

## 6. Impairment of Assets

A summary of impairment losses recognition and reversals is presented below.

### Year ended 31 December 2017

<i>US\$ million</i>	<b>Goodwill and intangible assets</b>	<b>Property, plant and equipment</b>	<b>Taxes receivable</b>	<b>Total</b>
EVRAZ Inc. NA	\$ (13)	\$ 6	\$ -	\$ (7)
EVRAZ Inc. NA Canada	-	(12)	-	(12)
Raspadskaya	-	9	-	9
EVRAZ Palini e Bertoli	-	20	-	20
Yuzhkuzbassugol	-	(9)	-	(9)
Evrzruda	-	8	-	8
Others, net	-	(2)	5	3
	<b>\$ (13)</b>	<b>\$ 20</b>	<b>\$ 5</b>	<b>\$ 12</b>
Recognised in profit or loss	(13)	20	5	12

### Year ended 31 December 2016

<i>US\$ million</i>	<b>Goodwill and intangible assets</b>	<b>Property, plant and equipment</b>	<b>Taxes receivable</b>	<b>Total</b>
EVRAZ Inc. NA	\$ (299)	\$ (88)	\$ -	\$ (387)
EVRAZ Inc. NA Canada	(17)	(26)	-	(43)
Raspadskaya	-	(17)	-	(17)
EVRAZ Stratcor Inc.	-	(16)	-	(16)
EVRAZ Palini e Bertoli	-	19	-	19
Yuzhny Stan	-	(5)	-	(5)
Evrzruda	-	(10)	-	(10)
Others, net	-	(8)	2	(6)
	<b>\$ (316)</b>	<b>\$ (151)</b>	<b>\$ 2</b>	<b>\$ (465)</b>
Recognised in profit or loss	(316)	(151)	2	(465)

### Year ended 31 December 2015

<i>US\$ million</i>	<b>Goodwill and intangible assets</b>	<b>Property, plant and equipment</b>	<b>Taxes receivable</b>	<b>Total</b>
EVRAZ Inc. NA	\$ (210)	\$ -	\$ -	\$ (210)
EVRAZ Inc. NA Canada	(41)	(7)	-	(48)
Raspadskaya	-	(91)	-	(91)
EVRAZ Palini e Bertoli	-	(37)	-	(37)
Yuzhny Stan	-	(30)	-	(30)
Evrzruda	-	(19)	-	(19)
Others, net	-	(6)	(1)	(7)
	<b>\$ (251)</b>	<b>\$ (190)</b>	<b>\$ (1)</b>	<b>\$ (442)</b>
Recognised in profit or loss	(251)	(189)	(1)	(441)
Recognised in other comprehensive income/(loss)	-	(1)	-	(1)

## 6. Impairment of Assets (continued)

The Group recognised the impairment losses as a result of the impairment testing at the level of cash-generating units. In addition, the Group made a write-off of certain functionally obsolete items of property, plant and equipment and recorded an impairment relating to VAT with a long-term recovery.

For the purpose of the impairment testing the Group assessed the recoverable amount of each cash-generating unit to which goodwill was allocated or where indicators of impairment were identified. Given the market volatility, in 2015 the impairment test was performed as of 31 December. In 2016 and 2017, the impairment tests were performed as of 30 September, the conclusions were reassessed at 31 December and no further impairment triggers were identified.

In the first half of 2016, based on the analysis of market changes and cash inflow dependence between the assets and new business organisational structure, management reassessed the composition of cash generating units of Steel North America for the purposes of impairment testing. The assets of EVRAZ Inc. NA and EVRAZ Inc. NA Canada, which were previously allocated to cash-generating units based on individual plant level, were merged into 5 new units based on principal markets served by each cash-generating unit:

- Large diameter pipes;
- Oil Country Tubular Goods (casing and tubing);
- Seamless pipes;
- Flat rolled products (plates and coils);
- Long products (rails, rod and bar products).

The recoverable amounts have been determined based on calculation of either value-in-use or fair value less costs to sell. Both valuation techniques used cash flow projections based on the actual operating results and business plans approved by management and appropriate discount rates reflecting the time value of money and risks associated with respective cash-generating units. For the periods not covered by management business plans, cash flow projections have been estimated by extrapolating the results of the respective business plans using a zero real growth rate. In the determination of fair value less costs to sell the asset's value additionally includes the cashflows of future projects not started yet and the associated capital expenditure costs.

The major drivers that led to impairment reversal in 2017 were improvements in net working capital and changes in expectations of iron ore and steel prices and production volumes.

The key assumptions used by management in the value-in-use calculations with respect to the cash-generating units to which the goodwill was allocated are presented in the table below.

Commodity	Period of forecast, years		Pre-tax discount rate, %		Average price of commodity per tonne in the next reporting year		Recoverable amount of CGU, US\$ million		Carrying amount of CGU before impairment, US\$ million		
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	
	Steel North America										
<i>Large diameter pipes</i>	steel products	5	5	11.23	10.69	\$913	\$978	1,074	1,288	938	877
<i>Oil Country Tubular Goods</i>	steel products	5	5	10.85	10.36	\$1,121	\$887	547	362	383	379
<i>Long products</i>	steel products	5	5	11.02	10.08	\$647	\$572	591	686	520	549
EVRAZ Vanady-Tula	vanadium products	5	5	13.03	12.98	\$23,403	\$10,990	986	393	61	58
EVRAZ Nikom, a.s.	ferrovanadium products	5	5	11.00	10.74	\$26,576	\$12,568	47	43	34	33

## 6. Impairment of Assets (continued)

In addition, the Group determined that there were indicators of impairment in other cash generating units and tested them for impairment using the following assumptions.

	Period of forecast, years	Pre-tax discount rate, %	Commodity	Average price of commodity per tonne in the next reporting year
EVRAZ Caspian Steel	5	12.55	steel products	\$373
EVRAZ Palini e Bertoli	8	14.68	steel products	€467
EVRAZ Stratcor Inc.	5	12.92	ferrovanadium products	\$35,823
Raspadskaya	18	13.09	coal	\$57
Mezhegeyugol	25	12.31	coal	\$67
Yuzhkuzbassugol	14	13.88	coal	\$78
EVRAZ Kachkanarsky Mining-and-Processing Integrated Works	23	13.61	iron ore products	\$47
Evrazruda - Sheregesh mine	22	14.36	iron ore	\$55
Evrazruda - Tashtagol mine	22	13.68	iron ore	\$54

The value in use of the cash-generating units for which an impairment loss was recognised or reversed in the reporting year was as follows:

US\$ million	30 September 2017	30 September 2016
Large diameter pipes	1,074	1,288
EVRAZ Palini e Bertoli	44	24
Evrazruda - Tashtagol mine	84	-

## 6. Impairment of Assets (continued)

The estimations of value in use are most sensitive to the following assumptions:

### Discount Rates

Discount rates reflect the current market assessment of the risks specific to each cash-generating unit. The discount rates have been determined using the Capital Asset Pricing Model and analysis of industry peers. Reasonably possible changes in discount rates could lead to an additional impairment or reduced amount of an impairment reversal at EVRAZ Caspian Steel, EVRAZ Palini e Bertoli, EVRAZ Stratcor Inc., Large diameter pipes and Long products cash-generating units. If discount rates were 10% higher, this would lead to an additional net impairment loss of \$37 million.

### Sales Prices

The price assumptions for the products sold by the Group were estimated based on industry research using analysts' views published by Alfa-Bank, Balclays, Credit Suisse, Deutsche Bank, Goldman Sachs, Morgan Stanley, RBC, Sberbank, VTB Capital and Wood & Company during the period from September to December 2017. The Group expects that the nominal prices will fluctuate with a compound annual growth rate of (7.4)%-9.4% in 2018 – 2022, 2.5% in 2023 and thereafter. Reasonably possible changes in sales prices could lead to an additional impairment or reduced amount of an impairment reversal at EVRAZ Palini e Bertoli and EVRAZ Stratcor Inc. cash-generating units. If the prices assumed for 2018 and 2019 in the impairment test were 10% lower, this would lead to an additional net impairment loss of \$5 million.

### Sales Volumes

Management assumed that the sales volumes of steel products in 2018 will increase by 2.2% and future dynamics will be driven by a gradual market recovery and changes in assets' capacities. Reasonably possible changes in sales volumes could lead to an additional impairment or reduced amount of an impairment reversal at EVRAZ Caspian Steel and EVRAZ Palini e Bertoli. If the sales volumes were 10% lower than those assumed for 2018 and 2019 in the impairment test, this would lead to an additional net impairment loss of \$23 million.

### Cost Control Measures

The recoverable amounts of cash-generating units are based on the business plans approved by management. A reasonably possible deviation in cost from these plans could lead to an additional impairment or reduced amount of an impairment reversal at EVRAZ Caspian Steel, EVRAZ Nikom, EVRAZ Palini e Bertoli and EVRAZ Stratcor Inc. If the actual costs were 10% higher than those assumed for 2018 and 2019 in the impairment test, this would lead to an additional net impairment loss of \$57 million.

### Sensitivity Analysis

For the cash-generating units, which were not impaired in the reporting period and for which the reasonably possible changes could lead to impairment, the recoverable amounts would become equal to their carrying amounts if the assumptions used to measure the recoverable amounts changed by the following percentages:

	Discount rates	Sales prices	Sales volumes	Cost control measures
EVRAZ Caspian Steel	5.1%	-	(3.5)%	4.8%
EVRAZ Inc NA – Long products	8%	-	-	-
EVRAZ Nikom	-	-	-	5.5%
EVRAZ Palini e Bertoli	-	-	-	8.2%
EVRAZ Stratcor Inc.	4.0%	(6.5)%	-	1.0%