ANNEX 2

METSO MINERALS
AUDITED CARVE-OUT FINANCIAL STATEMENTS AS AT AND FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016

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COMBINED STATEMENT OF INCOME

EUR million	Note	2018	2017	2016
Sales	1.1, 1.2	2,580	2,177	2,059
Sales, Metso Group		0	0	0
Sales, total		2,581	2,177	2,059
Cost of sales	1.5, 3.3	(1,867)	(1,623)	(1,506)
Gross profit		714	554	553
Selling and marketing expenses	1.3, 1.5, 3.3	(222)	(218)	(218)
Administrative expenses		(185)	(166)	(159)
Research and development expenses		(23)	(13)	(20)
Other operating income and expenses, net	1.4	(16)	(1)	3
Share of results of associated companies	5.2	0	0	0
Operating profit		268	156	159
Finance income	1.7	4	11	7
Finance income, Metso Group	5.4	5	7	10
Foreign exchange gains/losses	1.7	0	0	(2)
Finance expenses	1.7	(36)	(45)	(44)
Finance expenses, Metso Group	5.4	0	0	0
Finance income and expenses, net		(26)	(28)	(29)
Profit before taxes		242	128	129
Income taxes	1.8	(72)	(58)	(38)
Profit for the period		169	70	91
Attributable to:				
Equity holders of Metso Minerals		170	70	91
Non-controlling interests		(1)	0	0
		169	70	91

COMBINED STATEMENT OF COMPREHENSIVE INCOME

EUR million	Note	2018	2017	2016
Profit for the year		169	70	91
Other comprehensive income:				
Cash flow hedges, net of tax	1.8, 4.4, 4.8	(1)	2	(2)
Currency translation on subsidiary net investments	1.8, 4.4	(15)	(29)	21
Items that may be reclassified to profit or loss in subsequent periods		(16)	(27)	19
Defined benefit plan actuarial gains (+) / losses (-), net of tax	1.8, 2.8	1	(2)	2
Items that will not be reclassified to profit or loss		1	(2)	2
Other comprehensive income		(15)	(29)	21
Total comprehensive income		154	42	112
Attributable to:				
Equity holders of Metso Minerals		155	42	112
Non-controlling interests		(1)	0	0
		154	42	112

COMBINED BALANCE SHEET – ASSETS

EUR million	Note	2018	2017	2016
Non-current assets				
Intangible assets	3.1, 3.3			
Goodwill		462	446	430
Other intangible assets		63	69	75
Total intangible assets		526	515	505
Property, plant and equipment	3.2, 3.3			
Land and water areas		35	38	39
Buildings and structures		75	80	91
Machinery and equipment		106	106	116
Assets under construction		31	10	6
Total property, plant and equipment		246	233	251
Other non-current asset				
Investments in associated companies	5.2	4	1	1
Non-current financial assets	4.2	3	3	1
Loan receivables	4.2	6	3	3
Loan receivables, Metso Group	5.4	49	70	106
Derivative financial instruments	4.8	3	2	8
Deferred tax asset	1.8	81	74	90
Other non-current receivables	2.3	38	28	32
Other non-current receivables, Metso Group	2.2, 2.3, 4.2, 5.4	137	83	104
Total other non-current assets		321	262	344
Total non-current assets		1,094	1,010	1,100
Current assets				
Inventories	2.4	790	612	555
Trade receivables	2.2	493	416	382
Trade receivables, Metso Group	5.4	8	8	23
Customer contract assets	1.2	82	66	67
Loan receivables		1	0	9
Loan receivables, Metso Group	5.4	33	23	27
Cash pool receivables, Metso Group	5.4	20	27	39
Derivative financial instruments	4.8	9	12	8
Income tax receivables	1.8	21	37	19
Other current receivables	2.3	102	101	120
Other current receivables, Metso Group		1	0	1
Deposits and securities, maturity more than three months		76	248	241
Cash and cash equivalents		249	453	403
Liquid funds	4.3	325	701	644
Total current assets		1,885	2,005	1,894
TOTAL ASSETS		2,979	3,015	2,994

COMBINED BALANCE SHEET – EQUITY AND LIABILITIES

EUR million	Note	2018	2017	2016
Equity	4.4			
Cumulative translation adjustments		(153)	(138)	(109)
Hedge reserve		(3)	(2)	4
Invested equity and retained earnings		1,328	1,199	1,283
Equity attributable to equity holders of Metso Minerals		1,173	1,059	1,170
Non-controlling interests		10	7	7
Total equity		1,183	1,066	1,177
Liabilities				
Non-current liabilities				
Borrowings	4.2, 4.5	383	554	767
Post-employment benefit obligations	2.7	57	60	70
Provisions	2.6	27	35	38
Derivative financial instruments	4.8	2	0	5
Deferred tax liability	1.8	26	17	10
Other non-current liabilities		2	2	2
Other non-current liabilities, Metso group		6	6	6
Total non-current liabilities		502	673	899
Current liabilities				
Borrowings	4.2, 4.5	209	300	26
Cash pool liabilities, Metso Group	5.4	81	136	151
Trade payables	2.5	374	297	232
Trade payables, Metso Group	5.4	1	1	8
Provisions	2.6	59	66	75
Advances received		189	171	165
Customer contract liabilities	1.2	100	58	54
Derivative financial instruments	4.8	13	9	20
Income tax liabilities	1.8	58	66	43
Other current liabilities	2.5	210	171	142
Other current liabilities, Metso Group	5.4	0	1	0
Total current liabilities		1,294	1,276	917
Total liabilities		1,796	1,949	1,816
TOTAL EQUITY AND LIABILITIES		2,979	3,015	2,994

COMBINED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

EUR million	Cumulative translation adjustments	Hedge reserve	Invested equity and retained earnings	Equity attributable to Metso Minerals shareholders	Non-controlling interests	Total equity
Jan 1, 2016	(129)	(2)	1,289	1,157	8	**1,166**
Profit for the year	-	-	91	91	0	**91**
Other comprehensive income						
Cash flow hedges, net of tax	-	(2)	-	(2)	-	**(2)**
Currency translation on subsidiary net investments	21	-	-	21	-	**21**
Defined benefit plan actuarial gains (+) / losses (-), net of tax	-	-	2	2	-	**2**
Total comprehensive income	21	(2)	93	112	0	**112**
Dividends to shareholders of Metso Oyj	-	-	(126)	(126)	0	**(126)**
Dividends, Metso Group	-	-	(11)	(11)	-	**(11)**
Changes in invested equity	-	-	37	37	-	**37**
Net change from winding up the consolidated tax groups	-	-	0	0	-	**0**
Other items	-	-	0	0	0	**0**
Changes in non-controlling interests	-	-	0	0	0	**0**
Dec 31, 2016	(109)	(4)	1,283	1,170	7	**1,177**
Jan 1, 2017	(109)	(4)	1,283	1,170	7	**1,177**
Profit for the year	-	-	70	70	0	**70**
Other comprehensive income						
Cash flow hedges, net of tax	-	2	-	2	-	**2**
Currency translation on subsidiary net investments	(29)	-	-	(29)	0	**(29)**
Defined benefit plan actuarial gains (+) / losses (-), net of tax	-	-	(2)	(2)	-	**(2)**
Total comprehensive income	(29)	2	68	42	0	**42**
Dividends to shareholders of Metso Oyj	-	-	(126)	(126)	0	**(126)**
Dividends, Metso Group	-	-	(6)	(6)	-	**(6)**
Donations to universities	-	-	(1)	(1)	-	**(1)**
Share-based payments, net of tax	-	-	0	0	-	**0**
Changes in invested equity	-	-	1	1	-	**1**
Net change from winding up the consolidated tax groups	-	-	(22)	(22)	-	**(22)**
Other items	-	-	1	1	0	**0**
Changes in non-controlling interests	-	-	0	0	0	**0**
Dec 31, 2017	(138)	(2)	1,199	1,059	7	**1,066**
Impact from the adoption of new IFRS standards	-	-	0	0	-	0
Jan 1, 2018	(138)	(2)	1,198	1,059	7	**1,065**
Profit for the year	-	-	170	170	(1)	**169**
Other comprehensive income						
Cash flow hedges, net of tax	-	(1)	-	(1)	-	**(1)**
Currency translation on subsidiary net investments	(15)	-	-	(15)	0	**(15)**
Defined benefit plan actuarial gains (+) / losses (-), net of tax	-	-	1	1	-	**1**
Total comprehensive income	(15)	(1)	171	155	(1)	**154**
Dividends to shareholders of Metso Oyj	-	-	(126)	(126)	0	**(126)**
Dividends, Metso Group	-	-	(5)	(5)	-	**(5)**
Share-based payments, net of tax	-	-	1	1	-	**1**
Changes in invested equity	-	-	99	99	-	**99**
Net change from winding up the consolidated tax groups	-	-	(16)	(16)	-	**(16)**
Other items	-	-	1	1	0	**1**
Changes in non-controlling interests	-	-	4	4	4	**8**
Dec 31, 2018	(153)	(3)	1,328	1,173	10	**1,183**

COMBINED STATEMENT OF CASH FLOWS

EUR million	Note	2018	2017	2016
Operating activities				
Profit for the year		169	70	91
Adjustments:				
Depreciation and amortization	3.3	46	46	47
Financial expenses, net	1.7	26	27	30
Income taxes	1.8	72	58	38
Other items		(3)	12	5
Change in net working capital		(105)	26	106
Net cash flow from operating activities before financial items and taxes		207	240	318
Interests paid		(20)	(24)	(28)
Interests received		9	13	17
Other financial items, net		(3)	(3)	(4)
Income taxes paid	1.8	(85)	(57)	(19)
Net cash flow from operating activities		107	169	283
Investing activities				
Capital expenditures on intangible assets and property, plant and equipment	3.1, 3.2	(59)	(33)	(27)
Proceeds from sale of intangible assets and property, plant and equipment		4	3	21
Business acquisitions, net of cash acquired	5.3	(28)	(30)	-
Business acquisitions, net of cash acquired, Metso Group		(49)	-	-
Investments in associated companies	5.2	(4)	-	-
Other items		0	(2)	0
Net cash flow from investing activities		(135)	(61)	(6)
Financing activities				
Dividends paid	4.4	(126)	(126)	(126)
Dividends paid, Metso Group		(5)	(6)	(11)
Transactions with non-controlling interests		1	-	-
Proceeds from and investments in financial assets, net	4.6	0	9	1
Repayments of long-term debt	4.6	(268)	60	(40)
Repayments of lease liabilities		0	0	0
Net borrowings (+), payments (-), Metso Group		24	27	25
Equity financing, net, Metso Group		84	(21)	37
Cash pool funding, Metso Group		(52)	14	(20)
Other items		-	(1)	-
Net cash flow from financing activities		(342)	(43)	(136)
Net change in liquid funds		**(370)**	**64**	**142**
Effect from changes in exchange rates		(6)	(7)	11
Liquid funds equivalents at beginning of year	4.3, 4.6	701	644	492
Liquid funds at end of year	4.3, 4.6	325	701	644

NOTES TO THE CARVE-OUT FINANCIAL STATEMENTS

Background

Metso Corporation ("**Metso**" or "**Parent Company**") and its subsidiaries (together "**Metso**" or the "**Metso Group**") form a global supplier of sustainable technology and services for mining, aggregates, recycling and process industries. The main customers operate in mining, civil engineering, oil and gas industries.

As part of its strategy acceleration process, Metso announced in July 2019 its decision to carve out its Minerals business through partial demerger and to combine it with businesses of Outotec Corporation ("**Outotec**," "**Outotec Group**") and the demerger plan for the partial demerger and the combination agreement with Outotec Oyj was approved by Metso's Board of Directors on July 4, 2019. The completion of the demerger is expected to be registered in the second quarter of 2020, subject to the approval of the demerger by the Extraordinary General Meetings of both Metso and Outotec, the statutory creditor hearing process and receipt of all required regulatory and other approvals, including competition clearances, and the aim is to start trading in Outotec Oyj's new shares on the official list of Nasdaq Helsinki Ltd on or about the first business day following the effective date. The transaction is subject to the approval from the Extraordinary General Meeting of Metso which will be held on October 29, 2019. Metso's current Flow Control business will remain in Metso after the demerger. Metso's shareholders will receive 4.3 shares in Metso-Outotec for each share in Metso owned as demerger consideration. The final aggregate number of shares in Metso-Outotec to be issued as demerger consideration will be determined based on the number of shares in Metso (excluding own shares held by Metso) on the effective date.

As part of the proposed partial demerger Metso will carve out and transfer the relevant entities' assets and liabilities to Outotec Corporation. The carve-out financial statements presented herein reflect the relevant entities' results of operations, assets and liabilities and cash flows that will be carved out from Metso in the partial demerger process. Collectively these entities included in these carve-out financial statements are referred to as ("**Metso Minerals**"). The carve-out financial statements have been prepared in accordance with the basis of preparation and Metso accounting policies set out below.

The carve-out financial statements have been prepared for the inclusion in the demerger offering circular prepared by Outotec in connection with the Extraordinary General Meeting of Metso approving the partial demerger and the combination. These carve-out financial statements were authorized for issue by the Metso Board of Directors on October 3, 2019.

Basis of Preparation

The carve-out financial statements as at and for the years ended December 31, 2018, December 31, 2017 and December 31, 2016 present Metso Minerals as a single economic entity and have been prepared on historical financial information of the relevant entities and business as part of the Metso Group, using the same accounting principles and carrying amounts as in Metso Group. The entities and business have been under common control during these periods. The carve-out financial statements have been prepared on a basis that combined statements of income, statements of comprehensive income, balance sheets and cash flows of the legal entities and operating units attributable to the Minerals business in Metso's historical consolidated financial statements and that will be carved out from Metso to be combined to Outotec Group including certain Parent Company's and Metso's foreign holding companies' income and expenses, assets and liabilities and cash flows which will either be transferred to Outotec or which have been allocated to Minerals business for the purpose of the preparation of the carve-out financial statements. Metso Minerals is not comprised of a single sub-group of entities within Metso and, accordingly, has historically not prepared consolidated financial statements for internal or external reporting purposes.

The carve-out financial statements have been prepared in accordance with International Financial Reporting Standards ("**IFRS**") as adopted by the EU. The carve-out financial statements are the first Metso Minerals has prepared in accordance with IFRS as a separate combined entity. As IFRS does not provide guidance for the preparation of carve-out financial statements, certain accounting conventions commonly used for the preparation of historical financial information have been applied in preparing the carve-out financial statements for inclusion in offering circulars. The application of these carve-out conventions has been described below. In addition to the application of the specific carve-out conventions impacting the presentation of these financial statements, the areas involving a high degree of judgment or where estimates and assumptions are significant to the carve-out financial statements are discussed at the end of this section.

The carve-out financial statements have been prepared on a going concern basis under the historical cost convention, except for financial assets and liabilities classified as at fair value through profit and loss account.

These Metso Minerals carve-out financial statements do not necessarily reflect what the combined results of operations and financial position would have been had Metso Minerals existed as a separate independent legal group from January 1, 2016 and had it therefore presented stand-alone consolidated financial information during the periods presented. Further, these carve-out financial statements may not be indicative of Metso Minerals' future performance, financial position or cash flows.

The carve-out financial statements are presented in millions of euros (EUR million) except when otherwise indicated.

The legal entities and associated companies, of which minerals business is included in the carve out financial statements are shown below:

Company name	Country	Ownership Dec 31, 2018
Metso Minerals Oy	Finland	100.00%
Metso Argentina SA	Argentina	100.00%
Metso Austria GmbH	Austria	100.00%
Metso Australia Ltd	Australia	100.00%
WearX Holdings Pty Ltd	Australia	100.00%
Metso Brazil Indústria e Comércio Ltda	Brazil	100.00%
Metso Chile SpA	Chile	100.00%
Industrial Support Company SpA (1)	Chile	100.00%
Metso Minerals (Tianjin) Co. Ltd (2)	China	45.00%
Shaoguan City Shaorui Heavy Industries Co Ltd	China	75.00%
Metso Minerals (Tianjin) International Trade Co. Ltd	China	100.00%
Metso Minerals (Quzhou) Co Ltd	China	100.00%
Metso Czech Republic s.r.o.	Czech	100.00%
Metso Germany GmbH	Germany	100.00%
Metso Denmark A/S	Denmark	100.00%
Metso Denmark Properties Aps	Denmark	100.00%
Metso Espana SA	Spain	100.00%
Metso Spain Holding, S.L.U	Spain	100.00%
Santa Ana de Bolueta Gringing Mesi, S.A.U	Spain	100.00%
Forjas del Guadalquivir, S.L.U.	Spain	100.00%
Metso Ghana Ltd	Ghana	100.00%
Metso UK Ltd	Great Britain	100.00%
Kiln Flame Systems Enterprises Limited	Great Britain	100.00%
Kiln Flame Systems Ltd	Great Britain	100.00%
PT Metso Minerals Indonesia	Indonesia	99.90%
Metso India Private Ltd	India	100.00%
Metso Japan Co. Ltd.	Japan	100.00%
Metso (Kazakhstan) LLP	Kazakhstan	100.00%
Metso Minerals Dooel Skopje	Makedonia	100.00%
Metso Mexico SA de CV	Mexico	100.00%
Metso SA de CV	Mexico	100.00%
Metso Norway A/S	Norway	100.00%
Metso Peru SA	Peru	100.00%
Metso d.o.o. Beograd	Serbia	100.00%
OOO Metso	Russia	100.00%
Metso Sweden AB	Sweden	100.00%
AB P. J. Jonsson och Söner	Sweden	100.00%
Metso Central America SA	Panama	100.00%
Metso Asia Pacific Pte Ltd	Singapore	100.00%
Metso Minerals Anonim Sirketi	Turkey	100.00%
Metso South Africa Pty Ltd	South-Africa	86.74%
Metso (South Africa) Sales Pty Ltd	South-Africa	86.74%
Metso Zambia Ltd	Zambia	100.00%
Metso Minerals Canada Inc.	Canada	100.00%
Metso France SAS	France	100.00%
Metso Portugal Lda	Portugal	100.00%
Metso Algeria EURL	Algeria	100.00%
Metso USA Inc.	USA	100.00%
Metso Minerals Industries Inc.	USA	100.00%
Metso Shared Services Ltd	Canada	100.00%
Metso Captive Insurance Limited	Great Britain	100.00%

(1) Acquired in H1/2019

(2) Has been 100% consolidated.

Metso Minerals' associated companies

Liugong Metso Construction Equipment Ltda	China	50.00%

Description of the Carve-Out Principles

The following paragraphs summarize the accounting and other principles applied in preparing the carve-out financial statements.

Minerals reporting segment and its business areas have been managed as a single economic entity since 2016. Pumps business area, which was earlier included in Flow Control segment, was transferred to Minerals segment on January 1, 2019. In line with the current segment structure, Pumps business area has been combined into Minerals business from January 1, 2016 in these carve out financial statements.

For such legal entities' historical financial information with regards to assets and liabilities, as well as sales and expenses and cash flows directly attributable to Minerals segment or Pumps business area could be derived from stand-alone financial statements utilized in the preparation of the consolidated historical financial statements of Metso.

Carve-out financial statements include the allocations of income, expense, assets, liabilities and cash flows which are based on management judgement, assumptions and estimates as described below. The most significant estimates, judgements and assumptions relate to the allocation of costs of certain centrally provided services, cash management and financing related allocations, determination of current and deferred income taxes and invested equity.

Accordingly, Metso's management considers that the carve-out allocations have been made on a reasonable basis, but they are not necessarily indicative of the revenues and expenses that would have been incurred if Metso Minerals had been a stand-alone entity preparing consolidated financial statements for the periods presented.

Intercompany and Related Party Transactions

Intercompany transactions and assets and liabilities between Metso Minerals entities included in the carve-out financial statements have been eliminated. The carve-out financial statements include Metso Minerals' transactions and balance sheet items. Intercompany transactions and balance sheet items with other Metso Group companies previously considered as intercompany transactions in Metso's consolidated reporting have been treated as transactions with related parties. Metso Minerals does not have significant recurring interbusiness relationships with other Metso legal entities that are not part of Metso Minerals. Internal profit on inventories between Metso Group companies and Metso Minerals entities has not been eliminated in the carve-out financial statements.

Metso Corporation's or other Metso Group companies intercompany receivables and liabilities due to or due from a Metso Minerals entity have been allocated to Metso Minerals, including the financial income and expenses relating to these receivables and liabilities. Metso Minerals' ownership of shares in other Metso Group companies is presented under Other non-current assets, Metso Group in these carve-out financial statements. Metso will undertake certain intra-group arrangements prior to the Demerger to align the legal structures of Metso Minerals and Metso to reflect the contemplated legal structures after the Demerger.

Carrying values for subsidiary shares of Metso Minerals subsidiaries previously owned by Metso's parent company have been allocated to the Metso Minerals parent company. Acquisitions of businesses outside Metso Group are accounted for using the acquisition method.

Equity Components

Metso Minerals has not in the past formed a separate legal group nor presented stand-alone consolidated financial statements, and accordingly it is not conceivable to present share capital separately from other equity balances including reserves. Metso Minerals' net assets for each balance sheet date are represented by capital invested in Metso Minerals and shown in these carve-out financial statements as "Equity" comprising of cumulative translation adjustments, hedge reserve as well as invested equity and retained earnings. Invested equity and retained earnings comprise of equity items allocated from Metso's parent company and other Metso Minerals companies in accordance with the demerger plan and historical retained earnings balances of Metso Minerals entities.

All cash and other movements in capital amounts, being shares issued or cancelled or dividends and other distributions made from/to Metso Minerals companies from/to Metso parent company or changes resulting from the internal reorganization have been reflected in the combined statement of cash flows under "Dividends paid, ''Metso Group" and "Equity financing, Metso Group" and in the combined statements of changes in equity under "Dividends", "Changes in invested equity" and "Net change from winding up the consolidated tax groups".

These carve-out financial statements are presented in euros, which will be Metso Minerals' parent company's functional and reporting currency. Metso Minerals' operating units have also other functional currencies. Translation differences arising from translating the net results for the period and equity are recognized in equity and their changes are presented in the separate cumulative translation adjustment within equity.

Corporate, Shared Service Units and Foreign Holding Company Expenses

Metso's parent company has been responsible for the management and general administration of Metso Group. For the purposes of the preparation of the carve-out financial statements a portion of Metso's parent company's shared income and expense items including all administrative and personnel expenses for each of the corporate headquarter functions attributable to Metso Minerals has been allocated to Metso Minerals. Shared functions include Group Management, Human Resource, Communication and Investor Relations, Finance, Tax, Treasury, Legal and Strategy. Allocations of the income and expense items are based mainly on the number of employees, which the management believes is appropriate.

Metso's shared service units and foreign holding companies have historically recharged Metso Group companies for costs that have arisen from services conducted on behalf of the Metso Group companies. Such services consist of Business support services, Human Resources, Information Technology, Finance and Accounting, Communications, Legal, other general corporate services and tax services. The majority of the costs are included in the carve-out financial statements based on the historically recharged amounts.

These allocated income and expense items were affected by the arrangements that existed in Metso Group and are not necessarily representative of the position that may prevail in the future for Metso Minerals

Pensions

Pensions and other post-employment benefit plans and their respective portion of the plan liabilities, plan assets, interest and service costs are included in the carve-out financial statements in accordance with each Metso Minerals subsidiary's separate benefit plans. In addition, a portion of the costs for the supplementary pension plan subscribed by Metso to the members of the Metso Executive Team has been allocated to these carve-out financial statements.

Share-Based Payments

Metso Minerals key personnel have historically participated in Metso's share-based incentive plans. The carve-out financial statements include employee cost allocations related to these participations based on the actual number of Metso Minerals employees over the cost recorded at Metso. The historical cost allocations may not be indicative of the future expenses that will be incurred through incentive schemes that will be established for Metso Minerals' key personnel following the demerger.

Cash Management and Financing

Cash management is centralized so that Metso manages the Group's liquidity needs through cash pool arrangements and other liquid funds consisting of deposits and securities with maturity less than twelve months. Cash pools cover all major geographical areas and Metso Corporation participates in the cash pools whenever allowed by the local regulation.

Metso Minerals' cash and cash equivalents comprise cash held by legal entities and the cash pool balances held by cash pool masters in Metso Minerals legal entities. In addition, the carve-out financial statements include those cash pooling receivable and liability balances due to or due from other Metso Group companies that will be settled at the execution of the partial demerger. These receivable and liability cash pooling balances have been presented as short-term receivables and liabilities from related parties.

Metso Group's external financing is centralized mainly to the Metso parent company. Subsidiaries' working capital and capital expenditure needs have been funded in addition to cash pool arrangements mainly by intercompany loans. All Metso Minerals entities intercompany loans from Metso parent company have been eliminated in these carve-out financial statements against the corresponding Metso parent company's intercompany loan receivables allocated to Metso Minerals. In addition, a limited number of Metso Group companies have funded their operations directly with external banks.

The external debt financing of the demerging Metso parent company and the related interest expenses that are directly attributable to Metso Minerals' operations, comprising mainly of bonds and bank loans, are included in the carve-out financial statements in accordance with the demerger plan. In addition, carve-out financial statements comprise existing external funding arrangements and the related interest expenses of the demerging Metso Minerals entities.

Derivative Financial Instruments

Carve-out financial statements include allocated external derivative financial instruments, entered into by Metso's parent company, that correspond to the internal derivative contracts entered by Metso Minerals entities with the parent company. These derivative financial instruments comprise of foreign exchange forwards and electricity forward contracts. Metso has hedged the interest rate risk of the debt arrangements that will transfer to Metso Minerals in the demerger, and the related interest derivatives have been allocated to the carve-out financial statements.

In addition, the carve-out financial statements include an allocation of the derivative financial contracts that Metso has used to hedge its currency denominated financial items such as loans, receivables and bank account balances at the parent company level. The allocation has been made proportionately to correspond to Metso Minerals' share of the hedged exposure including Metso Minerals entities' cash, receivable and loan balances.

Income Taxes

During the periods presented in these carve-out financial statements, several of the legal entities in Metso Minerals have operated as separate taxpayers. For these entities the tax charges and the tax liabilities and receivables in the carve-out financial statements are based on actual taxation.

Some Metso Minerals entities have historically been included in Metso legal entities including operations other than operations of Metso Minerals or in tax groups consolidated for income tax purposes, where the taxpaying entity was another Metso Group entity outside of Metso Minerals. During the periods presented, these Metso Minerals entities did not file separate tax returns. Tax charges in these carve-out financial statements have been determined based on the separate return method, as if the Metso Minerals entities were separate taxpayers in the jurisdiction of their primary operations.

The current tax provision is the amount of tax payable or refundable based on the Metso Minerals entity's hypothetical, current-year separate return and has been recorded as current income tax expense and as a shareholder transaction through invested equity in the carve-out financial statements. After computing its current tax payable or refund, the Metso Minerals entity has provided deferred taxes on its temporary differences and on any tax losses that it could claim on its hypothetical return. Deferred taxes on temporary differences are recognized where such temporary differences exist.

The line item "income taxes paid" in the combined cash flow statement reflects current taxes for all carve-out entities as they are deemed to be paid by the respective tax filing group. To the extent that historically there has been no settlement through cash, such tax payments are deemed to be contributions from or distributions to Metso Group and deemed to be settled immediately through equity. Such settlement through equity is reflected in the line item "Equity financing, net, Metso Group" in the financing section of the combined cash flow statement."

The tax charges recorded in the combined income statement are not necessarily representative of the tax charges that may arise in the future.

Guarantees and Contingent Liabilities

Metso's parent company has given guarantees on behalf of its subsidiaries in the ordinary course of their business. The guarantee obligations of Metso's parent company relating to Metso Minerals have been allocated to these carve-out financial statements.

Earnings per Share

As the carve-out financial statements have been prepared on a carve-out basis, it is not possible to measure earnings per share for any of the periods presented. Metso minerals has not had share capital during the periods presented nor can a portion of Metso's outstanding shares be allocated to it. Therefore, management considers that presenting an earnings per share ratio calculated on the carve-out information would not accurately reflect the historical earnings per share. Accordingly, the requirement of IAS 33 "Earnings per share" to disclose earnings per share is not met.

Critical Accounting Estimates and Judgements

The preparation of carve-out financial statements requires management to make estimates and assumptions and to exercise its judgment in the process of applying the Group's accounting policies. These affect the reported amounts of balance sheet items, the presentation of contingent assets and liabilities, and the income and expenses for the financial year. Actual results may differ from the estimates made.

The assets and liabilities involving a higher degree of judgment or complexity, or areas where the assumptions and estimates are significant to Metso Minerals' carve-out financial statements, are disclosed in the following notes:

Key judgement and estimates	**Note**
Carve-out principles	Basis of preparation
Sales	1.2
Share-based payments	1.6
Income taxes	1.8
Trade receivables	2.2
Other receivables	2.3
Inventory	2.4
Provisions	2.6
Post-employment obligations	2.7
Goodwill and other intangible assets	3.1
Property, plant and equipment	3.2

Metso Minerals' more detailed accounting policies are disclosed in the relevant note to the consolidated financial statements.

1. Metso Minerals Performance

1.1. Reporting Segments

Accounting policy

Operating segments are reported in a manner consistent with the internal reporting provided to the Board of Directors. Metso Minerals' operations and profitability is reported as a single reportable segment and operative decisions have been made by the Board of Directors of Metso as Metso's Chief Operating Decision Maker at Metso Minerals level. Metso Minerals has not aggregated operating segments and thus Metso Minerals is the reportable operating segment. The accounting principles applied to the segment reporting are the same as those used in preparing the consolidated financial statements.

Segment performance is measured with operating profit/loss (EBIT). In addition, Metso Minerals uses alternative performance measures to reflect the underlying business performance and to improve comparability between financial periods: *Earnings before interest, tax and amortization (EBITA), adjusted*. Adjustment items comprise capacity adjustment costs, outcome of material intellectual property rights disputes, gains and losses on business disposals, and other infrequent events. Their nature and net effect on cost of goods sold, selling, general and administrative expenses, as well as other income and expenses are presented in the segment information. Alternative performance measures, however, should not be considered as a substitute for measures of performance in accordance with the IFRS.

Carve-out Principles

Carve-out reporting structure consists of one operative segment: Minerals. It covers the mining, aggregates, recycling and pump businesses. Intercompany transactions and balance sheet items with other Metso Group companies previously considered as intercompany transactions in Metso's consolidated reporting have been treated as transactions with related parties and presented as a part of Group Head Office and carve-out items.

Corporate Structure

Metso Minerals is a global supplier of sustainable technology and services for mining, aggregates, recycling and process industries.

The Minerals segment supplies technology, process solutions, machinery and services for aggregates production, mining, minerals processing, and metal and waste recycling.

Head Office and carve-out items is comprised of centralized group functions, such as treasury and tax, as well as shared service centers and holding companies.

Segment assets comprise intangible assets and property, plant and equipment, investments in associated companies and joint ventures, inventories and non-interest bearing operating assets and receivables. They exclude interest bearing assets, cash and cash equivalents, income tax receivables and deferred tax assets, which are included in the assets of Group Head Office and carve-out items.

Segment liabilities comprise non-interest bearing operating liabilities. They exclude income tax liabilities, deferred tax liabilities and interest bearing liabilities, which are included in the liabilities of Group Head Office and carve-out items.

Non-cash write-downs include write-offs made to the value of receivables and inventories, and impairment and other write-offs recognized to reduce the value of intangible assets or property, plant and equipment and other assets.

Gross capital expenditure comprises investments in intangible assets and property, plant and equipment, associated companies and joint ventures, and business acquisitions.

Segment information as at and for the years ended December 31, 2018, 2017 and 2016 is presented in the following tables.

EUR million	Minerals segment	Head Office and carve-out items	Metso Minerals
2018			
Sales	2,581	0	**2,581**
Earnings before interest, tax and amortization (EBITA)	291.0	(7.6)	**283.4**
% of sales	11.3	n/a	**11.0**
Adjusted EBITA	291,0	(7.6)	**283,4**
% of sales	11.3	n/a	**11.0**
Adjusted EBITDA	321,2	(7.3)	**313,9**
% of sales	12,4	n/a	**12.2**
Operating profit (-loss)	283.2	(15.6)	**267.6**
% of sales	11.0	n/a	**10.4**
Adjustment items	-	-	**-**
Amortization	(8)	(8)	**(16)**
Depreciation	(30)	0	**(30)**
Non-cash write-downs [1]	6	0	**5**
Gross capital expenditure (including business acquisitions)	78	2	**80**
Capital employed	1,272	396	**1,668**
Capital employed, Metso Group	7	182	**188**
Orders received	2,872	-	**2,872**
Order backlog	1,411	-	**1,411**

[1] Write-downs including reversals of intangible and tangible assets, inventories and trade receivables

EUR million	Minerals segment	Head Office and carve-out items	Metso Minerals
2017			
Sales	2,177	0	**2,177**
Earnings before interest, tax and amortization (EBITA)	182.4	(11.7)	**170.7**
% of sales	8.4	n/a	**7.8**
Adjusted EBITA	190.5	(11.7)	**178.8**
% of sales	8.8	n/a	**8.2**
Adjusted EBITDA	221.6	(11.4)	**210.2**
% of sales	10.2	n/a	**9.7**
Operating profit (-loss)	176.1	(20.2)	**155.9**
% of sales	8.1	n/a	**7.2**
Adjustment items in cost of goods sold	(6.4)	-	**(6.4)**
Adjustment items in selling, general and administrative expenses	(1.7)	-	**(1.7)**
Total adjustment items	(8.1)	-	**(8.1)**
Amortization	(6)	(8)	**(14)**
Depreciation	(31)	0	**(31)**
Non-cash write-downs	(12)	0	**(12)**
Gross capital expenditure (including business acquisitions)	59	1	**60**
Capital employed	1,120	781	**1,901**
Capital employed, Metso Group	8	147	**154**
Orders received	2,427	-	**2,427**
Order backlog	1,204	-	**1,204**

EUR million	Minerals segment	Head Office and carve-out items	Metso Minerals
2016			
Sales	2,059	0	**2,059**
Earnings before interest, tax and amortization (EBITA)	172.9	0.6	**173.5**
% of sales	8.4	n/a	**8.4**
Adjusted EBITA	209.1	(5.4)	**203.8**
% of sales	10.2	n/a	**9.9**
Adjusted EBITDA	241.3	(4.9)	**236.5**
% of sales	11.7	n/a	**11.5**
Operating profit (-loss)	166.8	(8.1)	**158.8**
% of sales	8.1	n/a	**7.7**
Adjustment items in cost of goods sold	(23.3)	-	**(23.3)**
Adjustment items in selling, general and administrative expenses	(7.6)	(1.9)	**(9.5)**
Adjustment items in other income and expenses, net	(5.4)	7.8	**2.4**
Total adjustment items	(36.3)	6.0	**(30.3)**
Amortization	(6)	(9)	**(15)**
Depreciation	(32)	0	**(33)**
Non-cash write-downs	(15)	0	**(15)**
Gross capital expenditure (including business acquisitions)	21	5	**26**
Capital employed	1,115	788	**1,902**
Capital employed, Metso Group	15	205	**220**
Orders received	2,220	-	**2,220**
Order backlog	1,105	-	**1,105**

Geographical Information

Accounting Policy

Metso Minerals presents the geographical segments' sales by location of customers. Non-current assets and gross capital expenditure are presented by location of assets.

Metso Minerals' businesses are present in over 40 countries providing strong diversification. Metso Minerals has production units on all inhabited continents.

Sales to Unaffiliated Customers by Destination

EUR million	2018	2017	2016
Finland	61	54	55
Other European countries	617	485	450
North America	403	370	376
South and Central America	567	508	495
Asia-Pacific	696	536	474
Africa and Middle East	236	223	208
Sales	**2,581**	**2,177**	**2,059**

Metso Minerals' Exports from Finland by Destination, Including Intra-group Sales

EUR million	2018	2017	2016
European countries	166	155	139
North America	83	74	64
South and Central America	23	18	18
Asia-Pacific	108	68	51
Africa and Middle East	33	31	24
Total	**413**	**346**	**296**

Non-Current Assets by Location

EUR million	2018	2017	2016
Finland	82	40	55
Other European countries	124	113	121
North America	176	199	270
South and Central America	76	76	83
Asia-Pacific	169	98	110
Africa and Middle East	25	13	9
Non-allocated	441	470	430
Total	**1,094**	**1,010**	**1,077**

Non-current assets comprise intangible assets and property, plant and equipment, investments in associated companies, joint ventures, and other non-interest bearing non-current assets. Non-allocated assets include mainly goodwill and other assets arising from business acquisitions that have not been pushed down to the subsidiaries' books.

Gross Capital Expenditure by Location

EUR million	2018	2017	2016
Finland	5	2	6
Other European countries	10	10	5
North America	3	3	2
South and Central America	9	7	6
Asia-Pacific	27	7	6
Africa and Middle East	4	3	1
Total	**59**	**33**	**26**

Gross capital expenditure comprises investments in intangible assets and property, plant and equipment, associated companies and joint ventures

1.2. Sales

Accounting Policy 2018

Metso Minerals has applied IFRS 15 Revenue from Contracts with Customers from January 1, 2018 fully retrospectively restating the comparative year 2017. Metso Minerals has applied the same accounting principles and carrying values (pooling) in these carve out financial statements as Metso Group. Hence the use of the full retrospective approach for implementation of IFRS 15 only affects the 2017 comparatives. See separate section on accounting policy for revenue for 2016. The principle is that sales are recognized at an amount that reflects the consideration to which Metso Minerals expects to receive in exchange for transferring goods or services to a customer. Sales are recognized, when the control of goods or services is transferred to a customer. The control is transferred either at a point in time or over time.

Metso Minerals providing standardized equipment and wear or spare parts to customers, sales are recognized at a point in time, when control for the goods is transferred, typically at the delivery of the goods or after commissioning. Sales to the distributors are recognized at the delivery, when the distributor is not acting as an agent. If the distributor is acting as an agent, sales are recognized only when delivered to ultimate client.

Metso Minerals providing customized engineered system deliveries, where the asset produced does not have alternative use and Metso Minerals has right to payment for the performance completed, sales are recognized over time. Sales recognition is based on estimated sales, costs and profit. Metso Minerals measures the progress using the cost-to-cost method, where sales and profits are recorded after considering the ratio of accumulated costs to estimated total costs to complete each contract. This method is considered to reflect best the satisfaction of the performance obligation. The estimated sales, costs and profit, together with the planned delivery schedule of the contract are subject to regular revisions as the contract progresses to the completion. Revisions in profit estimates as well as projected potential loss on contract are charged through the profit and loss account in the period in which they become known.

Sales from providing services are recognized when the performance obligation is satisfied. For long-term fixed price service contracts, sales are recognized over time, because of the customer receives the performance obligation simultaneously when the service is rendered. The measure of the progress is based on costs of actual services provided as a proportion of the costs of total services to be rendered. The estimated sales, costs and profit, together with the planned delivery schedule of the contract are subject to regular revisions as the contract progresses to the completion. Revisions in contract estimates as well as projected potential loss on contract are charged through the profit and loss account in the period in which they become known.

For short-term service contracts with hourly fee based on valid price list, sales are recognized to the extent Metso Minerals has the right to invoice the customer, and for service contracts with fixed hourly fee agreed in the contract, sales are recognized based on invoicing.

Client contracts may include promises such as volume-based rebates, late delivery penalties or right to return delivered parts. The impact of these promises on the final consideration will be estimated, when recognition is started and systematically during the contract period. Sales will be recognized to the extent that Metso Minerals is entitled to the consideration. Also, creditworthiness of the client and collectability of the consideration is assessed through the contract period. Extended warranties are treated as a separate performance obligation and appropriate transaction price is allocated to them and recognized in sales when occurred.

Metso Minerals typically requires advance payments from clients. Applying IFRS 15, advances received do not include a financing component, because the payment schedule of them follows closely the timing of performance obligations to be satisfied.

Estimates and Assessments by Management

Sales recognized at a point in time may require judgement on facts and circumstances when the control is considered to have passed to the client, affecting on timing of sales to be recognized. Transfer of the control is assessed mainly based on terms of delivery in the contract and local legislation. Customer contracts including clauses on rebates, late delivery penalties, right to return promises or extended warranties requires management judgement on the probability of such clauses to have an effect on contracts sales. Judgements are based on earlier experience and market practice, when it is available.

Sales recognized over time is based on cost-to-cost method, which requires management to be able to estimate total sales, costs, margin and cash flow to complete the project. To assess the progress and margin to be recognized as well as the total costs estimated to complete the contracts requires judgments by management throughout the contract period. The most critical judgments are needed in case of a loss-making contract to estimate the performance needed to be able to satisfy the contract. Changes in general market conditions and the possible act to contracts needs to be predicted as well. The credit worthiness of the customer is verified, and collectability of the consideration assessed before entering into a contract. However, a risk of non-payment might arise afterwards, and it requires then management judgement on the impact on final sales recognition.

Hedging of Foreign Currency Denominated Firm Commitments

Under Metso Minerals hedging policy, business units are required to hedge their foreign currency risk when they become engaged in a firm commitment denominated in a currency other than their functional currency. When a firm commitment qualifies for over time recognition, the business unit applies hedge accounting and recognizes the effect of the hedging instruments in other comprehensive income (OCI) until the commitment is recognized. Though Metso Minerals has defined the characteristics triggering a firm commitment, the final realization of the unrecognized commitment depends also on factors beyond management control, which cannot be foreseen when initiating the hedging relationship. Such factors can be a change in the market environment causing the other party to postpone or cancel the commitment. To the extent possible, management strives to include clauses in its contracts that reduce the impact of such adverse events on its results.

Disaggregation of Sales

EUR million	2018	2017
Sales, external	2,580	2,177
Sales, Metso Group	0	0
Sales	**2,581**	**2,177**

External sales by category

EUR million	2018	2017
Sales of services	1,644	1,481
Sales of projects, equipment and goods	936	696
Sales	**2,581**	**2,177**

External sales by destination

EUR million	2018	2017
Finland	61	54
Other European countries	617	485
North America	403	370
South and Central America	567	508
Asia-Pacific	696	536
Africa and Middle East	236	223
Sales	**2,581**	**2,177**

External sales by timing of revenue recognition

EUR million	2018	2017
At a point in time	2,220	1,962
Over time	360	215
Sales	**2,581**	**2,177**

Contract Balances

EUR million	2018	2017
Trade receivables	493	416
Trade receivables, Metso Group	8	8
Customer contract assets	82	66
Advances received	189	171

Most of the customer contract liabilities and advances received at the beginning of the year have been recognized as sales in 2018.

When providing standardized equipment, valves and pumps and wear or spare parts, invoicing takes place in general at the delivery or after commissioning. In engineered system delivery and long-term service contracts invoicing is based on the client contracts. Short-term service contracts are invoiced, when service is rendered.

Trade receivables are based on the invoicing to customers and are generally on terms of 30–90 days. The acquisitions in 2018 resulted in increase in trade receivables of EUR 5 million and EUR 6 million in 2017. In 2016 Metso Minerals made no acquisitions, see note 5.5. Information about provision for expected credit losses on trade receivables is presented in note 2.2.

Engineered system delivery contracts and long-term service contracts are mainly fixed priced contracts, where customers are invoiced with fixed amounts based on contracts' schedule. In case, the performance obligation satisfied exceeds the invoiced payment from the customer, a contracts asset is recognized. In case, the invoiced payment from the customer exceeds the performance obligation satisfied, a contract liability is recognized.

Advances received is the amount paid in advance to Metso Minerals by the customers. Typically, Metso Minerals receives advance payments in the customized large scale engineered system and equipment delivery projects.

Increase in receivables from customers or liabilities to customers and advances received is the result of additional volume in business operations in 2018 compared to the previous year.

Unsatisfied Performance Obligations

Unsatisfied performance obligations relate to customized engineered system projects and long-term service contracts amounting to EUR 539 million. These performance obligations are expected to be materially satisfied in two years.

Metso Minerals' Performance Obligations

Metso Minerals' sales consist of the sale of standardized equipment deliveries and services with wear or spare parts as well as customized large scale engineered system and/or equipment deliveries. Metso Minerals' performance obligations are as follows:

Equipment and Wear or Spare Parts Deliveries

Metso Minerals providing standardized equipment and wear or spare parts to customers, revenue will be recognized at a point in time, when control for the goods is transferred, typically at the delivery of the goods or after commissioning. These contracts may include promises such as volume-based rebates, late delivery penalties or right to return delivered parts. The impact of these promises on the final consideration will be estimated and sales will be recognized to the extent that Metso Minerals is entitled to. Extended warranties are treated as a separate performance obligation and appropriate transaction price is allocated to them and recognized in sales when occurred.

Metso Minerals cooperates with distributors specially in aggregates, valves and recycling businesses. Based on the current distributor contracts, Metso Minerals recognizes sales at the delivery to a distributor. Promises on volume-based rebates and right to return of the goods are assessed and sales will be recognized to the extent Metso Minerals is entitled to.

Engineered System and Equipment Deliveries

With customized large scale engineered system and equipment deliveries, where assets produced do not have alternative use for another client and Metso Minerals has the right to payment for the performance completed, revenue will be recognized over time. Each large scale engineered system and equipment delivery contract is assessed separately. These contracts usually have a customer specific, one total performance obligation agreed with the client.

These contracts may include promises such as late delivery penalties, performance guarantees and extended warranties. The impact of these promises on the final consideration will be estimated and sales will be recognized to the extent that Metso Minerals is entitled to. Metso Minerals typically requires advance payments from clients, which in general, does not include a financing component, because the payment schedule of advances follows closely the timing of performance obligations to be satisfied.

Service Contracts

Sales from providing services are recognized when the services are rendered. For long-term fixed price contracts, sales are recognized over time. The measure of the progress is based on costs of actual services provided as a proportion of the costs of total services to be rendered. For short-term service contracts with hourly fee based on valid price list, revenue is recognized to the extend Metso Minerals has right to invoice the customer, and for service contracts with fixed hourly fee agreed in the contract, revenue is recognized based on invoicing. Typical promises in service contacts are late delivery penalties, performance guarantees or right to return promises, the impact of these promises are assessed, and sales recognized to the extent Metso Minerals is entitled to.

Accounting Policy 2016

Sales from goods and services sold are recognized, net of sales taxes and discounts, when substantially all the risks and rewards of ownership are transferred to the buyer or when legal title of the goods and responsibility for shipment has been transferred to the buyer. The transfer of risk takes place either when the goods are shipped or when made available to the buyer for shipment depending on the terms of the contract. The credit worthiness of the buyer is verified before engaging into a sale. However, if a risk of non-payment arises after revenue recognition, a provision for non-collectability is established.

Metso Minerals applied the percentage-of-completion method, "POC method", for recognizing long-term delivery contracts of engineered systems and construction projects. Sales recognized under the POC method is based on estimated revenue, costs and profit. The stage of completion is determined by the cost-to-cost method of accounting. In the cost-to-cost method, sales and profits are recorded after considering the ratio of accumulated costs to estimated total costs to complete each contract. Subcontractor materials, labor and equipment, are included in sales and costs of goods sold when Metso is responsible for the ultimate acceptability of the project. A projected potential loss on a firm commitment is recognized through profit and loss, when it becomes known. The estimated revenue, costs and profit, together with the planned delivery schedule of the projects are subject to regular revisions as the contract progresses to completion. Revisions in profit estimates are charged through profit and loss account in the period in which the change becomes known.

Sales from short-term service contracts are recognized once the service has been rendered. Sales from long-term service contracts are recognized using the percentage-of-completion method.

Sales by Category:

EUR million	2016
Sale of services	1,428
Sale of projects, equipment and goods	631
Sales, total	**2,059**

Sales by Recognition Method:

EUR million	2016
Percentage of completion (POC) recognition	189
Recognition at the delivery	1,869
Sales, total	**2,059**

Balance Sheet Items of Uncompleted Projects at December 31, 2016:

EUR million	Cost and earnings	Billings	Net
Projects where cost and earnings exceed billings	598	532	66
Projects where billings exceed cost and earnings	343	397	54

Major Customers

In 2018, 2017 and 2016, Metso Minerals did not have a single customer to which sales would have exceeded 10 percent of the consolidated sales.

1.3. Selling, General and Administrative Expenses

EUR million	2018	2017	2016
Marketing and selling expenses	(222)	(218)	(218)
Research and development expenses, net	(23)	(13)	(20)
Administrative expenses	(185)	(166)	(159)
Selling, general and administrative expenses	**(430)**	**(397)**	**(397)**

Accounting Policy

Research and development expenses comprise salaries, administration costs, depreciation and amortization of tangible and intangible assets, and are mainly expensed as incurred. When material development costs meet certain capitalization criteria under IAS 38, they are capitalized and amortized over the expected useful life of the underlying technology.

Research and Development Expenses

EUR million	2018	2017	2016
Research and development expenses, total	(23)	(13)	(20)
Capital expenditure	0	0	0
Grants received	0	0	0
Depreciation and amortization	0	0	0
Research and development expenses, net	**(23)**	**(13)**	**(20)**

1.4. *Other Operating Income and Expenses*

Accounting Policy

Other operating income and expenses, net, comprise income and expenses that do not directly relate to the operating activity of businesses within Metso Minerals or which arise from unrealized and realized changes in fair value of foreign currency denominated financial instruments related to operations, including forward exchange contracts. Such items include costs related to significant restructuring programs, gains and losses on disposal of assets, and foreign exchange gains and losses, excluding those qualifying for hedge accounting and those, which are reported under financial income and expenses, net. Additionally, non-recoverable foreign taxes, which are not based on taxable profits, are reported in other operating income and expenses, net. In particular, these include foreign taxes and such like payments not based on double taxation treaties in force.

EUR million	2018	2017	2016
Gain on sale of intangible assets and property, plant and equipment	2	1	10
Rental income	0	0	0
Foreign exchange gains [1)]	62	45	39
Other income	4	6	8
Other operating income, total	**68**	**53**	**58**
Loss on sale of intangible assets and property, plant and equipment	0	0	(2)
Impairment of intangible assets and property, plant and equipment	(1)	(3)	(1)
Foreign exchange losses [1)]	(79)	(45)	(41)
Other expenses	(4)	(6)	(11)
Other operating expenses, total	**(84)**	**(54)**	**(54)**
Other operating income and expenses, net	**(16)**	**(1)**	**3**

[1)] Includes foreign exchange gains and losses resulting from trade receivables and payables and related derivatives.

1.5. *Personnel Expenses and the Number of Personnel*

Accounting policy

Carve-out principles

In these carve-out financial statements a share of the historical remuneration of the management of Metso has been allocated to Metso Minerals to reflect management's contribution to the Metso Minerals business, which share has been estimated at 75 percent of total remuneration. This allocation may not be indicative of the expenses related to management remuneration that will incur in the following financial years.

Personnel Expenses

EUR million	2018	2017	2016
Salaries and wages	(395)	(386)	(389)
Pension costs, defined contribution plans	(25)	(27)	(23)
Pension costs, defined benefit plans [1]	(5)	(4)	(5)
Other post-employment benefits [1]	(1)	(1)	(1)
Share-based payments [2]	(2)	(1)	(1)
Other indirect employee costs	(104)	(87)	(92)
Total	**(532)**	**(506)**	**(511)**

[1] For more information on pension costs, see note 2.7.
[2] For more information on share-based payments, see note 1.6.

Number of Personnel at end of Year

	2018	2017	2016
Minerals business	9,935	9,230	8,701
Group Head Office and other	432	440	465
Total	10,367	9,670	9,166

Board Remuneration

EUR thousand	2018	2017	2016
Total	501	437	489

Remuneration Paid to Chief Executive Officer and Other Executive Team members

EUR	Salary	Performance bonus paid	Fringe benefits	Share-based payment	Total
2018					
President and CEO	426 989	181 305	6 135	-	614 429
Other Executive Team members	1,631,164	261,432	23,991	-	1,916,587
Total	2,058,153	442,737	30,126	-	2,531,016
2017					
President and CEO	529 630	101 250	16 254	50 118	697 252
Other Executive Team members	1,657,179	132,231	17,316	108,751	1,915,477
Total	2,186,809	233,481	33,570	158,869	2,612,729
2016					
President and CEO	457,602	83,880	16,414	-	557,896
Other Executive Team members	1,544,032	116,124	25,994	-	1,686,150
Total	2,001,634	200,004	42,408	-	2,244,046

1.6. Share-based Payments

Accounting Policy

Certain Metso Minerals key personnel have participated in the Metso's share-based incentive plans. The equity-settled share awards are valued based on the market price of Metso share as of the grant date and recognized as an employee benefit expense over the vesting period with corresponding entry in the equity. The historical development of Metso share and the expected dividends have been taken into account when calculating the fair value. From 2018 the entire share incentive, including the cash-for-taxes portion is recognized in equity. Also the value of the cash portion is based on the grant date value. As a market condition, total shareholder return of the Performance Share Plans will be taken into account when determining the fair value at grant and it will not be changed during the plan. The fair value of the cost estimate of the Performance Share Plans will only be changed when service condition and non-market conditions are concerned. The liability resulting from cash-settled transactions is accrued in the current liabilities until the settlement date in years 2016 and 2017.

At each balance sheet date, Metso Minerals revises its estimates on the amount of share-based payments that are expected to vest. The impact of the revision to previous estimate is accrued as an employee benefit expense with corresponding entry to equity.

Carve-out Principles

Metso Minerals key personnel have historically participated in Metso's share-based incentive plans. The carve-out financial statement include employee cost allocations related to these participations based on the actual number of Metso Minerals employees over the cost recorded at Metso. The historical cost allocations may not be indicative of the future expenses that will be incurred through incentive schemes that will be established for Metso Minerals' key personnel following the demerger.

Estimates and Assessments by Management

At each balance sheet date, the management revises its estimates for the number of shares that are expected to vest. As part of this evaluation, Metso Minerals takes into account the changes in the forecasted performance, the expected turnover of the personnel benefiting from the incentive plan and other pertinent information impacting the number of shares to be vested.

Long-term Incentive Plan for 2012–2014

In December 2011, Metso Minerals' Board decided to establish a share-based incentive plan that had three performance periods: calendar years 2012, 2013 and 2014. No shares were delivered in 2016, as the targets set for the performance period 2013 were not met. In 2017 a total of 11,065 treasure shares were used to pay rewards to 43 participants from plan 2014.

Performance and Restricted Share Plans

In December 2014, Metso Board decided on new long-term share-based incentive plans: Performance Share Plan ("**PSP**") and Restricted Share Plan ("**RSP**"). The commencement of each new PSP and RSP and the earnings criteria for each new PSP plan will be subject to a separate decision by the Board. The PSP consists of an annually commencing plan, each with a three-year earning period, and the complementary RSP consists of an annually commencing plan, each with a three-year vesting period. The possible rewards are paid partly in Metso Minerals' shares and partly in cash.

If the participant's employment or service ends for reasons relating to the participant before the reward payment, no reward will be paid from the long-term incentive plans.

Performance Share Plan 2015–2017

The earning criteria for the PSP 2015–2017 and the potential reward is based on the total shareholder return (TSR) of Metso share during 2015–2017. The earning criteria was not met and there was no payout from PSP 2015–2017 plan.

Performance Share Plan 2016–2018

The earning criteria for the PSP 2016–2018 and the potential reward is based on the total shareholder return (TSR) of Metso share during 2016–2018. At the end of 2018, there were 63 participants in the plan and the potential reward corresponds to a maximum of 294,188 Metso shares. The potential reward will be paid in 2019.

Performance Share Plan 2017–2019

The earning criteria for the PSP 2017–2019 is based on the total shareholder return of Metso share during 2017–2019. At the end of 2018, there were 68 participants in the plan and the potential reward corresponds to a maximum of 269,786 Metso shares. The potential reward will be paid in 2020.

Restricted Share Plan 2017–2019

At the end of 2018, there were 4 participants in the RSP plan and the potential reward corresponds to a 15,400 Metso shares. The potential reward will be paid in 2020.

Performance Share Plan 2018–2020

The earning criteria for the PSP 2018–2020 is based on the total shareholder return of Metso share during 2018–2020. At the end of 2018, there were 10 participants in the plan and the potential reward corresponds to a maximum of 126,416 Metso shares. The potential reward will be paid in 2021.

Restricted Share Plan 2018–2020

At the end of 2018, there were one participant in the RSP plan and the potential reward corresponds to a 15,000 Metso shares. The potential reward will be paid in 2021.

Deferred Share Unit Plan 2018–2020

In December 2017, Metso Board of Directors decided to establish a new long-term incentive plan for senior managers and key employees. DSUP is a long-term share value-based incentive plan that aligns and rewards the employee's performance and Metso share value development during a performance period. At the end of 2018, there were 92 participants and the potential reward will be paid in 2021 if the terms of payment are met.

Matching Share Plan 2018–2022

Metso has one active Matching Share Plan for President and CEO Pekka Vauramo. The plan requires personal investment in Metso shares. The potential reward corresponds to maximum 18,750 shares and will be delivered in three installments and are subject to fulfill the performance criterion adjusted EBITA for each installment.

Beneficiaries of and Granted Shares Under the Share Ownership Plan as at December 31, 2018

	Beneficiaries total	**Shares total**
Plan 2014–2016		
Granted 2017	43	**11,065**

Costs Recognized for the Share Ownership Plans

EUR thousand	Plan 2014–2016	Plan PSP 2015–2017	Plan PSP 2016–2018	Plan PSP 2017–2019	Plan PSP and DSUP 2018–2020	Total
2018		(15)	(195)	(629)	(1,534)	(2,373)
2017	(103)	(104)	(730)	(679)		(1,616)
2016	(223)	(489)	(871)			(1,583)

1.7. *Financial income and expenses*

EUR million	2018	2017	2016
Financial income			
Interest income on cash and cash equivalents	3	4	6
Other finance income [1]	1	7	1
Finance income	4	11	7
Finance income, Metso Group			
Interest expenses on cash pool receivables	5	7	10
Finance income, Metso Group	5	7	10
Foreign exchange gains/losses	0	(0)	(2)
Finance expenses			
Interest expenses from financial liabilities at amortized cost	(26)	(24)	(30)
Other finance expenses	(10)	(21)	(15)
Finance expenses	(36)	(45)	(44)
Finance expenses, Metso Group			
Interest expenses from financial liabilities at amortized cost	-	-	(0)
Other finance expenses	-	(0)	-
Finance expenses, Metso Group	-	(0)	(0)
Finance income and expenses, net	**(26)**	**(28)**	**(29)**

[1] In 2017 other financial income includes a gain of EUR 7 million on loan modification.

1.8. *Income taxes*

Accounting Policy of Income Taxes

Income taxes in the consolidated income statement includes taxes of subsidiaries based on taxable income for the current period, tax adjustments for previous periods and the changes in deferred taxes. The other comprehensive income statement (OCI) includes taxes on items presented in OCI. Deferred taxes are determined for temporary differences arising between the tax base of assets and liabilities and their financial statement carrying amounts, measured using substantially enacted tax rates.

Carve-out Policy

During the periods presented in these carve-out financial statements, several of the legal entities in Metso Minerals have operated as separate taxpayers. For these entities the tax charges and the tax liabilities and receivables in the carve-out financial statements are based on actual taxation.

Some Metso Minerals entities have historically been included in Metso legal entities including operations other than operations of Metso Minerals or in tax groups consolidated for income tax purposes, where the taxpaying entity was another Metso Group entity outside of Metso Minerals. During the periods presented, these Metso Minerals entities did not file separate tax returns. Tax charges in these carve-out financial statements have been determined based on the separate return method, as if the Metso Minerals entities were separate taxpayers in the jurisdiction of their primary operations. The current tax provision is the amount of tax payable or refundable based on the Metso Minerals entity's hypothetical, current-year separate return and has been recorded as current income tax expense and as a shareholder transaction through invested equity in the carve-out financial statements. After computing its current tax payable or refund, the Metso Minerals entity has provided deferred taxes on its temporary differences and on any tax losses that it could claim on its hypothetical return. Deferred taxes on temporary differences are recognized where such temporary differences exist.

The tax charges recorded in the combined income statement are not necessarily representative of the tax charges that may arise in the future.

Estimates and Assessments by Management

Metso Minerals is subject to income tax in its operating countries. Metso Minerals' management is required to make certain assumptions and estimates in preparing the annual tax calculations for which the ultimate tax consequence is uncertain. Annually, Metso Minerals has tax audits ongoing in several subsidiaries and recognizes tax liabilities on for anticipated tax audit issues based on estimate of whether additional taxes will be due. Where the final outcome of these issues is different from the estimated amounts, the difference will impact the income tax in the period in which such determination is made.

The Components of Income Taxes

EUR million	2018	2017	2016
Income taxes for current year	(79)	(39)	(43)
Income taxes for prior years	2	(10)	0
Change in deferred tax asset and liability	4	(8)	5
Income taxes	(72)	(58)	(38)

The differences between income tax expense computed at the Finnish statutory rate and income tax expense provided on earnings were as follows:

EUR million	2018	2017	2016
Profit before taxes	242	128	129
Income tax at Finnish statutory tax rate of 20.0%	(48)	(26)	(26)
Effect of different tax rates in foreign subsidiaries	(17)	(9)	(10)
Non-deductible expenses	(4)	(8)	(8)
Tax exempt income or tax incentives	7	5	7
Foreign non-creditable withholding taxes	(1)	(1)	(4)
Deferred tax assets not booked on current year loss	(2)	0	(1)
Deferred tax liability on undistributed earnings	(7)	(1)	(1)
Effect of enacted change in tax rates	0	(7)	0
Reassessment of deferred taxes for prior years	0	0	0
Income tax for prior years [1]	2	(10)	0
Other	(2)	(4)	2
Income taxes	**(72)**	**(58)**	**(38)**

[1] Year 2017 includes EUR 15 million tax charge due to reassessment decision by Finnish tax authorities for years 2011–2016.

Tax Effects of Components in Other Comprehensive Income

	2018			2017			2016		
EUR million	Before taxes	Tax	After taxes	Before taxes	Tax	After taxes	Before taxes	Tax	After taxes
Cash flow hedges	(1)	0	(1)	2	0	2	(2)	0	(2)
Defined benefit plan actuarial gains (+) / losses (-)	1	0	1	1	(3)	(2)	2	0	2
Currency translation on subsidiary net investments	(15)	-	(15)	(29)	-	(29)	21	-	21
Total comprehensive income (+) / expense (-)	(15)	0	(15)	(26)	(3)	(29)	21	0	**21**
Current tax			0		0			0	
Deferred tax			0		(3)			0	
Total			0		(3)			0	

Accounting Policy of Deferred Taxes

The deferred tax asset or liability is determined for temporary differences arising between the tax bases of assets and liabilities and their financial statement carrying amounts using the substantially enacted tax rates expected to apply in future years. Typical temporary differences arise from provisions, depreciation and amortization expense, inter-company inventory margins, defined benefit plans and tax loss carry forwards. Deferred tax liabilities are recognized in the balance sheet in full, and the deferred tax assets are only recognized if it is probable there will be taxable income in the future against which deferred tax can be used. Deferred tax assets are set off against deferred tax liabilities if they relate to taxes levied by the same taxation authority.

Estimates and Assessments by Management

In determining the deferred tax assets and liabilities, Metso Minerals is required to make certain assumptions and estimates on in particular future operating performance and the taxable income of subsidiaries, recoverability of tax loss carry-forwards and potential changes of tax laws in jurisdictions where Metso Minerals operates. A deferred tax liability based on foreign subsidiaries undistributed earnings has been provided only where Metso Minerals management has elected to distribute such earnings in the coming years and the distribution is subject to taxation. Because the tax consequences are difficult to predict, the deferred tax asset and liabilities may need to be adjusted in coming financial years, which will have an impact in the period in which such determination is made.

Reconciliation of Deferred Tax Balances

EUR million	January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences	December 31
2018						
Deferred tax assets						
Tax losses carried forward	11	(5)	0	-	0	6
Intangible assets and property, plant and equipment	5	8	-	-	-	13
Inventory	23	(6)	-	-	-	17
Provisions	20	(3)	-	-	-	17
Accruals	5	(1)	-	-	2	6
Pension related items	0	10	(5)	-	-	5
Other	20	1	1	0	(3)	21
Total deferred tax assets	84	4	(4)	-	(1)	85
Offset against deferred tax liabilities	(10)	6	-	-	-	(4)
Net deferred tax assets	**74**	**10**	**(4)**	**0**	**(1)**	**81**
Deferred tax liabilities						
Purchase price allocations	9	(5)	0	4	-	8
Intangible assets and property, plant and equipment	5	(1)	-	-	1	4
Other	13	6	0	1	(2)	18
Total deferred tax liabilities	27	0	0	5	(1)	30
Offset against deferred tax assets	(10)	6	-	-	-	(4)
Net deferred tax liabilities	**17**	**6**	**0**	**5**	**(1)**	**26**
Deferred tax assets, net	**57**	**4**	**(4)**	**(5)**	**(2)**	**55**

EUR million	January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences	December 31
2017						
Deferred tax assets						
Tax losses carried forward	10	1	0	-	0	11
Intangible assets and property, plant and equipment	7	(2)	-	-	0	5
Inventory	31	(6)	-	-	(2)	23
Provisions	19	1	-	-	-	20
Accruals	13	(6)	-	-	(1)	5
Pension related items	7	0	(7)	-	-	0
Other	24	(1)	(1)	0	(2)	20
Total deferred tax assets [1]	110	(13)	(8)	0	(5)	84
Offset against deferred tax liabilities	(19)	9	-	-	-	(10)
Net deferred tax assets	**92**	**(4)**	**(8)**	**0**	**(5)**	**74**
Deferred tax liabilities						
Purchase price allocations	7	(1)	-	3	-	9
Intangible assets and property, plant and equipment	7	(2)	-	-	(1)	5
Other	15	(2)	-	-	(1)	13
Total deferred tax liabilities [1]	29	(5)	-	3	(1)	27
Offset against deferred tax assets	(19)	9	-	-	-	(10)
Net deferred tax liabilities	**10**	**4**	**-**	**3**	**(1)**	**18**
Deferred tax assets, net	**81**	**(8)**	**(8)**	**(3)**	**(5)**	**57**

[1] Metso Minerals has reclassified the presentation of deferred tax assets and liabilities on a gross basis and the opening balance line items have been adjusted accordingly.

EUR million	January 1	Charged to income statement	Charged to shareholders' equity	Acquisitions and disposals	Translation differences	December 31
2016						
Deferred tax assets						
Tax losses carried forward	11	(1)	0	0	-	10
Intangible assets and property, plant and equipment	6	1	-	-	-	7
Inventory	39	(10)	-	-	2	31
Provisions	15	4	-	-	-	19
Accruals	7	5	-	-	1	13
Pension related items	4	4	(1)	0	-	7
Other	24	0	0	0	0	24
Total deferred tax assets [1]	105	3	(1)	0	3	110
Offset against deferred tax liabilities	(16)	(3)	-	-	-	(19)
Net deferred tax assets	89	0	(1)	0	3	**92**
Deferred tax liabilities						
Purchase price allocations	7	0	-	-	-	7
Intangible assets and property, plant and equipment	9	(2)	-	-	-	7
Other	15	0	-	-	-	15
Total deferred tax liabilities [1]	31	(2)	-	-	-	29
Offset against deferred tax assets	(16)	(3)	-	-	-	(19)
Net deferred tax liabilities	15	(5)	-	-	-	**10**
Deferred tax assets, net	**74**	**5**	**(1)**	**0**	**3**	**81**

[1] Metso Minerals has reclassified the presentation of deferred tax assets and liabilities on a gross basis and the opening balance line items have been adjusted accordingly.

Deferred tax liability on undistributed retained earnings in subsidiaries will be recognized when the dividend distribution is probable in the near future and it will cause a tax impact. Undistributed retained earnings, of which deferred tax liability is not recognized amounted to EUR 56 million in 2018, EUR 113 million in 2017 and EUR 104 million in 2016.

2. Operational Assets and Liabilities

2.1. Net Working Capital and Capital Employed

Net Working Capital

EUR million	2018	2017	2016
Inventories	790	612	555
Trade receivables	501	424	405
Other non-interest bearing receivables	290	225	272
Customer contract assets and liabilities, net	(18)	8	12
Trade payables	(375)	(298)	(240)
Advances received	(189)	(171)	(165)
Other non-interest bearing liabilities	(370)	(342)	(354)
Net working capital	**629**	**458**	**486**

Capital Employed

EUR million	2018	2017	2016
Net working capital	629	458	486
Intangible assets	526	515	505
Property, plant and equipment	247	233	251
Non-current investments	7	3	2
Interest bearing receivables	109	124	184
Liquid funds	325	701	644
Tax receivables, net	18	27	55
Interest payables, net	(5)	(6)	(5)
Capital employed	**1,856**	**2,055**	**2,122**

2.2. Trade Receivables

Accounting Policy

Trade receivables are invoiced receivables from customers related to Metso Minerals' ordinary business transactions. General payment terms are typically from 30 days to 90 days and they are non-interest bearing receivables. Trade receivables are initially recognized at recoverable value and subsequently valued at amortized cost. If exceptionally over 360 days payment term has offered to a client, the invoiced amount is discounted to its fair value.

Metso Minerals may enter an agreement to sell trade receivables. Trade receivable will be derecognized as payment has been received and there is certainty that credit risk and other risks and rewards have been transferred to a third party.

Receivables from customer contracts are recognized receivables related to sales recognition over time, at the time when performance obligation satisfied by Metso Minerals exceeds the amount invoiced from the client. These receivables will be invoiced according to invoicing schedules in the client contract. See note 1.2.

Metso Minerals applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance to be assessed and recognized regularly. Credit loss risk related to customer contract assets is for material part covered with the advance payments received from the clients.

Based on the analysis of previous year's credit losses by aging category and nature, as well as macroeconomic outlook in the near future, Metso Minerals recognize credit loss allowance on trade receivables within the range: 0.2% undue–5% up to 180 days overdue. From 180 days overdue trade receivables impairment is assessed individually, but without any credit guarantee, collateral or similar assurance on the recoverability, credit loss provision of at the minimum 25% (over 180 days) and 100% (over 360 days) will be recognized. Trade receivables are written off when there is no reasonable expectation of recovery. Probability of bankruptcy, other financial reorganization or similar situation indicating insolvency of the client trigger final write off.

Metso Minerals applied IAS 39 standard for the years 2017 and 2016 (see note 5.6).

Estimates and Assessments by Management

Estimate on expected credit losses and credit loss provision to be recognized are based on management's best judgement. The judgement is based on earlier experience on past years credit losses and current economic outlooks and client segment and location information. Trade receivables are collected actively, and possible impairment analyzed regularly by businesses and Metso Minerals legal units, and necessary actions to secure the receivables are made by the management. When credit loss provision of a trade receivable is assessed individually, collateral, credit guarantees, financial position of client and earlier payment behavior.

EUR million	2018	2017	2016
Trade receivables	484	409	376
Trade receivables, Metso Group	8	8	23
Trade receivables for sale	9	7	6
Customer contract assets	82	66	67
Total	**584**	**490**	**471**

Provision on Trade Receivables by Ageing Category

EUR million	2018		2017		2016	
	Trade receivables	of which provided	Trade receivables	of which provided	Trade receivables	of which provided
Undue	362	1	289	-	283	0
overdue 1–30 days	81	0	68	-	67	-
overdue 31–180 days	54	2	60	1	48	2
overdue 181–360 days	9	2	8	3	11	3
overdue 360– days	23	23	43	40	34	33
Total	**529**	**27**	**468**	**45**	**443**	**38**

Realized write-offs amounted to EUR 3 million in 2018, EUR 11 million in 2017 and EUR 3 million in 2016.

Provision for Impairment of Trade Receivables

EUR million	2018	2017	2016
Accumulated provision January 1	32	38	30
Adjustment to the opening balance	-	(12)	-
Impact in income statement	(3)	8	4
Currency rate differences	(1)	(2)	0
Other change	0	1	3
Accumulated provision December 31	**27**	**32**	**38**

2.3. Other Receivables

Accounting Policy

Other non-interest bearing receivables are recognized in the balance sheet at fair value which can be subsequently written down due to impairment. The impairment is expensed under selling, general and administrative expenses.

Estimates and Assessments by Management

Metso Minerals' policy is to calculate an impairment loss based on the best estimate of the amounts that are potentially uncollectable at the balance sheet date. Metso Minerals' management actively monitors the amount of receivables past due globally and initiates action as necessary.

EUR million	2018 Non-current	2018 Current	2018 Total	2017 Non-current	2017 Current	2017 Total	2016 Non-current	2016 Current	2016 Total
Derivative financial instruments.	3	9	12	2	12	13	8	8	16
Deferred tax assets	81	-	81	74	-	74	90	-	90
Income tax receivables	-	21	21	-	37	37	-	19	19
Other receivables									
Prepaid expenses and accrued income	-	33	33	-	32	32	-	34	34
VAT, payroll tax and social charge receivables	-	60	60	-	56	56	-	68	68
Pension assets	15	-	15	16	-	16	18	-	18
Other receivables	23	9	32	12	14	26	14	18	32
Other receivables total	38	102	140	28	101	129	32	120	152
Prepaid expenses and accrued income, Metso Group	-	0	0	-	0	0	-	0	0
Other receivables, Metso Group	137	1	138	83	0	83	104	1	105
Other receivables total, Metso Group	137	1	138	83	0	83	104	1	105
Non-interest bearing receivables total	**259**	**133**	**392**	**186**	**150**	**336**	**233**	**148**	**382**

Other non-interest bearing receivables included EUR 14 million in 2018, EUR 16 million in 2017 and EUR 16 million in 2016 of Brazilian tax credits arising from delivery of goods and transfer of services (ICMS) recognized by local subsidiaries. Of that amount EUR 1 million in 2018, 2 million in 2017 and 1 million in 2016 was classified as long term. More information on derivatives, see note 4.8.

2.4. Inventory

Accounting Policy

Inventories are valued at the lower of historical cost calculated or net realizable value. Costs are measured on a weighted average cost basis and include purchase costs as well as transportation and processing costs. The costs of finished goods include direct materials, wages and salaries plus employer social contributions, subcontracting and other direct costs, as well as a portion of production and project administration overheads. Net realizable value is the estimated amount that can be realized from the sale of the asset in the normal course of business less costs to sell.

Inventories are shown net of a provision for obsolete and slow-moving inventories. Metso Minerals' policy is to maintain a provision for slow-moving and obsolete inventory based on the best estimate of such amounts at the balance sheet date. An obsolescence provision is charged to income statement in the period in which the obsolescence is determined. Estimates are based on a systematic, on-going review and evaluation of inventory balance.

Trade-in equipment received is recorded as inventory at the lower of cost or net realizable value.

Estimates and Assessments by Management

Inventory valuation requires management to make estimates and judgements particularly relating to obsolescence and expected selling prices in different market conditions. It also entails management's assessment of general market trends in global markets.

EUR million	2018	2017	2016
Materials and supplies	105	83	69
Work in process	180	136	113
Finished products	505	392	373
Inventories	**790**	**612**	**555**

The cost of inventories recognized as expense amounted to EUR 1,840 million in 2018 and EUR 1,596 million in 2017 and 1,478 in 2016.

Changes in Provision for Inventory Obsolescence

EUR million	2018	2017	2016
Balance at beginning of year	57	58	54
Impact of exchange rates	(1)	(4)	2
Additions charged to expense	5	8	9
Used reserve	0	1	(3)
Deductions / other additions	(9)	(5)	(4)
Balance at end of year	**53**	**57**	**58**

2.5. Trade and Other Payables

Accounting Policy

The fair values and carrying amounts of trade and other payables are considered to be the same due to the short-term maturities. The maturities of the current non-interest bearing liabilities rarely exceed six months. The maturities of trade payables are largely determined by trade practices and individual agreements between Metso Minerals and its supplier.

Accrued personnel costs, including holiday pay, are settled in accordance with local laws and regulations

	2018			2017			2016		
EUR million	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**
Trade payables	-	374	**374**	-	297	**297**	-	232	**232**
Trade payables, Metso Group	-	1	1	-	1	1	-	8	8
Other payables:									
Accrued interests	-	5	5	-	7	7	-	6	6
Accrued personnel costs	-	87	87	-	68	68	-	66	66
Accrued project costs	-	53	53	-	30	30	-	35	35
VAT, payroll tax and social charge payables	-	33	33	-	29	29	-	26	26
Other payables	2	32	34	2	37	39	2	9	11
Other payables total	2	210	211	2	171	173	2	142	144
Derivative instruments	-	13	13	-	9	9	-	20	20
Other payables, Metso Group	6	(0)	6	6	1	7	6	0	6
Total	**8**	**598**	**605**	**8**	**479**	**486**	**8**	**403**	**411**

2.6. Provisions

Accounting Policy

Provisions are recognized when the Group has a legal or constructive obligation as a result of a past event, and it is probable that financial benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions, for which settlement is expected to occur more than one year after the initial recognition, are discounted to their present value and adjusted in subsequent closings for the time effect.

Warranty and Guarantee Provisions

Metso Minerals issues various types of contractual product warranties under which it generally guarantees the performance levels agreed in the sales contract, the performance of products delivered during an agreed warranty period and services rendered for a certain period or term. The provision for estimated warranty costs is based on historical realized warranty costs for deliveries of standard products and services in the past. The typical warranty period is 12 months from accepted delivery. The adequacy of provisions is assessed periodically on a case by case basis.

Restructuring and Capacity Adjustment Costs

A provision for restructuring and capacity adjustment costs is recognized only after management has approved, committed to and started to implement a formal plan. Employee termination benefits are recognized after the representatives of employees or individual employees have been informed of the intended measures in detail and the related compensation packages can be reliably measured. The costs included in a provision for capacity adjustment are those costs that are either incremental or incurred as a direct result of the plan or are as the result of a continuing contractual obligation with no continuing economic benefit to Metso Minerals or a penalty incurred to cancel the contractual obligation. Restructuring and capacity adjustment expenses are recognized in either cost of goods sold or selling, general and administrative expenses depending on the nature of the restructuring expenses. Restructuring costs can also include other costs incurred as a result of the plan, which are recorded under other operating income and expenses, net, such as asset write-downs.

Environmental Remediation Costs

Metso Minerals recognizes provisions associated with environmental remediation obligations when there is a present obligation as a result of past events, an outflow of resources is considered probable and the obligation can be estimated reliably. Such provisions are adjusted as further information develops or circumstances change. Recoveries of environmental remediation costs from other parties are recorded as assets when their receipt is deemed virtually certain.

Provision for loss Making Projects

A provision for loss making projects is booked when the costs needed to settle the performance obligations of the contract exceed the consideration to be received. Such a provision for the unrecognized portion of the loss is recognized immediately when these conditions have been met and is revised according to the progress of the project.

Estimates and Assessments by Management

Provisions booked require management to estimate the future costs needed to settle the obligations and to estimate the possible outcomes of claims or lawsuits. The outcome depends on future development and events, so the final costs needed and timing to settle the obligation may differ from the initial provision estimated.

For larger and long-term delivery projects and sales involving new technology, additional warranty provisions can be established on a case by case basis to take into account the potentially increased risk.

	2018			2017			2016		
EUR million	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**	**Non-current**	**Current**	**Total**
Warranty and guarantee provision	0	47	47	-	45	45	-	36	36
Restructuring provision	0	5	5	1	11	11	1	28	29
Environmental remedial provision	0	0	1	0	0	1	0	0	0
Other provisions [1]	26	8	34	34	9	43	37	11	48
Total	**27**	**59**	**86**	**35**	**66**	**100**	**38**	**75**	**114**

[1] Includes provisions related to lawsuit, personnel liabilities and provisions for loss making projects.

Changes in Provisions

EUR million	2018 Warranty and guarantee provision	Restructuring provision	Environmental remediation provision	Total
Carrying value at January 1	45	11	1	**57**
Impact of exchange rates	0	0	0	**0**
Acquisitions	-	-	-	**-**
Addition charged to expense	28	2	0	**31**
Used reserve	(14)	(7)	(0)	**(21)**
Reversal of reserve / other changes	(13)	(2)	-	**(15)**
Carrying value at December 31	**47**	**5**	**1**	**52**

EUR million	2017 Warranty and guarantee provision	Restructuring provision	Environmental remediation provision	Total
Carrying value at January 1	36	29	0	**65**
Impact of exchange rates	(2)	(2)	(0)	**(4)**
Acquisitions	-	-	-	**-**
Addition charged to expense	36	0	0	**37**
Used reserve	(23)	(16)	-	**(38)**
Reversal of reserve / other changes	(2)	(0)	-	**(2)**
Carrying value at December 31	**45**	**11**	**1**	**57**

EUR million	2016 Warranty and guarantee provision	Restructuring provision	Environmental remediation provision	Total
Carrying value at January 1	37	19	1	**56**
Impact of exchange rates	1	0	0	**1**
Acquisitions	-	-	-	**-**
Addition charged to expense	31	27	-	**58**
Used reserve	(18)	(16)	(0)	**(34)**
Reversal of reserve / other changes	(15)	2	(0)	**(14)**
Carrying value at December 31	**36**	**29**	**0**	**65**

2.7. Post-employment Obligations

Accounting Policy

Metso Minerals has several different pension schemes in accordance with local regulations and practices in countries where it operates. In certain countries, the pension schemes are defined benefit plans with retirement, disability, death, and other post-retirement benefits, such as health services, and termination income benefits. The retirement benefits are usually based on the number of service years and the salary levels of the final service years. Metso Minerals has both defined contribution and defined benefit schemes. The schemes are generally funded through payments to insurance companies or to trustee-administered funds. Other arrangements are unfunded with benefits being paid directly by Metso Minerals as they fall due. All arrangements are subject to local tax and legal restrictions in their respective jurisdictions.

In the case of defined benefit plans, the liability recognized from the plan is the present value of the defined benefit obligation as of the balance sheet date less the fair value of the plan assets. Independent actuaries calculate the defined benefit obligation by applying the projected unit credit method under. The present value of the defined benefit obligation is determined by discounting the estimated future cash flows using the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and having maturity approximating to the terms of the related pension obligation. The cost of providing retirement and other post-retirement benefits to personnel is recognized in the income statement concurrently with the service rendered by personnel. Net interest is recorded through financial income and expenses in the income statement. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized through other comprehensive income (OCI) in shareholders' equity in the period in which they arise. Past service costs, gains and losses on curtailments or settlements are recognized immediately in the income statement.

The contributions to defined contribution plans and multi-employer and insured plans are recognized in the income statement concurrently with the payment obligations.

Estimates and Assessments by Management

The present value of the pension obligations is based on annual actuarial calculations, which use several assumptions such as the discount rate and expected return on assets, salary and pension increases and other actuarial factors. As a result, the liability recorded on Metso Minerals' balance sheet and cash contributions to funded arrangements are sensitive to changes. Where the actuarial experience differs from those assumptions gains and losses result and are recognized in OCI. Sensitivity analyses on the present value of the defined benefit obligation have been presented in the tables. Assets of Metso Minerals' funded arrangements are managed by external fund managers. The allocation of assets is reviewed regularly by those responsible for managing Metso Minerals' arrangements based on local legislation, professional advice and consultation with management, based on acceptable risk tolerances.

Metso Minerals' Pension and Other Post-employment Plans

Pension arrangements in the US, Canada, Germany and the UK together represent in years 2016–2018 78 percent, 80 percent and 82 percent of Metso Minerals' defined benefit obligation and 75 percent, 77 percent and 80 percent of its pension assets. These arrangements provide income in retirement which is substantially based on salary and service at or near retirement. In the US and Canada annual valuations are carried out to determine whether cash funding contributions are required in accordance with local legislation. In the UK, Metso Minerals' defined benefit pension arrangement is closed to future accrual. Plan assets are held by a separate pension fund and are administered by a board of trustees. Cash contributions are determined on a triennial basis in accordance with local funding legislation, with the level of cash payments being agreed between the trustees and Metso Minerals. Defined benefit pension arrangements in Sweden are offered in accordance with collective labor agreements and are unfunded.

Assets of Metso Minerals' funded arrangements are managed by external fund managers. The allocation of assets is reviewed regularly by those responsible for managing Metso Minerals' arrangements based on local legislation, professional advice and consultation with Metso Minerals, based on acceptable risk tolerances.

The expected contributions to plans in 2019 are EUR 5 million. In years 2016–2018 Metso Minerals paid contributions to defined benefit plans EUR 10 million, EUR 7 million and EUR 6 million.

The Amounts Recognized as of December 31 in the Balance Sheet

	2018			2017			2016		
EUR million	**Pension benefits**	**Other post-employment benefits**	**Total**	**Pension benefits**	**Other post-employment benefits**	**Total**	**Pension benefits**	**Other post-employment benefits**	**Total**
Present value of funded obligations	164	-	164	185	-	185	206	-	206
Fair value of plan assets	(180)	-	(180)	(203)	-	(203)	(222)	-	(222)
	(16)	-	(16)	(18)	-	(18)	(16)	-	(16)
Present value of unfunded obligations	32	25	57	34	27	61	32	35	67
Unrecognized asset	1	-	1	1	-	1	1	-	1
Net liability recognized	17	25	42	17	27	44	17	35	52
Amounts in the balance sheet:									
Liabilities	32	25	57	34	27	60	37	33	70
Assets	15	-	15	16	-	16	18	-	18
Net liability recognized	17	25	42	17	27	44	19	33	52

Movements in the Net Liability Recognized in the Balance Sheet

	Pension benefits and other post-employment benefits		
EUR million	**2018**	**2017**	**2016**
Net liability at beginning of year	44	52	57
Net expense recognized in the income statement	5	4	5
Employer contributions	(6)	(7)	(10)
Gain (+) / loss (-) recognized through OCI	1	(3)	(4)
Translation differences	(2)	(2)	4
Net liability at end of year	42	44	52

The Amounts Recognized in the Income Statement

EUR million	2018 Pension benefits	2018 Other post-employment benefits	2018 Total	2017 Pension benefits	2017 Other post-employment benefits	2017 Total	2016 Pension benefits	2016 Other post-employment benefits	2016 Total
Employer's current service cost	2	0	**2**	3	0	**3**	3	0	**3**
Net interest on net surplus (+) / deficit (-)	0	1	**1**	0	1	**1**	0	1	**1**
Settlements	-	-	**-**	0	-	**-**	0	-	**0**
Recognition of past service cost (+) / credit (-)	2	-	**2**	0	0	**0**	0	0	**0**
Administration costs paid by the scheme	0	-	**0**	0	-	**0**	0	-	**0**
Expense (+) / income (-) recognized in income statement	**4**	**1**	**5**	**3**	**1**	**4**	**3**	**2**	**5**

The amounts Recognized Through OCI

EUR million	2018 Pension benefits	2018 Other post-employment benefits	2018 Total	2017 Pension benefits	2017 Other post-employment benefits	2017 Total	2016 Pension benefits	2016 Other post-employment benefits	2016 Total
- Return on plan assets, excluding amounts included in interest expense (+) / income (-)	10	-	10	(1)		(1)	(25)	-	(25)
- Actuarial gain (-) / loss (+) on liabilities due to change in financial assumptions	(7)	(2)	(9)	4	-	5	21	1	22
- Actuarial gain (-) / loss (+) on liabilities due to change in demographic assumptions	0	-	0	(2)	0	(2)	3	0	3
- Actuarial gain (-) / loss (+) on liabilities due to experience	(2)	-	(2)	(5)	0	(5)	(3)	0	(3)
- Gain (-) / loss (+) as result of asset ceiling	0	-	0	0	0	0	1	0	1
Total gain (-) / loss (+) recognized through OCI	1	(2)	(1)	(3)	-	(3)	(5)	1	(4)

The Changes in the Value of the Defined Benefit Obligation

EUR million	2018 Pension benefits	2018 Other post-employment benefits	2018 Total	2017 Pension benefits	2017 Other post-employment benefits	2017 Total	2016 Pension benefits	2016 Other post-employment benefits	2016 Total
Defined benefit obligation at beginning of year	219	27	246	243	32	275	233	33	266
Other adjustment to present value	-	0	0	-	-	0	0	0	0
Employer's current service cost	2	0	2	3	0	3	3	0	3
Interest cost	5	1	6	8	1	7	8	0	8
Plan participant contributions	0	-	0	-	-	-	0	-	0
Past service cost (+) / credit (-)	1	-	1	-	-	-	0	-	0
- Actuarial gain (-) / loss (+) due to change in financial assumptions	(7)	(2)	(9)	4	1	5	21	1	22
- Actuarial gain (-) / loss (+) on liabilities due to change in demographic assumptions	0	-	0	(2)	-	(2)	3	0	3
- Actuarial gain (-) / loss (+) due to experience	(3)	0	(3)	(3)	(2)	(5)	(3)	0	(3)
Settlements	0	-	0	(6)	-	(6)	(3)	-	(3)
Benefits paid from the arrangement	(17)	-	(17)	(11)	-	(11)	(11)	-	(11)
Benefits paid direct by employer	(3)	(2)	(5)	(4)	(2)	(6)	(5)	-	(5)
Translation differences	(1)	1	0	(10)	(3)	(13)	(7)	-	(7)
Defined benefit obligation at end of year	**196**	**25**	**221**	**219**	**27**	**246**	**240**	**33**	**273**

The Changes in the Fair Value of the Plan Assets During the Year

EUR million	Pension and other post-employment benefits total 2018	2017	2016
Fair value of assets at beginning of year	203	222	210
Interest income on assets	5	6	7
Return on plan assets excluding interest income	(10)	2	25
Assets distributed on settlements	-	(6)	(4)
Employer contributions	6	7	10
Plan participant contributions	0	0	0
Benefits paid from the arrangements	(17)	(11)	(11)
Benefits paid direct by employer	(5)	(6)	(5)
Administration expenses paid from the scheme	0	0	0
Translation differences	(2)	(10)	(11)
Fair value of assets at end of year	**180**	**203**	**222**

The Major Categories of Plan Assets as a Percentage of Total Plan Assets as at December 31

	2018			2017			2016		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total	Quoted	Unquoted	Total
Equity securities	12%	0%	12%	15%	0%	15%	28%	0%	28%
Bonds	22%	3%	25%	17%	2%	19%	24%	2%	26%
Property	2%	0%	2%	2%	1%	3%	1%	0%	1%
Cash	1%	0%	1%	1%	0%	1%	1%	0%	1%
Insurance contracts	2%	15%	17%	1%	18%	20%	2%	15%	17%
Other	26%	17%	43%	4%	39%	43%	3%	25%	28%
Total	65%	35%	100%	40%	60%	100%	58%	42%	100%

As at 31, December 2016, 2017 and 2018 there were no plan assets invested in affiliated or property occupied by affiliated companies.

The Principal Actuarial Assumptions at December 31 Expressed as Weighted Average

	2018	2017	2016
Benefit obligation:			
Discount rate	3.52%	3.18%	3.35%
Rate of salary increase	2.54%	2.36%	3.11%
Rate of pension increase	2.13%	2.24%	1.95%
Expense in income statement:			
Discount rate	3.18%	3.18%	3.75%
Rate of salary increase	2.69%	2.69%	2.69%
Rate of pension increase	2.04%	2.04%	2.04%

The Weighted Average Life Expectancy Used for the Major Defined Benefit Plans

	Life expectancy at age of 65 for a male member currently aged 65			Life expectancy at age of 65 for a male member currently aged 45		
In years	2018	2017	2016	2018	2017	2016
United Kingdom	21.9	22.1	22.2	23.3	23.5	23.9
United States	21.8	20.7	20.9	22.8	22.6	22.5
Canada	20.7	21.7	21.4	22.3	22.8	22.0

Life expectancy is allowed for in the assessment of the Defined Benefit Obligation using mortality tables which are generally based on experience within the country in which the arrangement is located with (in many cases) an allowance made for anticipated future improvements in longevity.

Sensitivity analyses on present value of Defined Benefit Obligation in below table presents the present value of the Defined Benefit Obligation when major assumptions are changed while others held constant.

Sensitivity Analyses

	2018			2017			2016		
	Pension	Other	Total	Pension	Other	Total	Pension	Other	Total
Discount rate									
Increase of 0.25%	(7.4)	(0.6)	(8.0)	(8.6)	(0.6)	(9.2)	(9.7)	(0.8)	(10.5)
Decrease of 0.25%	7.8	0.6	8.4	9.0	0.7	9.7	10.3	0.8	11.1
Salary increase rate									
Increase of 0.25%	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.1	0.4
Decrease of 0.25%	(0.1)	(0.1)	(0.2)	(0.1)	(0.1)	(0.2)	(0.3)	(0.1)	(0.4)
Pension increase rate									
Increase of 0.25%	2.8	-	2.8	3.2	-	3.2	3.7	-	3.7
Decrease of 0.25%	(2.5)	-	(2.5)	(3.1)	-	(3.1)	(3.4)	-	(3.4)
Medical cost trend									
Increase of 0.25%	-	1.1	1.1	-	1.0	1.0	-	1.7	1.7
Decrease of 0.25%	-	(1.0)	(1.0)	-	(1.0)	(1.0)	-	(1.4)	(1.4)
Life expectancy									
Increase of one year	13.1	0.8	13.9	13.9	0.7	14.6	14.5	0.7	15.2
Decrease of one year	(12.9)	(0.8)	(13.7)	(13.7)	(0.7)	(14.4)	(14.2)	(0.7)	14.9

Weighted average duration of Defined Benefit Obligation expressed in years:

	2018			2017			2016		
In years	**Pension**	**Other**	**Total**	**Pension**	**Other**	**Total**	**Pension**	**Other**	**Total**
At December 31	11.4	9.5	11.2	12.0	10.1	11.8	12.4	10.0	12.2

3. Intangible Assets and Property, Plant and Equipment

3.1. Goodwill and Other Intangible Assets

Accounting policy

Goodwill and other intangible assets with an indefinite useful life

Recognized goodwill represents the excess of acquisition costs over the fair value of net identified assets acquired and liabilities assumed and the fair values of previously owned interests and non-controlling interests. Goodwill is allocated to cash-generating unit (CGUs), which is the Minerals business. When Metso Minerals reorganizes its reporting structure, goodwill is reallocated to the cash generating units affected based on their relative fair values at the time of the reorganization. The carrying value of goodwill is tested with the CGU's value in use or CGU's fair value less costs of disposal, when appropriate. Previously recognized impairment losses on goodwill are not reversed.

Other intangible assets with an indefinite useful life, such as brand values, are not amortized. Currently such assets are tested for impairment annually as part of the CGU tested for impairment. Previous losses on impairment are only reversed to the extent that the new carrying amount of the assets does not exceed the carrying amount the asset would have had, if the asset had not been impaired.

Other intangible assets

Other intangible assets with a definite useful life, mainly trademarks, patents, licenses, IT software or acquired order backlog are measured at costs less accumulated amortizations and impairment losses.

Amortization of intangible assets

Amortization of intangible assets with a definite useful life is calculated on a straight-line basis over the useful life of the assets as follows:

Patents and licenses	5–10 years
Computer software	3–5 years
Technology	3–15 years
Customer relationships	3–12 years
Other intangible assets	< 1–15 years

The carrying value of intangible assets subject to amortization is reviewed for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. A previously recognized impairment loss may be reversed if there is a significant improvement of the circumstances having initially caused the impairment, but not to a higher value than the carrying amount, which would have been recorded had there been no impairment in prior years.

Research and development expenses comprise salaries, administration costs, depreciation and amortization of tangible and intangible assets and they are mainly recognized as incurred. When material development costs meet certain capitalization criteria under IAS 38, they are capitalized and amortized during the expected useful life of the underlying technology.

Goodwill and Other Intangible Assets

EUR million	Goodwill	Patents and licenses	Capitalized software	Other intangible assets	Intangible assets total
2018					
Acquisition cost at beginning of year	446	30	76	101	651
Translation differences	(1)	(0)	(0)	1	(0)
Business acquisitions	17	0	0	7	24
Capital expenditure	-	2	1	1	3
Reclassifications	-	-	1	(1)	0
Other changes	0	(3)	(2)	(1)	(5)
Acquisition cost at end of year	462	29	75	108	674
Accumulated amortization at beginning of year	-	(21)	(62)	(53)	(136)
Other changes	-	2	2	0	4
Amortization charges for the year	-	(2)	(6)	(7)	(16)
Accumulated amortization at end of year	-	(22)	(66)	(60)	(148)
Net book value at end of year	462	7	8	49	526
2017					
Acquisition cost at beginning of year	430	25	75	101	631
Translation differences	(4)	(0)	(2)	(4)	(9)
Business acquisitions	19	3	0	7	30
Capital expenditure	-	1	0	1	3
Reclassifications	-	1	2	(3)	0
Other changes	0	(1)	(0)	(2)	(3)
Acquisition cost at end of year	446	30	76	101	651
Accumulated amortization at beginning of year	-	(20)	(57)	(48)	(126)
Translation differences	-	0	2	1	3
Other changes	-	1	0	0	1
Amortization charges for the year	-	(2)	(7)	(6)	(15)
Accumulated amortization at end of year	-	(21)	(62)	(53)	(136)
Net book value at end of year	446	8	14	48	515
2016					
Acquisition cost at beginning of year	430	29	73	98	631
Translation differences	0	(0)	1	1	2
Capital expenditure	-	1	0	4	6
Reclassifications	-	1	2	(2)	0
Other changes	0	(6)	(1)	(1)	(8)
Acquisition cost at end of year	430	25	75	101	631
Accumulated amortization at beginning of year	-	(24)	(50)	(44)	(118)
Translation differences	-	0	(1)	(0)	(1)
Other changes	-	6	1	2	8
Amortization charges for the year	-	(2)	(7)	(6)	(15)
Accumulated amortization at end of year	-	(20)	(57)	(48)	(126)
Net book value at end of year	430	5	18	53	505

Impairment Testing

Accounting Policy

Goodwill and other intangible assets with an indefinite useful life are tested for impairment annually. The testing of goodwill and other intangible assets with an indefinite useful life is performed at the cash generating unit level. When the carrying value of goodwill exceeds the recoverable value, an impairment is recognized in the income statement under depreciations and amortizations. Impairment losses on goodwill are not reversed. Currently Metso Minerals' management has defined one CGU to be tested, Minerals segment, to which goodwill has been allocated.

The recoverable amount of CGU is based on value in use calculations, where the estimated future cash flows of CGU are discounted to their present value. The cash flows are derived from the current year's last quarter estimate, the following year's budget and the approved strategy for the next four years, beyond which cash flows are calculated using the terminal value method. The terminal growth rate used is based on management's judgment regarding the average long-term growth. Cash flows include only normal maintenance investments and exclude any potential investments that enhance the CGU's performance and acquisitions.

Estimates and Assessments by Management

Value in use calculations are inherently judgmental and highly susceptible to change from period to period because they require management to make assumptions about future supply and demand related to its individual business units, future sales prices, profit margins and achievable efficiency savings over time. The value of benefits and savings expected from the efficiency improvement programs are inherently subjective. Metso Minerals management estimates sales growth rate and EBITDA development for the testing period as well as the discount factor used. The present value of the cash generating unit is discounted using the CGU's weighted average cost of capital (WACC) calculated by Metso Minerals. WACC calculations include judgments on regarding, among other things, relevant beta factors, peer companies and capital structure to use.

Metso Minerals performs impairment testing annually, or whenever there is an indication of impairment. Typical triggering events are material and permanent deterioration in the global economy or political environment, observed significant under-performance relative to projected future performance and significant changes in Metso Minerals' strategic orientations.

Expected useful lives and remaining amortization periods for other intangible assets are reviewed annually by management. Acquisitions, disposals and restructuring actions typically generate a need for the reassessment of the recoverable amounts and remaining useful lives of the assets. When other intangible assets are measured at fair value less costs of disposal, the selling price, incremental costs and selling costs need to be estimated by management.

Upon initial acquisition Metso Minerals uses readily available market values to determine the fair values of acquired net assets to be allocated. However, when this is not possible, the valuation is based on past performance of such an asset and expected future cash generating capacity, which requires management to make estimates and assumptions of the future performance and use of these assets. Any change in Metso Minerals' future business priorities may affect the recoverable amounts.

Goodwill Allocation to Cash Generating Unit

EUR million	
2018	
Balance at beginning of year	446
Translation differences and other changes	(1)
Acquisitions / disposals	17
Balance at end of year	**462**
2017	
Balance at beginning of year	430
Translation differences and other changes	(4)
Acquisitions / disposals	19
Balance at end of year	**446**
2016	
Balance at beginning of year	430
Translation differences and other changes	0
Acquisitions / disposals	-
Balance at end of year	**430**

The EUR 17 million increase in goodwill during 2018 relates to the acquisitions of P.J. Jonsson och Söner AB and Kiln Flame Systems Ltd. (see note 5.4.). In 2017, the increase of EUR 19 million in goodwill was caused by the acquisition of WearX Holding Pty Ltd. The value of other intangible assets with indefinite useful life amounted to EUR 16 million in 2018 2017 and 2016, which comprises of brand values.

Annual Impairment Test in 2018, 2017 and 2016

At the end of 2018, 2017 and 2016 goodwill amounted to EUR 462 million; EUR 446 million and EUR 430 million, equaling 39%, 42% and 37% of the equity. In years from 2016 to 2018, Metso Minerals' reporting structure and the allocation of goodwill remained unchanged from the previous year. As the pooling method has been applied for these carve out financial statements, the reporting structure and allocation of goodwill in the Metso Group has been carried forward, except for the reallocation of the Pumps business to the Minerals segment, which was tested under the Flow Control segment in the Metso Group.

Given that the recoverable amount significantly exceeded the carrying value tested, no indication of impairment was found in 2018, 2017 and 2016. The value in use calculations were derived from estimates, budgets and strategy figures reviewed by Metso Minerals' management and approved by the Board of Directors of Metso.

The key assumptions used in assessing the recoverable amount are the profitability and growth rate for the estimate period, long-term average growth in the terminal period and discount rate. The key values used were as follows:

%	**2018**	**2017**	**2016**
Sales growth in four years estimate period	10.2%	9.9%	3.8%
EBITDA % range in four years estimate period	12.3%–15.6%	12.0%–14.4%	9.1%–13.4%
Growth rate in the terminal period	1.7%	1.7%	1.7%
WACC after tax	7.5%	8.0%	8.9%
WACC before tax	9.7%	10.8%	12.1%

Values assigned to key assumptions reflect past experience and the management's expectations on the future sales and production volumes, which are based on the current structure and production capacity of the cash generating unit. The cyclicality and current market situation have been considered separately. In addition, data on growth, demand and price development provided by various research institutions have been utilized. The growth rate of 1.7% for the terminal period, is based on the long-term expectations on the growth in the Metso Minerals' market environments, considering the current low interest rate environment and overall financial market situation.

WACC (Weighted average cost of capital) before tax, is used as a discount factor in the calculations. It takes into account the expected return on both debt and equity and has been derived from the WACC on comparable peer industry betas, capital structure and tax rates. WACC is evaluated annually for testing and specific risk is incorporated through individual beta factors from the market data of the peer companies.

Sensitivity Analysis

The sensitivity to impairment of each cash generating unit was tested by:
a) increasing WACC by 2.0 percentage points
b) reducing the terminal growth from 1.7% to 1.2%
c) reducing the terminal growth rate from 1.7% to 1.2% and increasing WACC by 2.0 percentage points

The reductions into present value in the sensitivity analysis were as follows:

%	WACC increase by 2 p.p.	Terminal growth from 1.7% to 1.2%	Terminal growth from 1.7% to 1.2% and WACC increase by 2 p.p.
Metso Minerals			
2018	(26)%	–	(30)%
2017	–	(6)%	(28)%
2016	–	(5)%	(26)%

The sensitivity analysis also includes several cash projections on break-even levels of EBITA %, WACC and sales growth based on reasonable change in the future performance. However, the impact on the value in use obtained is limited as long as there is no permanent weakening expected for the business, which would affect the terminal value. Based on these sensitivity analyses, the Metso Minerals' management believes that no reasonably possible change of the key assumptions used would cause the carrying value of any cash generating unit to exceed its recoverable amount. In the years 2018, 2017 and 2016, the sensitivity analysis did not indicate risks of impairment.

3.2. Property, Plant and Equipment

Accounting Policy

Property, plant and equipment are stated at historical cost, less accumulated depreciation and impairment loss, if any. The Property, plant and equipment of acquired subsidiaries are measured at their fair value at the acquisition date.

Depreciation is calculated on a straight-line basis over the expected useful lives of the assets as follows:
Buildings and structures 15–40 years
Machinery and equipment 3–20 years
Land and water areas are not depreciated.

Expected useful lives are reviewed at each balance sheet date and if they differ significantly from previous estimates, the remaining depreciation periods are adjusted accordingly.

Subsequent improvement costs related to an asset are included in the carrying value of such asset or recognized as a separate asset, as appropriate, only when the future economic benefits associated with the costs are probable and the related costs can be separated from normal maintenance costs.

Metso Minerals reviews property, plant and equipment to be held and used by the company for impairment whenever events and changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Gains and losses on the disposal of property, plant and equipment and possible impairments are recognized in other operating income and expenses. Previously recognized impairment loss may be reversed if there is a significant improvement to the circumstances having initially caused the impairment, however not to a higher value than the carrying amount, which would have been recorded had there been no impairment in prior years.

Finance leases are capitalized at the inception of the lease at the lower of the fair value of the leased property or the present value of the minimum lease payments. Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in long-term debt and the interest element is charged to income statement over the lease period. Property, plant and equipment acquired under finance leases are depreciated over the useful life of the asset or over the lease period, if shorter.

Capitalized Interests

The interest expenses of self-constructed investments are capitalized in Metso Minerals' financial statements. The capitalized interest expense is amortized over the estimated useful life of the underlying asset.

Government Grants

Government grants relating to additions to property, plant and equipment are deducted from the acquisition cost of the asset and they reduce the depreciation charge of the related asset. Other government grants are deferred and recognized as profit concurrently with the costs they compensate.

Estimates and Assessments by Management

Acquisitions, disposals and restructuring actions typically generate a need for the reassessment of the recoverable values and remaining useful lives of the assets. When property, plant and equipment are valued at fair value less costs of disposal, selling price, incremental costs and selling costs need to be estimated.

Property, Plant and Equipment

EUR million	Land and water areas	Buildings and structures	Machinery and equipment	Assets under construction	Tangible assets total
2018					
Acquisition cost at beginning of year	38	188	441	10	**676**
Translation differences	(0)	(3)	(16)	(1)	**(20)**
Business acquisitions	-	4	1	(0)	**4**
Capital expenditure	-	4	21	31	**56**
Reclassifications	0	0	9	(9)	**0**
Other changes	(2)	(12)	(18)	-	**(32)**
Acquisition cost at end of year	**35**	**181**	**438**	**31**	**684**
Accumulated depreciation at beginning of year	-	(108)	(335)	-	**(444)**
Translation differences	-	1	12	-	**13**
Business acquisitions	-	0	0	-	**0**
Other changes	-	9	16	-	**25**
Impairment losses	-	(1)	(1)	-	**(2)**
Amortization charges for the year	-	(6)	(24)	-	**(31)**
Accumulated depreciation at end of year	**-**	**(105)**	**(333)**	**-**	**(438)**
Net book value at end of year	**35**	**75**	**106**	**31**	**246**
2017					
Acquisition cost at beginning of year	39	201	453	6	**698**
Translation differences	(1)	(11)	(27)	(1)	**(40)**
Business acquisitions	-	-	2	-	**2**
Capital expenditure	0	2	19	9	**30**
Reclassifications	(0)	0	5	(5)	**0**
Other changes	(0)	(3)	(10)	-	**(14)**
Acquisition cost at end of year	**38**	**188**	**441**	**10**	**676**
Accumulated depreciation at beginning of year	-	(110)	(337)	-	**(447)**
Translation differences	-	5	20	-	**25**
Business acquisitions	-	-	0	-	**0**
Other changes	-	3	8	-	**12**
Impairment losses	-	(1)	(1)	-	**(2)**
Amortization charges for the year	-	(6)	(26)	-	**(32)**
Accumulated depreciation at end of year	**-**	**(108)**	**(335)**	**-**	**(444)**
Net book value at end of year	**38**	**80**	**106**	**10**	**233**
2016					
Acquisition cost at beginning of year	43	211	446	7	**707**
Translation differences	0	5	22	1	**27**
Capital expenditure	-	1	13	7	**21**
Reclassifications	(0)	2	8	(10)	**(0)**
Other changes	(5)	(17)	(35)	-	**(57)**
Acquisition cost at end of year	**39**	**201**	**453**	**6**	**698**
Accumulated depreciation at beginning of year	-	(112)	(322)	-	**(434)**
Translation differences	-	(2)	(18)	-	**(20)**
Other changes	-	13	33	-	**46**
Impairment losses	-	(1)	(5)	-	**(6)**
Amortization charges for the year	-	(8)	(25)	-	**(33)**
Accumulated depreciation at end of year	**-**	**(110)**	**(337)**	**-**	**(447)**
Net book value at end of year	**39**	**91**	**116**	**6**	**251**

Financial leases recognized are included in property, plant and equipment and the carrying values at the year-end 2018, 2017 and 2016 is less than EUR 1 million.

3.3. Depreciation and Amortization

EUR million	2018	2017	2016
Intangible assets from acquisitions	(5)	(4)	(4)
Other intangible assets	(11)	(11)	(11)
Tangible assets	(30)	(31)	(33)
Buildings and structures	(6)	(6)	(8)
Machinery and equipment	(24)	(25)	(25)
Total	**(46)**	**(46)**	**(47)**

Depreciation and Amortization by Function

EUR million	2018	2017	2016
Cost of goods sold	(27)	(27)	(27)
Selling, general and administrative expenses	(19)	(19)	(20)
Marketing and selling	(3)	(2)	(3)
Research and development	0	0	0
Administrative	(16)	(17)	(17)
Total	**(46)**	**(46)**	**(47)**

3.4. Lease Commitments

Accounting policy

Leases of property, plant and equipment, under which Metso Minerals does not have a significant portion of the risks and rewards of ownership, are classified as operating leases. Payments under operating leases are recognized in the income statement as incurred over the lease term and the commitment of noncancelable future payments is shown as an off-balance sheet liability. Leases classified as finance leases are reported in the property, plant and equipment (see note 3.2.).

Metso Minerals has operating leases for offices, manufacturing and warehouse space, company cars and IT equipment and software. Certain contracts contain renewal options for various periods of time.

Future Minimum Payments under Operating Leases

EUR million	2018	2017	2016
Within one year	22	20	21
After one year but within two years	15	16	16
After two years but within three years	9	11	13
After three years but within four years	7	8	9
After four years but within five years	6	6	5
After five years	9	10	14
Total minimum lease payments	**68**	**70**	**78**

Total rental expenses amounted to EUR 22 million in 2018, EUR 24 million in 2017 and 23 EUR million in 2016, respectively.

4. Capital Structure and Financial Instruments

4.1. Financial Risk Management

As a global company, Metso Minerals is exposed to a variety of business and financial risks. Financial risks are managed centrally by the Group Treasury under annually reviewed written policies approved by the Board of Directors. Treasury operations are monitored by the Treasury Management Team chaired by the CFO. Group Treasury identifies, evaluates and hedges financial risks in close co-operation with the operating units. Group Treasury functions as counterparty to the operating units, manages centrally external funding and is responsible for the management of financial assets and appropriate hedging measures. The objective of financial risk management is to minimize potential adverse effects on Metso Minerals' financial performance.

Sensitivity Analysis

Sensitivity analysis figures presented in connection with different financial risks are based on the risk exposures at the balance sheet date. The sensitivity is calculated by assuming a change in one of the risk factors of a financial instrument, such as interest or currency. It is not likely that the future volatility of a risk factor will develop in accordance with the test assumptions and that only one factor would be impacted.

When calculating the sensitivity, Metso Minerals has chosen to use market conventions in assuming a one percentage point (100 basis points) variation in interest rates, 10 percent change in foreign exchange rates and in commodity prices because this provides better comparability from one period to another and information on the volatility to users of financial statements. Metso Minerals is aware that such assumptions may not be realistic when compared to past volatility and they are not intended to reflect the future. Metso Minerals has chosen not to use past volatility as this could mislead the users of financial statements to assume the analysis reflect management's view on future volatility of the financial instruments.

Liquidity and Refinancing Risk and Capital Structure Management

Liquidity or refinancing risk arises when a company is not able to arrange funding at terms and conditions corresponding to its creditworthiness. Sufficient cash, short-term investments and committed and uncommitted credit facilities are maintained to protect short-term liquidity. Diversification of funding among different markets and adequate number of financial institutions is used to safeguard the availability of liquidity at all times. Group Treasury monitors bank account structures, cash balances and forecasts of the operating units and manages the utilization of the consolidated cash resources.

The liquidity position of the Group remained strong supported by the solid cash flow from operations, maturity structure of the funding and the available back up credit facilities. During the year a bank loan with a nominal value EUR 211 million and private placements with total nominal value EUR 69 million matured and were repaid. At the end of 2018 liquid funds amounted to EUR 325 million, EUR 701 million in 2017 and EUR 644 million in 2016. Liquid funds consist of cash and cash equivalents amounting to EUR 249 million in 2018, EUR 452 million in 2017 and EUR 403 million in 2016 and deposits and securities with maturity over three months amounting to EUR 76 million in 2018, EUR 248 million in 2017 and EUR 241 million 2016. Additionally, committed undrawn credit facilities amounted to EUR 400 million in years 2016–2018 and committed undrawn European Investment Bank loan facility to EUR 32 million in years 2017–2018. The syndicated revolving credit facility matures in June 2021. Additionally, the uncommitted Finnish Commercial Paper program totaling EUR 400 million can be utilized for funding.

Metso Minerals' refinancing risk is managed by balancing the proportion of short-term and long-term debt as well as the average remaining maturity of long-term debt. The tables below analyze the repayments and interests on Metso Minerals' liabilities by the remaining maturities from the balance sheet date to the contractual maturity date. The net interest payments of interest rate swaps hedging long-term loans are included in the long-term debt repayment figures.

Maturities of Debts

	Dec 31, 2018			**Dec 31, 2017**			**Dec 31, 2016**		
EUR million	**<1 year**	**1–5 years**	**>5 years**	**<1 year**	**1–5 years**	**>5 years**	**<1 year**	**1–5 years**	**>5 years**
Long-term debt									
Repayments	174	100	300	283	274	300	-	676	100
Interests	9	24	4	14	30	7	18	38	5
Short-term debt					-				
Repayments	35	-	-	21	-	-	26	-	-
Interests	1	-	-	0	-	-	1	-	-
Trade payables	375	-	-	298	-	-	240	-	-
Other liabilities	7	8	-	5	8	-	6	6	-
Total	601	132	304	622	312	307	291	720	105

Detailed information on balance sheet items is presented in other notes to consolidated financial statements. Capital structure is assessed regularly by the Board of Directors and managed operationally by the Group Treasury.

Capital structure management in Metso Minerals comprises both equity and interest-bearing debt. As of December 31, 2018, the equity attributable to shareholders was EUR 1,173 million, EUR 1,059 million in 2017 and EUR 1,170 million in 2016 and the amount of interest bearing debt was EUR 673 million in 2018, EUR 990 million in 2017 and EUR 944 million in 2016.

Financial covenants included in some loan agreements refer to Metso Minerals' capital structure. Metso Minerals is in compliance with all covenants and other terms of its debt instruments.

Interest Rate Risk

Interest rate risk arises when changes in market interest rates and interest margins influence finance costs, returns on financial investments and valuation of interest bearing balance sheet items. Interest rate risks are managed by balancing the ratio between fixed and floating interest rates and administrating duration of debt and investment portfolios. Additionally, Metso Minerals may use derivative instruments such as forward rate agreements, swaps, options and futures contracts to mitigate the risks arising from interest bearing assets and liabilities. The interest rate risk is managed and controlled by the Group Treasury and measured using sensitivity analysis and duration of long term debt. The duration[1] of long term debt was 2.9 years at the end of 2018, 2.3 years at the end of 2017 and 1.9 years at the end of 2016.

At the end of 2018 the balance sheet items exposed to interest rate risk were interest bearing assets of EUR 426 million in 2018, EUR 779 million in 2017 and EUR 804 million in 2016. Interest-bearing debt amounted to EUR 673 million in 2018, EUR 990 million in 2017 and EUR 944 million in 2016.

The basis for the interest rate sensitivity analysis is an aggregate group level interest exposure, composed of interest bearing assets, interest bearing debt and financial derivatives, such as interest rate swaps and options, which are used to hedge the underlying exposures. For all interest bearing current debt and assets to be fixed during next 12 months a one percentage point move upwards or downwards in interest rates with all other variables held constant would have an effect on Metso Minerals' net interest expenses, net of taxes, of EUR +/- 0.7 million, EUR +/- 1.4 million in 2017 and EUR +/- 1.9 million in 2016.

For financial assets valued at fair value, a one percentage point change upwards or downwards in all interest rates with all other variables held constant would have following effects, net of taxes, in income statement and equity:

EUR million	2018	2017	2016
Effects in			
Income statement	+/- 1.5	+/- 1.1	+/-1.7
Equity	+/- 0.0	+/- 0.1	+/- 0.4

The effect in the income statement comprises of the changes in the fair value on the financial instruments, which are measured at fair value through profit and loss. The effect in the equity is comprised of the changes in the fair value on the financial instruments, which are measured at fair value through other comprehensive income, such as derivatives under hedge accounting.

Foreign Exchange Risk

Metso Minerals operates globally and is exposed to foreign exchange risk in several currencies, although the geographical diversity of operations decreases the significance of any individual currency. About 80 percent of Metso Minerals' sales originate from outside the euro zone; the main currencies being Euro, US dollar, Australian dollar, Chilean peso, Swedish crown and Indian rupee.

Transaction Exposure

Foreign exchange transaction exposure arises when an operating unit has commercial or financial transactions and payments in other than its own functional currency, and when related cash inflow and outflow amounts are not equal or concurrent.

In accordance with the Metso Minerals Treasury Policy, operating units are required to hedge in full the foreign currency exposures on balance sheet and other firm commitments. Future cash flows denominated in a currency other than the functional currency of the unit are hedged with internal foreign exchange contracts with the Group Treasury for periods, which do not usually exceed two years. Operating units also do some hedging directly with banks in countries, where regulation does not allow corporate internal cross-border contracts.

Group Treasury monitors the net position of each currency and decides to what extent a currency position is to be closed. Group Treasury is however responsible for entering into external forward transaction whenever an operating unit applies hedge accounting. Metso Minerals Treasury Policy defines upper limits on the open currency exposures managed by the Group Treasury; limits have been calculated on the basis of their potential profit impact. To manage the foreign currency exposure Group Treasury may use forward exchange contracts and foreign exchange options.

[1] Macaulay duration

Total amount of foreign currency exposures on December 31

EUR million	2018	2017	2016
Operational items	207	248	175
Financial items	367	440	356
Hedges	(590)	(689)	(580)
Total exposure	(16)	(1)	(49)

This aggregate group level currency exposure is the basis for the sensitivity analysis of foreign exchange risk. This exposure, net of respective hedges, is composed of all assets and liabilities denominated in foreign currencies, projected cash flows for unrecognized firm commitments, both short- and long-term sales and purchase contracts and anticipated operational cash flows to the extent their realization has been deemed highly probable and therefore hedged. This analysis excludes net foreign currency investments in subsidiaries together with instruments hedging these investments.

Assuming euro to appreciate or depreciate ten percent against all other currencies, the impact on cash flows, net of taxes, derived from the year-end net exposure as defined above, would be EUR -/+ 1.0 million and EUR -/+ 3.1 million in 2017. Transaction exposure is spread in about 37 currencies and as of December 31, 2018, the biggest open exposure was in US dollar, 21 percent.

A sensitivity analysis of financial instruments as required by IFRS 7, excludes following items: projected cash flows for unrecognized firm commitments, advance payments, both short- and long-term purchase contracts and anticipated operational cash flows. The next table presents the effects, net of taxes, of a +/- 10 percent change in EUR foreign exchange rates:

EUR million	USD	SEK	Other	2018 Total	2017 Total	2016 Total
Effects in						
Income statement	+/- 0.9	+/- 0.2	-/+ 0.1	+/- 0.6	-/+ 2.2	+/- 2.9
Equity	-/+ 0.5	-/+ 2.5	-/+ 0.6	-/+ 2.4	-/+ 4.2	-/+ 4.7

Effect in equity is the fair value change in derivatives contracts qualifying as cash flow hedges for unrecognized firm commitments. Effect in income statement is the fair value change for all other financial instruments exposed to foreign exchange risk including derivatives, which qualify as cash flow hedges, to the extent the underlying sales transaction, recognized over time, has been recognized as revenue.

Translation or Equity Exposure

Foreign exchange translation exposure arises when the equity of a subsidiary is denominated in currency other than the functional currency of the Parent Company. The major translation exposures are in Chinese yuan, Brazilian real, Chilean peso and Swedish krona, which altogether comprise approximately 65 percent of the total equity exposure. Metso Minerals is currently not hedging any equity exposure.

Commodity Risk

Metso Minerals is exposed to variations in prices of raw materials and of supplies. Metso Minerals units identify their commodity price hedging needs and hedges are executed through the Group Treasury using approved counterparties and instruments. Hedging is done on a rolling basis with a declining hedging level over time.

Metso Minerals had outstanding electricity forwards 11 GWh at end of 2017 and 28 GWh at the end of 2016. All electricity forwards matured during the year 2018. A 10 percent change upwards or downwards in electricity forwards would have effects, net of taxes, of EUR +/- 0.0–0.1 million to income statement in the years 2016 and 2017.

As cash flow hedge accounting has been applied, the effective portion of electricity forwards is recognized in equity. The ineffective portion is recognized through profit and loss.

Other commodity risks are not managed using financial derivative instruments.

Credit and Counterparty Risk

Credit or counterparty risk is defined as the possibility of a customer or a financial counterparty not fulfilling its commitments towards Metso Minerals. The operating units of Metso Minerals are primarily responsible for credit risks pertaining to sales and procurement activities. The units assess the credit quality of their customers, by taking into account their financial position, past experience and other relevant factors. When appropriate, advance payments, letters of credit and third party guarantees or credit insurance are used to mitigate credit risks. Group Treasury provides centralized services related to customer financing and seeks to ensure that the principles of the Treasury Policy are adhered to with respect to terms of payment and required collateral. Metso Minerals has no significant concentrations of credit risks.

The maximum credit risk equals the carrying value of trade and loan receivables. The credit quality is evaluated both on the basis of aging of the trade receivables and also on the basis of customer specific analysis. The aging structure of trade receivables is presented in note 2.2.

Counterparty risk arises also from financial transactions agreed upon with banks, financial institutions and corporates. The risk is managed by careful selection of banks and other counterparties, by counterparty specific limits determined in the Treasury Policy, and netting agreements such as ISDA (Master agreement of International Swaps and Derivatives Association). The compliance with counterparty limits is regularly monitored.

Credit risk exposure relates to carrying value of financial assets valued at amortized cost, such as trade receivables, interest bearing receivables, other receivables, deposits and security investments and cash and cash equivalents, and customer contract assets.

Impairment on cash on hand, bank accounts, deposits and interest- bearing investments is assessed regularly, but seen minor, because of their high investment grade and short duration. Group Treasury makes a financial analysis of corporate counterparties regularly. In addition, the investments are constantly monitored by Group Treasury and Metso Minerals does not expect any future credit losses from these investments.

For trade receivables and customer contract assets Metso Minerals applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance to be assessed and recognized regularly, see note 2.2.

Fair value estimation

For those financial assets and liabilities which have been recognized at fair value in the balance sheet, the following measurement hierarchy and valuation methods have been applied:

Level 1 Quoted unadjusted prices at the balance sheet date in active markets. The market prices are readily and regularly available from an exchange, dealer, broker, market information service system, pricing service or regulatory agency. The quoted market price used for financial assets is the current bid price. Level 1 financial instruments include fund investments classified as fair value through profit and loss.

Level 2 The fair value of financial instruments in Level 2 is determined using valuation techniques. These techniques utilize observable market data readily and regularly available from an exchange, dealer, broker, market information service system, pricing service or regulatory agency. Level 2 financial instruments include:

- Over-the-counter derivatives classified as financial assets/liabilities at fair value through profit and loss or qualified for hedge accounting
- Debt securities classified as financial instruments at fair value through profit and loss
- Fixed rate debt under fair value hedge accounting

Level 3 A financial instrument is categorized into Level 3 if the calculation of the fair value cannot be based on observable market data. Metso Minerals had no such instruments in 2018, 2017 or 2016.

The tables below present Metso Minerals' financial assets and liabilities that are measured at fair value. The table for comparison period 2017 has been updated to cover IFRS 9 requirements, see note 5.5.

EUR million	Level 1	Level 2	Level 3
2018			
Assets			
Financial assets at fair value through profit and loss			
Derivatives not under hedge accounting	-	4	-
Interest bearing investments	-	-	-
Fund investments	8	-	-
Financial assets at fair value through other comprehensive income			
Derivatives under hedge accounting	-	8	-
Interest bearing investments	-	-	-
Total assets	8	12	-
Liabilities			
Financial liabilities at fair value through profit and loss			
Derivatives not under hedge accounting	-	10	-
Long term debt at fair value	-	188	-
Derivatives qualified for hedge accounting			
Derivatives under hedge accounting	-	7	-
Total liabilities	-	205	-

EUR million	Level 1	Level 2	Level 3
2017			
Assets			
Financial assets at fair value through profit and loss			
Derivatives not under hedge accounting	-	9	-
Interest bearing investments	2	-	-
Fund investments	46	-	-
Financial assets at fair value through other comprehensive income			
Derivatives under hedge accounting	-	8	-
Interest bearing investments	-	-	-
Total assets	48	16	-
Liabilities			
Financial liabilities at fair value through profit and loss			
Derivatives not under hedge accounting	-	5	-
Long term debt at fair value	-	399	-
Derivatives qualified for hedge accounting			
Derivatives under hedge accounting	-	8	-
Total liabilities	-	411	-

EUR million	Level 1	Level 2	Level 3
2016			
Assets			
Financial assets at fair value through profit and loss			
Derivatives	-	4	-
Securities	6	82	-
Derivatives under hedge accounting		13	
Total assets	6	98	-
Liabilities			
Financial liabilities at fair value through profit and loss			
Derivatives	-	20	-
Long term debt at fair value	-	414	-
Derivatives qualified for hedge accounting		6	
Total liabilities	-	440	-

4.2. Financial Assets and Liabilities by Category

Accounting Policy 2018

Under IFRS 9 Metso Minerals classifies financial assets and liabilities in to measurement categories according to contractual terms of the cash flows and Metso Minerals' business model to manage the investment at the inception. Reclassification of the categories will be made only, if the business model for managing those assets changes. Financial assets and liabilities are classified as non-current items, when the remaining maturity exceeds 12 months and as current items, when the remaining maturity is 12 months or less. Financial assets and liabilities are classified as follows:

At amortized Cost

Financial Assets

Financial assets valued at amortized cost are investments in debt instruments or receivables, which are held until end of maturity and for collection of contractual cash flows, where those cash flows are solely payments of principal and/or interest. These are recognized at fair value less transaction costs, and subsequently measured at amortized cost using the effective interest method. Interest income is recognized in financial income in income statement. Financial assets at amortized cost include deposit, commercial papers, interest bearing loans and receivables, trade receivables and non-interest bearing receivables. Impairment is assessed regularly and when the carrying value exceeds the recoverable value of discounted cash flows, appropriate impairment is recognized in income statement.

For trade receivables, Metso Minerals applies the simplified method in IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables. See more in note 2.2.

Financial Liabilities

Issued bonds and withdrawn loan facilities from financial institutions as well as trade and other liabilities are valued at fair value, net transaction costs, and subsequently measured at amortized cost using the effective interest method. Trade and other receivables are non-interest bearing short-term unpaid debts.

The difference, between the debt amount net transaction cost recognized of bonds and loans from financial institutions and the redemption amount, is recognized in income statement as interest cost over the period of the borrowings using the effective interest method. Fees paid on the establishment of loan facilities are recognized in the income statement as other finance expense over the period of the facility, or, if the withdrawal of the loan is probable, as part of transaction cost,

At Fair Value Through Other Comprehensive Income (FVOCI)

Financial assets valued at fair value through other comprehensive income are debt instruments or receivables, which are held for collection of contractual cash flows or held for selling the assets, and where contractual cash flows are solely payments of principal and/or interest. Interest income is recognized in income statement using the effective interest method. Change in fair value is recognized in other comprehensive income (OCI). At the derecognition, the cumulative previously booked gains and losses in OCI are released from equity to income statement. Metso Minerals includes in this measurement category derivatives under hedge accounting, trade receivables for sale and security investments with maturity less than three months. Impairment is assessed regularly and when the carrying value exceed the recoverable value of discounted cash flows, appropriate impairment is recognized in income statement.

At Fair Value Through Profit and Loss (FVPL)

Financial Assets

Financial assets valued at fair value through profit and loss are equity investments, investments in funds and derivatives not under hedge accounting. Change in fair value and gain or loss at the derecognition will be recognized in income statement. The change in the fair value includes the valuation of the impairment risk as well. Fair value of listed equity shares or investments in funds is the quoted market price on the balance sheet date. Unlisted shares are valued at cost less impairment, if any.

Financial Liabilities

Fixed rate debts covered by fair value hedges accounting and derivatives not under hedge accounting are included in this measurement category. Change in fair value and gains or losses at derecognition will be recognized in income statement.

Accounting Policy 2017 and 2016

Metso Minerals has applied IAS 39 until December 31, 2017 and classified its financial assets and liabilities in the following categories:

Financial Assets and Liabilities at Fair Value Through Profit of Loss

This category includes financial instruments held for trading, maturities exceeding three months, derivative instruments not qualified hedge accounting and fair value hedged long-term liabilities. Changes in the fair value was recognized in profit and loss.

Loans and Receivables

This category includes loan receivables and other non-interest-bearing receivables. They were initially recognized at fair value and subsequently recognized at amortized cost using the effective interest rate method.

Available-for-sale Financial Assets

This category includes shares in unlisted companies and investments in commercial papers and time deposits. These instruments are measured at fair value with any change in fair value recognized in other comprehensive income (OCI). Any gains and losses at disposal recognized in the income statement.

Liabilities Measured at Amortized Cost

This category includes long-term debts, initially recognized at fair value and subsequently measured at amortized cost using effective interest method.

The classification was made at the acquisition depending on the intended purpose.

Impact analysis of adoption of IFRS 9 is presented in Note. 5.6.

Financial Assets and Liabilities by Categories as of December 31

Metso Minerals has adopted IFRS 9 from January 1, 2018 onwards. Table for comparison period 2017 has been updated to reflect IFRS 9 requirements, see note 5.6. Table for the year 2016 has been prepared following IAS 39.

EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
2018					
Non-current financial assets					
Equity investments	3	-	-	3	3
Loan receivables	-	-	6	6	6
Loan receivables, Metso Group	-	-	49	49	49
Derivatives financial instruments	1	2	-	3	3
Other receivables	-	-	10	10	10
Total	**4**	**2**	**65**	**71**	**71**
Current financial assets					
Trade receivables	-	-	484	484	484
Trade receivables, Metso Group	-	-	8	8	8
Trade receivables, for sale	-	9	-	9	9
Loan receivables	-	-	1	1	1
Loan receivables, Metso Group	-	-	33	33	33
Cash pool receivables, Metso group			20	20	20
Derivatives financial instruments	3	6	-	9	9
Other receivables	-	-	102	102	102
Other receivables, Metso Group	-	-	1	1	1
Deposits and securities, maturity more than three months	-	-	76	76	76
Fund investments	8	-	-	8	8
Deposits and securities, maturity three months or less	-	-	15	15	15
Cash at hand and on bank accounts	-	-	226	226	226
Total	**11**	**14**	**966**	**992**	**992**

EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
2018					
Non-current liabilities					
Bonds	95	-	288	383	402
Finance lease obligations	-	-	0	0	0
Derivatives financial instruments	2	-	-	2	2
Other liabilities	-	-	2	2	2
Other liabilities, Metso Group	-	-	6	6	6
Total	**97**	**-**	**296**	**393**	**412**
Current liabilities					
Current portion of non-current debt	87	-	87	174	174
Loans from financial institutions	-	-	35	35	35
Cash pool liabilities, Metso Group	-	-	81	81	81
Trade payables	-	-	374	374	374
Trade payables, Metso Group	-	-	1	1	1
Derivatives financial instruments	6	7	-	13	13
Other liabilities	-	-	210	210	210
Total	**93**	**7**	**788**	**888**	**888**

EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
2017					
Non-current financial assets					
Equity investments	3	-	-	3	3
Loan receivables	-	-	3	3	3
Loan receivables, Metso Group	-	-	70	70	70
Derivatives financial instruments	3	2	-	5	5
Other receivables	-	-	12	12	12
Total	**6**	**2**	**85**	**93**	**93**
Current financial assets					
Trade receivables	-	-	409	409	409
Trade receivables, Metso Group	-	-	8	8	8
Trade receivables, for sale	-	7	-	7	7
Loan receivables	-	-	0	0	0
Loan receivables, Metso Group	-	-	23	23	23
Cash pool receivables, Metso group			27	27	27
Derivatives financial instruments	6	6	-	12	12
Other receivables	-	-	101	101	101
Other receivables, Metso Group	-	-	0	0	0
Deposits and securities, maturity more than three months	-	2	246	248	248
Fund investments	46	-	-	46	46
Deposits and securities, maturity three months or less	-	-	57	57	57
Cash at hand and on bank accounts	-	-	349	349	349
Total	**52**	**15**	**1,220**	**1,287**	**1,287**

EUR million	At fair value through profit and loss	At fair value through other comprehensive income	At amortized cost	Carrying value	Fair value
2017					
Non-current liabilities					
Bonds	181	-	373	554	574
Finance lease obligations	-	-	-	0	0
Other non-current debt	-	-	-	0	0
Derivatives financial instruments	2	1	-	3	3
Other liabilities	-	-	2	2	2
Other liabilities, Metso Group	-	-	6	6	6
Total	**183**	**1**	**381**	**565**	**585**
Current liabilities					
Current portion of non-current debt.	209	-	69	279	284
Loans from financial institutions	-	-	21	21	21
Cash pool liabilities, Metso Group	-	-	136	136	136
Trade payables	-	-	297	297	297
Trade payables, Metso Group	-	-	1	1	1
Derivatives financial instruments	2	7	-	9	9
Other liabilities	-	-	171	171	171
Total	**211**	**7**	**695**	**914**	**919**

EUR million	Assets at fair value through profit and loss accounts	Derivatives qualified for hedge accounting	Loans and receivables	Available-for-sale financial assets	Carrying value	Fair value
2016						
Non-current assets						
Available-for-sale equity investments	-	-	-	1	1	1
Loan receivables	-	-	3	-	3	3
Loan receivables, Metso Group	-	-	106	-	106	106
Derivative financial instruments	-	8	-	-	8	8
Other receivables	-	-	14	-	14	14
Total	**-**	**8**	**123**	**1**	**132**	**132**
Current assets						
Trade receivables	-	-	376	-	376	376
Trade receivables, Metso Group	-	-	23	-	23	23
Loan receivables	-	-	9	-	9	9
Loan receivables, Metso Group	-	-	27	-	27	27
Cash pool receivables, Metso group			39		39	39
Derivative financial instruments	4	4	-	-	8	8
Other receivables	-	-	120	-	120	120
Other receivables, Metso Group	-	-	1	-	1	1
Liquid funds	241	-	403	-	644	644
Total	**245**	**4**	**998**	**-**	**1,247**	**1,247**

EUR million	Liabilities at fair value through profit and loss accounts	Derivatives qualified for hedge accounting	Financial liabilities measured at amortized cost	Carrying value	Fair value
2016					
Non-current liabilities					
Bonds	202	-	367	569	578
Loans from financial institutions	198	-	-	198	212
Finance lease obligations	-	-	-	0	0
Other long-term debt	-	-	-	0	0
Derivative financial instruments	4	1	-	5	5
Other liabilities	-	-	2	2	2
Other liabilities, Metso Group	-	-	6	6	6
Total	**404**	**1**	**375**	**780**	**803**
Current liabilities					
Current portion of long-term debt	-	-	0	0	0
Short-term debt	-	-	26	26	26
Cash pool liabilities, Metso Group	-	-	151	151	151
Trade payables	-	-	232	232	232
Trade payables, Metso Group	-	-	8	8	8
Derivative financial instruments	15	5	-	20	20
Other liabilities	-	-	119	119	119
Total	**15**	**5**	**536**	**556**	**556**

For more information on derivative financial instruments, see note 4.8.

4.3. Liquid Funds

Accounting Policy

Deposits and securities with maturities over three months, consist of highly liquid investments, which are part of Metso Minerals' cash management. These commercial papers deposit and debt investments have maturity less than twelve months, and they are measured at amortized cost.

Cash and cash equivalents consist of cash on hand and bank accounts, deposits and interest bearing investments, which are easily convertible to known amount of cash within the period of three months or less as well as bond fund investments, with the same risk profile.

Cash on hand, bank accounts, deposits and interest bearing investments are measured at amortized cost. The bond fund investments are measured at fair value through profit and loss.

Impairment on cash on hand, bank accounts, deposits and interest bearing investments is assessed regularly, but seen minor, because of their high investment grade and short duration. Impairment risk of bond fund investment is included in the change in fair value of them.

EUR million	2018	2017	2016
Deposits and securities, maturity more than three months	76	248	241
Cash and cash equivalents			
Fund investments	8	46	24
Deposits and securities, maturity three months or less	15	57	40
Cash on hand and bank accounts	226	349	339
Cash and cash equivalents	249	452	403
Liquid funds total	325	701	644

Average returns for deposits and securities were as follows:

	2018	2017	2016
With maturity more than three months	0.01%	0.06%	0.01%
With maturity three months or less	3.67%	2.50%	2.32%

4.4. Equity

Accounting Policy

Translation Differences

The translation differences arising from subsidiary net investments and non-current subsidiary loans without agreed settlement dates are recognized through the Other Comprehensive Income (OCI) to cumulative translation adjustments under equity. When Metso Minerals hedges the net investment of its foreign subsidiaries with foreign currency loans and with financial derivatives, the translation difference is adjusted by the currency effect of the hedging instruments which has been recorded, net of taxes, through OCI in equity. When a foreign entity is disposed of, the respective accumulated translation difference, including the effect from qualifying hedging instruments, is reversed through OCI and recognized in the consolidated statements of income as part of the gain or loss on the sale. If the equity of a subsidiary denominated in a foreign currency is reduced by a return of capital, the translation difference relating to the reduction is reversed through OCI and recognized in the consolidated statements of income.

Carve-out Principles

Metso Minerals has not in the past formed a separate legal group nor presented stand-alone consolidated financial statements, and accordingly it is not conceivable to present share capital separately from other equity balances including reserves. Metso Minerals' net assets for each balance sheet date are represented by capital invested in Metso Minerals and shown in these carve-out financial statements as "equity" comprising of cumulative translation account, fair value and other reserves as well as invested equity and retained earnings. Fair value and other reserves comprise of hedge and fair value reserve and legal reserve. Invested equity and retained earnings comprise of equity items allocated from Metso Minerals' parent company and other Metso Minerals companies in accordance with the demerger plan and historical retained earnings balances of Metso Minerals entities.

All cash and other movements in capital amounts, being shares issued or cancelled or dividends and other distributions made from/to Metso Minerals companies from/to Metso parent company or changes resulting from the internal reorganization have been reflected in the combined statement of cash flows under "Dividends paid, ''Metso Group" and "Equity financing, Metso Group" and in the combined statements of changes in equity under "Dividends", "Changes in invested equity" and "Net change from winding up the consolidated tax groups".

These carve-out financial statements are presented in euros, which will be Metso Minerals' parent company's functional and reporting currency. Metso Minerals' operating units have also other functional currencies. Translation differences arising from translating the net results for the period and equity are recognized in equity and their changes are presented in the separate cumulative translation account within equity.

Share Capital and Number of Shares

Carve-out financial statements are not presented share capital separately for historical periods.

Dividends

Dividends paid in 2018, 2017 and 2016 amounting to EUR 126 million consists of the allocated part of dividends paid by Metso Oyj.

Metso Minerals has paid dividends 2018, 2017 and 2016 to those Metso Corporation's subsidiaries that have owned the shares in such Metso Minerals companies.

Hedge Reserve

The hedge reserve includes the fair value movements of derivative financial instruments which qualify as cash flow hedges.

Changes in Fair Value and Other Reserves

EUR million	2018	2017	2016
Hedge reserve at January 1	(2)	(4)	(2)
Cash flow hedges			
Fair value gains (+) / losses (-), net of tax	2	6	4
Transferred to profit and loss, net of tax			
Sales	0	(1)	(1)
Cost of goods sold / Administrative expenses	0	0	0
Interest income / expenses	(3)	(3)	(4)
Instruments at fair value and share-based rewards	-	-	-
Other	-	-	-
Hedge reserve at December 31	(3)	(2)	(4)

Cumulative Translation Adjustments Included in the Shareholders' Equity

EUR million	2018	2017	2016
Cumulative translation adjustment at January 1	(138)	(109)	(129)
Currency translation on subsidiary net investments	(15)	(29)	21
Hedging of net investment denominated in foreign currency	-	-	-
Cumulative translation adjustment at December 31	(153)	(138)	(109)

4.5. Borrowings

Accounting policy

Long-term debt is initially recognized at fair value, net of transaction costs incurred and subsequently measured at amortized cost using the effective interest method. The difference, between the debt amount recognized and the redemption amount, is recognized in income statement as interest expense over the period of the borrowings. Borrowings covered by a fair value hedge are recognized at fair value through income statement. Change in fair value is recognized in financial income and expenses. A portion of long-term debt is classified as short-term debt, when the settlement of the liability is due within 12 months from the balance sheet date. Borrowings are derecognized only, if the contractual obligation is discharged, cancelled or expired.

Fees paid on the establishment of loan facilities are recognized in income statement as other finance expense over the period of the facility, or, if the withdrawal of the loan is probable, as part of transaction cost. Transaction costs arising from modification to debt instruments are included in the carrying value of the debt and amortized using the effective interest method over the remaining period of the modified liability provided that the new conditions obtained through the modification do not substantially differ from those of the original debt. Modification gain or loss will be recognized in income statement at the time of non-substantial modification.

	Carrying values			Fair values [1]		
EUR million	2018	2017	2016	2018	2017	2016
Bonds	383	554	569	402	574	578
Loans from financial institutions	-	-	198	-	-	212
Finance lease obligations	0	0	0	0	0	0
Total long-term borrowings	383	554	767	402	574	790
Current portion of bonds	174	69	-	174	73	-
Current portion of loans from financial institutions	-	209	0	-	211	0
Loans from financial institutions	35	21	27	35	21	27
Cash pool liabilities, Metso Group	81	136	151	81	136	151
Total short-term borrowings	290	436	178	290	441	178

[1] The fair values of long-term debt are equal to the present value of their future cash flows.

Bonds

EUR million	Nominal interest rate 31.12.2018	Effective interest rate 31.12.2018	Outstanding original loan amount	Carrying value 2018	Carrying value 2017	Carrying value 2016
Public bond 2012–2019	2.75%	2.91%	174	174	175	398
Public bond 2017–2024	1.125%	2.33%	300	283	279	-
Private placements 2022		3.80%	100	100	169	171
Bonds total			574	557	623	569

Metso has a Euro Medium Term Note Program (EMTN) of EUR 1.5 billion, under which EUR 557 million EUR 623 million and EUR 569 million at carrying value were outstanding at the end of years 2018, 2017 and 2016. EUR 457 million in 2018, EUR 454 million in 2017 and EUR 398 million in 2016 of the outstanding amounts were public bonds and EUR 100 million in 2018, EUR 169 million in 2017 and EUR 171 million in 2016 were private placements. Borrowings, Metso Group relates to funding of equity investments in Metso Group.

In 2018 matured USD denominated bank loan, with cross currency interest rate swap hedged nominal value of EUR 211 million and private placements with a nominal value of EUR 69 million.

In 2017 Metso Minerals purchased EUR 220 million of initially EUR 400 million bonds maturing in 2019 and issued new bond of EUR 300 million maturing 2024. Transaction qualified as a non-substantial modification and gain of EUR 7 million was recognized in the income statement.

The average interest rate of total loans and derivatives was 1.96% at the end of 2018, 1.77% at the end of 2017 and 2.50% at the end of 2016. The duration of medium and long- term interest-bearing debt was 2.9 years at the end of 2018, 2.3 years at the end of 2017and 1.9 years at the end of 2016.

Short-term loans from financial institutions consists of bank loans withdrawn by Metso Minerals subsidiaries to fund local operations. The loans are mainly Indian rupee denominated. The weighted average interest rate applicable to the short-term borrowing was 6.8% at the end of 2018, 3.9% at the end of 2017 and 6.4 % at the end of 2016.

Metso has a syndicated revolving credit facility with 10 banks maturing in 2021, of which EUR 400 million has been allocated to Metso Minerals. To Metso Minerals has also been allocated a Finnish commercial paper program amounting to EUR 400 million. These two additional funding facilities were undrawn at the end of 2018, 2017 and 2016. In addition, in 2018, to Metso Minerals has been allocated a EUR 30 million committed loan facility for research, development and innovation costs with a disbursement period until end of 2019, and a tenor up to ten years from European Investment Bank, which was undrawn at the end of 2018.

Contractual Maturities of Interest-bearing Debt as at December 31, 2018

EUR million	Bonds	Repayments	Interests
2019	183	174	9
2020	7	-	7
2021	7	-	7
2022	107	100	7
2023	3	-	3
Later	304	300	4
Total	611	574	37

The maturities of derivative financial instruments are presented in note 4.8.

4.6. Interest-bearing Net Debt Reconciliation

Net interest bearing liabilities

EUR million	2018	2017	2016
Borrowings, non-current [1]	557	833	767
Borrowings, current	35	21	26
Cash pool liabilities, Metso Group	81	136	151
Loan receivables	(7)	(3)	(12)
Loan receivables, Metso Group	(82)	(93)	(133)
Cash pool receivables, Metso Group	(20)	(27)	(39)
Liquid funds	(325)	(701)	(644)
Net interest bearing liabilities	239	165	116

[1] Including current portion of borrowings EUR 174 million in 2018 and EUR 279 million in 2017. In 2016 there were no current portions.

Changes in Net Interest-bearing Liabilities

2018 **EUR million**	**Balance at beginning of year**	**Cash flows**	**Acquisitions**	**Translation differences**	**Other non-cash movements**	**Balance at end of year**
Borrowings, non-current	833	(283)	-	0	7	**557**
Borrowings, current	21	15	-	(1)	-	**35**
Cash pool liabilities, Metso Group	136	(60)	-	4	-	**81**
Loan receivables	(3)	0	-	1	(5)	**(7)**
Loan receivables, Metso Group	(93)	25	-	(4)	(10)	**(82)**
Cash pool receivables, Metso Group	(27)	7	-	0	-	**(20)**
Liquid funds	(701)	370	-	6	-	**(325)**
Net interest bearing liabilities	**165**	**75**	**-**	**7**	**(8)**	**239**

2017 **EUR million**	**Balance at beginning of year**	**Cash flows**	**Acquisitions**	**Translation differences**	**Other non-cash movements**	**Balance at end of year**
Borrowings, non-current	768	64	0	0	1	**833**
Borrowings, current	26	(4)	0	(2)	-	**21**
Cash pool liabilities, Metso Group	151	4	-	(18)	-	**136**
Loan receivables	(12)	9	-	0	-	**(3)**
Loan receivables, Metso Group	(133)	26	-	15	(1)	**(93)**
Cash pool receivables, Metso Group	(39)	10	-	2	-	**(27)**
Liquid funds	(644)	(64)	(1)	8	-	**(701)**
Net interest bearing liabilities	**116**	**44**	**0**	**4**	**0**	**165**

2016 **EUR million**	**Balance at beginning of year**	**Cash flows**	**Acquisitions**	**Translation differences**	**Other non-cash movements**	**Balance at end of year**
Borrowings, non-current	792	(36)	-	3	9	**767**
Borrowings, current	30	(4)	-	0	1	**26**
Cash pool liabilities, Metso Group	156	(10)	-	5	-	**151**
Loan receivables	(12)	0	-	0	-	**(12)**
Loan receivables, Metso Group	(140)	25	-	(4)	(14)	**(133)**
Cash pool receivables, Metso Group	(30)	(10)	-	1	-	**(39)**
Liquid funds	(492)	(142)	-	(11)	-	**(644)**
Net interest bearing liabilities	**305**	**(178)**	**-**	**(6)**	**(4)**	**116**

4.7. Contingent Liabilities and Other Commitments

Accounting Policy

The repurchase commitments represent engagements whereby Metso Minerals agrees to purchase back equipment sold to customer. The conditions triggering the buyback obligation are specific to each sales contract.

EUR million	**2018**	**2017**	**2016**
Guarantees			
External guarantees given by Metso Corporation and Metso Minerals companies	319	207	228
Other commitments			
Repurchase commitments	1	1	1
Other contingencies	1	2	1
Total	320	210	230

Metso Minerals companies have guaranteed obligations arising in the ordinary course of business. These guarantees have typically been given to secure customer’s advance payments or to secure commercial contractual obligations, or given counter guarantees to banks, which have given commercial guarantees to a group company.

4.8. Derivative Instruments

Accounting Policy

Derivatives are initially recognized in the balance sheet at fair value and subsequently measured at their fair value at each balance sheet date. Derivatives are designated at inception either as hedges of firm commitments or forecasted transactions (cash flow hedge) or as hedges of fixed rate debt (fair value hedge), or as hedges of net investment in a foreign operation (net investment hedge), or as derivatives at fair value through profit and loss that do not meet the hedge accounting criteria.

In case of hedge accounting, Metso Minerals documents at inception the relationship between the hedging instruments and the hedged items in accordance with its risk management strategy and objectives. Metso Minerals also tests the effectiveness of the hedge relationships at hedge inception, and quarterly both prospectively and retrospectively.

Derivatives are classified as non-current assets or liabilities when the remaining maturities exceed 12 months and as current assets or liabilities when the remaining maturities are less than 12 months.

Cash Flow Hedge

Metso Minerals applies cash flow hedge accounting to certain interest rate swaps, foreign currency forward contracts and to electricity forwards.

Metso Minerals designates only the currency component of the foreign currency forward contracts as the hedging instrument to hedge foreign currency denominated firm commitments. The interest component is recognized under other operating income and expenses, net. The gain or loss relating to the effective portion of the currency forward contracts is recognized in the income statement concurrently with the underlying in the same line item. The effective portion of foreign currency forwards hedging sales and purchases is recognized in the sales and the cost of goods sold, respectively. The gain or loss relating to the effective portion of interest rate swaps hedging variable rate borrowings is reversed from the hedge reserve through the other comprehensive income (OCI) to the income statement within financial items concurrently with the recognition of the underlying liability. Both at hedge inception and at each balance sheet date an assessment is performed to ensure the continued effectiveness of the designated component of the derivatives in offsetting changes in the fair values of the cash flows of hedged items.

Metso Minerals assesses regularly the effectiveness of the fair value changes of the electricity forwards in offsetting the changes in the fair value changes of the underlying forecasted electricity purchases in different countries. The gain or loss relating to the effective portion of the electricity forward contracts is recognized in the cost of goods sold.

The effective portion of the derivatives is recognized through OCI in the hedge reserve under equity and reversed through OCI to be recorded through profit and loss concurrently with the underlying transaction being hedged.

The gain or loss relating to the ineffective portion of the derivatives is reported under other operating income or expenses, net or under financial items when contracted to hedge variable rate borrowings. Should a hedged transaction no longer be expected to occur, any cumulative gain or loss previously recognized under equity is reversed through OCI to profit and loss.

Fair Value Hedge

Metso Minerals applies fair value hedge accounting to certain fixed rate loans. The change in fair value of the interest rate swap hedging the loan is recognized through profit and loss concurrently with the change in value of the underlying. Both at inception and quarterly the effectiveness of the derivatives is tested by comparing their change in fair value against those of the underlying instruments.

Derivatives at Fair Value through Profit and Loss

Certain derivative instruments do not qualify for hedge accounting. These instruments, which have been contracted to mitigate risks arising from operating and financing activities, comprise foreign exchange forward contracts, currency and interest rate options and interest rate swaps.

Changes in the fair value of interest rate swaps are recognized in interest expenses. Changes in the fair value of foreign exchange forward contracts are mainly recognized in other operating income and expenses. However, when the foreign exchange forwards have been contracted to mitigate the exchange rate risks arising from foreign currency denominated cash and from financial instruments used for cash management, the changes in fair value of the derivatives are recognized in financial income and expenses. Changes in the fair value of other derivative instruments such as commodity instruments are recognized in other operating income and expenses.

Fair value estimation of derivative instruments

The fair value of the foreign currency forward contracts is determined using forward exchange market rates at the balance sheet date. The fair value of the interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves. The fair value of the commodity forwards and swaps are based on quoted market prices at the balance sheet date. The fair value of options is determined using Black-Scholes valuation model.

Notional amounts and fair values of derivative financial instruments as at December 31 were as follows:

EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
2018				
Forward exchange contracts [1]	1,215	9	13	(4)
Interest rate swaps	345	3	2	1
Cross currency swaps	-	-	-	-
Electricity forward contracts [2]	-	-	-	-
Total	-	12	15	(3)
2017				
Forward exchange contracts [1]	1,185	11	9	2
Interest rate swaps	432	5	4	1
Cross currency swaps	244	-	1	(1)
Electricity forward contracts [2]	11	-	0	0
Total	-	16	14	2
2016				
Forward exchange contracts [1]	968	8	20	(12)
Interest rate swaps	245	8	5	3
Cross currency swaps	244	0	1	(1)
Electricity forward contracts [2]	28	-	0	0
Total	-	16	26	(9)

[1] Ca. 35 percent, 41 percent and 30 percent of the notional amount at the end of 2018, 2017 and 2016, respectively, qualified for cash flow hedge accounting.
[2] Notional amount in GWh

The notional amounts indicate the volumes in the use of derivatives, but do not indicate the exposure to risk.

Derivative financial instruments recognized in balance sheet as at December 31 are presented below:

EUR million	2018		2017		2016	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Interest rate swaps - cash flow hedges	-	-	-	-	-	-
Interest rate swaps - fair value hedges	2	-	2	1	8	-
Interest rate swaps - non-qualifying hedges	1	2	3	2	-	5
	3	2	5	4	8	5
Cross currency swaps - cash flow hedges	-	-	-	0	-	1
Cross currency swaps - fair value hedges	-	-	0	1	0	-
	-	-	-	1	-	1
Forward exchange contracts - cash flow hedges	6	7	6	7		5
Forward exchange contracts - non-qualifying hedges	3	6	6	2	4	15
	9	13	11	9	8	20
Electricity forward contracts - cash flow hedges	-	-	-	0	-	0
Derivatives total	12	15	16	14	16	26

In the year ended December 31, 2018, there was no ineffectiveness related to the cash flow hedges. In the year ended December 31, 2017 there was ineffectiveness related to the cash flow hedges, which resulted in recognition of EUR 0.1 million loss in the income statement and at the end of the year 2016 EUR 0.05 million. As at December 31, 2018, the fixed interest rates of swaps varied from 0.4 percent to 2.6 percent.

As at December 31, 2018, the maturities of financial derivatives are the following (expressed as notional amounts):

EUR million	2019	2020	2021	2022	2023
Forward exchange contracts	1,211	4	-	-	-
Interest rate swaps	200	-	20	-	125
Cross currency swaps	-	-	-	-	-
Electricity forward contracts [1]	-	-	-	-	-

[1] Notional amount in GWh.

As at December 31, 2018, notional and carrying amounts of financial derivatives applying hedge accounting were as follows:

EUR million	Notional amount	Fair value, assets	Fair value, liabilities	Fair value, net
2018				
Forward exchange contracts	484	6	7	(1)
Interest rate swaps	187	2	-	2
Total		8	7	1
2017				
Forward exchange contracts	557	6	7	(1)
Interest rate swaps	187	2	1	1
Cross currency swaps	244	-	1	(1)
Electricity forward contracts [1]	11	-	0	0
Total		8	8	(1)
2016				
Forward exchange contracts	298	4	5	(1)
Interest rate swaps	245	8	5	3
Cross currency swaps	244	0	1	(1)
Electricity forward contracts [1]	28	-	0	0
Total		12	11	1

[1] Notional amount in GWh.

Forward exchange contracts hedge commercial cash flows of projects applying hedge accounting. The hedge ratio is 1:1. 98% of hedged cash flows mature during the year 2019, 2% in year 2020.

The impact of cash flow hedge in the statement of financial position in year 2018 is as follows:

EUR million Notional amount	Hedging gain/loss recognized in OCI	Amount reclassified from OCI to P/L	Cost of hedging recognized in OCI
484	(2)	0	(1)

Metso Minerals applies fair value hedge accounting to two bonds. The hedge accounted total nominal value is EUR 187 million, EUR 398 million in 2017 and EUR 411 million in 2016.. The terms of the interest rate swaps match the terms of the fixed rate bonds (maturity dates, interest fixing and payments dates). Fair values of cash flows of interest rate swap and bond are compared when measuring hedge accounting effectiveness. Credit margin is added to the discount curve of the bond.

In years 2017 and 2016 Metso Minerals applied cash flow hedge accounting when hedging private placement with interest rate swap. The nominal value of the loan was EUR 33 million.

Bonds applying fair value hedge accounting as at December 31, 2018, were as follows:

Nominal amount of loan (EUR million)	Hedge ratio	Maturity date of loan	Nominal amount of interest rate swap (EUR million)	Maturity date of interest rate swap
174	50%	October 4, 2019	87	October 4, 2019
300	33%	June 13, 2024	100	June 13, 2024

5. Consolidation

5.1. Principles of Consolidation

Carve-out Principles

The carve-out financial statements as at and for the years ended December 31, 2018, December 31, 2017 and December 31, 2016 present Metso Minerals as a single economic entity and have been prepared on historical financial information of the relevant entities and business as part of the Metso Group, using the same accounting principles and carrying values as Metso Group. The entities have been under common control during these periods. The carve-out financial statements have been prepared on a basis that combined statements of income, statements of comprehensive income, balance sheets and cash flows of the legal entities and operating units attributable to the Minerals business in Metso's historical consolidated financial statements and that will be carved out from Metso to be combined to Outotec Group including certain Parent Company's and Metso's foreign holding companies' income and expenses, assets and liabilities and cash flows which will either be transferred to Outotec or which have been allocated to Minerals business for the purpose of the preparation of the carve-out financial statements. Metso Minerals is not comprised of a single sub-group of entities within Metso and, accordingly, has historically not prepared consolidated financial statements for internal or external reporting purposes.

Subsidiaries

The carve-out financial statements include the financial statements of the Parent Company and each of those companies over which Metso Minerals exercises control. Control is achieved when Metso Minerals is exposed, or has rights, to variable returns from the investee and has the ability to affect those returns through its power over the investee. The companies acquired during the financial period have been consolidated from the date Metso Minerals acquired control. Subsidiaries sold or distributed to the owners have been included up to their date of disposal.

All intercompany transactions, balances and gains or losses on transactions between subsidiaries are eliminated as part of the consolidation process. Non-controlling interests are presented in the consolidated balance sheet within equity, separate from equity attributable to shareholders. Non-controlling interests are separately disclosed in the consolidated statement of income.

Acquisitions of businesses are accounted for using the acquisition method. The purchase consideration of an acquisition is measured at fair value over the assets given up, shares issued or liabilities incurred or assumed at the date of acquisition. For each acquisition, the non-controlling interest in the acquiree, if any, can be recognized either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets. The excess acquisition price over the fair value of net assets acquired is recognized as goodwill (see also intangible assets). If the purchase consideration is less than the fair value of the Group's share of the net assets acquired, the difference is recognized directly through profit and loss.

When Metso Minerals ceases to have control, any retained interest in equity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity is accounted for as if the group had directly disposed of the related assets or liabilities.

Non-controlling Interest

Transactions with non-controlling interests are regarded as transactions with equity owners. In the case of purchases from non-controlling interests, the difference between any consideration paid and the relevant share of the carrying value of net assets acquired in the subsidiary is recorded in shareholders' equity. Gains or losses on disposal to non-controlling interests are also recorded directly in shareholders' equity.

Non-current Assets or Disposal Group Held-for-sale

Metso Minerals classifies a non-current asset or disposal group as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. These assets are valued at the lower of its carrying value and fair value less costs to sell, and assets subject to depreciation or amortization are no longer amortized. Assets related to non-current assets or a disposal group classified a held-for-sale are disclosed separately from other assets, but financial statements for prior periods are not reclassified.

Foreign Currency Translation

The carve-out financial statements are presented in euros, which is Metso Minerals' functional and presentation currency.

Transactions in foreign currencies are recorded at the rates of exchange prevailing at the date of the transaction. At the end of the reporting period, unsettled foreign currency transaction balances are valued at the rates of exchange prevailing at the balance sheet date. Trade related foreign currency exchange gains and losses are recorded in other operating income and expenses, unless the foreign currency denominated transactions are subject to hedge accounting, in which case the related exchange gains and losses are recorded in the same line item as the hedged transaction. Foreign exchange gains and losses associated with financing are entered as a net amount under financial income and expenses.

The statements of income of subsidiaries with a functional currency different from the presentation currency are translated into euros at the average month end exchange rates for the financial year, and the balance sheets are translated at the exchange rate in effect on the balance sheet date. This exchange rate difference is recorded through other comprehensive income (OCI) within cumulative translation adjustments under equity.

The translation differences arising from foreign subsidiary net investments and long-term subsidiary loans without agreed settlement dates are recognized through OCI with in cumulative translation adjustments under equity. When Metso Minerals hedges the net investment of its foreign subsidiaries with foreign currency loans and financial derivatives, the translation difference is adjusted by the currency effect of hedging instruments which has been recorded, net of taxes, through OCI under equity. When a foreign entity is disposed of, the respective accumulated translation difference, including the effect from qualifying hedging instruments, is reversed through OCI and recognized in the consolidated statements of income as part of the gain or loss on the sale. If the equity of a foreign currency denominated subsidiary is reduced by reimbursement of invested funds, the translation difference relating to the reduction is reversed through OCI and recognized in the consolidated statements of income.

Net Investment Hedge

Metso Minerals may hedge its net foreign investments in certain currencies to reduce the effect of exchange rate fluctuations. The hedging instruments are mainly foreign currency loans and foreign currency forward contracts. Both realized and unrealized exchange gains and losses measured on these instruments are recorded, net of taxes, through OCI in a separate component of equity against the translation differences arising from consolidation to the extent these hedges are effective. The interest portion of derivatives qualifying as hedges of net investment is recognized under financial income and expenses.

5.2. *Subsidiaries*

Company name	Country	Ownership Dec 31, 2018
Metso Minerals Oy	Finland	100.00%
Metso Argentina SA	Argentina	100.00%
Metso Austria GmbH	Austria	100.00%
Metso Australia Ltd	Australia	100.00%
WearX Holdings Pty Ltd	Australia	100.00%
Metso Brazil Indústria e Comércio Ltda	Brazil	100.00%
Metso Chile SpA	Chile	100.00%
Metso Minerals (Tianjin) Co. Ltd[(1)]	China	45.00%
Shaoguan City Shaorui Heavy Industries Co Ltd	China	75.00%
Metso Minerals (Tianjin) International Trade Co. Ltd	China	100.00%
Metso Minerals (Quzhou) Co Ltd	China	100.00%
Metso Czech Republic s.r.o.	Czech	100.00%
Metso Germany GmbH	Germany	100.00%
Metso Denmark A/S	Denmark	100.00%
Metso Denmark Properties Aps	Denmark	100.00%
Metso Espana SA	Spain	100.00%
Metso Spain Holding, S.L.U	Spain	100.00%
Santa Ana de Bolueta Gringing Mesi, S.A.U	Spain	100.00%
Forjas del Guadalquivir, S.L.U	Spain	100.00%
Metso Ghana Ltd	Ghana	100.00%
Metso UK Ltd	Great Britain	100.00%
Kiln Flame Systems Enterprises Limited	Great Britain	100.00%
Kiln Flame Systems Ltd	Great Britain	100.00%
PT Metso Minerals Indonesia	Indonesia	99.90%
Metso India Private Ltd	India	100.00%
Metso Japan Co. Ltd	Japan	100.00%
Metso (Kazakhstan) LLP	Kazakhstan	100.00%
Metso Minerals Dooel Skopje	Makedonia	100.00%
Metso Mexico SA de CV	Mexico	100.00%
Metso SA de CV	Mexico	100.00%
Metso Norway A/S	Norway	100.00%
Metso Peru SA	Peru	100.00%
Metso d.o.o. Beograd	Serbia	100.00%
OOO Metso	Russia	100.00%
Metso Sweden AB	Sweden	100.00%
AB P. J. Jonsson och Söner	Sweden	100.00%
Metso Central America SA	Panama	100.00%
Metso Asia Pacific Pte Ltd	Singapore	100.00%
Metso Minerals Anonim Sirketi	Turkey	100.00%
Metso South Africa Pty Ltd	South Africa	86.74%
Metso Mining and Construction (South Africa) (Pty) Ltd	South Africa	86.74%
Metso Zambia Ltd	Zambia	100.00%
Metso Minerals Canada Inc.	Canada	100.00%
Metso France SAS	France	100.00%
Metso Portugal Lda	Portugal	100.00%
Metso Algeria EURL	Algeria	100.00%
Metso USA Inc.	USA	100.00%
Metso Minerals Industries Inc.	USA	100.00%
Metso Shared Services Ltd	Canada	100.00%
Metso Captive Insurance Limited	Great Britain	100.00%

1) 100% consolidated

5.3. *Associated Companies and Joint Ventures*

Accounting policy

The equity method of accounting is used for investments in associated companies in which the investment provides Metso Minerals the ability to exercise significant influence over the operating and financial policies of the investee company. Such influence is presumed to exist for investments in companies in which Metso Minerals' direct or indirect shareholding is between 20 and 50 percent of the voting rights or if Metso Minerals is able to exercise significant influence. Investments in associated companies are initially recognized at cost after which Metso Minerals' share of their post-acquisition retained profits and losses is included as part of investments in associated companies in the consolidated balance sheets.

Under the equity method, the share of profits and losses of associated companies and joint ventures is presented separately in the consolidated statements of income.

A joint arrangement is an arrangement of which two or more parties have joint control. Within Metso Minerals, all the joint arrangements are joint ventures. Investments in joint ventures in which Metso Minerals has the power to jointly govern the financial and operating activities of the investee company are accounted for using the equity method. Investments in joint ventures in which Metso Minerals has the control over the financial and operating activities of the investee company are fully consolidated and a non-controlling interest is recognized.

Associated Companies and Joint Ventures

	2018		2017		2016	
EUR million	**Ownership**	**Carrying value**	**Ownership**	**Carrying value**	**Ownership**	**Carrying value**
Liugong Metso Construction Equipment (Shanghai) Co. Ltd	50.0%	3	50.0%	1	50.0%	1
Sefate Capital (Pty) Limited	49.0%	1	-	-	-	-
Other		0		0		0
Total		4		1		1

Metso Minerals acquired in 2018 49% of the shares of South African company Sefate Capital (Pty) Limited. This restructuring transaction also had an impact to the share of non-controlling interest in Metso South Africa Pty Ltd, which is 13.26% at the end of year

The Movements in the Carrying Value of Investments in Associated Companies and Joint Ventures

EUR million	**2018**	**2017**	**2016**
Investments in associated companies and joint ventures			
Acquisition cost as of January 1	2	2	2
Investments	4	-	-
Acquisition cost as of December 31	6	2	2
Equity adjustments in investments in associated companies and joint ventures			
Equity adjustments as of January 1	(1)	(1)	(1)
Share of results	0	0	0
Translation differences	0	0	0
Equity adjustments as of December 31	(2)	(1)	(1)
Carrying value as of December 31	4	1	1

Metso Minerals' share of the assets and liabilities, sales and results of the associated companies and joint ventures, which have been accounted for using the equity method

EUR million	**2018**	**2017**	**2016**
Assets	15	2	3
Liabilities	11	2	2
Sales	7	2	1
Profit	0	0	0

5.4. Related Party Transactions

Metso Minerals' related parties include Metso Corporation, Metso companies other than Metso Minerals business related and associated companies as well as key members of Metso Minerals management. For a list of Metso Minerals' associated companies, see note 5.2 of these carve-out financial statements. For information on the remuneration and salaries paid to the management of Metso Minerals management, see note 1.5 of these carve-out financial statements.

In the historical carve-out financial information of Metso Minerals, previous business transactions between Metso Minerals business and Metso Flow Control business have been presented as related party transactions. Metso Minerals' sales and purchases to and from Metso Flow Control has been insignificant during the periods in the carve-out financial statements.

In addition, Metso Group has equity and financing transactions with Metso Minerals business, which have led to the recognition of receivables and liabilities with Metso Group. Current receivables include trade receivables arising in the intragroup services as well as loan receivables and positive cash pool balances resulting from the centralized cash pool arrangements. Other receivables comprise non-interest bearing receivables from Metso Corporation corresponding to Metso Minerals' ownership in Metso Group entities, which are subject to contemplated internal reorganizations before the Effective date.

Non-current and current loan receivables represent loan balances owed by the Flow Control entities to the Metso Minerals entities, which have arranged funding to the Flow Control entities to meet their financing needs. Trade payables comprise of items arising in intragroup services. Cash pooling liabilities represent cash owed to Metso as part of the centralized cash pool arrangements. Interest income relates to interest earned on positive cash pool accounts and loan receivables and interest expenses comprise of interest on Metso's financing to Metso Minerals and interest costs on cash owed through the cash pooling arrangements.

Transactions Carried Out and Related Balances with Metso Group

EUR million	2018	2017	2016
Sales	0	0	0
Cost of sales	0	0	0
Finance income	5	7	10
Finance expenses	0	0	0

EUR million	2018	2017	2016
Non-current			
Loan receivables	49	70	106
Other non-current receivables	137	83	104
Current			
Loan receivables	33	23	27
Trade receivables	8	8	23
Cash pool receivables	20	27	39
Other current receivables	1	0	1
Non-current			
Other non-current liabilities	6	6	6
Current			
Cash pool liabilities	81	136	151
Trade payables	1	1	8
Other current liabilities	0	1	0

Following the Effective Date, business transactions between Metso Minerals and Metso Flow Control will not be related party transactions according to the "*IAS 24 – Related Party Disclosures*" standard.

Transactions Carried Out and Related Balances with Associated Companies and Joint Ventures

EUR million	2018	2017	2016
Sales	0	1	2
Purchases	0	0	(1)
Receivables	0	3	2
Payables	-	-	-

5.5. Acquisitions and Business Disposals

Acquisitions 2018

On July 2, 2018, Metso Minerals acquired 100% of the share capital of Swedish mobile crushing and screening solution provider P.J. Jonsson och Söner AB. The acquired business contributed sales of EUR 20 million to Metso Minerals for the period from July 2, 2018 to December 31, 2018. The company's sales in 12 months fiscal year that ended on August 31, 2017, was EUR 33 million and the number of personnel was 40.

On December 4, 2018, Metso Minerals acquired 100% of the share capital of UK-based combustion solutions and technology provider Kiln Flame Systems Ltd. The company is specialized in rotary kiln and calcining processes, combustion optimization and burner technologies. The company's sales in 12 months fiscal year that ended on August 31, 2018, amounted to EUR 4 million and the number of personnel was 13.

The Preliminary Assets and Liabilities Recognized as a Result of the Acquisitions

EUR million	2018
Intangible assets	7
Property, plant and equipment	4
Inventory	7
Trade receivables	5
Other receivables	0
Cash	3
Trade payables	(6)
Other liabilities	(4)
Deferred tax liability	(2)
Net identifiable assets acquired at fair value	15
Goodwill	18
Purchase consideration	33

The goodwill is attributable to synergies related to sales and personnel know-how. Goodwill is not tax deductible.

Initial calculations on goodwill generated are based on the results of acquired companies, adjusted by changes in accounting principles and effects from the fair value adjustments of acquired assets and related tax adjustments.

The net cash flow impact of the acquisitions

EUR million	2018
Cash consideration paid	(32)
Cash and cash equivalents acquired	3
Net cash flow for the year	(28)
Contingent consideration	(1)
Cash considerations, total	(29)

Acquisition costs of EUR 0,6 million are expensed and included in administrative expenses in the income statement and in operating cash flow in the statement of cash flows.

Acquisitions 2017

On November 1, 2017, Metso Minerals acquired 100% of the share capital of Australian WearX Holding Pty Ltd, which is producing wear lining solutions.

The acquired business contributed sales of EUR 5 million to the Metso Minerals for the period from November 1, 2017 to December 31, 2017. The company's sales in the twelve months fiscal year that ended June 30, 2017, amounted to EUR 23 million and the number of personnel was 142.

The Assets and Liabilities Recognized as a Result of the Acquisition

EUR million	2017
Intangible assets	11
Property, plant and equipment	2
Inventory	1
Trade receivables	6
Cash	1
Trade payables	(2)
Other liabilities	(3)
Deferred tax liability	(2)
Net identifiable assets acquired at fair value	13
Goodwill	18
Purchase consideration	31

The goodwill is attributable to synergies related mainly to the extended offering in the wear lining business in the whole group, sourcing and personnel know-how. Goodwill is not deductible for tax purposes.

The calculation on goodwill generated is based on the acquired company's result adjusted by changes in accounting principles and effects from the fair value adjustments of acquired assets and related tax adjustments.

The Net Cash Flow Impact of the Acquisition

EUR million	2017
Cash consideration	(31)
Cash and cash equivalents acquired	1
Net cash outflow - investing activities	(30)

Acquisition costs of EUR 0.4 million are expensed and included in other expenses in income statement and in operating cash flow in the statement of cash flows.

Acquisitions 2016

Metso Minerals made no business acquisitions in 2016.

Disposals

Metso Minerals made no business disposals in 2018, 2017 or 2016.

5.6. New Accounting Standards

New and Amended Standards Adopted in 2018

IFRS 15 Revenue from Contracts with Customers

Metso Minerals adopted the new IFRS 15 Revenue from Contracts with Customers standard from January 1, 2018. The adoption was done fully retrospectively starting from comparative period 2017, using permitted practical expedients. IFRS 15 introduces a five-step model for assessing revenue recognition. The principle is that revenue is recognized at an amount that reflects the consideration to which an entity expects to receive in exchange for transferring goods or services to a customer. Revenue is recognized when the control of goods or service is transferred to a customer. Revenue is recognized either at a point in time or over time. The accounting policy for sales recognition described in note 1.2.

Adoption of the new standard has had no impact on the timing of sales recognition or on the balance sheet presentation. Reported sales is reduced by the amounts of late delivery penalties, which have up until now been expensed. Accordingly, cost of goods sold (COGS) is affected positively by the same amount. Gross profit and other income statement items as well as the balance sheet are unchanged.

The used practical expedients:

- client contracts signed and satisfied in 2017 were not adjusted
- client contracts fully satisfied by January 1, 2017 were not adjusted
- disclosure on transaction price allocated to unsatisfied performance obligations as at December 31, 2017 and the expected recognition period will not be reported

If Metso Minerals would have chosen to not apply the practical expedients, this would not have had a material impact on the financial statements.

The IFRS 15 impact on Metso Minerals' Carve-out Statement of Income for 2017 is as follows:

EUR million	Restated	2017 Adjustment	Reported
Sales	2,177	(6)	2,183
Cost of goods sold	1,623	6	1,629
Gross profit	554	-	554

IFRS 9 Financial Instruments

Metso Minerals has adopted the IFRS 9 Financial instruments standard from January 1, 2018. The IFRS 9 adoption at Metso Minerals is related to three areas: the classification and measurement of financial assets, the impairment model for financial assets based on expected loss method, and to a new guidance on hedge accounting that will align more closely with common risk management practices. Applying IFRS 9 did not have any significant impact on the classification or valuation of financial assets, impairment bookings on trade receivables and other financial assets or hedge accounting. However, the adoption of IFRS 9 caused an adjustment to the carrying value of a debt instrument, for which the earlier modification loss has not been recognized. The adjustment in the opening retained earnings as at January 1, 2018, amounted to EUR 0.5 million.

Classification of Financial Instruments

In IFRS 9 financial assets are classified according to their cash flow and the business model they are managed in. Applying IFRS 9 did not have any significant impact on the classification or valuation of financial assets in Metso Minerals. Commercial papers and deposits and interest bearing investments are valued at amortized cost only when the business model is to hold the financial assets until the due date and collect the contractual cash flows through principal and interest payments. Other interest bearing investments and shares in mutual funds are value at fair value through profit and loss accounts.

The following table sets out the classification and carrying amounts of Metso Minerals' financial assets and liabilities as well as changes thereto as at the date of initial application IFRS 9, 1 January 2018:

EUR million	IAS 39 classification	IFRS 9 classification	Carrying amount as at January 1, 2018		
			IAS 39	IFRS 9	Change
FINANCIAL ASSETS					
Current financial assets					
Trade receivables					
Trade receivables	Loans and receivables	At amortized cost	424	417	(7)
Trade receivables for sale	Loans and receivables	At fair value through other comprehensive income	-	7	7
Interest bearing receivables	Loans and receivables	At amortized cost	0	0	-
Other receivables					
Derivatives, under hedge accounting	At fair value through other comprehensive income statement OCI	At fair value through other comprehensive income	6	6	-
Derivatives, not under hedge accounting	At fair value through profit and loss accounts	At fair value through profit and loss	6	6	-
Other receivables	Loans and receivables	At amortized cost	101	101	-
Liquid funds					
Deposits and securities, maturity more than three months	Assets at fair value through profit and loss accounts	At amortized cost	123	246	123
Deposits and securities, maturity more than three months	Assets at fair value through profit and loss accounts	At fair value through other comprehensive income	-	2	2
Cash and cash equivalents					
Fund investments	Loans and receivables	At fair value through profit and loss	-	46	46
Deposits and securities, maturity under three months	Loans and receivables	At amortized cost	229	57	(172)
Cash and cash equivalents	Loans and receivables	At amortized cost	349	349	-
FINANCIAL LIABILITIES					
Current financial liabilities					
Interest bearing liabilities					
Current portion of long-term debt	At fair value through profit and loss accounts	At fair value through profit and loss	209	210	1
Current portion of long-term debt	Measured at amortized cost	At amortized cost	69	69	-
Short-term debt	Measured at amortized cost	At amortized cost	21	21	-
Trade payables	Measured at amortized cost	At amortized cost	298	298	-
Other liabilities					
Derivatives, under hedge accounting	At fair value through other comprehensive income statement OCI	At fair value through other comprehensive income	7	7	-
Derivatives, not under hedge accounting	At fair value through profit and loss accounts	At fair value through profit and loss	2	2	-
Other liabilities	Liabilities measured at amortized cost	At amortized cost	171	171	-

Measurement of Financial Instruments

Long-term debts are valued at amortized cost using the effective interest method, except the debts, which fair value hedge accounting is applied, are being valued at fair value through profit and loss accounts. IFRS 9 did not have impact on classification of financial liabilities, but the transition to IFRS 9 causes an adjustment to the carrying value of a debt, for which the earlier modification loss has not been recognized in 2013. Impact to the retained earnings as at January 1, 2018, amounted to EUR 0.5 million.

IFRS 9 gives guidance to measure the impairment of financial assets. Metso Minerals assesses systematically the credit risk related to its financial assets valued at amortized cost, thus valuation of financial assets at fair value included already the credit risk impact. For trade receivables Metso Minerals uses the simplified approach of measuring the expected losses based on the lifetime expected loss amounts. Under IFRS 9 credit loss allowance is recognized earlier than currently, however the impact is expected to be minor, because of the low level of actual credit losses in the past years. Credit risk of client receivables from sales recognition using POC method are targeted to be covered through the advance payments from the clients.

Hedge Accounting

The new guidance for hedge accounting aligned hedge accounting more closely with risk management. Also, IFRS 9 relaxed the requirements for hedge effectiveness, only prospective effectiveness testing is needed.

Before January 1, 2018, Metso Minerals applied hedge accounting for forecasted cashflow transactions based on firm client long-term contracts. The hedge relationships mainly qualified also for IFRS 9, so no major impacts for financial statements occurred.

IFRS 2 Amendment - Classification and Measurement of Share-based Payment Transactions

Metso Minerals has adopted the amendment to IFRS 2 Classification and measurement of Share-based Payment Transactions from January 1, 2018. The amendment clarifies the measurement and accounting treatment for cash-settled share-based payments. When an employer is committed to the net settlement feature and thereby withholds and pays to the tax authority an amount for the employee's tax obligation associated with a share-based payment, the whole award should be treated as if it were equity-settled. The adoption of the IFRS 2 had no effect to carve-out financial statement.

IFRIC 22 Foreign Currency Transactions and Advance Consideration

This new interpretation gives guidance on the practice regarding the exchange change rate used when the transactions are denominated in foreign currency in circumstances in which consideration, both monetary and non-monetary, are received or paid in advance. Both monetary and non-monetary transactions are recorded using the exchange rate of the transaction date. Metso Minerals does not expect that adoption of this interpretation will have a major effect on its financial statements. Metso Minerals has applied the interpretation from the beginning of the financial year 2018.

Other New and Amended Standards Effective

The impact from other new and amended standards effective is not considered to be material to Metso Minerals.

New and Amended Standards Adopted in 2017

IAS 7 - Amendment

Disclosure initiative - amendment to IAS 7 Statement of Cash Flows. The amendment requires entities to provide disclosures about changes in financial activities. Metso Minerals has adopted this amendment in the financial statements 2017, see note 26 Net debt reconciliation.

IAS 12 - Amendment

Recognition of deferred tax assets for unrealized losses - Amendment to IAS 12. The amendment clarifies the accounting for deferred tax assets for unrealized losses on debt instruments measured at fair value.

New and Amended Standards Adopted in 2016

IAS 1

The Amendments to IAS 1 Disclosure Initiative clarifies the existing IAS 1 disclosure requirements for the statement of financial position, profit and loss account and OCI. Metso Minerals has applied this amendment from the beginning of 2016 and it had no major impact to its financial statements.

Annual Improvements 2012–2014 Cycle

Metso Minerals has applied the required annual improvements related to IFRS 5 Non-current assets Held for Sale and Discontinued Operations, IFRS 7 Financial Instruments: Disclosures, IAS 19 Employee Benefits and IAS 34 Interim Financial Reporting from the beginning of 2016 and they had no major impact to its financial statements.

New and Amended Standards to be Applied in 2019 or Later

IFRS 16 Leases

IFRS 16, effective for periods beginning on or after January 1, 2019, replaces IAS 17 Leases and the interpretations thereto. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to recognize nearly all leases on the balance sheet. The standard includes two recognition exemptions for lessees – leases of low-value assets (e.g. laptops and printers) and short-term leases (lease term of 12 months or less). At the commencement date of a lease, a lessee will recognize a liability to make lease payments (the lease liability) and an asset representing the right to use the underlying asset during the lease term (the right-of-use asset).

Lessees will be required to separately recognize the interest expense on the lease liability and the depreciation expense on the right-of-use asset. Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term or a change in future lease payments resulting from a change in an index or rate used to determine those payments). The lessee will generally recognize the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset. Lessor accounting under IFRS 16 is substantially unchanged from today's accounting under IAS 17.

Metso Minerals will adopt IFRS 16 as of January 1, 2019 using the modified retrospective approach whereby the comparative financial information is not restated. Metso Minerals plans to apply the standard to contracts that were previously identified as leases. Metso Minerals plans to use the recognition exemptions proposed by the standard on low-value leased assets and short-term leases.

Based on Metso Minerals' assessment, the adoption of IFRS 16 will have some impact on reported EBITDA, operating profit, non-current assets, interest bearing liabilities and total balance sheet amounts as well as on related key figures. The change will affect also the presentation of cash flows from operating activities and from financing activities.

As at December 31, 2018 Metso Minerals' off-balance sheet operating lease commitments amounted to EUR 68 million of which the most part will be recognized on the balance sheet in connection with the adoption of IFRS 16. Part of the operating lease commitments relates to low-value leased assets and short-term leases for which no right-of-use asset or lease liability will be recognized. The finance lease liabilities of Metso Minerals were not material as of December 31, 2018. The value of the right-of-use asset and the respective lease liability to be recognized on the opening balance sheet as of January 1, 2019 is expected to be in the range of EUR 65–75 million.

In the income statement, the lease expense relating to the leases to be recognized on the balance sheet under IFRS 16 will be replaced by the interest expense of the lease liability and depreciation of the leased asset. This change will have an increasing impact on the reported operating profit, EBITDA and net financial expenses.

IFRIC Interpretation 23 Uncertainty over Income Tax Treatment

The interpretation addresses the accounting for income taxes when tax treatments involve uncertainty in the application of IAS 12. An entity must determine whether to consider each uncertain tax treatment separately of together with one or more other uncertain tax treatments. The approach that better predicts the resolution of the uncertainty should be followed. Metso Minerals will apply the interpretation from January 1, 2019. Based on an initial assessment, the interpretation will not have a material impact on Metso Minerals.

Other New and Amended Standards Issued but not yet Effective

The impact from other new and amended standards issued but not yet effective is not considered to be material to Metso Minerals.

5.7. Exchange Rates Used

		Average rates			Year-end rates		
		2018	2017	2016	2018	2017	2016
USD	(US dollar)	1.1809	1.1307	1.1021	1.1450	1.1993	1.0541
SEK	(Swedish krona)	10.2591	9.6392	9.4496	10.2548	9.8438	9.5525
GBP	(Pound sterling)	0.8861	0.8742	0.8159	0.8945	0.8872	0.8562
CAD	(Canadian dollar)	1.5307	1.4684	1.4630	1.5605	1.5039	1.4188
BRL	(Brazilian real)	4.3020	3.6271	3.8571	4.4440	3.9729	3.4305
CNY	(Chinese yuan)	7.8148	7.6299	7.3199	7.8751	7.8044	7.3202
AUD	(Australian dollar)	1.5795	1.4780	1.4856	1.6220	1.5346	1.4596

6. Other Notes

6.1. Audit Fees

EUR million	2018	2017	2016
Audit services	1.2	1.1	1.2
Tax services	0.0	0.1	0.1
Other audit related services	0.0	0.1	0.1
Total	**1.2**	**1.3**	**1.5**

6.2. Lawsuits and Claims

Several lawsuits, legal claims and disputes based on various grounds are pending against Metso Minerals in various countries related, among other things, to Metso Minerals' products, projects, other operations and customer receivables. Metso Minerals' management assesses, however, to the best of its present understanding that the outcome of these lawsuits, claims and legal disputes would not have a material adverse effect on Metso Minerals in view of the grounds presented for them, provisions made, insurance coverage in force and the extent of Metso Minerals' total business activities. It should be noted, however, that outcomes of pending lawsuits, legal claims and disputes are beyond the direct influence of Metso Minerals' management and may, therefore, materially deviate from management's current assessment.

6.3. Events After the Reporting Period Ended December 31, 2018

Acquisition of HighService Corp's Service Business

Metso announced on January 2, 2019 that it had agreed to acquire HighService Service, the service business of the Chilean mining technology and maintenance provider HighService Corp. HighService Service (later Industrial Support Company SpA) is a high-quality service provider for the mining industry, with operations in Chile, Argentina and Brazil. Its sales in the fiscal year 2017 were EUR 60 million and it has 1,300 employees. The acquisition is pending regulatory approval from the Chilean authorities and is expected to close during the first half of 2019. The parties have agreed not to disclose the value of the transaction.

Divestment of Grinding Media Business

Metso announced on January 4, 2019 that it had successfully completed the divestment of its grinding media business to Moly-Cop, a portfolio company of American Industrial Partners. The divestment was announced on November 6, 2018. The transaction includes the sale of Metso Spain Holding, S.L.U, including operations in Bilbao and Seville, Spain. As part of the transaction, approximately 80 employees have transferred from Metso Minerals to Moly-Cop. The turnover of the divested business in 2018 was approximately EUR 60 million. Based on an initial assessment, Metso Minerals does not expect to recognize a material impact on the income statement from the divestment.

Acquisition of McCloskey

Metso announced on June 10, 2019 that it has signed an agreement to acquire McCloskey International, a Canadian mobile crushing and screening equipment manufacturer, to expand Metso Minerals' offering in the aggregates industry globally and to strengthen the customer reach especially to general contractor customers. The acquisition was completed on October 1, 2019.

In the 12-month period ending September 30, 2018, McCloskey had pro forma sales of CAD 464 million (EUR 308 million) and a pro forma EBITDA margin of 10.3%. The company's sales in the fiscal year ending September 30, 2019, are expected to exceed CAD 500 million (EUR 330 million). McCloskey has approx. 900 employees in Canada, the United States and Northern Ireland.

The enterprise value of the transaction is CAD 420 million (EUR 279 million) payable at closing with an additional profitability-based earn-out consideration of up to CAD 35 million (EUR 23 million) for the two-year period after closing.

To ensure financing for the acquisition, Metso has agreed on a bilateral loan from Nordea Bank Abp. The loan has a maturity of two years and includes an option to extend the maturity by one year.

SIGNATURES OF CARVE-OUT FINANCIAL STATEMENTS

Helsinki, October 7, 2019

/S/ MIKAEL LILIUS Mikael Lilius Chairman of the Board	/S/ CHRISTER GARDELL Christer Gardell Vice Chairman of the Board	
/S/ PETER CARLSSON Peter Carlsson Member of the Board	/S/ LARS JOSEFSSON Lars Josefsson Member of the Board	
/S/ ANTTI MÄKINEN Antti Mäkinen Member of the Board	/S/ KARI STADIGH Kari Stadigh Member of the Board	/S/ ARJA TALMA Arja Talma Member of the Board
/S/ PEKKA VAURAMO Pekka Vauramo President and CEO		

THE AUDITOR'S NOTE

Our auditor's report has been issued today.

Helsinki, October 7, 2019
Ernst & Young Oy
Authorized Public Accountant Firm

/S/ MIKKO JÄRVENTAUSTA
Mikko Järventausta
APA

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AUDITOR'S REPORT (Translation of the Finnish original)

To the Board of Directors of Metso Corporation

Report on the Audit of Carve-out Financial Statements

Opinion

We have audited the carve-out financial statements of Metso Minerals business ("Metso Minerals") of Metso Corporation (business identity code1538032-5) for the years ended 31 December 2018, 31 December 2017 and 31 December 2016. The carve-out financial statements comprise the combined balance sheets as at 31 December 2018, 31 December 2017 and 31 December 2016 and the combined income statements, statements of comprehensive income, statements of changes in equity and statements of cash flows for the years then ended as well as the notes, including summaries of significant accounting policies, to the carve-out financial statements. The carve-out financial statements of Metso Minerals and this report have been prepared only for the purpose of including them in the prospectus prepared by Outotec Corporation as described in the notes to the carve-out financial statements.

In our opinion, the carve-out financial statements of Metso Minerals give a true and fair view of its financial positions as at 31 December 2018, 31 December 2017 and 31 December 2016 as well as its financial performances and their cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and under consideration of the principles for determining which assets and liabilities, income and expenses as well as cash flows are to be assigned to Metso Minerals as described in the notes to the carve-out financial statements.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the *Auditor's Responsibilities for the Audit of Carve-out Financial Statements* section of our report.

We are independent of Metso Corporation and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of the Board of Directors and the Managing Director for the Carve-out Financial Statements

The Board of Directors and the Managing Director of Metso Corporation are responsible for the preparation of carve-out financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and under consideration of the principles for determining which assets and liabilities, income and expenses as well as cash flows are to be assigned to Metso Minerals as described in the notes to the carve-out financial statements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of carve-out financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the carve-out financial statements, the Board of Directors and the Managing Director are responsible for assessing Metso Minerals' ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The carve-out financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate Metso Minerals or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of Carve-out Financial Statements

Our objectives are to obtain reasonable assurance on whether the carve-out financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the carve-out financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the carve-out financial statements, 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 opinion. 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 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 the Metso Minerals' internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's 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 Metso Minerals' ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the carve-out financial statements or, if such disclosures are inadequate, to modify our opinion. 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 Metso Minerals to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the carve-out financial statements, including the disclosures, and whether the carve-out financial statements represent the underlying transactions and events so that the carve-out financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within Metso Minerals to express an opinion on the carve-out financial statements. We are responsible for the direction, supervision and performance of the audit of Metso Minerals. We remain solely responsible for our audit opinion.

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.

Emphasis of Matter

We draw attention to the fact that, as described in the notes to the carve-out financial statements for the years ended 31 December 2018, 31 December 2017 and 31 December 2016, Metso Minerals has not formed a separate legal group of entities during the years ended. The carve-out financial statements are, therefore, not necessarily indicative of the financial performances, financial positions and cash flows of Metso Minerals that would have occurred if it had operated as a separate stand-alone group of entities during the years presented nor of Metso Minerals' future performance. Our opinion is not modified in respect of this matter.

Helsinki, 7 October 2019

Ernst & Young Oy
Authorized Public Accountant Firm

Mikko Järventausta
Authorized Public Accountant