Hydro

Fourth quarter 2018 Report

Contents

Oslo, February 6, 2019

Overview

Summary underlying financial and operating results and liquidity

Key financial information NOK million, except per share data	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Revenue	**38,386**	38,803	(1) %	39,766	(3) %	**159,377**	109,220
Earnings before financial items and tax (EBIT)	**335**	4,511	(93) %	2,057	(84) %	**8,679**	12,189
Items excluded from underlying EBIT[1]	**199**	(956)	>100 %	620	(68) %	**390**	(974)
Underlying EBIT[1]	**534**	3,555	(85) %	2,676	(80) %	**9,069**	11,215
Underlying EBIT :							
Bauxite & Alumina	**493**	1,872	(74) %	685	(28) %	**2,282**	3,704
Primary Metal	**(677)**	1,377	>(100) %	861	>(100) %	**1,762**	5,061
Metal Markets	**275**	185	48 %	(3)	>100 %	**686**	544
Rolled Products	**(113)**	95	>(100) %	82	>(100) %	**413**	380
Extruded Solutions[2]	**202**	284	(29) %	497	(59) %	**2,390**	284
Energy	**500**	457	9 %	652	(23) %	**1,846**	1,531
Other and eliminations[2]	**(145)**	(715)	80 %	(97)	(49) %	**(310)**	(289)
Underlying EBIT[1]	**534**	3,555	(85) %	2,676	(80) %	**9,069**	11,215
Earnings before financial items, tax, depreciation and amortization (EBITDA)[3]	**2,011**	6,481	(69) %	3,890	(48) %	**15,953**	18,344
Underlying EBITDA[1]	**2,210**	5,524	(60) %	4,510	(51) %	**16,344**	17,369
Net income (loss)	**(593)**	3,600	>(100) %	925	>(100) %	**4,480**	9,184
Underlying net income (loss)[1]	**(175)**	2,816	>(100) %	1,696	>(100) %	**5,819**	8,396
Earnings per share	**(0.26)**	1.71	>(100) %	0.37	>(100) %	**2.16**	4.30
Underlying earnings per share[1]	**(0.06)**	1.33	>(100) %	0.74	>(100) %	**2.75**	3.95
Financial data:							
Investments[1) 3)]	**2,624**	24,632	(89) %	2,051	28 %	**7,614**	28,848
Net cash (debt)[1]	**(8,653)**	(4,118)	>(100) %	(6,471)	(34) %	**(8,653)**	(4,118)
Adjusted net cash (debt)[1]	**(23,127)**	(17,968)	(29) %	(18,380)	(26) %	**(23,127)**	(17,968)
Underlying Return on average Capital Employed (RoaCE)[1]						**6.5 %**	9.6 %

Key Operational information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Bauxite production (kmt)[4]	**1,254**	3,049	(59) %	1,286	(2) %	**6,214**	11,435
Alumina production (kmt)	**786**	1,693	(54) %	821	(4) %	**3,712**	6,397
Realized alumina price (USD/mt)[5]	**463**	398	16 %	460	1 %	**429**	326
Primary aluminium production (kmt)	**490**	528	(7) %	497	(1) %	**1,993**	2,094
Realized aluminium price LME (USD/mt)	**2,041**	2,092	(2) %	2,194	(7) %	**2,140**	1,915
Realized USD/NOK exchange rate	**8.35**	8.16	2 %	8.16	2 %	**8.08**	8.30
Rolled Products sales volumes to external market (kmt)	**220**	224	(2) %	235	(6) %	**951**	940
Extruded Solutions sales volumes to external market (kmt)[6]	**318**	318	-	343	(7) %	**1,396**	845
Power production (GWh)	**2,822**	3,089	(9) %	2,888	(2) %	**10,693**	10,835

1) Alternative performance measures (APMs) are described in the corresponding section in the back of the report.
2) Other and eliminations includes Hydro's 50 percent share of underlying net income from Sapa until end of third quarter 2017. Extruded Solutions was fully consolidated from October 2, 2017.
3) EBITDA and investments per segment are specified in Note 2: Operating segment information.
4) Paragominas production, on wet basis.
5) Weighted average of own production and third party contracts. The majority of the alumina is sold linked to either the LME prices or alumina index with a one month delay.
6) Hydro's 50 percent share of Sapa sales volumes until end of third quarter 2017 and 100 percent of Extruded Solutions sales volumes from the beginning of the fourth quarter 2017.

The Alunorte situation

Following a period of extreme rainfall, and subsequent flooding, in the region of Bacarena, in Pará, Brazil, during February 2018, authorities ordered several measures against Hydro's alumina refinery Alunorte. The measures restricted the production at Alunorte to 50 percent of its capacity while authorities reviewed the situation, over concerns that flooding led to harmful spills into the surrounding areas. Consequently, Alunorte's primary bauxite source Paragominas and Hydro's part-owned subsidiary Albras aluminium plant, both in the state of Pará, reduced their production by 50 percent. More than 90 investigations and inspections were conducted by the relevant authorities, including the environmental agency in the state of Pará, SEMAS, and the federal environmental agency, IBAMA. SEMAS and IBAMA have both confirmed that there was no overflow from Alunorte's bauxite residue deposits. Reports made by or for Hydro have found no indication or evidence of contamination to nearby local communities, nor any significant or lasting environmental impact to nearby rivers from Alunorte as a result of the extreme rainfall.

Fourth quarter 2018 versus fourth quarter 2017

Hydro's underlying earnings before financial items and tax decreased in the fourth quarter, mainly reflecting the effects of the production curtailment at Alunorte and increased raw material costs.

Fourth quarter 2018 versus third quarter 2018

Results decreased reflecting a lower all-in metal price[1], higher raw material costs, effects from seasonally lower sales volumes and yearly maintenance activities. Results were also influenced by a significantly lower contribution, compared to the third quarter, from the sale of excess power following the production curtailment of the Albras smelter in Brazil.

Full year 2018 versus full year 2017

Results decreased reflecting negative effects relating to the production curtailment at Alunorte and increased raw material costs partly offset by a higher all-in metal price and alumina sales price as well as the positive contribution from the full consolidation of Extruded Solutions. Further, the result was positively impacted by strong Energy results and improved downstream margins and volumes.

Mainly due to the situation in Brazil, Hydro's "Better" improvement program did not reach the 2018 target of NOK 500 million. For the same reason, Hydro will not be able to meet its "Better" target for 2019.

Hydro's net debt position increased from NOK 6.5 billion[2] to NOK 8.7 billion at the end of the quarter. Net cash provided by operating activities amounted to NOK 0.9 billion. Net cash used in investment activities, excluding short term investments, amounted to NOK 2.6 billion.

Dividend

For 2018, Hydro's Board of Directors proposes a dividend of NOK 1.25 per share reflecting Hydro's robust financial situation, taking into account a demanding year for the company and the volatility in the aluminium industry. The proposed payment represents a 58 percent pay-out ratio of reported net income for the year and demonstrates the company's commitment to provide a competitive cash return to shareholders. Hydro has a dividend policy of 40 percent payout ratio of reported net income over the cycle with NOK 1.25 per share considered as a floor.

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[1] The all-in metal price refers to the LME cash price plus premiums.

[2] Net cash (debt) includes Cash and cash equivalents and Short-term investments less Bank loans and other interest bearing Short-term debt and Long-term debt.

Reported EBIT and net income

In addition to the factors discussed above, reported earnings before financial items and tax (EBIT) and net income include effects that are disclosed in the below table. Items excluded from underlying EBIT and underlying net income (loss) are defined and described as part of the APM section in the back of this report.

Items excluded from underlying EBIT and net income[1)] NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Third quarter 2018	**Year 2018**	Year 2017
Unrealized derivative effects on LME related contracts	**22**	140	436	**39**	220
Unrealized derivative effects on power and raw material contracts	**(82)**	91	(183)	**(260)**	246
Metal effect, Rolled Products	**93**	(146)	(153)	**(73)**	(419)
Significant rationalization charges and closure costs[2)]	**79**	210	-	**79**	210
Alunorte agreements - provision[3)]	**-**	-	519	**519**	-
Other effects[4)]	**46**	212	-	**46**	212
Pension[5)]	**40**	-	-	**40**	-
Transaction related effects (Sapa)[6)]	**-**	(1,463)	-	**-**	(1,463)
Items excluded in equity accounted investments (Sapa)[7)]	**-**	-	-	**-**	19
Items excluded from underlying EBIT	**199**	(956)	620	**390**	(974)
Net foreign exchange (gain)/loss	**408**	696	257	**1,303**	875
Calculated income tax effect	**(188)**	(523)	(105)	**(355)**	(564)
Other adjustments to net income[8)]	**-**	-	-	**-**	(125)
Items excluded from underlying net income	**418**	(783)	772	**1,338**	(788)
Income (loss) tax rate	**(54)%**	4%	43%	**32%**	17%
Underlying income (loss) tax rate	**179%**	19%	32%	**30%**	24%

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) Significant rationalization charges and closure costs include in the fourth quarter 2018 rationalization costs in Rolled products of NOK 39 million and closure costs in Extruded Solutions of NOK 40 million. Environmental liabilities in Kurri Kurri of NOK 181 million and rationalization costs in Extruded Solutions of NOK 29 million were included in 2017.
3) Alunorte agreements - provision refers to the provision recognized in relation to the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made on September 5, 2018.
4) Other effects include in the fourth quarter 2018 a charge of NOK 80 million due to adjustments to the value of certain assets in relation to the Sapa acquisition and a gain of NOK 34 million due to remeasurement of environmental liabilities related to closed business in Germany. In addition to a gain of NOK 33 million related to the remeasurement of environmental liabilities in 2017, a charge of NOK 245 million related to a customs case in Germany was included in the fourth quarter 2017.
5) Pension includes a charge of NOK 40 million due to remeasurement of all UK schemes with Guaranteed Minimum Pensions (GMP) required to be adjusted to equalize pension benefits for gender. The remeasurement is based on the accrued pension benefits in the period between 1990 and 1997.
6) Transaction related effects include the revaluation gain of NOK 2,171 million of Hydro's pre-transactional 50 percent interest in Sapa, as well as the fair value allocated to inventory of finished goods and to the backlog of contractual deliveries as of closure, sold during fourth quarter 2017, reflecting an expense of NOK 707 million.
7) Items excluded in equity accounted investments (Sapa) for the year 2017 include unrealized derivative gains, rationalization charges and net foreign exchange gains.
8) Other adjustments to net income include reduction in tax expense and related interest income of NOK 125 million in total following a closed tax case in September 2017.

Market developments and outlook

Market statistics	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
USD/NOK Average exchange rate	**8.43**	8.16	3 %	8.24	2 %	**8.13**	8.26
USD/NOK Period end exchange rate	**8.69**	8.21	6 %	8.18	6 %	**8.69**	8.21
BRL/NOK Average exchange rate	**2.22**	2.51	(12) %	2.09	6 %	**2.23**	2.59
BRL/NOK Period end exchange rate	**2.24**	2.48	(10) %	2.03	10 %	**2.24**	2.48
USD/BRL Average exchange rate	**3.80**	3.24	17 %	3.95	(4) %	**3.66**	3.19
USD/BRL Period end exchange rate	**3.88**	3.31	17 %	4.02	(3) %	**3.88**	3.31
EUR/NOK Average exchange rate	**9.62**	9.60	-	9.58	-	**9.60**	9.33
EUR/NOK Period end exchange rate	**9.95**	9.84	1 %	9.47	5 %	**9.95**	9.84
Bauxite and alumina:							
Average alumina price - Platts PAX FOB Australia (USD/t)	**451**	446	1 %	542	(17) %	**474**	355
China bauxite import price (USD/mt CIF China)	**55**	53	4 %	54	2 %	**53**	51
Global production of alumina (kmt)	**31,088**	30,609	2 %	31,013	-	**123,488**	123,999
Global production of alumina (ex. China) (kmt)	**13,189**	14,070	(6) %	13,105	1 %	**52,873**	55,687
Primary aluminium:							
LME cash average ((USD/mt)	**1,971**	2,102	(6) %	2,057	(4) %	**2,110**	1,969
LME three month average (USD/mt)	**1,978**	2,119	(7) %	2,068	(4) %	**2,115**	1,980
Standard ingot premium (EU DP Cash)	**131**	159	(17) %	157	(16) %	**164**	148
Extrusion ingot premium (EU DP)	**494**	353	40 %	500	(1) %	**455**	334
Chinese production of primary aluminium (kmt)	**9,156**	8,836	4 %	9,311	(2) %	**36,222**	36,234
Chinese consumption of primary aluminium (kmt)	**8,987**	8,740	3 %	9,228	(3) %	**35,900**	34,397
Global production of primary aluminium (ex. China) (kmt)	**6,975**	6,945	-	6,950	-	**27,598**	27,223
Global consumption of primary aluminum (ex. China) (kmt)	**7,413**	7,281	2 %	7,417	-	**29,768**	29,087
Global production of primary aluminium (kmt)	**16,130**	15,781	2 %	16,260	(1) %	**63,820**	63,457
Global consumption of primary aluminum (kmt)	**16,400**	16,021	2 %	16,645	(1) %	**65,668**	63,485
Reported primary aluminium inventories (ex. China) (kmt)	**2,931**	2,790	5 %	2,673	10 %	**2,931**	2,790
Reported primary aluminium inventories (China) (kmt)	**1,998**	2,580	(23) %	2,313	(14) %	**1,998**	2,580
Rolled products and extruded products:							
Consumption rolled products - Europe (kmt)	**1,186**	1,160	2 %	1,230	(4) %	**4,961**	4,823
Consumption rolled products - USA & Canada (kmt)	**1,312**	1,222	7 %	1,328	-	**5,281**	5,065
Consumption extruded products - Europe (kmt)	**751**	727	3 %	802	(6) %	**3,236**	3,156
Consumption extruded products - USA & Canada (kmt)	**598**	581	3 %	640	(7) %	**2,540**	2,440
Energy:							
Average southern Norway spot price (NO2) (NOK/MWh)	**455**	287	59 %	475	(4) %	**415**	269
Average mid Norway spot price (NO3) (NOK/MWh)	**455**	291	>100 %	487	(7) %	**423**	275
Average nordic system spot price (NOK/MWh)	**460**	294	56 %	484	(5) %	**423**	274

On March 8, 2018 the US administration announced a 10 percent tariff on aluminium imports to the US, effective from March 23. Argentina and Australia are exempted from the 10 percent tariff, although Argentina will be covered by a quota. On September 30, 2018 The US, Canada and Mexico came to an agreement on a revised trade deal, called the United States Mexico Canada Agreement (USMCA), replacing the 1994 NAFTA agreement. The USMCA is expected to be ratified during 2019 and does not address the 10 percent tariff on imported aluminium.

On April 6, 2018 the US Department of Treasury's Office of Foreign Assets Control (OFAC) issued a sanctions list that included Russian individuals and companies including the Russian aluminium company Rusal, controlled by Oleg Deripaska. On December 19, 2018 OFAC submitted a notification to the US Congress of its intention to remove Rusal from the sanctions list. Despite attempts to postpone the deadline further, OFAC deleted Rusal from the sanctions list as of January 27, 2019 meaning that the sanctions directed towards the company are now lifted.

Motor vehicle production in Europe declined as manufacturers reduced the pace of output in response to a backlog in certifying vehicles' carbon dioxide emission as part of the new Worldwide Harmonized Light Vehicles Test Procedure (WLTP), introduced by the European Union in 2017, effective September 2018.

Bauxite and alumina

The Platts alumina spot prices decreased in the fourth quarter of 2018 compared to the third quarter of 2018 as the alumina shortfall in the World ex-China caused by the production embargo at Alunorte was met by Chinese alumina exports. Additionally, the resolution of industrial action at Alcoa's Western Australian bauxite and alumina operations and market expectation that US sanctions against UC Rusal would be lifted alleviated previous supply concerns. The Alunorte refinery continued operating at 50 percent of capacity during the quarter.

Prices started the quarter at USD 459 per mt and spiked to USD 600 per mt in the first week of October following the announcement of the full curtailment of Alunorte on October 3. Following the reversal of the decision on October 8, prices drifted down to USD 408 per mt at the end of the quarter. Compared to the fourth quarter of 2017, the Platts alumina spot price was marginally higher.

Traditionally an alumina importer (2.9 million mt in 2017), China was a net exporter in 2018 (1.0 million mt); this volume was required to balance the World ex-China alumina market, undersupplied as a result of the Alunorte production embargo. The duration of the embargo in 2019 will be the most important factor determining China's alumina trade flows.

China imported 82.7 million mt of bauxite in 2018, 20 percent higher than the previous year. Guinea and Australia maintained their dominant market share accounting for 82 percent of China's bauxite imports in 2018.

Primary aluminium

Three-month LME prices ranged between USD 1,846 and USD 2,251 per mt during the fourth quarter of 2018, with high volatility in the start of the quarter following increased uncertainty related to production at the Alunorte alumina refinery, and continued uncertainty around Rusal sanctions, before gradually drifting down towards the end of the quarter. Prices ended the fourth quarter at USD 1,846 per mt and have so far in January traded around this level.

European duty paid standard ingot premiums ended the fourth quarter of 2018 at USD 115 per mt, compared to USD 150 per mt at the beginning of the quarter, while the Midwest premiums started the fourth quarter at USD 452 per mt, and ended at USD 419 per mt.

Average Shanghai Futures Exchange (SHFE) prices decreased by USD 262 per mt ex. VAT, increasing the difference to the equivalent LME, compared to the fourth quarter in 2017. Compared to the third quarter of 2018, average SHFE decreased by USD 102 per mt ex. VAT, compared to a decline of USD 90 per mt in the equivalent LME price. Consequently, average export arbitrage potential increased slightly during the quarter compared to the third quarter of 2018.

Global primary aluminium consumption increased compared to the fourth quarter of 2017, due to positive development in the world outside China and steady, although slower, demand growth in China. Compared to the third quarter of 2018, global demand decreased due to seasonal effects in China. Global demand for primary aluminium grew by 3.4 percent in 2018, and is expected to grow by 2-3 percent in 2019.

Demand for primary aluminium outside China grew by 2.3 percent in 2018 and is expected to grow by 1-3 percent in 2019. Production outside China is expected to increase by 3-4 percent in 2019, compared to 1.4 percent in 2018. Production of primary aluminium in China was flat in 2018, but is expected to grow by 2-4 percent in 2019, with mixed growth drivers including several price driven curtailments in the second half of 2018 and some new smelters ramping up. Demand for primary aluminium in China is expected to increase by 2-4 percent in 2019, lower than the 4.4 percent demand growth in 2018 and significantly slower than the 8.0 percent demand growth in 2017.

The global primary aluminium market ended at approximately 2 million mt deficit in 2018, and is expected to be in a 1 – 1.5 million mt deficit in 2019.

European demand for extrusion ingot and sheet ingot increased in the fourth quarter compared to the fourth quarter of 2017. Due to the introduction of the Worldwide Harmonized Light Vehicles Test Procedure (WLTP) the demand for primary foundry alloys decreased in the last quarter 2018 compared to the same period 2017.

Total global stocks at the end of the fourth quarter were estimated to be 10.9 million mt, down around 0.3 million mt compared to the third quarter of 2018. Compared to the fourth quarter of 2017 total stocks were down around 1.9 million mt, from around 12.8 million mt.

Rolled products

European demand for flat rolled products increased by around 2 percent compared to the fourth quarter 2017 due to improved demand across most segments. Compared to the third quarter of 2018, European demand declined by almost 4 percent driven by seasonality.

Demand in automotive continued to show a positive development due to the increasing substitution of steel by aluminium for automotive body sheet. However, car production declined compared to the fourth quarter last year due to the diesel emissions scandal, delays in WLTP certifications and lower car demand from China. Demand in the building and construction segment was better than expected due to mild weather conditions across Europe while intensified competition caused a negative impact on margins. European demand in beverage can was solid. The European foil market showed modest growth as producers continue to benefit from a high US demand. The demand growth in general engineering was solid despite increased margin pressure.

The European demand for flat rolled products is expected to grow by around 2 percent in the first quarter of 2019 compared to the first quarter of 2018. For the year 2019, European demand is expected to grow by 2.6 percent.

Extruded products

European demand for extrusions increased 3 percent compared to the fourth quarter of 2017. Compared to the third quarter of 2018 demand decreased by 6 percent, mainly due to seasonality. The European demand for extruded products is estimated to increase by 2 percent for 2018 compared to 2017.

The building and construction market remains strong and has grown by 3 percent in 2018, with strong developments in the Eastern European countries. Transportation market is experiencing mixed developments across sub-segments. The automotive market growth expectations have been reduced and the build rates declined by 1 percent in 2018, driven partially by the backlog in certifying vehicles' carbon dioxide emission as part of WLTP. Despite the slow-down in automotive, extruders continue to benefit from material substitution, while the total automotive vehicle output in Europe remained at high levels in 2018. The European demand for extruded products is estimated to increase by 2 percent for 2019.

North American extrusion demand is estimated to increase by 3 percent in the fourth quarter of 2018 compared to the fourth quarter 2017, but decline 7 percent from third quarter of 2018 due to an unfavorable seasonal impact. The North American demand for extruded products is estimated to increase by 4 percent for 2018 compared to 2017.

The increased demand has been driven by a strong transportation sector, with heavy-duty truck and trailer build rates soaring as a result of robust freight demand and economic activity. Light vehicle build rates have softened during 2018 due to softening demand, however, significant aluminum penetration growth has more than offset lower vehicle output. Building and construction continues with low single-digit growth as the commercial sector is supported by strong U.S. non-residential spending, while the residential sector is sustained by slowing, but steady U.S. housing starts. North American extruded product demand is estimated to increase by 2 percent for 2019.

Energy

Nordic power prices were on average significantly higher compared to the same quarter last year. Prices were on average somewhat lower compared to the previous quarter. A combination of an improved hydrological balance in October and November and above normal temperatures affected prices. In December the hydrology deteriorated again and remains at a significant deficit, compared with historic normal, at the end of the quarter.

The Nordic hydrological balance ended the quarter at around 15 TWh below normal[3] compared to 14 TWh above normal at the end of the fourth quarter last year and 7 TWh below normal at the end of the previous quarter. Water reservoirs in Norway were at 63.9 percent of full capacity at the end of the quarter, which is 8.4 percentage points below the normal level. Snow reservoirs were slightly below normal level at the end of the quarter.

[3] Normal based on long term historical averages.

Additional factors impacting Hydro

Following a period of extreme rainfall, and subsequent flooding, in the region of Bacarena, in Pará, Brazil, during February 2018, authorities ordered several measures against Hydro's alumina refinery Alunorte. The measures restricted the production at Alunorte to 50 percent of its capacity while authorities reviewed the situation, over concerns that flooding led to harmful spills into the surrounding areas. Consequently, Alunorte's primary bauxite source Paragominas and Hydro's part-owned subsidiary Albras aluminium plant, both in the state of Pará, reduced their production by 50 percent. More than 90 investigations and inspections were conducted by the relevant authorities, including the environmental agency in the state of Pará, SEMAS, and the federal environmental agency, IBAMA. SEMAS and IBAMA have both confirmed that there was no overflow from Alunorte's bauxite residue deposits. Reports made by or for Hydro have found no indication or evidence of contamination to nearby local communities, nor any significant or lasting environmental impact to nearby rivers from Alunorte as a result of the extreme rainfall.

In addition to the production restriction at Alunorte, an embargo was enforced by the authorities on the press filters and on the bauxite residue deposit area (DRS2) which were under commissioning. Using DRS2 in combination with new state-of -the art press filters is the only viable long-term solution for Alunorte to dispose bauxite residue. The current bauxite residue deposit area (DRS1), has an estimated remaining capacity of around 12-18 months based on volume of bauxite residue processed by the press filters. The timing depends on both actual production volumes from Alunorte and DRS1's final regulated capacity, which is currently being subject to geotechnical verifications.

On October 25, 2018 the embargo previously imposed by IBAMA on DRS2 was suspended. On January 15, 2019 SEMAS issued a technical opinion confirming that Alunorte can operate safely at its installed capacity in respect of effluent treatment.

At the time of authorizing this report, the production embargoes on Alunorte as well as the embargoes on DRS2 by the Federal Court, both civil and criminal, remains in force. The timing with regards to when the embargoes may be lifted remains uncertain. Once the embargoes are lifted, the timing of a return to full production capacity at Alunorte depends on the commissioning process of DRS2 and the press filters.

On September 5, 2018 Alunorte signed two agreements with the government of Pará and Ministerio Público representing an important step towards resuming normal operations. The agreements regulate certain technical improvements, audits, fines, studies as well as additional investments related to the social development of communities in Barcarena. The combined investments, costs and fines are estimated at BRL 360 million (around NOK 750 million). *See Note 3: Contingent liabilities for further information.*

In response to the flooding in the area, Alunorte has expanded its voluntary social measures for communities close to the refinery. Alunorte continues to support the communities with immediate needs for water supply and health services and has committed to contribute to long-term improvements. To support broad collaboration for social change in Barcarena, Alunorte has committed BRL 100 million (around NOK 200 million) in local community investments through the Sustainable Barcarena Initiative, which will be supporting local communities over the next 10 years. The initiative will establish an independent organization, bringing together local communities, and will provide a public platform for data monitoring and evaluation, and develop social and environmental projects.

Hydro has initiated several investments related to the wastewater handling and treatment systems at Alunorte, totaling BRL 675 million (around NOK 1.5 billion). These aim at increasing the wastewater treatment capacity by 50 percent and the water reservoir capacity by 350 percent as well as strengthening the infrastructure related to the water management system and enhancing robustness and flexibility of the system.

Hydro has been in dialogue with all relevant authorities, at the local, regional and national level in Brazil. We continue to seek a common agreed solution, so operations can be resumed, using the new and modern deposit area and the state-of-the-art press filters. The timing of a full resumption of operations remains uncertain.

Primary Metal has sold forward around 60 percent of its expected primary aluminium production for the first quarter of 2019 at a price level of around USD 1,975 per mt[4]. There was a negative contribution in the fourth quarter, following a significant positive contribution in the third quarter, from the sale of excess power following the production curtailment of the Albras smelter in Brazil. Future result effects depend on local power price developments and production level in Albras.

Hydro Extrusion Portland, Inc. (formerly Sapa Profiles, Inc.) (SPI), a Portland, Oregon-based indirect subsidiary of Hydro Extruded Solutions AS (formerly Sapa AS) (Hydro) is under investigation by the United States Department of Justice (DOJ) Civil and Criminal Divisions regarding certain aluminum extrusions that SPI manufactured from 1996 to 2015, including extrusions that were delivered to a supplier to NASA. SPI is cooperating fully in these investigations, which are currently ongoing. At this point, the outcome of the investigations, including financial consequences, is still uncertain. SPI also has been temporarily suspended as a federal government contractor. Based on the information currently known to Hydro, Hydro does not expect any resulting liabilities to have a material adverse effect on its consolidated results of operations, liquidity, or

[4] Prices are fixed mainly one month prior to production. As a result, and due to the hedging of product inventories, Hydro's realized aluminium prices lag LME spot prices by around 1 to 2 months.

financial position. As part of the share purchase agreement between Hydro and Orkla ASA, the parties have agreed that Orkla ASA shall indemnify Hydro for 50 percent of any liability related to these investigations.

Underlying EBIT

Alternative performance measures (APMs) are described in the corresponding section in the back of the report

Bauxite & Alumina

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**493**	1,872	(74) %	166	>100 %	**1,763**	3,704
Underlying EBIT (NOK million)	**493**	1,872	(74) %	685	(28) %	**2,282**	3,704
Underlying EBITDA (NOK million)	**877**	2,551	(66) %	1,193	(27) %	**4,377**	6,190
Alumina production (kmt)	**786**	1,693	(54) %	821	(4) %	**3,712**	6,397
Sourced alumina (kmt)	**1,163**	610	91 %	907	28 %	**3,954**	2,522
Total alumina sales (kmt)	**1,983**	2,344	(15) %	1,711	16 %	**7,607**	8,920
Realized alumina price (USD/mt) 1)	**463**	398	16 %	460	1 %	**429**	326
Bauxite production (kmt) 2)	**1,254**	3,049	(59) %	1,286	(2) %	**6,214**	11,435
Sourced bauxite (kmt) 3)	**1,730**	2,103	(18) %	905	91 %	**5,202**	7,601

1) Weighted average of own production and third party contracts. The majority of the alumina is sold linked to LME prices with a one month delay.
2) Paragominas on wet basis.
3) 40 percent MRN off take from Vale and 5 percent Hydro share on wet basis.

The 50 percent production restriction at Alunorte and subsequent reduction of production at Paragominas had a negative impact on the results for the fourth quarter. If we had assumed Alunorte and Paragominas operating at full production and a realized alumina price of USD 360 per mt, reflecting the price level just before the production restriction, as well as cost levels as reflected in fourth quarter 2018 results, underlying EBIT would have been around NOK 1.1 billion. If we assume a realized alumina price of USD 463 per mt, as realized in fourth quarter 2018, underlying EBIT would have been around NOK 2.5 billion. However, it is likely that the Alunorte situation has had an impact on alumina prices in the fourth quarter.

Underlying EBIT for Bauxite & Alumina decreased significantly compared to the fourth quarter of last year. The results were driven by the effects of reduced production at both Alunorte and Paragominas and higher raw material prices partly offset by higher realized alumina sales prices and positive currency effects.

Due to the situation at Alunorte, Bauxite and Alumina's "Better" improvement program did not reach the 2018 target.

Compared to the third quarter of 2018 the underlying EBIT decreased driven by higher raw material prices and negative currency effects.

Underlying EBIT for the year was significantly below 2017 due to the factors described above.

Primary Metal

Operational and financial information[1]	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**(524)**	1,112	>(100) %	954	>(100) %	**2,123**	4,729
Underlying EBIT (NOK million)	**(677)**	1,377	>(100) %	861	>(100) %	**1,762**	5,061
Underlying EBITDA (NOK million)	**(176)**	1,900	>(100) %	1,424	>(100) %	**3,906**	7,078
Realized aluminium price LME (USD/mt) [2]	**2,041**	2,092	(2) %	2,194	(7) %	**2,140**	1,915
Realized aluminium price LME (NOK/mt) [2]	**17,038**	17,066	-	17,905	(5) %	**17,282**	15,888
Realized premium above LME (USD/mt) [3]	**362**	259	40 %	367	(1) %	**346**	265
Realized premium above LME (NOK/mt) [3]	**3,025**	2,116	43 %	2,999	1 %	**2,791**	2,197
Realized USD/NOK exchange rate	**8.35**	8.16	2 %	8.16	2 %	**8.08**	8.30
Primary aluminium production (kmt)	**490**	528	(7) %	497	(1) %	**1,993**	2,094
Casthouse production (kmt)	**496**	550	(10) %	507	(2) %	**2,058**	2,169
Total sales (kmt)	**503**	554	(9) %	516	(3) %	**2,145**	2,278

1) Operating and financial information includes Hydro's proportionate share of underlying income (loss), production and sales volumes in equity accounted investments. Realized prices, premiums and exchange rates exclude equity accounted investments.

2) Realized aluminium prices lag the LME price developments by approximately 1.5 - 2 months.

3) Average realized premium above LME for casthouse sales from Primary Metal.

Operational and financial information Qatalum (50%)	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Revenue (NOK million)	**1,509**	1,613	(6) %	1,746	(14) %	**6,202**	5,821
Underlying EBIT (NOK million)	**59**	318	(81) %	301	(80) %	**971**	985
Underlying EBITDA (NOK million)	**354**	599	(41) %	591	(40) %	**2,085**	2,157
Net income (loss) (NOK million)	**(4)**	259	>(100) %	238	>(100) %	**724**	747
Underlying Net income (loss) (NOK million)	**(4)**	259	>(100) %	238	>(100) %	**724**	747
Primary aluminium production (kmt)	**74**	78	(5) %	79	(6) %	**308**	310
Casthouse sales (kmt)	**78**	86	(9) %	84	(7) %	**315**	325

Underlying EBIT for Primary Metal declined in fourth quarter of 2018 compared to the fourth quarter of 2017 mainly due to higher alumina (NOK 1.2 billion) and carbon costs (NOK 0.4 billion), as well as lower sales volumes.

The "Better Primary Metal" improvement program did not reach its target for 2018 mainly due to the production curtailment at Alunorte resulting in the production curtailment at Albras. The reduced availability of alumina from Alunorte resulted in externally sourced alumina of a different quality which contributed negatively to operational performance at the affected smelters.

Compared to the third quarter of 2018, underlying EBIT for Primary Metal declined due to lower all-in metal prices[5], higher raw material and fixed cost, and a significantly lower contribution from the sale of excess power in Brazil.

Underlying EBIT for the year 2018 declined substantially compared to 2017. Lower sales volumes, negative currency effects, higher raw material and fixed cost, were partly offset by higher all-in metal prices.

[5] The all-in metal price refers to the LME cash price plus premiums.

Metal Markets

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**419**	158	>100 %	(107)	>100 %	**886**	485
Underlying EBIT (NOK million)	**275**	185	48 %	(3)	>100 %	**686**	544
Currency effects	**58**	47	22 %	(81)	>100 %	**(25)**	83
Inventory valuation effects	**-**	(19)	100 %	-	-	**53**	(38)
Underlying EBIT excl. currency and inventory valuation effects	**217**	157	38 %	78	>100 %	**658**	499
Underlying EBITDA (NOK million)	**301**	209	44 %	22	>100 %	**786**	638
Remelt production (kmt)	**135**	137	(2) %	126	7 %	**563**	568
Metal products sales excluding ingot trading (kmt) [1)]	**682**	720	(5) %	685	(1) %	**2,859**	2,921
Hereof external sales (kmt)	**532**	589	(10) %	543	(2) %	**2,217**	2,575

1) Includes external and internal sales from primary casthouse operations, remelters and third party metal sources.

Underlying EBIT for Metal Markets improved in the fourth quarter compared to the same quarter last year, mainly due to increased results from the remelters and positive contribution from currency and inventory valuation effects, partly offset by lower results in the sourcing and trading activities.

Compared to the third quarter of 2018, underlying EBIT for Metal Markets improved due to improved results from remelters, higher results in the sourcing and trading activities and positive currency effects.

Underlying EBIT for the year 2018 improved compared with 2017, mainly due to higher results from the remelters and positive contribution from inventory valuation effects. This was partly offset by lower results from sourcing and trading activities and negative currency effects.

Rolled Products

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**(319)**	-	-	223	>(100) %	**336**	512
Underlying EBIT (NOK million)	**(113)**	95	>(100) %	82	>(100) %	**413**	380
Underlying EBITDA (NOK million)	**133**	325	(59) %	314	(58) %	**1 340**	1 240
Sales volumes to external market (kmt)	**220**	224	(2) %	235	(6) %	**951**	940

Sales volumes to external markets (kmt) - Product areas							
Can & foil	**78**	87	(10) %	87	(9) %	**348**	352
Lithography & automotive	**72**	68	6 %	78	(7) %	**309**	297
Special products	**70**	69	1 %	71	(2) %	**295**	291
Rolled Products	**220**	224	(2) %	235	(6) %	**951**	940

Underlying EBIT decreased significantly compared to the fourth quarter of 2017. Improved performance from Automotive line 3 and positive currency effects were more than offset by lower sales volumes and margins in addition to increased personnel, energy and maintenance cost. Results for the Neuss smelter decreased, the positive effects of the new power contracts were more than offset by increasing raw material prices and lower positive inventory effects.

Despite highgrading and margin improvements Rolled Products did not achieve its "Better Rolled Products" program target for 2018. This was mainly due to lower than expected performance at Alunorf, resulting in reduced production volume, as well as further delays in the speed of the ramp up of the UBC line at Neuss.

Underlying EBIT decreased compared to the third quarter of 2018. Positive margin effects were more than offset by seasonally lower sales volumes, higher personnel costs and year end maintenance costs. Results from the Neuss smelter decreased due to increased alumina cost, lower all-in metal prices and increased maintenance activities at the UBC line.

Underlying EBIT for the full year 2018 improved somewhat compared to 2017. The result was mainly driven by improved margins, improved performance from Automotive line 3 in addition to a positive development from the Hamburg plant following operational issues in 2017. These positive effects were offset by an increase in energy costs, personnel costs and negative currency effects. Results for the Neuss smelter improved slightly, the positive impacts of the new power contracts and increased all-in metal prices were to a large extent offset by significantly higher raw material prices.

Extruded Solutions

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**(150)**	1,722	>(100) %	286	>(100) %	**1,931**	1,722
Underlying EBIT (NOK million)	**202**	284	(29) %	497	(59) %	**2,390**	284
Underlying EBITDA (NOK million)	**645**	728	(11) %	931	(31) %	**4,114**	728
Sales volumes to external markets (kmt)	**318**	318	-	343	(7) %	**1,396**	318

Sales volumes to external markets (kmt) - Business units							
Extrusion Europe	**125**	130	(4) %	134	(7) %	**568**	130
Extrusion North America	**137**	134	2 %	152	(10) %	**598**	134
Building Systems	**19**	19	-	18	6 %	**77**	19
Precision Tubing	**37**	34	9 %	40	(8) %	**154**	34
Extruded Solutions	**318**	318	-	343	(7) %	**1,396**	318

The new Extruded Solutions business area was formed at the beginning of the fourth quarter 2017 following Hydro's acquisition of the remaining 50 percent of Sapa shares. The business areas' financial results are fully consolidated from the closing date October 2, 2017.

Sapa's financial results prior to the transaction were reported as a 50 percent owned joint venture in the Other and eliminations section.

For pro forma information related to the Extruded Solutions business area and a more detailed results explanation please see the corresponding section later in this report.

Energy

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT) (NOK million)	**507**	457	11 %	652	(22) %	**1,853**	1,531
Underlying EBIT (NOK million)	**500**	457	9 %	652	(23) %	**1,846**	1,531
Underlying EBITDA (NOK million)	**566**	519	9 %	716	(21) %	**2,100**	1,757
Direct production costs (NOK million)[1)]	**169**	171	(1) %	158	7 %	**630**	614
Power production (GWh)	**2,822**	3,089	(9) %	2,888	(2) %	**10,693**	10,835
External power sourcing (GWh)	**2,382**	2,498	(5) %	2,374	-	**9,217**	9,562
Internal contract sales (GWh)	**3,799**	3,724	2 %	3,796	-	**14,848**	14,424
External contract sales (GWh)	**239**	230	4 %	151	57 %	**858**	767
Net spot sales (GWh)	**1,166**	1,633	(29) %	1,315	(11) %	**4,204**	5,206

1) Include operational costs except for depreciation, maintenance costs, property taxes, concession fees for Hydro as operator and transmission costs.

Underlying EBIT increased compared to the same quarter in the previous year. The increase was mainly due to significantly higher prices, partly offset by lower production and negative effects from the repricing of an internal power contract with the Neuss smelter.

Compared to the previous quarter, Underlying EBIT decreased mainly due to lower net spot sales volume and lower prices. The lower net spot sales volume were both due to lower production and higher concession power sales.

Compared to the previous year, Underlying EBIT increased mainly due to significantly higher prices, partly offset by negative effects from the repricing of an internal power contract with the Neuss smelter and somewhat lower production.

Other and eliminations

Financial information NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Earnings before financial items and tax (EBIT)	**(89)**	(810)	89 %	(117)	23 %	**(214)**	(495)
Sapa (50%) 1)							819
Other	**(299)**	(279)	(7) %	(190)	(58) %	**(851)**	(586)
Eliminations	**154**	(436)	>100 %	93	66 %	**541**	(522)
Underlying EBIT	**(145)**	(715)	80 %	(97)	(49) %	**(310)**	(289)

1) Hydro's share of Sapa's underlying net income.

Other is mainly comprised of head office costs, and costs related to holding companies as well as earnings from Hydro's industrial insurance company. Other also includes transaction and integration costs related to the Sapa transaction.

Eliminations are comprised mainly of unrealized gains and losses on inventories purchased from group companies which fluctuate with product flows, volumes and margin developments throughout Hydro's value chain.

Following the acquisition of the remaining 50 percent interest in Sapa AS completed on October 2, 2017, Sapa AS has been renamed Hydro Extruded Solutions AS and the fully consolidated financial results are presented in the Extruded Solutions business area.

Finance

Financial income (expense) NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Interest income	**79**	67	18 %	48	66 %	**250**	322
Dividends received and net gain (loss) on securities	**(34)**	75	>(100) %	16	>(100) %	**6**	159
Financial income	**45**	142	(68) %	64	(29) %	**255**	481
Interest expense	**(270)**	(115)	>(100) %	(157)	(71) %	**(699)**	(378)
Capitalized interest	**1**	8	-	-	>100 %	**1**	76
Net foreign exchange gain (loss)	**(408)**	(696)	41 %	(257)	(59) %	**(1,303)**	(875)
Net interest on pension liability	**(41)**	(51)	20 %	(32)	(27) %	**(138)**	(152)
Other	**(48)**	(65)	27 %	(40)	(19) %	**(175)**	(266)
Financial expense	**(766)**	(919)	17 %	(486)	(58) %	**(2,315)**	(1,596)
Financial income (expense), net	**(721)**	(776)	7 %	(423)	(71) %	**(2,060)**	(1,114)

For the fourth quarter, the net foreign exchange loss, mainly unrealized, of NOK 408 million primarily reflects a weaker NOK versus EUR and USD, affecting the embedded derivatives in Norwegian power contracts denominated in EUR and unrealized gain on intercompany assets denominated in USD. The strengthening of BRL against USD resulted in a gain on USD denominated debt in Brazil.

The net financial items in the fourth quarter are also affected by provisions for interest expenses on tax cases in Brazil.

The loss for the full year 2018 is mainly comprised of currency loss on USD denominated debt in Brazil, and unrealized currency loss on embedded derivatives in Norwegian power contracts denominated in EUR.

Tax

Income tax expense amounted to NOK 207 million for the fourth quarter of 2018. For the full year 2018, tax expense was about 32 percent of income before tax. The tax rate reflects the relatively high share of reported income before tax subject to power surtax.

Pro forma information

The following section is comprised of selected financial and operating information and a discussion of underlying developments including 100 percent of the acquired Sapa business for the full year 2017 and the fourth quarter 2018 on a comparable basis with the earlier periods presented.

Summary consolidated underlying financial and operating results

Key financial information NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Revenue	**38,386**	38,803	(1) %	39,766	(3) %	**159,377**	148,920
Earnings before financial items and tax (EBIT)	**335**	3,048	(89) %	2,057	(84) %	**8,679**	11,927
Items excluded from underlying EBIT	**199**	508	(61) %	620	(68) %	**390**	510
Underlying EBIT[1)]	**534**	3,555	(85) %	2,676	(80) %	**9,069**	12,437
Earnings before financial items, tax, depreciation and amortization (EBITDA)	**2,011**	5,016	(60) %	3,890	(48) %	**15,953**	19,294
Underlying EBITDA	**2,210**	5,524	(60) %	4,510	(51) %	**16,344**	19,786

1) Underlying EBIT includes certain effects of the acquisition such as increased depreciation and amortization following fair value adjustment related to long-lived assets.

Extruded Solutions

Operational and financial information	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Revenue (NOK million)	**15,218**	14,153	8 %	15,976	(5) %	**64,085**	57,769
Earnings before financial items and tax (EBIT) (NOK million)	**(150)**	258	>(100) %	286	>(100) %	**1,931**	2,265
Unrealized derivative effects (NOK million)	**192**	(4)	>100 %	211	(9) %	**299**	36
Significant rationalization charges and closure costs (NOK million)[1)]	**40**	29	37 %	-	-	**40**	29
Pension[2)]	**40**	-	-	-	-	**40**	-
Other effects[3)]	**80**	-	-	-	-	**80**	-
Items excluded from underlying EBIT (NOK million)	**352**	25	>100 %	211	67 %	**459**	65
Underlying EBIT (NOK million)	**202**	284	(29) %	497	(59) %	**2,390**	2,330
Earnings before financial items, tax, depreciation and amortization (EBITDA)	**293**	703	(58) %	720	(59) %	**3,655**	3,917
Underlying EBITDA (NOK million)	**645**	728	(11) %	931	(31) %	**4,114**	3,982
Sales volumes to external markets (kmt)	**318**	318	-	343	(7) %	**1,396**	1,372

Sales volumes to external markets (kmt) - Business units							
Extrusion Europe	**125**	130	(4) %	134	(7) %	**568**	568
Extrusion North America	**137**	134	2 %	152	(10) %	**598**	584
Building Systems	**19**	19	-	18	6 %	**77**	78
Precision Tubing	**37**	34	9 %	40	(8) %	**154**	143
Extruded Solutions	**318**	318	-	343	(7) %	**1,396**	1,372

1) Significant rationalization charges and closure costs of NOK 40 million in the fourth quarter 2018 relate to partial closure of the Burlington plant, while the charges in 2017 relates to certain effects of the acquisition such as increased depreciation and amortization following fair value adjustments related to long-lived assets.

2) Pension includes a charge of NOK 40 million due to remeasurement of all UK schemes with Guaranteed Minimum Pensions (GMP) required to be adjusted to equalize pension benefits for gender. The remeasurement is based on the accrued pension benefits in the period between 1990 and 1997.

3) Other effects include a charge of NOK 80 million due to adjustments to the value of certain assets in relation to the acquisition.

Underlying EBIT for Extruded Solutions decreased compared to the underlying EBIT for the fourth quarter 2017. The positive effect of higher margins was offset by increased production costs in connection with the ramp-up of new product lines in Europe and negative effects from a lower Midwest Premium and section 232 tariffs in North America. Additional costs due to the integration and restructuring of the two recently acquired Brazilian extrusion plants also had a negative effect on the quarter.

Compared to the third quarter 2018 the underlying EBIT decreased, primarily due to seasonally lower volumes and higher costs.

Underlying EBIT for Extruded Solutions in 2018 was on the same level as pro forma underlying EBIT in 2017. The positive effects of higher margins and sales volumes were offset by increased production costs in connection with the ramp-up of new product lines in Europe. Additional costs due to the integration and restructuring of the two recently acquired Brazilian extrusion plants also had a negative effect for the year.

Interim financial statements

Condensed consolidated statements of income (unaudited)

NOK million, except per share data	**Fourth quarter 2018**	Fourth quarter 2017	**Year 2018**	Year 2017
Revenue	**38,386**	38,803	**159,377**	109,220
Share of the profit (loss) in equity accounted investments	**30**	256	**765**	1,527
Other income, net	**264**	2,358	**772**	2,947
Total revenue and income	**38,680**	41,417	**160,913**	113,693
Raw material and energy expense	**25,164**	24,411	**102,523**	69,848
Employee benefit expense	**5,926**	5,578	**23,176**	13,285
Depreciation, amortization and impairment	**1,719**	1,970	**7,369**	6,162
Other expenses	**5,537**	4,948	**19,167**	12,209
Total expenses	**38,345**	36,907	**152,234**	101,504
Earnings before financial items and tax (EBIT)	**335**	4,511	**8,679**	12,189
Financial income	**45**	142	**255**	481
Financial expense	**(766)**	(919)	**(2,315)**	(1,596)
Financial income (expense), net	**(721)**	(776)	**(2,060)**	(1,114)
Income (loss) before tax	**(386)**	3,735	**6,619**	11,075
Income taxes	**(207)**	(135)	**(2,139)**	(1,891)
Net income (loss)	**(593)**	3,600	**4,480**	9,184
Net income (loss) attributable to non-controlling interests	**(57)**	100	**67**	401
Net income (loss) attributable to Hydro shareholders	**(536)**	3,499	**4,413**	8,783
Basic and diluted earnings per share attributable to Hydro shareholders (in NOK) [1)]	**(0.26)**	1.71	**2.16**	4.30
Weighted average number of outstanding shares (million)	**2,046**	2,045	**2,046**	2,044

1) Basic earnings per share are computed using the weighted average number of ordinary shares outstanding. There were no significant diluting elements.

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of comprehensive income (unaudited)

NOK million	**Fourth quarter 2018**	Fourth quarter 2017 Restated	**Year 2018**	Year 2017 Restated
Net income (loss)	**(593)**	3,600	**4,480**	9,184
Other comprehensive income				
Items that will not be reclassified to income statement:				
Remeasurement postemployment benefits, net of tax	**(1,781)**	(276)	**(718)**	761
Unrealized gain (loss) on securities, net of tax	**414**	(170)	**394**	(255)
Share of remeasurement postemployement benefits of equity accounted investments, net of tax	**-**	-	**-**	(2)
Total	**(1,367)**	(446)	**(324)**	504
Items that will be reclassified to income statement:				
Currency translation differences, net of tax	**5,482**	2,002	**(2,031)**	(1,387)
Cash flow hedges, net of tax	**(137)**	102	**(14)**	174
Share of items that will be reclassified to income statement of equity accounted investments, net of tax	**12**	(718)	**72**	(736)
Total	**5,357**	1,386	**(1,973)**	(1,949)
Other comprehensive income	**3,990**	940	**(2,296)**	(1,444)
Total comprehensive income	**3,397**	4,540	**2,184**	7,740
Total comprehensive income attributable to non-controlling interests	**418**	150	**(273)**	103
Total comprehensive income attributable to Hydro shareholders	**2,979**	4,390	**2,457**	7,637

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed balance sheets (unaudited)

NOK million, except number of shares	**December 31 2018**	December 31 2017 Restated
Assets		
Cash and cash equivalents	**5,995**	11,828
Short-term investments	**975**	1,311
Accounts receivables	**20,527**	19,983
Inventories	**26,483**	20,711
Other current assets	**801**	798
Total current assets	**54,781**	54,631
Property, plant and equipment	**71,299**	72,933
Intangible assets	**11,443**	12,712
Investments accounted for using the equity method	**11,570**	11,221
Prepaid pension	**5,162**	5,750
Other non-current assets	**7,444**	6,028
Total non-current assets	**106,918**	108,643
Total assets	**161,699**	163,273
Liabilities and equity		
Bank loans and other interest-bearing short-term debt	**8,543**	8,245
Trade and other payables	**20,381**	19,571
Other current liabilities	**5,630**	5,521
Total current liabilities	**34,555**	33,337
Long-term debt	**7,080**	9,012
Provisions	**5,707**	5,828
Pension liabilities	**15,648**	15,118
Deferred tax liabilities	**3,037**	3,501
Other non-current liabilities	**4,746**	4,269
Total non-current liabilities	**36,217**	37,728
Total liabilities	**70,773**	71,064
Equity attributable to Hydro shareholders	**85,990**	87,032
Non-controlling interests	**4,936**	5,178
Total equity	**90,926**	92,209
Total liabilities and equity	**161,699**	163,273
Total number of outstanding shares (million)	**2,046**	2,045

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of cash flows (unaudited)

NOK million	**Fourth quarter 2018**	Fourth quarter 2017	**Year 2018**	Year 2017
Operating activities				
Net income	**(593)**	3,600	**4,480**	9,184
Depreciation, amortization and impairment	**1,719**	1,970	**7,369**	6,162
Other adjustments	**(182)**	829	**(4,824)**	(999)
Net cash provided by operating activities	**944**	6,399	**7,025**	14,347
Investing activities				
Purchases of property, plant and equipment	**(2,517)**	(3,049)	**(7,219)**	(7,296)
Purchases of other long-term investments	**(102)**	(11,115)	**(389)**	(11,190)
Purchases of short-term investments	**-**	-	**-**	(5,094)
Proceeds from long-term investing activities	**29**	41	**412**	742
Proceeds from sales of short-term investments	**-**	552	**-**	8,402
Net cash used in investing activities	**(2,590)**	(13,571)	**(7,196)**	(14,436)
Financing activities				
Loan proceeds	**1,485**	7,500	**7,057**	15,271
Principal repayments	**(930)**	(5,290)	**(5,984)**	(10,917)
Net increase (decrease) in other short-term debt	**(139)**	(1,268)	**(2,934)**	2,515
Proceeds from shares issued	**12**	11	**47**	40
Dividends paid	**(23)**	(74)	**(3,622)**	(3,069)
Net cash provided by (used in) financing activities	**405**	879	**(5,436)**	3,840
Foreign currency effects on cash	**390**	268	**(226)**	40
Net increase (decrease) in cash and cash equivalents	**(851)**	(6,025)	**(5,833)**	3,791
Cash and cash equivalents at beginning of period	**6,846**	17,853	**11,828**	8,037
Cash and cash equivalents at end of period	**5,995**	11,828	**5,995**	11,828

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of changes in equity (unaudited)

NOK million	Share capital	Additional paid-in capital	Treasury shares	Retained earnings	Other components of equity	Equity attributable to Hydro shareholders	Non-controlling interests	Total equity
January 1, 2017	2,272	29,070	(870)	50,210	1,224	81,906	5,733	87,640
Changes in equity for 2017								
Treasury shares issued to employees		27	60			87		87
Dividends				(2,556)		(2,556)	(702)	(3,258)
Capital contribution in subsidiaries							3	3
Items not reclassified to income statement in subsidiaries sold				(3)	3	-	40	40
Total comprehensive income for the period				8,783	(1,147)	7,637	103	7,740
December 31, 2017	2,272	29,097	(810)	56,435	80	87,074	5,178	92,252
Effect of change in accounting principle				17	(60)	(43)	-	(43)
January 1, 2018	2,272	29,097	(810)	56,452	20	87,032	5,178	92,209
Changes in equity for 2018								
Treasury shares issued to employees		29	53			83		83
Dividends				(3,581)		(3,581)	(106)	(3,687)
Capital contribution in subsidiaries							138	138
Total comprehensive income for the period				4,413	(1,956)	2,457	(273)	2,184
December 31, 2018	2,272	29,126	(756)	57,284	(1,936)	85,990	4,936	90,926

The accompanying notes are an integral part of the condensed consolidated financial statements

Notes to the condensed consolidated financial statements

Note 1: Accounting policies

All reported figures in the financial statements are based on International Financial Reporting Standards (IFRS). Hydro's accounting principles are presented in note 2 Significant accounting policies and note 3 Changes in accounting principles and new pronouncements in Hydro's Financial Statements - 2017.

IFRS 15 Revenue from Contracts with Customers
Hydro implemented IFRS 15 as of January 1, 2018. The new standard is implemented retrospectively with the cumulative effect of initially applying this standard recognized directly to equity at implementation.

IFRS 15 requires us to, for each contract with a customer, to identify the performance obligations, determine the transaction price, allocate the transaction price to performance obligations to the extent the contract covers more than one performance obligation, determine whether revenue should be recognized over time or at a point in time, and, finally, recognize revenue when or as performance obligations are recognized. The significant judgment in applying IFRS 15 for Hydro is related to which contracts that qualify for recognition over time, versus recognition at a point in time; at delivery to customer.

Hydro's main performance obligations can be described as follows:
- sale of products, produced independent of customer orders
- sale of products, produced to customer order
- sale of products made to customer specifications and order
- sale of electricity

For products which are not made to the customer's specification, performance obligations are either the individual product, the delivery in total, or an agreed volume of products delivered in more than one delivery. Contracts covering a fixed, committed volume at fixed or determinable prices are relevant for this assessment. Delivery period for such contracts can cover a period of a few weeks, and up to one year. Some contracts cover more than one year, however, these are a declining number. Prices are usually a combination of fixed elements and market references such as the aluminium price at the London Metal Exchange, at, or prior to, delivery. Revenue related to such contracts continues to be recognized at delivery of products to customers. Such contracts accounts for the majority of sales in the segments Bauxite & Alumina, Primary Metal, Metal Markets and Rolled Products, and a significant share of sales in Extruded Solutions. Some of these contracts includes an element of freight services, which is considered a separate performance obligation under IFRS 15, and related revenue is recognized over the time of journey.

For products made to customer specifications and orders, we have assessed whether the finished product has an alternative use to Hydro, and whether Hydro has an enforceable right to payment. For contracts where both of these conditions are fulfilled, revenue shall be recognized over the time from start of production of the specialized product until completion of delivery to the customer. For Hydro's products, the alternative use of customer designed products would, in most cases, be as basis for producing other products rather than for sale of the product unchanged. We have assessed whether Hydro has an enforceable right to payment for performance completed to date, including a reasonable margin, throughout the production period. The assessment is primarily related to the segment Extruded Solutions. The main assessment is related to which compensation Hydro would be entitled to in a situation where firm orders are canceled or amended by the customer. Our conclusion is that for close to all contracts we do not have enforceable right to payment, however, as our conclusions depends both on legal assessment of a large number of contracts in many countries, and on the understanding of what constitutes an enforceable right to payment under IFRS 15, we might reach a different conclusion in the future for some of the contracts, or for new contracts covering similar products and customer segments entered into in the future. The period from contract inception (firm order) to delivery of products to customer in Extruded Solutions is usually not exceeding about six weeks, often considerably shorter. For one unit in Metal Markets selling casthouse equipment, the period from order to final delivery varies from a few months to more than one year.

For some contracts, mainly where products are delivered to the customer's site as consignment stock, control is concluded to pass to the customer at an earlier time than transfer of risk and rewards as assessed under IAS 18.

Sale of electricity from the Energy segment continues to be recognized as electricity is delivered to customers through the relevant grid.

IFRS 9 Financial Instruments
IFRS 9 shall be applied retrospectively. Some transitional effects were recognized in the opening equity at transition, i.e. January 1, 2018 as required or allowed by the standard. IFRS 9 will not lead to any significant changes in timing of recognition or how to measure assets or liabilities and related income and expense. Hydro has classified the portfolio of equity investments that were not part of trading portfolios, which was held at transition, as instruments at fair value through Other Comprehensive Income (FVOCI). All changes in the fair value of those instruments, including an ultimate gain or loss at divestment of the instrument, will be recognized in OCI. Recognized changes to fair value of such investments of NOK 239

million, after tax, will not be recycled in future periods. There will be some changes to presentation and disclosures, however, the impact for Hydro's portfolio of instruments at transition is minor. Some additional risk management strategies related to commodity price exposure qualify for hedge accounting, however, Hydro has decided not to apply hedge accounting for any additional risk management activities utilized as of the end of 2017. For one cash flow hedge program for a previous investment project which was deferred in the hedging reserve in equity and reclassified to income over the depreciation period of the asset, the remaining hedging reserve of NOK 60 million was reclassified to reduce the carrying value of the asset and related deferred tax as a basis adjustment.

	IFRS 15		IFRS 9	Total effect of changes in accounting principles
Change of accounting principles, amounts in NOK million	Earlier recognition	Later recognition		
Current assets	26	8		34
Property, plant and equipment			(87)	(87)
Total assets	26	8	(87)	(54)
Current liabilities		11		11
Deferred tax liabilities	6	(1)	(27)	(22)
Equity attributable to Hydro shareholders	20	(2)	(60)	(43)
Total liabilities and equity	26	8	(87)	(54)

The interim accounts are presented in accordance with IAS 34 Interim Financial Reporting. The condensed consolidated interim financial information should be read in conjunction with Hydro's Financial Statements - 2017 that are a part of Hydro's Annual Report - 2017.

As a result of rounding adjustments, the figures in one or more columns may not add up to the total of that column.

Note 2: Operating segment information

Hydro identifies its reportable segments and discloses segment information under IFRS 8 Operating Segments. This standard requires Hydro to identify its segments according to the organization and reporting structure used by management. See Hydro's Financial statements - 2017 note 7 Operating and geographic segment information for a description of Hydro's management model and segments, including a description of Hydro's segment measures and accounting principles used for segment reporting. The Extruded Solutions segment includes the business acquired as a 100 percent owned subsidiary in fourth quarter 2017.

The following tables include information about Hydro's operating segments, including a reconciliation of EBITDA to EBIT for Hydro's operating segments.

NOK million	**Fourth quarter 2018**	Fourth quarter 2017	**Year 2018**	Year 2017
Total revenue				
Bauxite & Alumina	**8,613**	8,040	**28,548**	25,421
Primary Metal	**9,196**	9,291	**39,434**	36,466
Metal Markets	**12,903**	12,991	**54,237**	50,606
Rolled Products	**6,223**	6,434	**26,955**	25,715
Extruded Solutions[1]	**15,218**	14,153	**64,085**	14,153
Energy	**2,267**	2,169	**8,681**	7,705
Other and eliminations	**(16,034)**	(14,276)	**(62,562)**	(50,847)
Total	**38,386**	38,803	**159,377**	109,220
External revenue				
Bauxite & Alumina	**4,232**	5,095	**14,396**	15,188
Primary Metal	**1,505**	2,068	**7,829**	7,578
Metal Markets	**10,121**	10,414	**42,502**	44,264
Rolled Products	**6,287**	6,375	**26,940**	25,538
Extruded Solutions[1]	**15,280**	14,083	**64,023**	14,083
Energy	**961**	767	**3,673**	2,550
Other and eliminations	**(1)**	-	**14**	18
Total	**38,386**	38,803	**159,377**	109,220
Internal revenue				
Bauxite & Alumina	**4,381**	2,944	**14,152**	10,234
Primary Metal	**7,691**	7,223	**31,605**	28,888
Metal Markets	**2,781**	2,577	**11,735**	6,341
Rolled Products	**(64)**	59	**15**	178
Extruded Solutions[1]	**(62)**	70	**61**	70
Energy	**1,306**	1,403	**5,007**	5,155
Other and eliminations	**(16,033)**	(14,276)	**(62,576)**	(50,865)
Total	**-**	-	**-**	-
Share of the profit (loss) in equity accounted investments				
Bauxite & Alumina	**-**	-	**-**	-
Primary Metal	**(5)**	258	**722**	745
Metal Markets	**-**	-	**-**	-
Rolled Products	**-**	-	**-**	-
Extruded Solutions[1]	**10**	12	**53**	812
Energy	**(11)**	(7)	**(35)**	(7)
Other and eliminations	**35**	(7)	**24**	(24)
Total	**30**	256	**765**	1,527

1) The Extruded Solutions segment includes the business acquired as a 100 percent owned subsidiary in fourth quarter 2017. For the previous periods, the segment includes the same business reported as 50 percent owned joint venture, reported using the equity method.

NOK million	**Fourth quarter 2018**	Fourth quarter 2017	**Year 2018**	Year 2017
Depreciation, amortization and impairment				
Bauxite & Alumina	**384**	679	**2,095**	2,486
Primary Metal	**548**	526	**2,253**	2,026
Metal Markets	**26**	24	**101**	95
Rolled Products	**246**	230	**927**	860
Extruded Solutions[1)]	**443**	444	**1,723**	444
Energy	**63**	60	**239**	223
Other and eliminations	**10**	7	**30**	28
Total	**1,719**	1,970	**7,369**	6,162
Earnings before financial items and tax (EBIT) [2)]				
Bauxite & Alumina	**493**	1,872	**1,763**	3,704
Primary Metal	**(524)**	1,112	**2,123**	4,729
Metal Markets	**419**	158	**886**	485
Rolled Products	**(319)**	-	**336**	512
Extruded Solutions[1)]	**(150)**	1,722	**1,931**	2,522
Energy	**507**	457	**1,853**	1,531
Other and eliminations	**(89)**	(810)	**(214)**	(1,295)
Total	**335**	4,511	**8,679**	12,189
EBITDA				
Bauxite & Alumina	**877**	2,551	**3,858**	6,190
Primary Metal	**(23)**	1,635	**4,267**	6,747
Metal Markets	**445**	182	**986**	579
Rolled Products	**(73)**	230	**1,263**	1,372
Extruded Solutions[1)]	**293**	2,166	**3,655**	2,966
Energy	**573**	519	**2,107**	1,757
Other and eliminations	**(80)**	(803)	**(183)**	(1,268)
Total	**2,011**	6,481	**15,953**	18,344
Investments [3)]				
Bauxite & Alumina	**38**	662	**963**	1,634
Primary Metal	**915**	1,144	**2,724**	3,537
Metal Markets	**87**	70	**165**	143
Rolled Products	**600**	496	**1,047**	997
Extruded Solutions[1)]	**922**	22,137	**2,390**	22,137
Energy	**57**	114	**280**	361
Other and eliminations	**5**	8	**45**	39
Total	**2,624**	24,632	**7,614**	28,848

1) The Extruded Solutions segment includes the business acquired as a 100 percent owned subsidiary in fourth quarter 2017. For the previous periods, the segment includes the same business reported as 50 percent owned joint venture, reported using the equity method.

2) Total segment EBIT is the same as Hydro group's total EBIT. Financial income and expense are not allocated to the segments. There are no reconciling items between segment EBIT to Hydro EBIT. Therefore, a separate reconciliation table is not presented.

3) Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations. In the fourth quarter of 2018, investments were reduced with certain indirect tax charges in Brazil not completely deducted and claimed at the time of investment. A review of deductibility resulted in reduction of asset costs for Bauxite & Alumina and Primary Metal of NOK 635 million and NOK 145 million, respectively.

NOK million	EBIT	Depr., amor. and impairment	Other items[2]	EBITDA
EBIT - EBITDA Fourth quarter 2018				
Bauxite & Alumina	493	384	-	877
Primary Metal	(524)	548	(47)	(23)
Metal Markets	419	26	-	445
Rolled Products	(319)	246	-	(73)
Extruded Solutions[1]	(150)	443	-	293
Energy	507	63	4	573
Other and eliminations	(89)	10	-	(80)
Total	335	1,719	(43)	2,011

NOK million	EBIT	Depr., amor. and impairment	Other items[2]	EBITDA
EBIT - EBITDA 2018				
Bauxite & Alumina	1,763	2,095	-	3,858
Primary Metal	2,123	2,253	(110)	4,267
Metal Markets	886	101	-	986
Rolled Products	336	927	-	1,263
Extruded Solutions[1]	1,931	1,723	2	3,655
Energy	1,853	239	15	2,107
Other and eliminations	(214)	30	1	(183)
Total	8,679	7,369	(94)	15,953

1) The Extruded Solutions segment includes the business acquired as a 100 percent owned subsidiary in fourth quarter 2017. For the previous periods, the segment includes the same business reported as 50 percent owned joint venture, reported using the equity method.

2) Investment grants, and amortization of excess values in equity accounted investments and impairment loss of such investments.

Note 3: Contingent liabilities

Hydro is involved in or threatened with various legal and tax matters arising in the ordinary course of business.

Following a period of extreme rainfall in February, and subsequent flooding, in the region of Barcarena, in Pará, Brazil, authorities ordered several measures against Alunorte. The measures restricted the production at Alunorte to 50 percent of its capacity while authorities reviewed the situation, over concerns that flooding led to harmful spills into the surrounding areas. Several investigations and inspections were conducted by the relevant authorities, including the environmental agency in the state of Pará, Semas and the federal environmental agency, Ibama. Semas and Ibama have both confirmed that there was no overflow from Alunorte’s bauxite residue deposits. Reports made by or for Hydro have found no indication or evidence of contamination to nearby local communities, nor any significant or lasting environmental impact to nearby rivers from Alunorte as a result of the heavy rainfall.

In September, Hydro entered into two agreements with authorities. The agreements include a technical Term of Adjusted Conduct (TAC) signed between Alunorte – Alumina do Norte do Brasil S.A, Norsk Hydro do Brasil Ltda, the Ministério Público Federal (MPF), the Pará State Ministério Público (MPPA), the State Government of Pará, represented by the Secretariat of State of Environment and Sustainability (SEMAS). In addition, a social Term of Commitment (TC) has been signed between Alunorte - Alumina do Norte do Brasil S.A and the State Government of Pará. The TAC regulates certain technical studies and improvements, audits, fines and payments for food cards to families living in the hydrographic area of the Murucupi River. The TC addresses additional efforts and investments related to the social development of communities in Barcarena. The combined investments, costs and fines are estimated at about BRL 360 million (around NOK 750 million), of which about NOK 65 million relates to fines. About NOK 19 million of the total estimated amount was expensed in the fourth quarter, about NOK 525 million in the third quarter, and about NOK 50 million was expensed in the first quarter. The remainder is primarily related to improvement of certain monitoring and water treatment equipment at the plant, expected to be capitalized.

In response to the needs in the area, Hydro has decided to increase the social measures for communities close to the plant. Hydro continues to support the communities with immediate needs for water supply and health services, and has committed to contribute to long-term improvements. To support broad collaboration for social change in Barcarena, Hydro has committed BRL 100 million (around NOK 200 million) in local community investments through the Sustainable Barcarena Initiative, which will be supporting local communities over the next 10 years. The initiative will establish an independent organization that will provide a public platform for data monitoring and evaluation, and develop social and environmental projects. The associated costs to such measures are considered future operating expenses and thus not provided for.

Authorities and non-governmental organizations have filed several lawsuits related to the incident, claiming a combination of mitigating actions and financial compensation. The argumentation, cost calculation and legal basis for these claims is highly uncertain. Further claims may still be received. Given the limited information about claimed physical and moral damages to be compensated, and the extent and cost of mitigating actions claimed, or the extent or content of other potential claims and lawsuits, it is not possible at this time to provide a range of possible outcomes or a reliable estimate of potential future exposure for Hydro. It is further not possible to estimate the timing of when such claims may be determined or when any payments may arise.

Note 4: Acquisition of Sapa

On July 10, 2017, Hydro entered into a contract to acquire 50 percent of the shares in Sapa AS, which was a joint venture owned 50 percent by Hydro and 50 percent by Orkla, a listed company in Norway. Following completion of the transaction on October 2, 2017, Hydro owns 100 percent of the parent company Hydro Extruded Solutions AS.

Hydro completed the process of identifying the fair value of assets acquired and liabilities assumed during the third quarter of 2018. The estimated fair value of net assets of Sapa was updated with the final estimates. Changes compared to the provisional amounts recognized at the end of 2017 were as follows:

Changes to fair value estimates	Reported 31.12.17	Adjusted 2018	Final fair value estimate
Property, plant and equipment	14,052	922	14,974
Intangible assets	2,897	(130)	2,767
Other adjustments, net		(67)	
Deferred tax	2,486	287	2,773
Goodwill	4,119	(539)	3,580

The changes mainly related to completed valuation of land and to some extent buildings. The changes did not result in significant changes to depreciation or amortization; prior periods have thus not been restated.

Note 5: Impairment of non-current assets

Impairment tests in the fourth quarter
In the fourth quarter of 2018, mandatory impairment tests for Cash Generating Units (CGUs) where goodwill or intangible assets with indefinite useful life have been allocated, has been completed. In addition, one aluminium smelter, the Slovakian plant Slovalco, was tested for possible impairment. For all of these tests, we concluded that there was no need to write down the assets tested. For the goodwill tested in prior interim period during 2018, the updated test resulted in improved recoverable amount, primarily resulting from weaker BRL to USD in the first few years, reduced raw material cost and a somewhat higher estimated sales price for alumina.

Impairment tests in previous quarters
The CGU in Bauxite & Alumina to which goodwill is allocated was tested at the end of the second quarter and at the end of the third quarter.

The challenging operational situation related to the Alunorte production embargo has resulted in close monitoring of whether, and when, this situation constituted impairment indicators for any of our Cash Generating Units (CGUs) in the region, or other CGUs benefiting from alumina produced at Alunorte. The uncertainty surrounding when full production at Alunorte can be reached after commissioning of the press filters adds to the uncertainty already imposed by the embargo. Due to the continued embargo at Alunorte, a return to full capacity of Albras was, at the end of the third quarter, expected to be achieved at a later time than previously estimated. We thus considered the situation an impairment indicator for both the CGU comprising Alunorte and its primary bauxite source Paragominas, and for the Albras smelter. Both CGUs had been tested for impairment earlier in 2018. The tests performed as of the end of the third quarter represented updates of the established VIU models with more recent estimates for production volumes, market prices for alumina, aluminium, and certain key raw materials, as well as production volumes in the near-term periods.

The duration of the commissioning phase of the press filters to reach satisfactory operational stability, is uncertain. Market prices are also significantly impacted by the shortfall of alumina in the global market, which has lead to a significant increase in alumina prices. The timing and magnitude of price reactions to the production shortfall for Alunorte is difficult to estimate. Further, other prices impacting the tests are also highly volatile and may change significantly for unrelated reasons.

The CGU comprising the alumina refinery Alunorte and the bauxite mine in Paragominas also contains goodwill and was thus subject to an annual impairment test at year-end 2017. See Hydro's Financial statements - 2017 note 19 Impairment of non-current assets for further information about the CGU, significant assumptions and results of the test at that time. The same model was used for the tests as of September 30 and June 30, 2018, with updated assumptions.

The recoverable amount was determined based on a Value In Use (VIU) calculation. As the recoverable amount in both tests exceeded the carrying value, a write-down was not required. The calculations used cash flow forecasts in BRL based on internal plans developed in the autumn of 2017 covering a five-year period, amended with updated assumptions for product prices and key input factors as well as specific cost elements, production volumes until full production can be reached, and assumed start-up time for full production. All significant price assumptions are internally derived based on external references.

Key assumptions and results of the tests are summarized in the table below:

	Results of impairment tests	
NOK million, except ratios	Third quarter	Second quarter
Recoverable amount	25,841	26,713
Carrying amount	21,078	22,350
Recoverable amount in excess of carrying amount	4,763	4,362
Excess, %	23%	20%

	Assumptions third quarter		Assumptions second quarter	
	4 Q 2018	Long-term	2 H 2018	Long-term
Exchange rate BRL/USD	3.95	3.53	3.56	3.53
Alumina price (USD/mt)	500	347	404	347
Discount rate nominal, pre-tax	17.50%	17.50%	17.25%	17.25%

As there was uncertainty related to when the plant will be allowed to restart, the test included different scenarios for restart, with the earliest time for restart of curtailed capacity assumed during the second quarter of 2019 and the latest scenario during the fourth quarter of 2019. When tested at the end of the second quarter, restart no later than mid 2019 was assumed.

Significant cash flows are denominated in US dollars. These were translated to BRL at a rate of 3.95 for the fourth quarter of 2018 with an increase to a nominal rate of 4.10 in 2025, equal to a real exchange rate of 3.53. For future periods the exchange rate was projected with a rate development reflecting the assumed inflation difference of 2.5 percentage points between international inflation and the higher expected Brazil specific inflation. This is the same methodology and long-term assumptions as included in the test performed in the second quarter. Production volumes were assumed to be at somewhat lower levels than forecasted in the 2017 annual impairment test after reverting to full production capacity.

If one of the key parameters were changed with no changes to the other assumptions, the estimated recoverable amount for the CGU would equal the carrying amount with the following long-term real 2018 assumptions over the entire 40-year period:

	Assumptions third quarter		Assumptions second quarter	
	% change	Value	% change	Value
Exchange rate BRL/USD	(8) %	3.26	(6) %	3.33
Alumina price (USD/mt)	(5) %	381	(3) %	386
Discount rate (% point)	15 %	20.2 %	12 %	19.50%

In April, Hydro's part-owned subsidiary Albras decided to curtail 50 percent of aluminium production at the Albras aluminium plant. The curtailment represents 230,000 mt on an annualized basis and was a result of the Alunorte alumina refinery not being able to supply more than 50 percent of Albras' alumina needs following Alunorte's forced production cut. The decision to reduce capacity was considered an impairment indicator for the Albras plant for the first quarter interim reporting.
The prolonged period of curtailment made us update the impairment test at the end of the third quarter.

Assumptions for an impairment test are highly uncertain, in particular the timing of restart of production and the cash flows in the near term which are impacted by both disturbance in market balance and volatile prices for aluminium, alumina and power in the region. In addition, there is uncertainty regarding power prices beyond the current purchase contract, which expires in 2024. The test performed at the end of the first quarter of 2018 was based on the assumption that full production would be resumed after a limited period; however, reflecting the longer restart period for a smelter compared to the refinery. The updated test performed at the end of the third quarter reflected a restart of the curtailed capacity towards the end of 2019. There is significant uncertainty related to market prices for aluminum, alumina and other raw material. We assumed that price levels for both raw materials and metal remained at levels similar to those observed prior to the market disruption during 2018, including our long-term price assumptions developed in December 2017. Based on these assumptions, the plant had a coverage above carrying value of the assets at both points in time. Hydro continues to monitor the situation in the periods to come.

Alternative performance measures (APMs)

Alternative performance measures, i.e. financial performance measures not within the applicable financial reporting framework, are used by Hydro to provide supplemental information, by excluding items that, in Hydro’s view, does not give an indication of the periodic operating results or cash flows of Hydro. Financial APMs are intended to enhance comparability of the results and cash flows from period to period, and it is Hydro’s experience that these are frequently used by analysts, investors and other parties. Management also uses these measures internally to drive performance in terms of long-term target setting and as basis for performance related pay. These measures are adjusted IFRS measures defined, calculated and used in a consistent and transparent manner over the years and across the company where relevant. Operational measures such as, but not limited to, volumes, prices per mt, production costs and improvement programs are not defined as financial APMs. To provide a better understanding of the company's underlying financial performance for the relevant period, Hydro focuses on underlying EBIT in the discussions on periodic underlying financial and operating results and liquidity from the business areas and the group, while effects excluded from underlying EBIT and net income (loss) are discussed separately in the section on reported EBIT and net income. Financial APMs should not be considered as a substitute for measures of performance in accordance with the IFRS. Disclosures of APMs are subject to established internal control procedures.

Hydro's financial APMs

- *EBIT:* Income (loss) before tax, financial income and expense.
- *Underlying EBIT:* EBIT +/- identified items to be excluded from underlying EBIT as described below.
- *EBITDA:* EBIT + depreciation, amortization and impairments, net of investment grants.
- *Underlying EBITDA:* EBITDA +/- identified items to be excluded from underlying EBIT as described below + impairments.
- *Underlying net income (loss):* Net income (loss) +/- items to be excluded from underlying income (loss) as described below.
- *Underlying earnings per share:* Underlying net income (loss) attributable to Hydro shareholders divided by a weighted average of outstanding shares (ref.: the interim financial statements).
- *Investments:* Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations.
- *Adjusted net cash (debt):* Short- and long-term interest-bearing debt adjusted for Hydro's liquidity positions, and for liquidity positions regarded unavailable for servicing debt, pension obligation and other obligations which are considered debt-like in nature.
- Metal Markets specific adjustments to underlying EBIT:
  - *Currency effects* include the effects of changes in currency rates on sales and purchase contracts denominated in foreign currencies (mainly US dollar and Euro for our European operations) and the effects of changes in currency rates on the fair valuation of derivative contracts (including LME futures) and inventories mainly translated into Norwegian kroner. Hydro manages its external currency exposure on a consolidated basis in order to take advantage of offsetting positions.
  - *Inventory valuation effects* comprise hedging gains and losses relating to inventories. Increasing LME prices result in unrealized hedging losses, while the offsetting gains on physical inventories are not recognized until realized. In period of declining prices, unrealized hedging gains are offset by write-downs of physical inventories.

Items excluded from underlying EBIT, EBITDA, net income (loss) and earnings per share
Hydro has defined two categories of items which are excluded from underlying results in all business areas, equity accounted investments and at group level. One category is the timing effects, which are unrealized changes to the market value of certain derivatives and the metal effect in Rolled Products. When realized, effects of changes in the market values since the inception are included in underlying EBIT. Changes in the market value of the trading portfolio are included in underlying results. The other category includes material items which are not regarded as part of underlying business performance for the period, such as major rationalization charges and closure costs, major impairments of property, plant and equipment, effects of disposals of businesses and operating assets, as well as other major effects of a special nature. Materiality is defined as items with a value above NOK 20 million. All items excluded from underlying results are reflecting a reversal of transactions recognized in the financial statements for the current period, except for the metal effect. Part-owned entities have implemented similar adjustments.

- *Unrealized derivative effects on LME related contracts* include unrealized gains and losses on contracts measured at market value, which are used for operational hedging purposes related to fixed-price customer and supplier contracts, where hedge accounting is not applied. Also includes elimination of changes in fair value of certain internal physical aluminium contracts.
- *Unrealized derivative effects on power and raw material contracts* include unrealized gains and losses on embedded derivatives in raw material and power contracts for Hydro's own use and for financial power contracts used for hedging purposes, as well as elimination of changes in fair value of embedded derivatives within certain internal power contracts.
- *Metal effect in Rolled Products* is an effect of timing differences resulting from inventory adjustments due to changing aluminium prices during the production, sales and logistics process, lasting two to three months. As a result, margins are impacted by timing differences resulting from the FIFO inventory valuation method (first in, first out), due to changing aluminium prices during the process. The effect of inventory write-downs is included. Decreasing aluminium prices in Euro results in a negative metal effect on margins, while increasing prices have a positive effect.
- *Significant rationalization charges and closure costs* include costs related to specifically defined major projects, and not considered to reflect periodic performance in the individual plants or operations. Such costs involve termination benefits, dismantling of installations and buildings, clean-up activities that exceed legal liabilities, etc. Costs related to regular and continuous improvement initiatives are included in underlying results.
- *Impairment charges (PP&E and equity accounted investments)* relate to significant write-downs of assets or groups of assets to estimated recoverable amounts in the event of an identified loss in value. Gains from reversal of impairment charges are simultaneously excluded from underlying results.
- *Alunorte agreements – provision* refers to the provision recognized in relation to the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made on September 5, 2018
- *(Gains) losses on divestments* include a net gain or loss on divested businesses and/or individual major assets.
- *Other effects* include insurance proceeds covering asset damage, legal settlements, etc. Insurance proceeds covering lost income are included in underlying results.
- *Pension* includes recognition of pension plan amendments and related curtailments and settlements.
- *Transaction related effects (Sapa)* reflect the net measurement gain relating to previously owned shares in Sapa and an inventory valuation expense related to the Sapa transaction.
- *Items excluded in equity accounted investments* reflects Hydro's share of items excluded from underlying net income in Sapa, until end of third quarter 2017, and Qatalum and are based on Hydro's definitions, including both timing effects and material items not regarded as part of underlying business performance for the period.
- *Net foreign exchange (gain) loss:* Realized and unrealized gains and losses on foreign currency denominated accounts receivable and payable, funding and deposits, embedded currency derivatives in certain power contracts and forward currency contracts purchasing and selling currencies that hedge net future cash flows from operations, sales contracts and operating capital.
- *Calculated income tax effect:* In order to present underlying net income on a basis comparable with our underlying operating performance, the underlying income taxes are adjusted for the expected taxable effects on items excluded from underlying income before tax.
- *Other adjustments to net income* include other major financial and tax related effects not regarded as part of the underlying business performance of the period.

Items excluded from underlying EBIT per operating segment and for Other and eliminations [1)] NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Third quarter 2018	**Year 2018**	Year 2017
Alunorte agreements - provision[2)]	**-**	-	519	**519**	-
Bauxite & Alumina	**-**	-	519	**519**	-
Unrealized derivative effects on LME related contracts	**(89)**	100	101	**(143)**	101
Unrealized derivative effects on power contracts	**(64)**	(16)	(194)	**(218)**	50
Significant rationalization charges and closure costs	**-**	181	-	**-**	181
Primary Metal	**(153)**	265	(93)	**(361)**	331
Unrealized derivative effects on LME related contracts	**(144)**	27	104	**(200)**	58
Metal Markets	**(144)**	27	104	**(200)**	58
Unrealized derivative effects on LME related contracts	**74**	(4)	11	**111**	41
Metal effect	**93**	(146)	(153)	**(73)**	(419)
Significant rationalization charges and closure costs	**39**	-	-	**39**	-
Other effects[3)]	**-**	245	-	**-**	245
Rolled Products	**206**	95	(141)	**77**	(132)
Unrealized derivative effects on LME related contracts	**192**	(4)	211	**299**	(4)
Significant rationalization charges and closure costs	**40**	29	-	**40**	29
Pension [4)]	**40**	-	-	**40**	-
Transaction related effects (Sapa)[5)]	**-**	(1,463)	-	**-**	(1,463)
Other effects[6)]	**80**	-	-	**80**	-
Extruded Solutions	**352**	(1,438)	211	**459**	(1,438)
Unrealized derivative effects on power contracts	**(7)**	-	-	**(7)**	-
Energy	**(7)**	-	-	**(7)**	-
Unrealized derivative effects on power contracts[7)]	**(11)**	107	11	**(36)**	197
Unrealized derivative effects on LME related contracts[7)]	**(11)**	21	8	**(27)**	23
Other effects[8)]	**(34)**	(33)	-	**(34)**	(33)
Unrealized derivative effects (Sapa)					20
Net foreign exchange (gain) loss (Sapa)					5
Calculated income tax effect (Sapa)					(6)
Other and eliminations	**(56)**	95	19	**(97)**	206
Items excluded from underlying EBIT	**199**	(956)	620	**390**	(974)

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) Alunorte agreements - provision, refers to the provision recognized in relation to the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made on September 5 2018.
3) Other effects in Rolled Products reflect a charge related to a customs case in Germany.
4) Pension includes a charge of NOK 40 million due to remeasurement of all UK schemes with Guaranteed Minimum Pensions (GMP) required to be adjusted to equalize pension benefits for gender. The remeasurement is based on the accrued pension benefits in the period between 1990 and 1997.
5) Transaction related effects include the revaluation gain of Hydro's pre-transactional 50 percent share in Sapa, as well as the fair value allocated to inventory of finished goods and to the backlog of contractual deliveries as of closure, sold during fourth quarter 2017.
6) Other effects include a charge of NOK 80 million due to adjustments to the value of certain assets in relation to the acquisition.
7) Unrealized derivative effects on power contracts and LME related contracts result from elimination of changes in the valuation of embedded derivatives within certain internal power contracts and in the valuation of certain internal aluminium contracts.
8) Other effects in Other and eliminations include the remeasurement of environmental liabilities related to closed business in Germany.

Underlying EBITDA NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
EBITDA	**2,011**	6,481	(69) %	3,890	(48) %	**15,953**	18,344
Items excluded from underlying EBIT	**199**	(956)	>100 %	620	(68) %	**390**	(974)
Underlying EBITDA	**2,210**	5,524	(60) %	4,510	(51) %	**16,344**	17,369

Underlying earnings per share NOK million	**Fourth quarter 2018**	Fourth quarter 2017	Change prior year quarter	Third quarter 2018	Change prior quarter	**Year 2018**	Year 2017
Net income (loss)	**(593)**	3,600	>(100) %	925	>(100) %	**4,480**	9,184
Items excluded from net income (loss)	**418**	(783)	>100 %	772	(46) %	**1,338**	(788)
Underlying net income (loss)	**(175)**	2,816	>(100) %	1,696	>(100) %	**5,819**	8,396
Underlying net income attributable to non-controlling interests	**(56)**	90	>(100) %	182	>(100) %	**184**	331
Underlying net income attributable to Hydro shareholders	**(119)**	2,726	>(100) %	1,514	>(100) %	**5,635**	8,066
Number of shares	**2,046**	2,045	-	2,046	-	**2,046**	2,044
Underlying earnings per share	**(0.06)**	1.33	>(100) %	0.74	>(100) %	**2.75**	3.95

Adjusted net cash (debt) NOK million	**Dec 31 2018**	Sep 30 2018	Change prior quarter	Dec 31 2017	Sep 30 2017	Change prior year quarter
Cash and cash equivalents	**5,995**	6,846	(851)	11,828	17,853	(6,025)
Short-term investments[1)]	**975**	1,176	(201)	1,311	1,985	(674)
Short-term debt	**(8,543)**	(6,607)	(1,937)	(8,245)	(9,065)	820
Long-term debt	**(7,080)**	(7,886)	806	(9,012)	(3,077)	(5,936)
Net cash (debt)	**(8,653)**	(6,471)	(2,182)	(4,118)	7,697	(11,815)
Cash and cash equiv. and short-term investm. in captive insurance company [2)]	**(876)**	(968)	92	(1,076)	(1,064)	(12)
Net pension obligation at fair value, net of expected income tax benefit [3)]	**(8,813)**	(6,419)	(2,394)	(7,895)	(6,527)	(1,368)
Operating lease commitments, net of expected income tax benefit [4)]	**(1,708)**	(1,585)	(123)	(1,585)	(507)	(1,078)
Short- and long-term provisions net of exp. income tax benefit, and other liab.[5)]	**(3,077)**	(2,938)	(139)	(3,295)	(2,574)	(720)
Adjusted net cash (debt)	**(23,127)**	(18,380)	(4,746)	(17,968)	(2,976)	(14,992)
Net debt in EAI[6)]	**(5,584)**	(5,648)	64	(5,798)	(6,895)	1,096
Adjusted net cash (debt) incl. EAI	**(28,711)**	(24,028)	(4,683)	(23,767)	(9,871)	(13,896)

1) Hydro's policy is that the maximum maturity for cash deposits is 12 months. Cash flows relating to bank time deposits with original maturities beyond three months are classified as investing activities and included in short-term investments on the balance sheet.

2) Cash and cash equivalents and short-term investments in Hydro's captive insurance company Industriforsikring AS are assumed to not be available to service or repay future Hydro debt, and are therefore excluded from the measure Adjusted net debt.

3) The expected income tax benefit related to the pension liability is NOK 1 673 million and NOK 1 140 million for December 2018 and September 2018, respectively.

4) Operating lease commitments are discounted using a rate of 2.69 percent for December 2018 (1.14 for December 2017). The expected tax benefit on operating lease commitments is estimated at 30 percent. The net present value of operating lease commitments is re-calculated once a year in connection with full year reporting.

5) Consists of Hydro's short and long-term provisions related to asset retirement obligations, net of an expected tax benefit estimated at 30 percent, and other non-current financial liabilities.

6) Net debt in equity accounted investments is defined as the total of Hydro's relative ownership percentage of each equity accounted investment's short and long-term interest bearing debt less their cash position, reduced by total outstanding loans from Hydro to the equity accounted investment. Net debt per individual equity accounted investment is limited to a floor of zero. Per December 2018, the adjustment is related to Qatalum.

Underlying RoaCE

Hydro uses underlying RoaCE to measure the performance for the group as a whole and within its operating segments, both in absolute terms and comparatively from period to period. Management views this measure as providing additional understanding of the rate of return on investments over time in each of its capital intensive businesses and in the operating results of its business segments.

RoaCE

	Reported		Underlying	
NOK million	**2018**	2017	**2018**	2017
EBIT	**8,679**	12,189	**9,069**	11,215
Adjusted Income tax expense[1]	**(2,757)**	(2,225)	**(2,721)**	(2,651)
EBIT after tax	**5,922**	9,964	**6,348**	8,564

	December 31		
NOK million	**2018**	2017	2016
Current assets[2]	**47,811**	41,492	23,722
Property, plant and equipment	**71,299**	72,933	58,734
Other non-current assets	**35,619**	35,710	35,688
Current liabilities[3]	**(26,012)**	(25,092)	(13,823)
Non-current liabilities[4]	**(29,137)**	(28,715)	(22,651)
Capital Employed	**99,579**	96,327	81,670

	Reported		Underlying	
Return on average Capital Employed (RoaCE)	**2018**	2017	**2018**	2017
Hydro	**6.0 %**	11.2 %	**6.5 %**	9.6 %

1) Adjusted income tax expense is based on reported and underlying tax expense adjusted for tax on financial items.
2) Excluding cash and cash equivalents and short-term investments.
3) Excluding bank loans and other interest-bearing short-term debt.
4) Excluding long-term debt.

Additional Information

Financial calendar 2019

March 15	Annual report
April 30	First quarter results
May 7	Annual General Meeting
July 23	Second quarter results
October 23	Third quarter results

Hydro reserves the right to revise these dates.

Cautionary note

Certain statements included in this announcement contain forward-looking information, including, without limitation, information relating to (a) forecasts, projections and estimates, (b) statements of Hydro management concerning plans, objectives and strategies, such as planned expansions, investments, divestments, curtailments or other projects, (c) targeted production volumes and costs, capacities or rates, start-up costs, cost reductions and profit objectives, (d) various expectations about future developments in Hydro's markets, particularly prices, supply and demand and competition, (e) results of operations, (f) margins, (g) growth rates, (h) risk management, and (i) qualified statements such as "expected", "scheduled", "targeted", "planned", "proposed", "intended" or similar.

Although we believe that the expectations reflected in such forward-looking statements are reasonable, these forward-looking statements are based on a number of assumptions and forecasts that, by their nature, involve risk and uncertainty. Various factors could cause our actual results to differ materially from those projected in a forward-looking statement or affect the extent to which a particular projection is realized. Factors that could cause these differences include, but are not limited to: our continued ability to reposition and restructure our upstream and downstream businesses; changes in availability and cost of energy and raw materials; global supply and demand for aluminium and aluminium products; world economic growth, including rates of inflation and industrial production; changes in the relative value of currencies and the value of commodity contracts; trends in Hydro's key markets and competition; and legislative, regulatory and political factors.

No assurance can be given that such expectations will prove to have been correct. Hydro disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries on all continents, combining local expertise, worldwide reach and unmatched capabilities in R&D. In addition to production of primary aluminium, rolled and extruded products and recycling, Hydro also extracts bauxite, refines alumina and generates energy to be the only 360° company of the global aluminium industry. Hydro is present within all market segments for aluminium, with sales and trading activities throughout the value chain serving more than 30,000 customers. Based in Norway and rooted in more than a century of experience in renewable energy, technology and innovation, Hydro is committed to strengthening the viability of its customers and communities, shaping a sustainable future through innovative aluminium solutions.