified at the beginning of 2017 through cooperation with the Chinese partners as well as the participation in the research and development company NICE PV Research Ltd. The efficiency world record for CIGS thin-film solar modules set by the joint venture company NICE Solar Energy GmbH (formerly, "Manz CIGS Technology GmbH") in December 2019 using equipment from Manz is impressive proof of this. The aim remains to accelerate the further development of CIGS technology and thus to increase the potential it offers for further increases in efficiency and for reducing manufacturing costs. In addition to the existing innovation/production facility for CIGS thin-film solar modules at Schwäbisch Hall, a further research/production facility with a capacity of 44 MW will therefore be built in Beijing.
ZSW is also one of 19 partners that joined forces with Manz AG within the lithium-ion batteries (KLiB) competence network at the end of 2017 to form a consortium. The research and development of processes for large-scale production of lithium-ion battery cells began at the start of 2018 as part of the Fab4Lib project. Other project partners include BMZ Battery Assembly Group GmbH, SGL CARBON GmbH, Umicore AG & Co. KG, Siemens AG, ThyssenKrupp System Engineering GmbH and RWTH Aachen University. The 18-month project is funded by the Federal Government with around EUR 5.5 million. The aim of the project is to define or develop the basis for a competitive production line with an annual capacity of 6 GWh. This modular line is then to be set up where the corresponding capacity is required. Fab4Lib combines necessary competencies in order to completely plan German mass battery cell production and to realize cell production in a timely and cost-effective manner. The KomVar project (Competitive variant production for lithium batteries), which is sponsored by the German Federal Ministry of Economics and Energy (BMWi), is pursuing a similar goal. As an associated partner, Manz AG is contributing its in-depth knowledge in the area of equipment and a production facility. Plans call for developing and setting up a flexibly shaped demonstrator cell production line for high-quality lithium-ion battery cells in small to medium volumes within the scope of the two-year project. At the EU level, Manz AG, in addition to Saft S.A., Solvay S.A. and Siemens AG, is also a member of the "EU Battery Alliance", a complementary initiative to the "Horizon 2020" EU program.

Investments in R&D amounted to EUR 9.2 million in 2019 (previous year: EUR 9.1 million). The R&D ratio based on the lower total output increased to 7.2 % (previous year: 6.7%). Capitalized development costs alone amounted to 3.3% (previous year: 3.4%).

The company will also continue to place a clear emphasis on R&D activities in future. Manz AG strives for an annual rate of R & D to sales of 5 % on average in order to provide sustained and long-term consolidation of its technological positioning and its innovations in the relevant target markets.

1.1.5 Employees

Qualified and motivated employees provide the basis of Manz AG's long-term success. As of December 31, 2019, Manz AG employed an average of 438 employees (previous year: 410) and 39 trainees (previous year: 39).

1.2 General Conditions

1.2.1 Market and Competitive Environment

1.2.1.1 Economic Environment

Economic sentiment darkened significantly in the course of 2019. According to the Kiel Institute for the World Economy (IfW), the global economy expanded at 3.0%. The more expansive US interest rate policy had a slightly stabilizing effect. However, increasing trade conflicts worldwide lead to inhibited growth. According to information from the IfW, the economy in the US itself continued to slow in 2018, registering growth of 2.3% (previous year: 2.9%). The European economy was likewise weaker with growth of 1.2% (previous year: 1.9%). The economic upswing in Germany also lost momentum, with growth of 0.5% in 2019 (previous year: 1.5%). According to the IfW, the Chinese economy grew by 6.2% in 2019, slightly less than in 2018 (6.6%).

1.2.1.2 Mechanical Engineering Industry

The Mechanical Engineering Industry Association (VDMA) expects no growth for 2019. In China, the industry reported growth of 4% in 2019 after growth of 8% in 2018. In Germany, mechanical engineering companies experienced a decline in growth of -2%, significantly below the previous year's 3%. At -5%, German mechanical engineering companies for assembly and handling solutions also performed noticeably worse than in the previous year (9%). Incoming orders for German mechanical engineering companies also reflected the general downturn in the period from January to November, reporting a decline of -9% compared to the same period last year.

1.2.1.3 Industries of the Core Segments

Revenue expectations in the photovoltaics industry were significantly worse in September 2019 than they had been in April in the last VDMA survey. Whereas a year-on-year decline in sales of –6.8 % for 2019 had already been anticipated in April, estimated decline in revenues was –15.9 % in September. Among the industry's most important target markets, there was a slight decline in the Asian market and an increase in the Western industrialized nations. In terms of shares in revenue, Asia accounted for 67 % (April 2019: 70 %), followed by Germany with 13 % (April 2019: 8 %) and North America with 11 % (April 2019: 7 %). IHS Markit expected newly installed PV capacity of 125 GW for 2019, compared to 104 GW in the previous year. This corresponds to a 20.2 % increase.

The mood dampener in the VDMA business climate issue was less pronounced among German manufacturers of electronics production equipment. After the surveyed companies had expected 1.0 % growth in April 2019, the anticipated revenue growth in October 2019 was 6.4 %. Companies in the Asia sector constituted the most important buyer markets, accounting for 32.6 % of the total revenue (April 2019: 44.2 %), followed by Germany with 28.7 % (April 2019: 22.9 %) and the rest of Europe with 21.9 % of the revenue (April 2019: 18.2 %). According to IHS Markit, global revenue of LCD and AMOLED displays fell by 3.3 % in 2019 compared to the previous year. This development is justified by a significant oversupply and the resulting drop in prices, which weighed down the revenue figures. The market share of LCD displays was 76.8 %, corresponding to a 23.2 % market share for AMOLED displays. By contrast, global printed circuit board revenue grew slightly by 2.9 % in 2019, albeit slower than in the previous year (3.8 %), according to Prismark.

In the field of electric mobility, there was a slowdown in the two largest sales markets, China and the United States, in 2019. While the registration figures for hybrid plug-ins and purely electrical vehicles in China fell by –4 % compared to 2018, new registrations in the US were down by even –10 %. This was due to a reduction in purchasing incentives as well as the economic downturn caused by the trade disputes between China and the US. A completely different picture can be seen in Germany, where the number of new registrations rose by more than 50 % compared to 2018. This means that Germany, behind China and the US, had the highest number of new registrations worldwide in 2019.

A decline in growth momentum was expected by the VDMA in the area of battery production equipment. The companies in this industry expected sales growth in the September VDMA survey for 2019 of 4 %, significantly less than in March 2019 (12 %). The critical market here is Europe with a 32.4 % share of revenue (March 2019: 26.0 %), followed closely by the Asian market (31.9 %) which had still been the leader in March 2019 at 37.1 %. Germany is in third place with a revenue share of 19.7 % (March 2019: 23.7 %). Electromobility also drove global demand for lithium-ion batteries to some 200 GW in 2019, much higher than in 2018 (160 to 170 GW), as estimated by the Fraunhofer Institute.

2. Explanations of business results and analysis of results of operations, net assets, liquidity position

2.1 Financial Performance

In 2019, sales revenues amounted to EUR 37.2 million (previous year: EUR 37.8 million) and thus remained below the figure of EUR 50 million forecast for 2019. Delays in the receipt of customer orders, mainly in the Energy Storage segment, meant that customer orders will not be relevant for revenues and earnings until 2020. Most of the revenues were generated in Germany, at EUR 16.1 million. Other sales territories were China with EUR 8.1 million, the rest of Europe with EUR 3.7 million, the USA with EUR 3.6 million, Taiwan with EUR 1.0 million and other countries in the world with EUR 4.7 million.

Inventories of unfinished and finished goods increased in line with the growth forecast for 2019. The increase in inventories in 2019 amounted to EUR 87.0 million (previous year: increase of EUR 92.2 million) and is mainly attributable to the further progress of orders in the Solar segment. Own work capitalized amounted to EUR 4.2 million (previous year: EUR 4.7 million). Total output declined by EUR 6.4 million to EUR 128.4 million in the financial year (previous year: EUR 134.8 million).

In the Electronics segment, the customer orders acquired in the previous year were successfully completed in 2019, which essentially led to an increase in revenues from EUR 7.8 million to EUR 16.3 million (previous year: EUR 8.5 million).

The Solar segment was characterized by the further processing of the major CIGS orders as well as further customer orders acquired at the end of 2018 and in the course of 2019, which for the most part contributed to a clearly positive inventory development of unfinished goods in 2019. Revenue in 2019 was correspondingly low at EUR 0.4 million after EUR 3.3 million in the previous year.

Due to delays in order intake, revenue in the Energy Storage segment declined from EUR 17.0 million to EUR 12.2 million in 2019.

Revenues in the Service segment fell from EUR 4.3 million in the previous year to EUR 3.2 million in the financial year and were largely due to a reduced machine base in the Electronics segment.

In the Contract Manufacturing segment, revenues in 2019 decreased to EUR 1.2 million (previous year: EUR 1.8 million) and revenues from affiliated companies fell from EUR 5.4 million in the previous year to EUR 4.0 million, whereby unusually high deliveries of goods were registered in the previous year.

Other operating income amounted to EUR 2.0 million (previous year: EUR 3.9 million). This includes income from the reversal of valuation adjustments on trade receivables of EUR 0.2 million (previous year: EUR 0.3 million), due to payments received, and income from the reversal of other provisions amounting to EUR 1.4 million (previous year: EUR 1.1 million), which mainly comprises income from the reversal of warranty provisions of EUR 1.0 million (previous year: EUR 0.5 million).

The material costs decreased in 2019 in line with the drop in total output to EUR 94.4 million (previous year: EUR 98.1 million). The material cost ratio increased to 73.5% (previous year: 72.8%) of total output in financial year 2019 due to the material-intensive major CIGS orders.
Personnel expenses increased to EUR 34.8 million (previous year: EUR 33.8 million) due to an increase in the number of employees in the technical area, which, taking into account the decline in total output, led to a rise in the personnel expenses ratio in 2019 to 27.1% (previous year: 25.1%).

Scheduled depreciation of intangible assets and property, plant and equipment grew to EUR 4.8 million in 2019 (previous year: EUR 3.6 million), of which EUR 3.8 million (previous year: EUR 2.6 million) was attributable to depreciation of capitalized development services. There was no unscheduled depreciation as in the previous year.

Other operating expenses grew to EUR 21.5 million (previous year: EUR 20.7 million). This includes freight costs for outgoing freight of EUR 1.4 million (previous year: EUR 2.0 million), which are primarily attributable to major CIGS orders, legal and consulting fees of EUR 1.6 million (previous year: EUR 0.9 million), expenses for guarantee commissions of EUR 1.2 million (previous year: EUR 0.6 million), which are primarily attributable to customer projects in the solar segment. The expenses for sales commissions amounted to EUR 1.2 million (previous year: EUR 0.3 million). Manz AG's subsidiaries have received these for acquired customer orders.

The financial results decreased by EUR 8.3 million to EUR -11.9 million (previous year: EUR -3.6 million). This item mostly includes write-downs on financial assets totaling EUR 11.7 million (previous year: EUR 3.6 million), in addition to the 100% shares held in the subsidiaries Manz Italy s.r.l., Manz Hungary Kft. and Suzhou Manz New Energy Equipment Co., Ltd., these primarily relate to the 11,1% stake in NICE PV Research Ltd. Interest and similar expenses of EUR 0.5 million (previous year: EUR 0.3 million) were also incurred in 2019. Earnings after taxes worsened by EUR 15.9 million year-on-year to EUR -37.0 million (previous year: EUR -21.1 million).

The net loss for the year of 37.6 million EUR was generated in the fiscal year.
A withdrawal of EUR 37.0 million from the capital reserve, taking into account the loss carried forward from the previous year, resulted in a balance sheet loss of EUR -6.5 million (previous year: EUR -5.8 million).

2.2 Financial Position

As of December 31, 2019, total assets amounted to EUR 224.1 million, a decline of EUR 28.8 million from the prior-year figure of EUR 253.0 million. The net loss of EUR 37.6 million resulted in a decline in balance sheet equity from EUR 91.7 million to EUR 54.0 million. Subscribed capital remained unchanged at EUR 7.7 million and is divided into 7,744,088 no-par-value bearer shares. The equity ratio on the balance sheet date decreased from 36.2 % to 24.1 % compared to the previous year.

Liabilities to affiliated companies increased from EUR 9.6 million to EUR 35.3 million, primarily resulting from deliveries for the major CIGS projects as of the balance sheet date. Trade payables increased from EUR 9.3 million in the previous year to EUR 12.7 million, and advance payments received on orders decreased from EUR 130.6 million in the previous year to EUR 107.9 million, largely due to the ongoing major CIGS orders.
Provisions increased from EUR 11.2 million in 2018 to EUR 12.3 million. The provision for invoices not yet received included in this figure rose from EUR 0.6 million in 2018 to EUR 0.8 million. A further EUR 3.0 million related to earn-out obligations (previous year: EUR 3.1 million). Provisions for taxes totaling EUR 0.5 million (previous year: EUR 0.0 million) resulted from withholding tax to be paid for existing receivables from services provided to Manz Taiwan Ltd.

Manz AG's fixed assets decreased by EUR 11.6 million to EUR 86.2 million (previous year: EUR 97.8 million). This decrease resulted primarily from financial assets, which fell from EUR 77.5 million in the previous year to EUR 67.0 million. In addition to the reduced loans to affiliated companies totaling EUR 5.3 million (previous year: EUR 5.7 million) as a result of repayments received totaling EUR 0.4 million, write-downs on Manz Italy Srl, Manz Hungary Kft. and Suzhou Manz New Energy Equipment Co., Ltd., in which a 100% of share are held, totaling EUR 3.3 million also had a reducing effect on the portfolio. The participation in Nice PV Research Ltd. was also written down in the amount of EUR 8.3 million. A new shareholding was formed in 2019 from the foundation of Manz Batterytech Tübingen GmbH in the amount of EUR 1.5 million.

Current assets fell by EUR 17.1 million to EUR 137.5 million (previous year: EUR 154.6 million). In the process, cash and cash equivalents fell from EUR 63.3 million to EUR 40.2 million. Inventories increased from EUR 88.2 million in the previous year to EUR 95.6 million, which are primarily attributable to CIGS orders. At EUR 61.5 million (previous year: EUR 62.0 million), prepayments made remained nearly unchanged, as a large proportion of the deliveries to suppliers of the major CIGS orders had already been completed and invoiced as of the balance sheet date. Trade receivables fell from EUR 0.9 million to EUR 0.6 million. There were no receivables from affiliated companies on the balance sheet date (previous year: EUR 1.6 million).

2.3 Liquidity Position

In the financial year 2019, the cash flow from operating activities developed negatively at EUR -19.2 million (previous year: EUR 19.4 million) in line with the net loss for the year of EUR -37.6 million. This resulted in cash outflows also resulted from inventories and other assets of EUR -6.1 million (previous year: EUR -26.0 million). Cash inflows developed from the increase in liabilities and other liabilities in the amount of EUR 8.5 million (previous year: EUR 60.7 million), which were mainly influenced by the major CIGS orders. This included cash inflows from liabilities of EUR 28.7 million (previous year: EUR 7.3 million), and EUR 2.5 million cash inflows from other liabilities (previous year: cash outflow of EUR 2.9 million). In contrast, advance payments received declined by EUR 22.7 million (previous year: cash inflow of EUR 56.3 million),

Cash flow from investing activities amounted to EUR -3.7 million in 2019 (previous year: EUR -5.7 million) and was significantly influenced by cash outflows from investing activities for intangible assets and property, plant and equipment of EUR -4.3 million.

Cash flow from financing activities in financial year 2019 was limited to cash outflows from interest payments totaling EUR -0.2 million (previous year: EUR 0.0 million), which were mostly paid to the affiliated company Manz Taiwan Ltd.

At the end of financial year 2019, financial resources were EUR 40.2 million (previous year: EUR 63.3 million). This includes restricted cash of EUR 5.0 million (previous year: EUR 19.9 million) due to cash deposits for advance payment guarantees issued by financial institutions to customers. On the balance sheet date, Manz AG had an unused credit line with banks totaling EUR 4.8 million (December 31, 2018: EUR 0.0 million).

Based on current liquidity planning for 2020 and 2021, Manz AG will be able to fulfill its current and future payment obligations.

Please refer to the liquidity and financing risks in the Risk Report Concerning additional statements regarding liquidity and the types of financing in the Group.

2.4 General Statement on the Economic Situation of the Company

Following a net loss of EUR 21.1 million in 2018, the net result for the year worsened to EUR -37.6 million in 2019, which was influenced by the EUR 6.4 million reduction in total operating performance to EUR 128.4 million (previous year: EUR 134.8 million). The high write-downs on financial assets in 2019 of EUR 11.7 million (previous year: EUR 3.6 million) further impacted the net result for the year.

Total assets decreased from EUR 253.0 million in the previous year to EUR 224.1 million. In this context, equity decreased from 91.7 million EUR in the previous year to 54.0 million EUR and the equity ratio dropped to 24.1% (previous year: 36.2%). Advance payments received declined from EUR 130.6 million to EUR 107.9 million, with inventories increasing from EUR 88.2 million to EUR 95.6 million due to the increased project progress of the major CIGS orders in 2019. This also led to an increase in liabilities to affiliated companies to EUR 35.3 million (previous year: EUR 9.6 million). In contrast, fixed assets decreased from EUR 97.8 million in the previous year to EUR 86.2 million due to the reduction of financial assets by EUR 10.5 million to EUR 67.0 million.

Cash and cash equivalents amounted to EUR 40.2 million as of December 31, 2019 (previous year: EUR 63.3 million). Manz AG generated cash and cash equivalents from operating activities totaling EUR -19.2 million (previous year: EUR 19.4 million), which resulted primarily in a reduction in cash and cash equivalents of EUR 23.2 million as of the balance sheet date.

Despite the increased net loss in 2019, the Managing Board believes that Manz AG's growth opportunities and prospects in its core segments remain fully intact overall. With orders on hand totaling EUR 462.0 million, in particular the developments on the market for electric mobility and the dynamic growth in the consumer electronics segment underscore the potential for Manz AG.

2.5 Explanation of Target Achievement 2019

Manz AG generated revenues of EUR 37.2 million (previous year: EUR 37.8 million) and a total output of EUR 128.4 million (previous year: EUR 134.8 million) in financial year 2019. Manz achieved earnings before interest and taxes (EBIT) of EUR -25.1 million (previous year: EUR -7.5 million) and earnings before interest, taxes, depreciation, and amortization (EBITDA) of EUR -20.3 million (previous year: EUR -13.8 million) in the operating business.
Delays in incoming orders in the Energy Storage segment led primarily to a reduction in total operating performance of EUR -6.4 million, resulting in a decrease of EUR -6.4 million in EBITDA and EUR -7.6 million in EBIT compared to 2018. The increase in revenue to EUR 50 million forecast for 2019 and the expected increase in total output over 2018 with EBIT and EBITDA tending towards a 15% to 20% improvement yet remaining in double-digit negative territory, could not be achieved. As a result of the negative annual result of EUR -37.6 million, the equity ratio fell further than the forecast 5%, from 36.2% in the previous year to 24.1%. Despite a lower equity of EUR 54.0 million (previous year: EUR 91.7 million) and lower credit balances with banks down to EUR 40.2 million (previous year: EUR 63.3 million), gearing improved from -0.69 to -0.74, contrary to the forecast.

The revenue increase targeted for 2019 in the Energy Storage segment will not materialize until 2020, resulting in revenue of EUR 12.2 million (previous year: EUR 17.0 million). In contrast, the Electronics segment achieved an expected revenue increase of EUR 16.3 million (previous year: EUR 8.5 million), which also almost led to the forecast 100 % revenue increase. As expected, the financial year 2019 in the Solar segment was largely dominated by the processing of ongoing customer orders such as the major CIGS projects. Sales revenues were correspondingly low.

2.6 Non-financial Performance Indicators

Manz AG is required to prepare a sustainability report or to submit a non-financial statement in accordance with the European Corporate Social Responsibility Directive and the provisions of sections 315b and 315c in conjunction with section 289b and 289c HGB (German Commercial Code). The non-financial consolidated statement is published separately from the consolidated management report in a separate sustainability report. For this purpose, the Managing Board of Manz AG has decided to use the German Sustainability Code (DNK) as a framework. The sustainability report and the non-financial Group statement can be viewed on our website www.manz.com in the "Investor Relations" section under "Publications" and in the "Company" section under the heading "Sustainability.”

2.7 Corporate Governance Statement

The corporate governance statement in accordance with section 289f and 315d of the German Commercial Code (HGB) was prepared jointly for Manz AG and the Manz Group and published under the heading "Manz AG Corporate Governance Statement and Corporate Governance Report for the Financial Year 2020" on the company's website www.manz.com in the Investor Relations section under the heading "Corporate Governance - Corporate Governance Statement."

2.7 Disclosures in accordance with section 315a (1) HGB and explanatory report in accordance with section 176 (1) sentence 1 AktG on the disclosures in accordance with section 289A (1) and section 315a (1) HGB

Composition of subscribed capital

Manz AG's subscribed capital is valued at EUR 7.7 million and is divided into 7,744,088 no-par value bearer shares. All shares are associated with the same rights and duties. Each share grants its holder one vote at the annual general meeting. Each share offers the same share of profits. This would exclude treasury shares held by Manz AG, which do not entitle the company to any rights. At the present time, the company does not hold any treasury shares. In other respects, shareholders' individual rights and duties result from the provisions of the German Stock Corporation Act, particularly sections 12, 53a et seqq., 118 et seqq., and 186.

Restrictions that apply to voting rights or the transfer of shares

The Managing Board of Manz AG does not know of any agreements pertaining to restrictions on the use of voting rights or the transfer of shares.

Shareholdings that exceed 10% of voting rights

As a result of notifications received regarding major holdings of voting rights pursuant to sections 33 and 34 of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG) and transactions involving company shares executed by managers pursuant to Article 19 of the Market Misuse Directive, the Managing Board is aware of the following direct and indirect holdings in the company's capital that exceed 10% of the voting rights:

	Number of voting rights	Percentage of voting rights
Dieter Manz, Schlaitdorf	2,175,199	28.09%
directly thereof (section 33 WpHG)	953,942	12.32%
attributed (section 34 WpHG)	1,221,257	15.77%
People's Republic of China, acting through the State-owned Asset Supervision Commission (SASAC) of the People's Government of Shanghai, People's Republic of China Full chain of subsidiaries: Shanghai Electric (Group) Corporation Shanghai Electric Group Company Limited Shanghai Electric Hongkong Co. Limited Shanghai Electric Germany Holding GmbH (shareholder)	1,523,480	19.67%

Shares with special rights that confer authority to exercise control

The company does not have shares with special rights that confer authority to exercise control.

Type of voting right controls when employees are issued shares of company stock and do not directly exercise their control rights

Employees with holdings in the capital of Manz AG may directly exercise any control rights to which they are entitled based on the shares transferred to them in accordance with provisions of the company's Articles of Incorporation and the law.

Legal requirements and provisions of the Articles of Incorporation regarding the appointment and dismissal of members of the Managing Board and regarding amendments to the Articles of Incorporation

The appointment and dismissal of members of the Managing Board is governed by sections 84 and 85 of the German Stock Corporation Act. These sections stipulate that members of the Managing Board are to be appointed by the Supervisory Board for a period lasting a maximum of five years. Members may be repeatedly appointed or have their term extended, in either case for another period lasting a maximum of five years. Pursuant to section 5 of the company's Articles of Incorporation, the Managing Board may consist of one or more persons. The Supervisory Board appoints the members of the Managing Board pursuant to the provisions of the German Stock Corporation Act and determines their number. The Supervisory Board may appoint a member as chairperson of the Managing Board. Pursuant to section 84(3) of the German Stock Corporation Act (AktG), the Supervisory Board may revoke the appointment of a member of the Managing Board and the appointment of a chairperson of the Managing Board for good cause.
Amendments to the Articles of Incorporation are governed by sections 133 et seqq. and 179 et seqq. of the German Stock Corporation Act. In general, amendments require a resolution passed at the annual general meeting. A resolution passed at the annual general meeting requires a majority of at least three-quarters of the capital stock represented at the time the resolution is adopted. The Articles of Incorporation may determine a different, but only greater capital majority, for any amendment to the corporate purpose of the company.
Pursuant to Article 16(1) of the company's Articles of Incorporation, resolutions are passed at the Annual General Meeting by a simple majority of the votes cast, unless mandatory provisions of the German Stock Corporation Act stipulate otherwise. Where the German Stock Corporation Act also stipulates that a majority of the represented capital stock is required to pass a resolution, a simple majority of the represented capital fulfills this requirement, as permitted by law.

Authority of the Managing Board to issue or repurchase company shares

The Managing Board may issue new shares only on the basis of resolutions passed at the annual general meeting in respect of an increase in capital stock or in respect of authorized and conditional capital. Purchasing treasury shares is governed by section 71 et seqq. of the German Stock Corporation Act (AktG) and, in certain cases, is permitted by operation of law or as a result of authorization given at the Annual General Meeting.

Authorized capital

On the basis of a resolution passed by the Annual General Meeting of July 12, 2016 pursuant to Article 3, Sentence 3 of the Articles of Incorporation, the Managing Board is authorized to increase the company’s capital stock, with Supervisory Board approval, in the period until July 11, 2021, on a one-time basis or in partial contributions, up to a total of EUR 3,872,044.00 through the issuance of a total of 3,872,044 new bearer shares (no-par-value shares) by means of cash or non-cash contributions (Authorized Capital 2016).

In principle, the new shares must be offered to shareholders for subscription. The new shares may also be assumed by banks designated by the Managing Board with the obligation to offer them to the shareholders for subscription (indirect subscription right). However, the Managing Board was authorized, with Supervisory Board approval, to exclude shareholders' subscription rights

- in the event of a capital increase for cash consideration, if the issue amount of the new shares is not significantly less, within the meaning of section 203 (1) and (2) and section 186 (3) section 4 of the German Stock Corporation Act (AktG), than the stock exchange price of shares of the company of the same type at the time of establishment of the issue price, which is to be as close in time as possible to the time of issue of new shares. This authorization to exclude the subscription right applies only to the extent that shares to be issued in the capital increase do not in total represent a proportionate amount of the capital stock of more than EUR 774,408.00 and overall do not comprise more than 10% of the capital stock at the time the authorization is exercised. The proportionate amount of capital stock of shares which are issued or sold during the period of this authorization based on other authorizations in direct or corresponding application of section 186(3), Sentence 4 of the German Stock Corporation Act (AktG), with exclusion of subscription rights, is to be credited toward this maximum amount for the exclusion of subscription rights;

- in the case of capital increases against contribution in kind for the acquisition of companies, parts of companies or participations in companies or other assets or for the purpose of business combinations;

- to the extent that it is necessary to give owners of warrant or convertible bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) issued by the company or direct or indirect affiliates of the company a subscription right to new shares to the same extent as they would have upon exercising their option or conversion right or after fulfilling their conversion obligation;

- In order to exclude fractional amounts from subscription rights.

The Managing Board is authorized, with Supervisory Board approval, to determine the further details of the implementation of the capital increases based on the authorized capital.

Authorization to issue partial debentures with options or conversion rights or conversion obligations, profit-sharing rights, and profit-sharing bonds (or combinations of these instruments), as well as Conditional Capital I

At the Annual General Meeting on July 2, 2019, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue bearer warrant or convertible bonds, profit-sharing rights and/or profit-sharing bonds, or a combination of these instruments (collectively referred to as "bonds"), up to a total nominal value of EUR 150 million, on one or more occasions until July 1, 2024. In addition, the Managing Board was also authorized to grant owners of warrant bonds option rights and owners of convertible bonds, conversion rights for bearer shares of the company with a proportionate amount of capital stock totaling up to EUR 3,100,000.00, in accordance with the detailed terms and conditions of the warrant/convertible bonds.

The statutory subscription right is granted to the shareholders in the way that the bonds are underwritten by a bank or a syndicate of banks with the obligation to offer them for subscription to shareholders. If bonds are issued by one of Manz AG's subsidiaries pursuant to section 18 of the German Stock Corporation Act, the company must ensure that the statutory subscription right is granted accordingly to shareholders of Manz AG.

The Managing Board is however authorized, with Supervisory Board approval, to exclude fractional amounts from shareholders' subscription rights and also to exclude the shareholders' subscription rights to the extent necessary in order to give holders of already issued bonds with options or conversion rights and/or conversion obligations a subscription right to the extent to which they would be entitled after exercising their options or conversion rights or upon fulfilling their conversion obligation.

Furthermore, the Managing Board is authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights to bonds issued with an option and/or conversion right or conversion obligation, provided the Managing Board, after dutiful examination, arrives at the view that the issue price of the bonds is not significantly below their hypothetical market value as calculated according to accepted and, in particular, actuarial methods. This authorization to exclude the subscription right applies to bonds issued with an option and/or conversion right or a conversion obligation, carrying an option and/or conversion right or a conversion obligation for shares with a total proportionate amount of the capital stock, which may not exceed 10 % of the capital stock, either at the time the authorization becomes effective or – in the event that this amount is lower – at the time this authorization is exercised. The following are offset against the aforementioned ten percent limit:

- new shares issued from authorized capital excluding subscription rights in accordance with section 186 (3) sentence 4 Stock Corporation Act (AktG) during the term of this authorization up to issue of bonds with option and / or conversion rights or conversion obligations pursuant to section 186 paragraph 3 Sentence 4 Stock Corporation Act (AktG), such as
- such shares as are acquired on the basis of an authorization granted at the Annual General Meeting and are disposed of, with exclusion of the subscription right, pursuant to section 71(1) no. 8 sentence 5 German Stock Corporation Act (AktG), in conjunction with section 186(3) sentence 4, of the German Stock Corporation Act (AktG) during the term of this authorization up to the issue, subject to the exclusion of subscription rights pursuant to section 186(3) sentence 4 of the German Stock Corporation Act (AktG), of the bonds carrying an option and/or conversion right or conversion obligation.

Where profit-sharing rights or profit-sharing bonds without an option right or conversion right/obligation are issued, the Managing Board is authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights if these profit-sharing rights or profit-sharing bonds have the characteristics of a debenture; i.e., do not give rise to any membership rights in the company, do not grant a share in the liquidation proceeds, and the interest payable is not calculated on the basis of the net income for the year, net retained profit, or the dividend. Moreover, in such a case, the interest payment and the issue price of the profit-sharing rights or profit-sharing bonds must reflect current market conditions at the time of issue.
Pursuant to Article 3(4) of the Articles of Incorporation, the capital stock of the company has been conditionally increased by up to EUR 3,100,000.00 through the issue of up to 3,100,000 no-par value bearer shares (Conditional Capital I). The contingent capital increase will only be carried out to the extent that the holders of option or conversion rights or those obliged to convert from warrant or convertible bonds, profit participation rights or participating bonds issued by the Company or a Group company within the meaning of section 18 AktG on the basis of issued or guaranteed at the Annual General Meeting on Tuesday, July 2, 2019 under agenda item 5, exercise their option or conversion rights or, if they are required to convert, fulfill their obligation to convert, unless a cash settlement is granted or treasury shares or shares of another listed company. The new shares are issued at the option or conversion price to be determined in each case in accordance with the authorization resolution described above. The new shares are to participate in profit from the beginning of the financial year in which they are created on the basis of the exercise of options or conversion rights or of the fulfillment of conversion obligations. The Managing Board is authorized, with Supervisory Board approval, to establish the further details of the execution of the conditional capital increase.

Authorization to issue share subscription rights within the scope of the Manz Performance Share Plan 2019 as well as Conditional Capital III

At the annual general meeting held on July 2, 2019, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 95,000 subscription rights for subscription of a total of up to 190,000 shares in the company to executives of affiliated companies of the company, as well as Manz's own managers below the executive level and managers of affiliated companies, both domestic and foreign, below the executive level on one or more occasions through June 30, 2024. The Supervisory Board was authorized to grant one or several times a total of up to 85,000 subscription rights for the purchase of up to 170,000 shares in the company to members of the company's Managing Board until June 30, 2024.
Subscription rights are to be granted, structured and exercised in accordance with the provisions in the resolution of the annual general meeting on July 2, 2019.
The authorization of July 7, 2015 was revoked by resolution passed at the annual general meeting of July 2, 2019, insofar as no subscription rights had yet been issued on the basis of the authorization.
Pursuant to Article 3(6) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to EUR 360,000.00 through the issue of up to 360,000 no-par value

bearer shares (Conditional Capital III). The conditional capital increase serves to secure the rights of the holders of subscription rights granted on the basis of the authorization granted by the annual general meeting on July 2, 2019. The shares will be issued at the issue amount established in the authorization adopted at the annual general meeting on Tuesday, July 2, 2019. The contingent capital increase will be carried out only to the extent subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new bearer shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are affected, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

Authorization to issue share subscription rights within the scope of the 2015 Manz Performance Share Plan as well as Conditional Capital II

At the annual general meeting held on July 7, 2015, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 59,000 subscription rights ("Performance Shares") for a total of up to 118,000 shares in the company to executives of affiliated companies as well as Manz's own managers below the executive level and managers of affiliated companies, both domestic and foreign, below the executive level on one or more occasions through June 30, 2020. The Supervisory Board was given authorization to issue a total of up to 56,000 subscription rights ("Performance Shares") for a total of up to 112,000 shares in the company to members of Manz's Managing Board, on one or more occasions, through June 30, 2020.

Subscription rights are to be granted, structured and exercised in accordance with the provisions in the resolution of the annual general meeting on Tuesday, July 7, 2015.

Pursuant to Article 3(5) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to EUR 230,000.00 through the issue of up to 230,000 no-par value bearer shares (Conditional Capital II). The conditional capital increase serves to secure the rights of the holders of subscription rights ("Performance Shares") granted on the basis of the authorization granted by the annual general meeting on July 7, 2015. The shares will be issued at the issue amount established in the authorization adopted at the annual general meeting on Tuesday, July 7, 2015. The contingent capital increase will be carried out only to the extent subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are affected, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

Authorization to purchase and dispose of treasury shares

The annual general meeting held on July 2, 2019, authorized the Managing Board of the company to acquire treasury shares until July 1, 2024, pursuant to section 71(1) number 8 of the German Stock Corporation Act (AktG) with a proportional value of up to 10 % of the capital stock at the time this authorization becomes effective or of the existing capital stock of the company at the time of exercise of the authorization, if such amount is lower, whereby at no point in time more than 10 % of the capital stock of the company may be represented by the shares acquired on the basis of this authorization together with other shares of the company, which the company has already acquired and still possesses or which are attributable to it pursuant to sections 71d and 71e AktG. The provisions in section 71(2) sentences 2 and 3 AktG must be observed.

The acquisition may take place only through the securities exchange or by means of a public purchase order and must satisfy the principle of equal treatment of shareholders (section 53a AktG).

The Managing Board was authorized to sell the treasury shares acquired on the basis of the above authorization also in manners other than through the stock exchange or through an offer to other shareholders, under the condition that the sale is for cash and is at a price that is not significantly below the stock-exchange price, at the time of the sale, of company shares with the same features. This authorization of use is restricted to shares with a proportionate amount of capital stock that in total does not exceed 10 % of the capital stock of the company, neither at the time of coming into effect of this authorization, nor – if such amount is lower – at the time of exercise of the above authorization. The maximum limit of 10 % of the capital stock is reduced by the proportionate amount of the capital stock that is attributable to those shares that are issued or sold during the term of this authorization with exclusion of the subscription rights pursuant to or in accordance with section 186(3) sentence 4 AktG. The maximum limit of 10 % of the capital stock is further reduced by the proportionate amount of the capital stock represented by those shares that were to be issued in order to service bonds with option or conversion rights and/or option or conversion obligations to the extent such bonds are issued during the term of this authorization with exclusion of subscription rights in analogous application of section 186(3) sentence 4 AktG.

The Managing Board was further authorized to transfer treasury shares acquired on the basis of the above authorization to third parties insofar as this is for the purpose of acquiring companies, parts of companies or interests in companies or other assets, or to carry out business combinations.

The Managing Board and – to the extent there is an obligation with respect to members of the Managing Board – the Supervisory Board were further authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfillment of the subscription rights that were or are issued in the framework of the Manz Performance Share Plan 2015 resolved at the Annual General Meeting of Tuesday, July 7, 2015, under item 6 of the agenda or in the framework of the Performance Share Plan 2019 resolved at the Annual General Meeting of Tuesday, July 2, 2019, under item 6 of the agenda.

The Managing Board was also authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfillment of the subscription and conversion rights that

result from exercising option or conversion rights or fulfilling option or conversion obligations that have been granted or imposed within the framework of issuing convertible or warrant bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) of the company or its subsidiaries.
The Managing Board was further authorized to transfer own shares acquired on the basis of the above authorization to employees of the Company or employees or members of governing bodies of subordinate affiliates of the Company within the meaning of sections 15 et seqq. AktG.

Significant company agreements that are conditional on a change of control as a result of a takeover bid

Patent and Know-How License Agreement with the ZSW

There is a patent and know-how license agreement from the year 2017 between Manz AG and the Center for Solar Energy and Hydrogen Research Baden-Württemberg (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg, ZSW), which is a foundation under German civil law and a research institution of the state of Baden-Württemberg, under which the ZSW grants Manz AG certain licenses to its patents and know-how with regard to CIS and/or CIGS technology for the manufacture of thin-film solar cells. The new patent and know-how license agreement can be terminated by ZSW for important cause if a competitor of ZSW acquires or exceeds 30 % of voting rights in Manz AG in terms of section 21 et seqq. of the German Securities Trading Act (WpHG) (in the version applicable prior to January 3, 2018).

Patent and know-how license agreement with NICE Solar Energy GmbH (previously Manz CIGS Technology GmbH)

In addition, Manz AG and NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH), a subsidiary of NICE PV Research Ltd., in which China Energy Investment Corporation Limited (formerly Shenhua Group), Shanghai Electric Group Co. Ltd , and Manz AG, a patent and know-how licensing agreement from 2017, according to which NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) of Manz AG has granted certain patents and know-how regarding the CIS or CIGS technology for the production of thin-film solar cells. The patent and expertise licensing agreement can be terminated by NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) for good cause if a third party directly or indirectly acquires at least 30.0 % of the shares in Manz AG where a direct or indirect purchase of shares by Shanghai Electric Group Co. Ltd., China Energy Investment Corporation Limited (formerly Shenhua Group) exceeding 30.0 % or such acquisition by Dieter Manz does not give rise to the right of termination.

Talus Manufacturing Ltd.

A contract regarding Talus Manufacturing Ltd. in Chungli, Taiwan, where Manz Taiwan Ltd. in the amount of 80.5 % and the partner in the amount of 19.5 % is involved, exists between the subsidiary Manz Taiwan Ltd. and a leading US manufacturer of equipment for the semiconductor industry. The Partner has a right to terminate the contract in the event that shares of the Manz AG are sold by their existing shareholders to third parties, with the result that a person or company from the People's Republic of China is involved in the amount of more than 30 % directly or indirectly in the company. If the right of termination is exercised, the Partner has the right to buy shares of Manz Taiwan Ltd. at Talus Manufacturing Ltd. to be acquired against payment of the participation value (purchase option).

Apart from the agreements mentioned above and in the section below, there are no significant company agreements that are conditional on a change of control as a result of a takeover bid.

Compensation agreements of the company that have been made in the event of a takeover bid with members of the Managing Board or with employees

In the event of a change of control, the employment contract of Managing Board member Martin Drasch stipulates that the Managing Board member is entitled to terminate the employment contract with a notice period of three months to the end of a calendar month and to resign from his office as member of the Managing Board with the same deadline. These rights may be exercised only within six months after the change of control has occurred.
A change of control is to be deemed to have taken place when the company receives notification from a notifying party in accordance with section 33 (1), sentence 1 WpHG that the notifying party, with inclusion of the voting rights attributable to him pursuant to section 34 WpHG, has reached or exceeded a 25 % or higher share of voting rights in the company.
In the event of a termination of the employment contract pursuant to the above provisions, the member of the Managing Board shall receive a severance payment. This severance payment shall consist of the total amount of the fixed salary owed for the remaining term of the employment contract and the total amount of the cash bonus owed for the remaining term of the employment contract, whereby for the calculation of the amount, the average of the EBT return in the last financial year before the termination and the EBT return that is expected to be realized in the current financial year according to the forecast of the company are to be taken as the basis. The severance payment is limited to the amount that corresponds to 150 % of the severance cap. The value of two years' annual compensation is deemed to be the severance cap. If the remaining employment term on the date the resignation becomes effective amounts to more than two years, the severance payment is reduced, insofar as it is being granted for the exceeding period, by 75 % for the purposes of offsetting the severance payment with a lump sum equal to the member's expected income from other sources after ending employment. In addition, the amounts used in the calculation of the severance payment must also be discounted at 3 % p.a. each to the date on which the severance payment is due.

In other respects, the company has not entered into any agreements with members of the Managing Board or with employees that make provision for compensation payments in the event of a takeover bid.

2.8. Compensation report

The following compensation report presents the basic principles of the compensation systems for the Managing and Supervisory Boards of Manz AG, as well as the salaries earned by the members of the Managing and Supervisory Boards in the financial year 2019.

System of compensation for the Managing Board

The aim of the compensation system is to compensate the members of the Managing Board commensurately according to their area of activity and responsibility, taking into account not only the personal performance of each respective Managing Board member, but also the company's overall situation and business success. The compensation structure is geared toward sustainable corporate growth.

The compensation paid to members of the Managing Board consists of fixed and variable components. When assessing the amount of the remuneration elements, a distinction is made between the Chairman of the Managing Board and the other members of the Managing Board.

Fixed elements of compensation

The fixed components of Managing Board compensation consist of a fixed monthly salary, benefits in kind, and contributions to a company retirement scheme.

The fixed salary is paid in twelve equal monthly installments. These fixed payments function as a base salary to cover Managing Board members' and their families' ongoing cost of living expenses irrespective of the company's performance.

An appropriate company car, which can also be used for private purposes, is provided to Managing Board members as a benefit in kind. In addition, the company has taken out accident insurance policies with appropriate benefits for each of the Managing Board members. These policies also cover non-work-related accidents. Furthermore, there is a directors and officers pecuniary damage liability insurance policy (so-called D & O insurance) for the members of the Management Board at the company's expense.

The company has undertaken to pay pension contributions to members of the Managing Board, Martin Drasch, Manfred Hochleitner and Jürgen Knie, by paying annual contributions to a support fund.

Variable elements of compensation

General

The variable compensation comprises an annual component linked to the company's success in the form of an annual cash bonus (short-term variable compensation) on the one hand, and on the other hand, a share-based component with a multi-year assessment in the form of annual stock options based on the 2019 Manz Performance Share Plan (long-term variable compensation).

The variable components complement the fixed elements of compensation, serving as a specific incentive to achieve sustained corporate growth while contributing to the Managing Board members' accumulation of personal assets and financial independence. In the interest of an alignment of variable compensation with sustainable corporate development, the fair value of the subscription rights granted on the basis of the recognized 2019 Manz Performance Share Plan outweighs the annual cash bonus.

Annual cash bonus

The aim of the annual cash bonus is to allow the members of the Managing Board to participate in the company's success in a given financial year as a result of their own personal management performance.

The cash bonus is granted annually, depending on the EBIT margin of the respective financial year. The EBIT margin is calculated as the ratio of earnings before interest and taxes (EBIT) to total revenues in accordance with the consolidated financial statements in accordance with IFRS. Moreover, the cash bonus is calculated based on the fixed salary of the particular Managing Board member for the given financial year (fixed annual salary).

The cash bonus grant requires that an EBIT margin of at least 0.1% has been achieved. The Managing Board member receives a cash bonus of 1% of the annual fixed salary with an EBIT margin of 0.1%. Accordingly, the percentage applicable for calculating the cash bonus increases by one percentage point for each full 0.1 percentage point by which the achieved EBIT margin exceeds 0.1%. Therefore, the Managing Board member receives, for example, a cash bonus of 50% of the annual fixed salary with an EBIT margin of 5.0%, and, with an EBIT margin of 10%, a cash bonus of 100% of the annual fixed salary. The upper limit is set at an EBIT margin of 16.0%, at which the cash bonus is 160% of the annual fixed salary.

The Supervisory Board has set an EBIT margin of 6% as the medium target of short-term variable compensation for the purpose of determining the ratio between the individual compensation elements. At this middle value, the cash bonus is 60% of the fixed annual salary.

The rights to Manz shares granted and to be granted on the basis of the 2019 Manz Performance Share Plan in the years 2019 to 2022 are intended to stimulate the Managing Board members to sustainably increase their internal and external company value and, therefore, their interests with those of the shareholders, but also with the other stakeholders.

The Supervisory Board may in principle determine the number of subscription rights to be granted to the individual members of the Managing Board at its own discretion - in line with the legal requirements for the appropriateness of the compensation. There is no contractual claim for the granting of performance shares.

However, the Supervisory Board has specified as a guideline that the annual long-term variable compensation in the form of performance shares (allocation value) should, as a rule, amount to 50% of the annual total cash compensation of the respective Managing Board member. In this case, total cash compensation consists of the member's annual fixed salary, as well as the middle target value of the annual cash bonus equal to 60% of the annual fixed salary. The performance shares to be granted shall be valued upon issuance through the price of the Manz share in Xetra trading on the Frankfurt Stock Exchange on the basis of an appropriate period of time at the beginning of the particular issuing period.

Further details of the Manz Performance Share Plan 2019 and the subscription rights to shares of the company issued on the basis thereof are set out in the "Corporate Governance Statement and Corporate Governance Report of Manz AG for the Financial Year 2019" in section VI, which can be downloaded from the Manz AG website at www.manz.com, in the Investor Relations section under the heading "Corporate Governance".

Severance cap in the event of early termination of Managing Board duties

The service contracts of the Managing Board members stipulate that, in the event of early termination of the term of office and service which is not based on cause, severance payments to the Managing Board member, including fringe benefits do not exceed two years' compensation (severance payment cap) and not more than the remainder of the employment relationship. The calculation of the severance payment cap will be based on the total compensation of the past financial year and, if applicable, the expected total compensation for the financial year in progress at the time of early termination.

Provisions in the event of a change of control

In the event of a change of control, the employment contract of CEO Martin Drasch stipulates that the member of the Management Board is entitled to terminate the employment contract with three month’s notice to the end of a calendar month and to resign from his office as member of the Managing Board with the same deadline. In principle, a change of control occurs when the company receives a notice from a party that the party, including the voting rights attributable to it, has reached or exceeded 25 % or a higher proportion of the voting rights in the company. In the event of a termination of the employment contract pursuant to the above provisions, the member of the Managing Board shall receive a severance payment.

Further details on the change of control provisions in the service contracts of the named members of the Managing Board are provided in this consolidated situation report in the "Disclosures pursuant to section 315a paragraph (1) HGB and explanatory report pursuant to section 176 (1) paragraph (1) Sentence 1 AktG on the disclosures pursuant to section 289a paragraph 1, and section 315a paragraph 1 HGB "in the subsection" Compensation Agreements of the Company, which have been concluded in the event of a takeover bid with members of the Management Board or with employees".

Managing Board compensation in the Financial Year 2019

The members of the Managing Board received total compensation of TEUR 996 for carrying out their duties in the financial year 2019 (previous year: TEUR 520).

The following table provides an overview of the compensation paid to individual members of the Managing Board according to DRS 17 for performing their duties in the financial year 2019:

	Non performance-related components		Performance-based components (short term)	Components with long-term incentive	
(in TEUR) (Previous year in parentheses)	Fixed salary	Other benefits[1)]	Cash bonus	Subscription rights to shares (fair value)	Total
Martin Drasch, Chairman of the Managing Board	307 (247)	37 (35)	0 (0)	110 (102)	454 (384)
Manfred Hochleitner, Chief Financial Officer	240 (124)	24 (12)	0 (0)	88 (0)	352 (136)
Jürgen Knie, COO (since 7-1-2019)	124	10	0	56	190
Total	**671 (371)**	**71 (47)**	**0 (0)**	**254 (102)**	**996 (520)**

1) In particular, pecuniary benefits in kind and contributions to company pension schemes (relief fund).

The subscription rights to shares of Manz AG on the basis of the Manz Performance Share Plan 2019 were measured at fair value using recognized mathematical finance methods.

Compensation of the Supervisory Board

The Supervisory Board compensation regulated in the Articles of Incorporation was amended by resolution of the annual general meeting on July 3, 2018.

According to the regulation in force until July 3, 2018, each member of the Supervisory Board receives fixed compensation payable after the end of the financial year amounting to EUR 12,000.00, in addition to the reimbursement of expenses. The compensation for the chairperson of the Supervisory Board is EUR 24,000.00, while, for the deputy chairperson, it is EUR 18,000.00. Supervisory Board members who are only members during a portion of a financial year receive proportionately less compensation.

The applicable rules since July 4, 2018 stipulate that each member of the Supervisory Board receives fixed compensation of EUR 16,000.00, payable after the end of the financial year. The members of the Supervisory Board receive an additional fixed compensation for each financial year for their work on Supervisory Board committees, which amounts to EUR 8,000.00 for each member of a committee. Committee activities are to be considered for a maximum of two committees. In addition, the members of the Supervisory Board receive an attendance fee of EUR 1,500.00 for each attendance at a meeting of the Supervisory Board and its committees. Attendance fees are to be granted only once when several sessions take place in one day. The Chairman of the Supervisory Board receives three times the aforementioned compensation. His deputy receives double the fixed compensation mentioned in the first sentence.

The company also reimburses Supervisory Board members for any VAT to be paid on their compensation. Moreover, the company can insure Supervisory Board members at its own expense against civil and criminal recourse in connection with the execution of their official duties; the company can also take out corresponding liability insurance against legal expenses and property loss (D&O insurance).

The following table provides an overview of the compensation paid to individual members of the Supervisory Board for performing their duties in the financial year 2019 (previous year's values in parentheses):

(in thousands of EUR) (Previous year's figures in brackets)	Compensation
Professor Dr. Heiko Aurenz, Chairperson	130.5 (74.6)
Dieter Manz Deputy Chairman	59.5 (33.3)
Dr. Zhiming Xu	23.5 (15.5)
Professor Dr.-Ing. Michael Powalla	23.5 (18.5)
Total	**237.0 (141.9)**

Furthermore, the company also covered the cost of D&O insurance for each member of the Supervisory Board.

As in the previous years, no loans or advances were granted to members of the Supervisory Board and no contingencies were entered into for their benefit.

3. Report on Opportunities and Risks

3.1 Risk Management and Internal Control System

The goal of Manz AG's risk management system is to identify possible risks early on and to initiate appropriate measures to avert any threat of damage. The application of a risk management system integrated into corporate management is aimed at identifying and assessing potential risks throughout the group in good time and countering them with appropriate measures. Within the scope of business activities, i.e. the area of conflict between opportunities and risks, risks cannot be avoided in principle, but are minimized or transferred as far as possible.

The company's risk management activities are managed centrally by the risk management officer, are regularly evaluated with regard to their effectiveness and appropriateness and they are the complete responsibility of the CFO. Responsibility for risk monitoring, on the other hand, is decentralized and, depending on the risk category and scope, is the responsibility of both the divisional managers and managing directors as well as Manz AG's Managing Board members. Regular written and oral inquiries are used to detect potential risks in all business segments and, at the same time, they also provide the opportunity to take prompt countermeasures to prevent any negative developments. The Managing Board and the Supervisory Board are presented with an overall report at regular intervals for a comprehensive assessment of the risk situation.

Risks are analyzed and assessed on the basis of a risk management system that is essentially unchanged from the previous year, consisting of a defined group of risk owners, specified risk categories and a risk classification that reflects the risk potential and the urgency of the need for action. Particular attention is paid to risks whose probability of occurrence is high and whose potential damage in the event of occurrence is high. The identification and handling of risks is anchored in the corporate principles and defined as the task of all Manz AG employees. Integrating the company's entire workforce enables risks to be identified quickly and communicated to the appropriate risk officer, who must then take appropriate steps in accordance with the principles of action defined across the Group.

The risks are attributed to the following categories:

- Environmental risks
- Market risks
- Strategic risks
- Operating risks

In addition to this risk management system, as part of the planning process based on continuous technology and market observation, further activities are taking place both for risk identification and mitigation and for identifying opportunities.

The effectiveness and appropriateness of our risk management system have been assessed by the public auditors. He noted that the Managing Board has taken the measures required under section 91(2) AktG, in particular with regard to the establishment of a monitoring system, in an appropriate manner, and that the monitoring system is capable of identifying developments that endanger the continued existence of the company at an early stage. Manz AG thereby fulfills the requirements of the German Control and Transparency in Business Act (KonTraG).

Risk Management System for the Accounting Process
(section 289(4) and section 315(4) HGB)

The goal of Manz AG's risk management system as it pertains to the accounting process is to identify and assess risks that might conflict with the compliance of the consolidated financial statements with the rules. Risk management encompasses the entirety of the organizational regulations and measures for detecting risks and for dealing with the risks associated with entrepreneurial activity. With regard to the accounting process, Manz has implemented the following structures and processes:
The CFO has total responsibility for the company's internal monitoring and risk management system as it pertains to the accounting process. All of the companies included in the consolidated

financial statements are integrated via a defined management and reporting organizational structure. The separate financial statements of Manz AG and its subsidiaries are prepared in accordance with the corresponding national legislation and reconciled in financial statements in accordance with IFRS.
The purpose of the group' s accounting policies and group accounting, which are regularly adapted to current external and internal developments, is to ensure uniform accounting and valuation on the basis of the regulations applicable to the parent company. Furthermore, companies in the Group are prescribed report packages that they are required to prepare. The SAP SEM-BCS tool is used for the monthly consolidation process. Automatic plausibility checks are already carried out during data collection in order to test the consistency of the data.

Consolidation measures and monitoring of adherence to chronological and process-related requirements are carried out by members of the consolidation department at Group level. Additional monitoring activities at Group level include analyzing, and if necessary, adjusting the separate financial statements submitted by the Group's subsidiaries, in accordance with the reports submitted by the auditors. Key elements of the company's strategy for monitoring risks in the accounting process also include the functional separation between entry, verification, and approval, as well as a clear allocation of responsibilities in the departments in question. The use of SAP as an IT financial system is another important means of systematically preventing errors. Furthermore, the company should use a dual control system at all process levels. If there are special issues of a technical or complex nature, the company also involves external experts. Further monitoring activities include analyzing and conducting plausibility checks on transactions as well as continuously monitoring project calculations.
The illustrated structures, processes and features of the internal control and risk management system ensure that Manz AG's financial reporting is consistent and in accordance with legal requirements, generally accepted accounting principles, international accounting standards and consolidated internal guidelines. The Managing Board considers the established systems, which are reviewed annually for their ability to optimize and develop, to be appropriate. Any potential improvements identified are implemented by the Managing Board in conjunction with Manz AG's employees.

3.2 Risk Report

3.2.1 Operating Risks

Project risks

Project risks relate primarily to non-standardized major contracts. In such contracts risks arise from potential missing planned costs or schedules, the non-fulfillment of the acceptance criteria and order cancellations and the associated non acceptance of contracts as well as contract risks. By expanding the share of standardized machine components in the product portfolio, which can be modularly customized to modules or entire production equipment according to the customer's requirements, Manz AG intends to reduce the aforementioned project risks overall. In order to keep project costs under control, costs, time and quality are coordinated in a gate process between business unit and operations. Design changes to non-standard machines that are necessary and unforeseeable at the beginning of an order could lead to higher costs than expected and thus erode project margins. In order to avoid additional work and associated additional costs for project completion, project and product specifications are already clearly and precisely defined in the contract offers through interdepartmental cooperation. Specific project risks also exist, in particular with regard to contracts concluded with Shanghai Electric Group and China Energy Investment Corporation Limited for the supply of a CIGS production line, and a CIGS research line with a total order volume of EUR 263 million. Project handling risk is reduced through the use of external project management experts experienced in such major projects, some of whom are also temporarily engaged, as well as through a monthly steering committee, which also includes all members of the Managing Board.

Personnel risks

For the corporate success of a high-tech equipment manufacturer, qualified and motivated managers and employees are of decisive importance. The departure of executives or key employees could have a negative impact on the company's business performance, thereby affecting its net assets, financial position and operational results. At the same time, there is also a risk that the company will not be able to hire a sufficient number of new, suitable executives or additional employees. Manz creates a positive working environment with measures such as flexible working time models or employees' financial participation in the success of the company, and can therefore retain employees and expertise in the company in the long term. As a listed company, Manz AG enjoys greater attention from potential employees than do unlisted companies. This allows Manz AG to better present its offerings to employees, such as flat hierarchies, exciting activities, flexible working hours, and well-equipped workplaces. However, it also brings extra attention in economically challenging times, which can temporarily make it harder to recruit. Another positive aspect of stock market listing is the ability to bind employees more closely to the company through the issue of shares and a corresponding profit share.

Liquidity and financing risks

The parent company Manz AG is currently financed by bank balances and a small cash credit line. The subsidiaries in Slovakia, Hungary, Italy, China and Taiwan are financed primarily through short-term overdraft facilities and, to a lesser extent, long-term loans. As of the balance sheet date, December 31, 2019, the Manz Group had cash and cash equivalents amounting to EUR 44.0 million and free cash availability and guaranteed credit lines in the amount of EUR 18.0 million (previous year: EUR 14.6 million). The Manz companies are required, where possible, to process orders cash positive in order to reduce liquidity and financing risks. Here, the deposits should exceed the payouts over the entire term of the respective project. As usual in project-based business, a delay on incoming orders or payments has significant effects on liquidity or the relevant company and possibly also on the Group. In order to recognize risks from delayed payments in a timely manner, the Manz Group works with a rolling liquidity forecast, which is updated bi-weekly. Based on current corporate planning, the Managing Board believes that Manz AG will be able to meet its payment obligations in the financial years 2020 and 2021.

Currency risks

Manz AG's currency risks arise from operating activities. In financial year 2019, these mainly related to transactions of the Asian companies from the sale of machinery. The transaction-related exchange rate risk resulting from the appreciation or depreciation of the US dollar against the New Taiwan Dollar, the euro against the New Taiwan Dollar and the euro against the Hong Kong Dollar is generally hedged by forward exchange transactions wherever necessary and possible. Furthermore, economic currency risk is generally also reduced by distributing the production locations over several countries (natural hedging).

3.2.2 Strategic Risks

Risks from the strategic focus on dynamic growth markets

As a high-tech equipment manufacturer, Manz AG focuses on rapidly growing future markets with short product life cycles. With its production solutions, Manz contributes to the development of central technologies. For instance, numerous components for smartphones and tablet computers, batteries for electric vehicles, consumer electronics and stationary energy storage devices as well as solar modules are produced on Manz machines. This market positioning on highly competitive and innovation-driven markets bears the risk of a competitive disadvantage due to insufficient structural flexibility, insufficient expertise or a slow pace of development. In order to avoid this, the respective segments therefore always endeavor to recognize customer requirements and future technological trends in the industries at an early stage. Based on this knowledge, the company derives innovations with unique selling points in order to stay one step ahead of the competition. The innovation approaches are presented and discussed by the business units in a group-wide strategy meeting every six months and their implementation is approved after a detailed, positive review.

Dependence on major customers and industries

The development of production facilities for industrial companies entails the risk of a concentration in the order volume on individual projects, sectors and customers. For example, in financial year 2019 Manz AG recorded around 40 % of its revenues with three customers, with the Display division being of particular importance in this regard as a result of the processing of a major order. If the loss of a major client cannot be compensated for, negative effects on the Manz Group's results are to be expected. For this reason, Manz pursues the goal of achieving a balanced order structure within its three strategic segments. In this regard, modularly combinable machines and machine components, as well as "small lines" and major projects (> EUR 10 million order volume) should be balanced. The risk of a decline in major customers is to be reduced in principle by broadening the customer base and diversifying project volumes and the business model. In addition, Manz accepts third-party business in the Contract Manufacturing segment in order to achieve balanced capacity utilization despite the cyclical development of its strategic business divisions.

3.2.3 Market risks

Risks in connection with international business activities

Negative macroeconomic and financial developments in the international sales markets may have negative effects on business development. As a result, refinancing for Manz as a listed company via the capital market could become significantly more difficult. With potential clients of Manz AG in general, there is a risk that the necessary capital for investments in new equipment may not be available based on the markets, some of which are still young. As a result, Manz constantly monitors and analyzes the market and the competition in order to recognize such developments at an early stage and to counteract them. The flexibility of the entire corporate organization, the expansion of the product portfolio, the customer base and global sales capacities, and the focus on growth markets of the three core regions of Asia, Europe and the United States make it possible to react quickly to negative changes in individual markets.

Risks due to increasing competition

Existing and potential competitors, especially Asian manufacturers, could seek to gain market share in Manz AG's target industries, notably through aggressive pricing, imbalances through local tax and subsidy policies by states and governments, or through import restrictions to support national companies. A further risk is that there are too many new competitors, resulting in an oversupply on the market and, as a consequence, consolidation among companies. This could have a direct impact on the development of the company's market share and thus on Manz AG's sales, revenues and earnings. In order to counteract these risks effectively, the "Market Intelligence" division constantly conducts market and competitive surveys, which are discussed in detail in international sales meetings on a regular basis and serve as a basis for possible countermeasures. Furthermore, the CRM system (Customer Relationship Management System) provides leading indicators for assessing future market development. A detailed analysis of lost projects provides clarity about the competitive situation in a timely manner. The process of "product identification, development and market launch" also aims to provide the necessary competitive advantage on growth markets with strategic innovations and to further strengthen Manz AG's position as a high-tech equipment manufacturer. With its local facilities in Taiwan and China, the associated production costs that are standard for the local area, and direct customer contacts, Manz counteracts any churn to domestic competitors. Strategic cooperations, for example in the Energy Storage segment with the Chinese company Shenzhen Yinghe Technology

Co. Ltd. are also aimed at streamlining the individual service portfolio by focusing, thereby reducing the cost base and increasing the company's competitiveness.

Risks from rapid technological change and from launching new products

Research and development as well as an innovative product portfolio are of crucial importance for the company to maintain its technological high-end positioning in the market. The industries for which Manz AG develops and manufactures its machines and equipment are characterized by rapid technological change. Substitutive or disruptive technologies may occupy substantial parts of an existing market. As a result, Manz AG's competitors may be able to react faster or better to changes in customer requirements by developing corresponding technologies or software, thus gaining a competitive advantage over Manz AG. In these cases, the demand for the products of Manz AG could be significantly impaired. Furthermore, the Manz Group could develop machines and equipment for which there is little or no demand on the market. There is also a risk that the completion of new products currently under development may prove to be more complex than expected in the future. Problems with, e.g., technical feasibility, quality assurance, failure to meet deadlines, increased costs, etc., could at worst lead to the loss of customers in conjunction with financial losses. Manz AG endeavors to maintain close contact with its clients and thus to recognize new trends at an early stage. Furthermore, in the Business Development segment, we are also working on new application possibilities for the technologies developed by Manz. The proximity to the customer further enhances Manz AG through the constant expansion of the associated service business, in particular with after-sales service. Based on our risk analysis, Manz also pursues the goal of ensuring that projects and products are implemented in line with contractual agreements. Manz AG also counters the fundamental risk involved in developing and launching new products for individual customers by expanding its product portfolio, to include machine components which can be customized to form modular assemblies or complete production machines at the customer's request.

3.2.4 Environmental risks

Risks related to pandemics

As an internationally active high-tech engineering company, Manz AG has production facilities in Germany, China, Taiwan, Slovakia, Hungary, and Italy, as well as global service branches. Activities in regions with less developed healthcare systems could have a negative impact on the company's business in the region in the event of pandemics and the resulting production stops, thus impacting the company's net assets, financial position and results of operations. In this context, the outbreak of the corona virus could have a negative impact in particular on the processing of our customer projects in the Solar and Electronic Components segments in Asia. Although appropriate travel guidelines and precautionary measures are intended to minimize the potential health risk for travelling employees, they are exposed to a higher risk of infection and may also transmit diseases to employees in other regions.

3.3 Opportunities Report

Industry focus with competitive and customer-oriented, innovative technology portfolio

With many years of proven expertise in automation, laser processing, vision processing, metrology, wet chemistry and roll-to-roll processes, Manz AG is active in the Solar, Electronics and Energy Storage segments. Manz AG offers a broad portfolio of innovative products to producers and their suppliers in a wide variety of industries worldwide. This includes customer-specific production systems right up to machines that can be linked together to form complete, individual system solutions based on a modular system. Manz AG also offers services around its core technological competencies. Diversification in technologies, industries and regions is aimed at adjusting production capacities in line with the investment cycles of individual industries and using them by other segments within the Group. This should create the stability necessary for sustainable corporate development. At the same time, this diversified business model gives the company the opportunity to benefit from the growth potential of several dynamic target markets. The company has, for example, opened up a further significant area in connection with the electric power trains in electric vehicles with a major order from a Tier 1 automotive supplier for machines for the automated assembly of cell contacting systems for battery cells.

Sustainable competitiveness and profitability through profitable growth

Manz AG's diversified business model forms the basis for the sustained stability and long-term growth we are striving for. With the aim of significantly expanding its customer base and thus further stabilizing its business model, Manz AG is constantly expanding the proportion of modular machines in its product portfolio for all segments, in addition to customized solutions. These modular machines should be intelligently linked to complete, individual system solutions based on a modular system. This step should significantly reduce development risks, effort and duration and thus significantly shortens the amortization of development efforts. At the same time, this should create synergy effects for Manz AG which support the productivity of the entire Group. Cost-conscious management is of crucial importance for the profitable development of a company. The diversified business model and ongoing measures to optimize costs are aimed at maintaining long-term competitiveness and profitability.

Cross-segment technology deployment offers possibilities for synergy effects and flexibility

In developing its production systems, Manz AG carries out an active technology transfer between the relevant target industries. By using its extensive technological expertise across industries, the company generates synergies and thus aims to make a contribution to minimizing its customers' production costs, thus contributing to their economic production. At the same time, the synergy effects achieved between the segments should increase the Manz Group's productivity and profitability. By leveraging the synergies between the individual segments, Manz AG's business model is also flexibly positioned for new growth trends and sales markets with additional revenues and earnings potential.

Strategic cooperation with Chinese partners opens up growth potential

By entering into the strategic cooperation agreement between Manz AG, Shanghai Electric Group, and the Shenhua Group at the beginning of 2017, the partners have formed a strategic cooperation in the CIGS thin-film sector, in which they have bundled their individual strengths. China Energy Investment Corporation Limited is one of China's largest energy producers. Shanghai Electric is China's leading supplier of equipment to generate electricity, with extensive experience in the renewable energies sector. As a high-tech equipment manufacturer, Manz AG has contributed its CIGS technology and its CIGS research team to this cooperation. With the establishment of NICE Solar Energy GmbH in April 2017 and the development resources thus available, the partners have been able to accelerate the further development of CIGS technology. It was only at the end of 2019 that NICE Solar Energy succeeded in increasing the efficiency of CIGS thin-film solar modules to a world record of 17.6%. By combining their complementary expertise in power generation, large-scale equipment and plant manufacturing, and cutting-edge technology, the partners form a strong alliance to further develop and commercialize CIGS technology in China and around the world. Manz also entered into a strategic alliance with a Chinese partner in the Energy Storage segment at the start of 2020. Shenzhen Yinghe Technology Co. Ltd. was formed in 2006 and is engaged in research and development, production and sales of intelligent automation solutions for the manufacture of lithium-ion battery cells. As part of this cooperation, Manz and Yinghe will jointly offer their customers the best equipment technology from their respective product portfolios within the scope of a licensing model. In addition to joint project management, both partners have agreed to provide mutual support for research and development activities in conjunction with production equipment for lithium-ion batteries. With this step, Manz is pursuing the goal of significantly improving its own starting position when placing orders for projects to be implemented in future, and thus being able to benefit from the market potential.

4.4 Assessment and Summary of the Risk and Opportunity Situation

Manz AG's risk portfolio consists of risks that can be influenced by the Group as well as risks that cannot be influenced, such as economic activity and sector development. The company regularly monitors and analyses the situation in these areas. Risks that can be influenced are identified at an early stage by appropriate monitoring and control systems and should therefore be avoided. Significant risks, which are likely to have serious negative effects on the ecological or social aspects, cannot be deduced from the business model of Manz AG.

The identification of risks and opportunities has not given rise to any risks that could jeopardize the continued existence of the entire Group or its Group companies for the financial year 2019 or for the forecast period 2020. Risks that endanger the continued existence of the company are defined as risks with a probability of occurrence of more than 60 % and a financial impact on EBIT of more than EUR 20 million. The general risk and opportunity situation in the financial year 2019 remains unchanged from the previous year. Risks which do not have any or little relevance according to the risk management system in comparison with the preceding year have not been shown in the current risk report. The risks and their possible effects are known, as are the measures to be introduced. The resulting opportunities are analyzed and, if necessary, implementation is initiated. Risks that arise in the financial year 2020 (forecast period) and could lead to deviations in the development of revenue and/or earnings are evaluated as follows:

Risks	Impact	Probability of occurrence	Net risk in millions of euros
Operating risks			
Project risks	■■■	■	5
Personnel risks	■■	■■■	3.75
Liquidity and financing risks	■■■	■	5
Currency risks	■■	■	1.25
Strategic risks			
Risks from the strategic focus on dynamic growth markets	■■	■■■	3.75
Dependence on major customers and industries	■■■	■	5
Market risks			
Risks in connection with international business activities	■■	■	1.25
Risks due to increasing competition	■■	■■■	3.75
Risks arising from rapid technological change and the market launch of new products	■■	■■■	3.75
Environmental risks			
Risks related to pandemics	■■	■■	2.5

Opportunities	Impact	Probability of occurrence
Industry focus with competitive and customer-oriented, innovative technology portfolio	■■■	■■■
Sustainable competitiveness and profitability through profitable growth	■■■	■■■
Cross-segmental use of technology offers synergy effects and flexibility	■■■	■■■
Strategic cooperation with Chinese partners opens up growth potential	■■	■■■

The Managing Board of Manz AG thus fulfills its obligation to inform the Supervisory Board and shareholders about the opportunities and risks of the company. It regards this reporting as an important element of corporate governance in practice.

From today's perspective, there are no existential risks to the future development of Manz AG that could have a material adverse effect on the Group's assets, financial and earnings situation.

5. Forecast Report

5.1 Economic and Industry Outlook

According to the Kiel Institute for the World Economy, the slowdown in the major economies will continue in 2020 as well. Overall, however, the major economies remain on a slower growth course. An impending deterioration in the environment for international trade is noted as the key influencing factor. The associated deterioration in the investment climate represents an additional risk for the economy. Against this background, global economic growth of 3.1 % is forecast for 2020, after 3.0 % in 2019. At 1.5 % (2019: 2.3 %), the US is growing significantly more slowly than the global average, as is Europe at 1.2 % (2019: 1.4 %). Germany itself is defying the global trend and is expected to grow 1.1 % in 2020 after a rate of 0.5 % in 2019. Economic growth in China will be weaker again in 2020 than previously, with Kiel's economists expecting only 5.9 % growth (2019: 6.2 %). For 2020, the German Engineering Federation (VDMA) expects revenues to decline by –2 % as had likewise been the case for 2019. The Chinese market, which is critical to Manz, is expected to grow by 2 % (2019: 4 %).
In the critical customer segments of Manz AG, German manufacturers of PV production equipment are significantly more positive than last year, expecting an average increase in revenue of 2.7 % (2019: –15.9 %). IHS Markit once again expects a significant increase in newly installed capacity of 142 GW in 2020 (2019: 125 GW).
According to the German Engineering Federation (VDMA), German electronics manufacturers expect revenue to increase by 5.1 % in 2020 (2019: 6.4 %). IHS Markit expects a slight year-on-year increase of 5.3 % in 2020 in the global market for LCD and AMOLED displays, following a market correction and the associated decline in revenue in the past year. The share of revenue is shifting slightly in favor of the AMOLED displays, for which a revenue share of 28.7 % is expected in 2020 (2019: 23.2 %). The revenue share of LCD displays in the market as a whole is therefore decreasing slightly from 76.8 % in 2019 to 71.3 %. According to Prismark, global printed circuit boards revenue should grow by 2.9 % in 2020 compared to the previous year (2019: 2.9 %).
German manufacturers expect revenue to increase by 9 % compared to 4 % in the previous year in the segment Energy Storage, according to VDMA 2020. Global demand for lithium-ion batteries is also expected to grow strongly after several very dynamic years. For 2020, the Frauenhofer Institute forecasts total requirements of some 270 GWH, whereby the lion’s share will once more comprise automotive applications.

5.2 Overall Assessment of the Company's Future Development

Given the overall positive outlook for the industry in the countries and markets relevant to Manz AG, the Managing Board is confident that Manz AG's revenues and total operating performance will grow significantly by 30 - 40% in 2020. Compared to 2019, the Managing Board anticipates a positive EBITDA margin in the mid single-digit percentage range and a balanced EBIT margin. The equity ratio is expected to exceed 25%; with regard to gearing, the Managing Board is forecasting a figure comparable to 2019.

The forecast takes into account the currently assessable effects of the corona pandemic on the economic development of our Company, but is based on the assumption that the further spread of the virus will have no additional negative impact on the development of our business, in the Solar, Electronics, Energy Storage and Contract Manufacturing segments, in fiscal year 2020.

At the segment level, the Management Board expects significant revenue growth of between 250% and 300% for Energy Storage in 2020, while the Management Board also anticipates slight revenue growth in the Service segment. In the Solar segment, the Management Board expects a significant increase in revenue compared with the previous year. Due to the delays in the overall project caused by customers and the effects of the corona epidemic, the Board of Directors expects final acceptance of the machines and receipt of payment of the remaining amount of around EUR 50 million and the placement of a follow-up order for a turnkey production line for CIGS thin-film solar modules until the first quarter of the 2021 fiscal year. An increase in sales is also expected in the Electronics segment and in the Contract Manufacturing segment the Board of Directors expects sales to be comparable to the previous year. The overall positive expectations for 2020 are underlined by a positive trend in the intensity of enquiries, order intake and a solid order backlog of EUR 462.0 million as of 31 December 2019 (previous year: EUR 368.5 million).

The goal of the Managing Board is to further develop the comprehensive technology portfolio on the one hand, and to strengthen and expand Manz AG's favorable market position in all segments on the other.

Forward-looking Statements

This report contains forward-looking statements, which are based on the current assumptions and forecasts of Manz AG's Managing Board. Such statements are subject to risks and uncertainties. These and other factors could cause the actual results, financial position, developments, or performance of the company to differ materially from the estimates given here. The company assumes no obligation to update these forward-looking statements or adapt them to future events or developments.

Reutlingen, March 13, 2020

Manz AG

Martin Drasch Chief Executive Officer	Manfred Hochleitner	Jürgen Knie

Engagement Terms, Liability and Conditions of Use

We, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, conducted our audit of this financial reporting on behalf of the Company. Besides satisfying the legal disclosure requirement (Sec. 325 HGB ["Handelsgesetzbuch": German Commercial Code]) for statutory audits, the audit opinion is addressed exclusively to the Company and was issued for internal purposes only. It is not intended for any other purpose or to serve as a decision-making basis for third parties. The result of voluntary audits summarized in the audit opinion is thus not intended to serve as a decision-making basis for third parties and must not be used for purposes other than those intended.

Our work is based on our engagement agreement for the audit of these financial statements including the General Engagement Terms for "Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften" [German Public Auditors and Public Audit Firms] as issued by the Institute of Public Auditors in Germany ["Institut der Wirtschaftsprüfer": IDW] on 1 January 2002.

To clarify, we point out that we assume no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the audit opinion to reflect events or circumstances arising after it was issued, unless required to do so by law.

It is the sole responsibility of anyone taking note of the summarized result of our work contained in this audit opinion to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

[Translator's notes are in square brackets]

General Engagement Terms
for
Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften
[German Public Auditors and Public Audit Firms]
as of January 1, 2017

1. Scope of application

(1) These engagement terms apply to contracts between German Public Auditors (*Wirtschaftsprüfer*) or German Public Audit Firms (*Wirtschaftsprüfungsgesellschaften*) – hereinafter collectively referred to as "German Public Auditors" – and their engaging parties for assurance services, tax advisory services, advice on business matters and other engagements except as otherwise agreed in writing or prescribed by a mandatory rule.

(2) Third parties may derive claims from contracts between German Public Auditors and engaging parties only when this is expressly agreed or results from mandatory rules prescribed by law. In relation to such claims, these engagement terms also apply to these third parties.

2. Scope and execution of the engagement

(1) Object of the engagement is the agreed service – not a particular economic result. The engagement will be performed in accordance with the German Principles of Proper Professional Conduct (*Grundsätze ordnungsmäßiger Berufsausübung*). The German Public Auditor does not assume any management functions in connection with his services. The German Public Auditor is not responsible for the use or implementation of the results of his services. The German Public Auditor is entitled to make use of competent persons to conduct the engagement.

(2) Except for assurance engagements (*betriebswirtschaftliche Prüfungen*), the consideration of foreign law requires an express written agreement.

(3) If circumstances or the legal situation change subsequent to the release of the final professional statement, the German Public Auditor is not obligated to refer the engaging party to changes or any consequences resulting therefrom.

3. The obligations of the engaging party to cooperate

(1) The engaging party shall ensure that all documents and further information necessary for the performance of the engagement are provided to the German Public Auditor on a timely basis, and that he is informed of all events and circumstances that may be of significance to the performance of the engagement. This also applies to those documents and further information, events and circumstances that first become known during the German Public Auditor's work. The engaging party will also designate suitable persons to provide information.

(2) Upon the request of the German Public Auditor, the engaging party shall confirm the completeness of the documents and further information provided as well as the explanations and statements, in a written statement drafted by the German Public Auditor.

4. Ensuring independence

(1) The engaging party shall refrain from anything that endangers the independence of the German Public Auditor's staff. This applies throughout the term of the engagement, and in particular to offers of employment or to assume an executive or non-executive role, and to offers to accept engagements on their own behalf.

(2) Were the performance of the engagement to impair the independence of the German Public Auditor, of related firms, firms within his network, or such firms associated with him, to which the independence requirements apply in the same way as to the German Public Auditor in other engagement relationships, the German Public Auditor is entitled to terminate the engagement for good cause.

5. Reporting and oral information

To the extent that the German Public Auditor is required to present results in writing as part of the work in executing the engagement, only that written work is authoritative. Drafts are non-binding. Except as otherwise agreed, oral statements and explanations by the German Public Auditor are binding only when they are confirmed in writing. Statements and information of the German Public Auditor outside of the engagement are always non-binding.

6. Distribution of a German Public Auditor's professional statement

(1) The distribution to a third party of professional statements of the German Public Auditor (results of work or extracts of the results of work whether in draft or in a final version) or information about the German Public Auditor acting for the engaging party requires the German Public Auditor's written consent, unless the engaging party is obligated to distribute or inform due to law or a regulatory requirement.

(2) The use by the engaging party for promotional purposes of the German Public Auditor's professional statements and of information about the German Public Auditor acting for the engaging party is prohibited.

7. Deficiency rectification

(1) In case there are any deficiencies, the engaging party is entitled to specific subsequent performance by the German Public Auditor. The engaging party may reduce the fees or cancel the contract for failure of such subsequent performance, for subsequent non-performance or unjustified refusal to perform subsequently, or for unconscionability or impossibility of subsequent performance. If the engagement was not commissioned by a consumer, the engaging party may only cancel the contract due to a deficiency if the service rendered is not relevant to him due to failure of subsequent performance, to subsequent non-performance, to unconscionability or impossibility of subsequent performance. No. 9 applies to the extent that further claims for damages exist.

(2) The engaging party must assert a claim for the rectification of deficiencies in writing (*Textform*) [*Translators Note: The German term "Textform" means in written form, but without requiring a signature*] without delay. Claims pursuant to paragraph 1 not arising from an intentional act expire after one year subsequent to the commencement of the time limit under the statute of limitations.

(3) Apparent deficiencies, such as clerical errors, arithmetical errors and deficiencies associated with technicalities contained in a German Public Auditor's professional statement (long-form reports, expert opinions etc.) may be corrected – also versus third parties – by the German Public Auditor at any time. Misstatements which may call into question the results contained in a German Public Auditor's professional statement entitle the German Public Auditor to withdraw such statement – also versus third parties. In such cases the German Public Auditor should first hear the engaging party, if practicable.

8. Confidentiality towards third parties, and data protection

(1) Pursuant to the law (§ [Article] 323 Abs 1 [paragraph 1] HGB [German Commercial Code: *Handelsgesetzbuch*], § 43 WPO [German Law regulating the Profession of Wirtschaftsprüfer: *Wirtschaftsprüferordnung*], § 203 StGB [German Criminal Code: *Strafgesetzbuch*]) the German Public Auditor is obligated to maintain confidentiality regarding facts and circumstances confided to him or of which he becomes aware in the course of his professional work, unless the engaging party releases him from this confidentiality obligation.

(2) When processing personal data, the German Public Auditor will observe national and European legal provisions on data protection.

9. Liability

(1) For legally required services by German Public Auditors, in particular audits, the respective legal limitations of liability, in particular the limitation of liability pursuant to § 323 Abs. 2 HGB, apply.

(2) Insofar neither a statutory limitation of liability is applicable, nor an individual contractual limitation of liability exists, the liability of the German Public Auditor for claims for damages of any other kind, except for damages resulting from injury to life, body or health as well as for damages that constitute a duty of replacement by a producer pursuant to § 1 ProdHaftG [German Product Liability Act: *Produkthaftungsgesetz*], for an individual case of damages caused by negligence is limited to € 4 million pursuant to § 54 a Abs. 1 Nr. 2 WPO.

(3) The German Public Auditor is entitled to invoke demurs and defenses based on the contractual relationship with the engaging party also towards third parties.

(4) When multiple claimants assert a claim for damages arising from an existing contractual relationship with the German Public Auditor due to the German Public Auditor's negligent breach of duty, the maximum amount stipulated in paragraph 2 applies to the respective claims of all claimants collectively.

(5) An individual case of damages within the meaning of paragraph 2 also exists in relation to a uniform damage arising from a number of breaches of duty. The individual case of damages encompasses all consequences from a breach of duty regardless of whether the damages occurred in one year or in a number of successive years. In this case, multiple acts or omissions based on the same source of error or on a source of error of an equivalent nature are deemed to be a single breach of duty if the matters in question are legally or economically connected to one another. In this event the claim against the German Public Auditor is limited to € 5 million. The limitation to the fivefold of the minimum amount insured does not apply to compulsory audits required by law.

(6) A claim for damages expires if a suit is not filed within six months subsequent to the written refusal of acceptance of the indemnity and the engaging party has been informed of this consequence. This does not apply to claims for damages resulting from scienter, a culpable injury to life, body or health as well as for damages that constitute a liability for replacement by a producer pursuant to § 1 ProdHaftG. The right to invoke a plea of the statute of limitations remains unaffected.

10. Supplementary provisions for audit engagements

(1) If the engaging party subsequently amends the financial statements or management report audited by a German Public Auditor and accompanied by an auditor's report, he may no longer use this auditor's report.

If the German Public Auditor has not issued an auditor's report, a reference to the audit conducted by the German Public Auditor in the management report or any other public reference is permitted only with the German Public Auditor's written consent and with a wording authorized by him.

(2) If the German Public Auditor revokes the auditor's report, it may no longer be used. If the engaging party has already made use of the auditor's report, then upon the request of the German Public Auditor he must give notification of the revocation.

(3) The engaging party has a right to five official copies of the report. Additional official copies will be charged separately.

11. Supplementary provisions for assistance in tax matters

(1) When advising on an individual tax issue as well as when providing ongoing tax advice, the German Public Auditor is entitled to use as a correct and complete basis the facts provided by the engaging party – especially numerical disclosures; this also applies to bookkeeping engagements. Nevertheless, he is obligated to indicate to the engaging party any errors he has identified.

(2) The tax advisory engagement does not encompass procedures required to observe deadlines, unless the German Public Auditor has explicitly accepted a corresponding engagement. In this case the engaging party must provide the German Public Auditor with all documents required to observe deadlines – in particular tax assessments – on such a timely basis that the German Public Auditor has an appropriate lead time.

(3) Except as agreed otherwise in writing, ongoing tax advice encompasses the following work during the contract period:

a) preparation of annual tax returns for income tax, corporate tax and business tax, as well as wealth tax returns, namely on the basis of the annual financial statements, and on other schedules and evidence documents required for the taxation, to be provided by the engaging party

b) examination of tax assessments in relation to the taxes referred to in (a)

c) negotiations with tax authorities in connection with the returns and assessments mentioned in (a) and (b)

d) support in tax audits and evaluation of the results of tax audits with respect to the taxes referred to in (a)

e) participation in petition or protest and appeal procedures with respect to the taxes mentioned in (a).

In the aforementioned tasks the German Public Auditor takes into account material published legal decisions and administrative interpretations.

(4) If the German Public auditor receives a fixed fee for ongoing tax advice, the work mentioned under paragraph 3 (d) and (e) is to be remunerated separately, except as agreed otherwise in writing.

(5) Insofar the German Public Auditor is also a German Tax Advisor and the German Tax Advice Remuneration Regulation (*Steuerberatungsvergütungsverordnung*) is to be applied to calculate the remuneration, a greater or lesser remuneration than the legal default remuneration can be agreed in writing (*Textform*).

(6) Work relating to special individual issues for income tax, corporate tax, business tax, valuation assessments for property units, wealth tax, as well as all issues in relation to sales tax, payroll tax, other taxes and dues requires a separate engagement. This also applies to:

a) work on non-recurring tax matters, e.g. in the field of estate tax, capital transactions tax, and real estate sales tax**;**

b) support and representation in proceedings before tax and administrative courts and in criminal tax matters;

c) advisory work and work related to expert opinions in connection with changes in legal form and other re-organizations, capital increases and reductions, insolvency related business reorganizations, admission and retirement of owners, sale of a business, liquidations and the like, and

d) support in complying with disclosure and documentation obligations.

(7) To the extent that the preparation of the annual sales tax return is undertaken as additional work, this includes neither the review of any special accounting prerequisites nor the issue as to whether all potential sales tax allowances have been identified. No guarantee is given for the complete compilation of documents to claim the input tax credit.

12. Electronic communication

Communication between the German Public Auditor and the engaging party may be via e-mail. In the event that the engaging party does not wish to communicate via e-mail or sets special security requirements, such as the encryption of e-mails, the engaging party will inform the German Public Auditor in writing (*Textform*) accordingly.

13. Remuneration

(1) In addition to his claims for fees, the German Public Auditor is entitled to claim reimbursement of his expenses; sales tax will be billed additionally. He may claim appropriate advances on remuneration and reimbursement of expenses and may make the delivery of his services dependent upon the complete satisfaction of his claims. Multiple engaging parties are jointly and severally liable.

(2) If the engaging party is not a consumer, then a set-off against the German Public Auditor's claims for remuneration and reimbursement of expenses is admissible only for undisputed claims or claims determined to be legally binding.

14. Dispute Settlement

The German Public Auditor is not prepared to participate in dispute settlement procedures before a consumer arbitration board (*Verbraucherschlichtungsstelle*) within the meaning of § 2 of the German Act on Consumer Dispute Settlements (*Verbraucherstreitbeilegungsgesetz*).

15. Applicable law

The contract, the performance of the services and all claims resulting therefrom are exclusively governed by German law.