



# Financial update - maintaining financial strength and flexibility

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01

# Prudent financial framework

# Prudent financial framework



Managing industry cyclicality, driving long-term shareholder value

## Lifting cash flow potential

Improving efficiency, strengthening margins

Improvement efforts

- 4.5 BNOK 2009-2015
- 3.0 BNOK target 2016-2019<sup>1)</sup>
- 1.8 BNOK 2016-2017
- (0.5) BNOK 2016-E2018<sup>2)</sup>

Optimizing Net operating capital

## Financial strength and flexibility

Investment grade credit rating

Financial ratio targets over the cycle

- FFO/aND <sup>3)</sup> > 40%
- aND/E <sup>4)</sup> < 55%

Strong liquidity

## Disciplined capital allocation

Long-term sustaining capex below depreciation

- ~6.5-7.0 BNOK average 2018-2021E

Total capex incl. growth

- 2018E ~8.1 BNOK

Selective value-add growth

Attractive organic growth prospects and M&A optionality

## Predictable dividend policy

Sector competitive TSR

1.75 NOK/share dividend for 2017

Dividend policy

- 40% payout ratio of Net income over the cycle
- Dividend 1.25 NOK/share to be considered as floor

Special dividends and share buybacks in the toolbox

## Effective risk management

Volatility mitigated by strong balance sheet and relative positioning

Hedging policy

- Operational LME and currency hedging
- Limited financial hedging

Diversified business

1) Real 2015 terms

2) The Better improvement ambition in 2018 is estimated 2.8 BNOK behind the 2018 cumulative target of 2.3 BNOK due to the Alunorte situation. In addition to (2.6) BNOK in the curtailment effect, 0.2 BNOK were not delivered out of 0.5 BNOK 2018 target.

3) Funds from operations / adjusted net debt

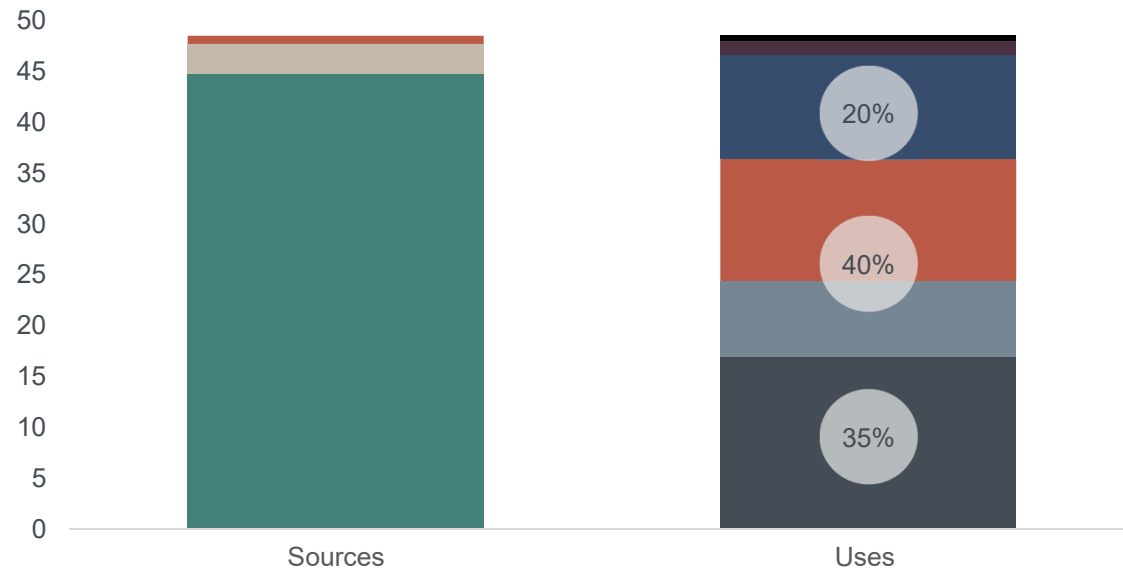
4) Adjusted net debt / Equity

# Balanced capital allocation, solid free cash flow generation



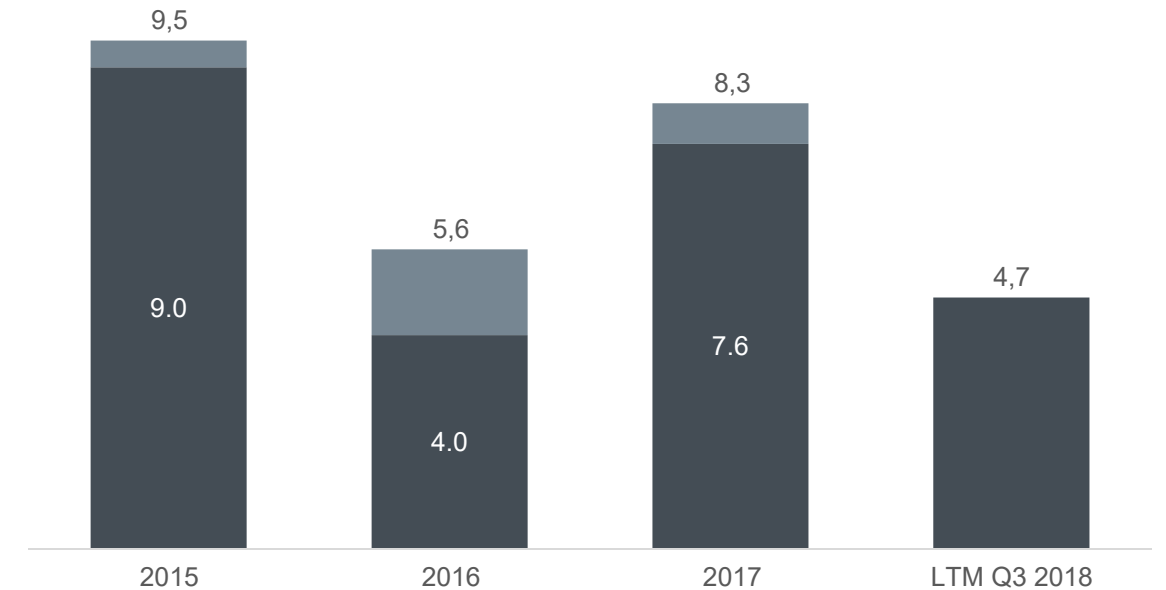
## Uses and sources of cash <sup>1)</sup>

Cash flows, 2015-Q3 2018, BNOK



## Free cash flow generation <sup>2)</sup>

2015 – LTM Q3 2018, BNOK



- Disposals
- Other uses
- M&A
- Use of own cash
- Net change in debt
- Growth capex
- Operating cash flow
- Return to shareholders
- Sustaining capex

- Sapa FCF
- Hydro FCF

Based on Hydro and Sapa cash flow statements

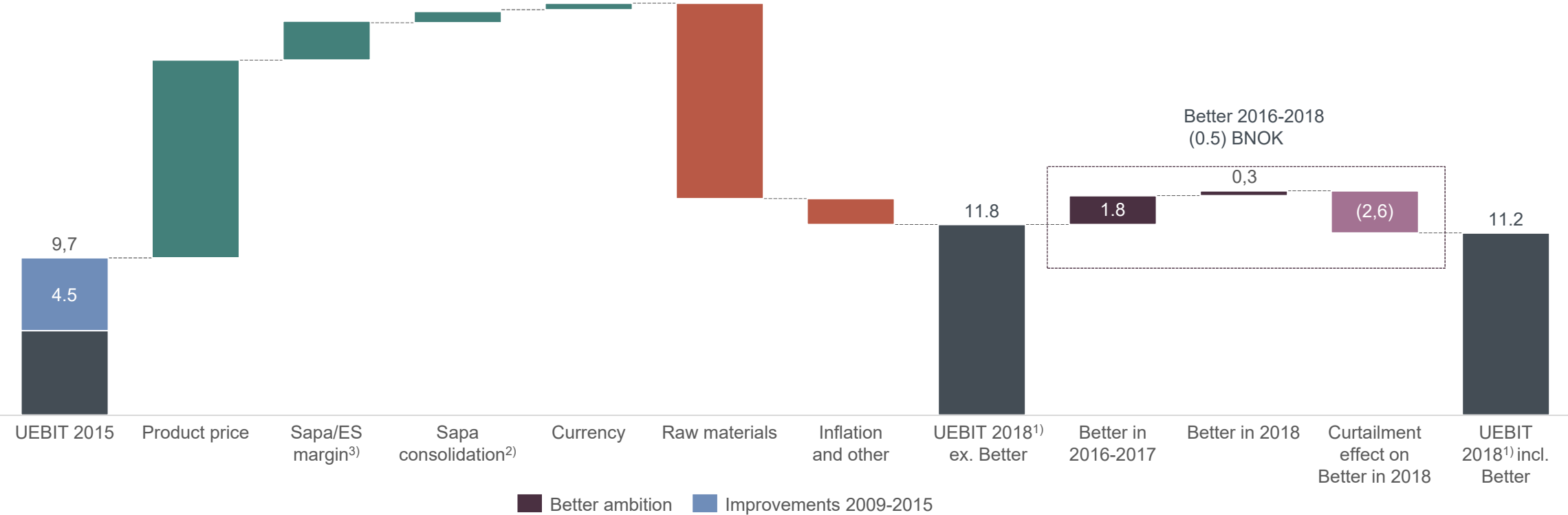
1) Extruded Solutions reflected as 50% equity accounted investment until Q3 2017 and fully consolidated from Q4 2017.

2) Free cash flow = operating cash flow – investing cash flow (excluding short-term investments). 2017 excludes Sapa acquisition capex of 11 BNOK. LTM Q3 2018 Hydro including Extruded Solutions.

# Earnings and improvement ambitions affected by the Alunorte situation



Underlying EBIT development  
NOK billion



1) YTD Q3-2018 annualized except for Albras excess power sales, which are YTD Q318  
 2) Sapa consolidation effect - difference between 50% of underlying Net income as equity accounted investment and fully consolidated Underlying EBIT, incl. excess value depreciation  
 3) Includes Extruded Solutions net margin improvement in 2018, and Sapa UEBIT improvement from 2015 mainly driven by higher margins. Incl. delivered synergies of 0.1 BNOK.

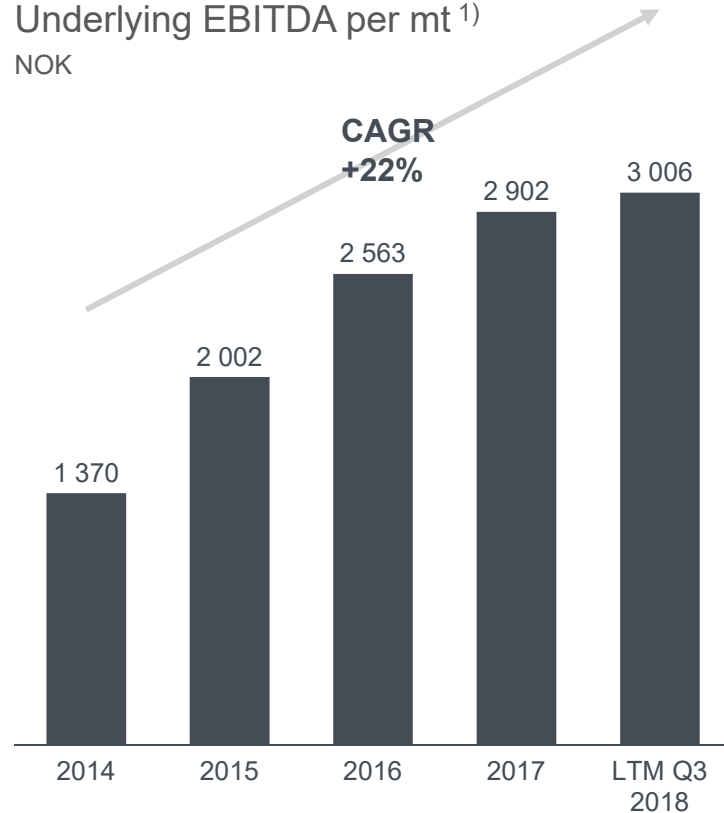
# Extruded Solutions continue to deliver with further improvement potential and growth opportunities



## Integration and synergies on track

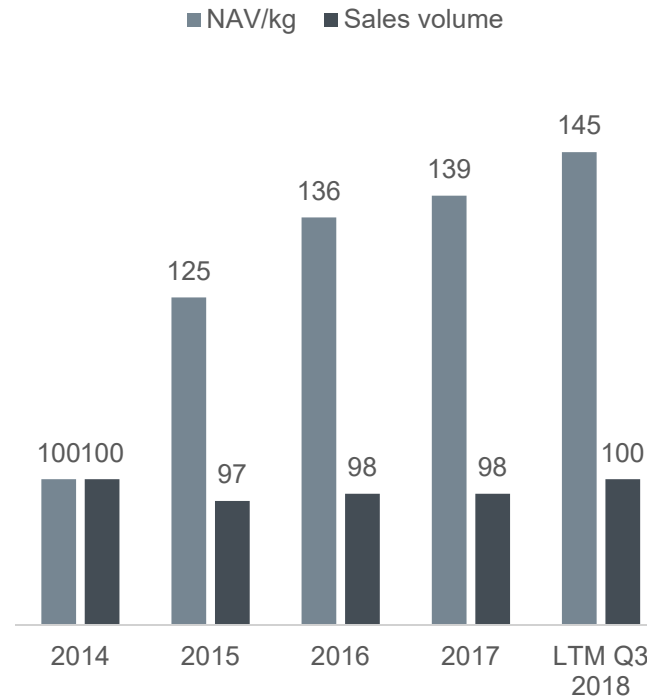
Sapa (100%) and Extruded Solutions  
Underlying EBITDA per mt <sup>1)</sup>

NOK



Net added value <sup>2)</sup> per kg

NOK and kmt, indexed to 2014



- Ambition to deliver min 10% average annual UEBIT growth over the next 3 years <sup>3)</sup>
  - Increasing share of value-added solutions
  - Simplification and collaboration
  - Selective and profitable growth
- Execution of integration plans on track
  - 100 MNOK in synergies realized by Q3-18
  - Total identified synergies of 200 MNOK related to remelters performance, scrap sourcing, corporate costs and other
  - Integration costs according to plan
  - Intensified technical and commercial cooperation between the business areas to develop innovative solutions for customers

1) 2017 Underlying EBITDA based on pro-forma figures for Extruded Solutions. LTM Q3 2018 with fully consolidated Extruded Solutions

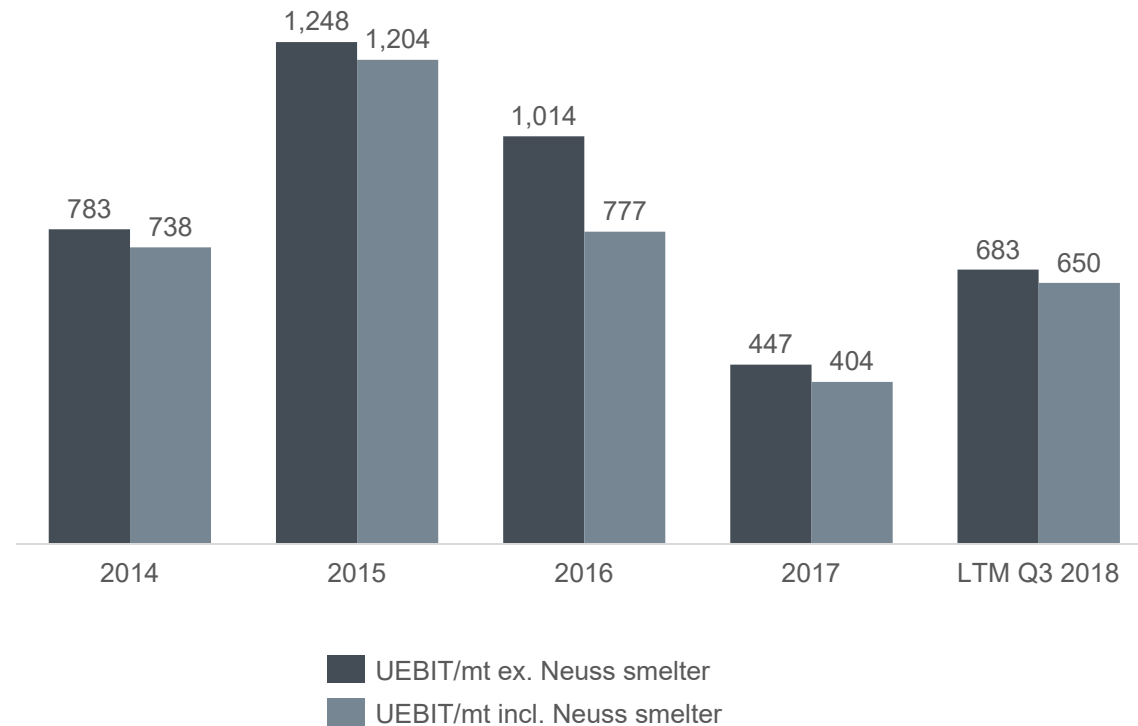
2) Net added value calculated as operating revenues less cost of material, including freight costs out

3) Including some smaller bolt-on acquisitions with capex for the coming years in line with 2018

# Focus on resolving operational issues, strengthening performance and portfolio high-grading in Rolled Products



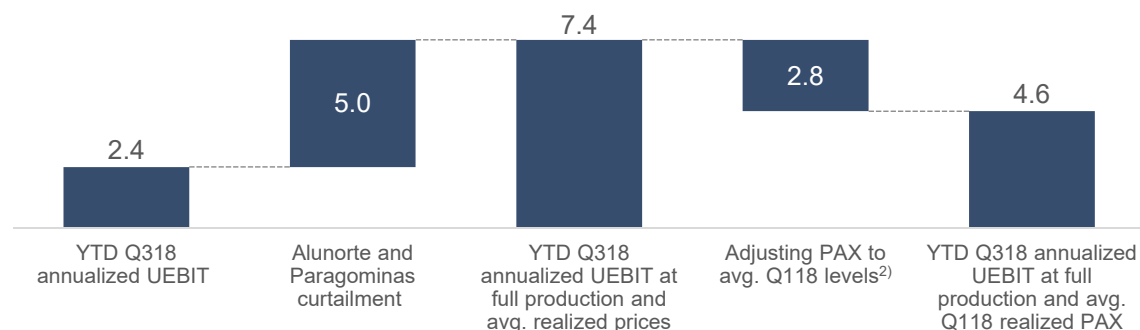
Rolled Products Underlying EBIT per mt  
NOK



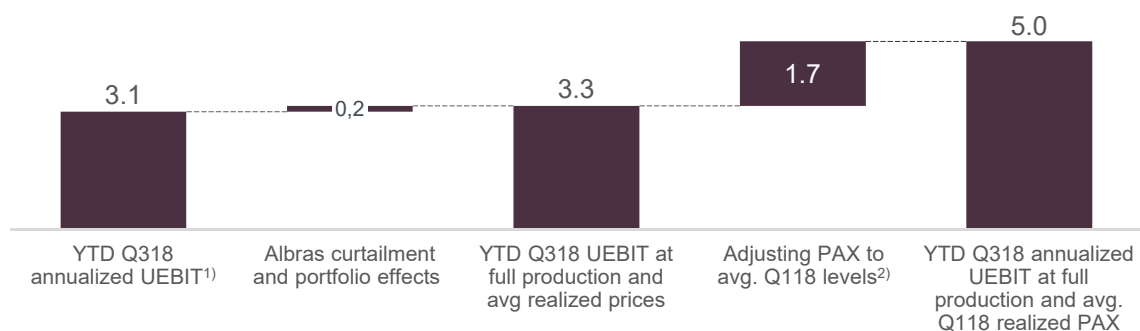
- Operational performance improving, issues not fully resolved in 2018
  - Alunorf hot mill and Hamburg – stabilized production performance
  - Alunorf cold mill area – outstanding operational issues leading to reduced output and stability
  - Used beverage can (UBC) recycling facility – improved performance following modifications made in Q4-17, further modifications planned for 1H-2019. Now targeting full ramp-up to 40 000 mt by end-2019
  - Automotive Line 3 (AL3) – main technical issues resolved, qualification process ongoing, expected to reach the original plan during 2019
- Improved results from the Neuss smelter:
  - A more competitive power contract from 2018 with positive effect of MNOK 350-400/year, higher aluminium prices, but increased raw material costs
- Further improvement potential:
  - Product mix improvement, selected product restructuring and further high-grading through ramp-up of UBC and AL3

# Significant curtailment effects in Bauxite&Alumina and Primary Metal

Curtailment effects on UEBIT in Bauxite & Alumina, BNOK\*



Curtailment effects on UEBIT in Primary Metal, BNOK\*



1) YTDQ318 annualized except for Albras excess power sales, which are YTDQ318

2) Adjustment based on Hydro price sensitivities for realized PAX alumina index from YTDQ318 average of 460 USD/t to Q118 average of 390 USD/t. Sensitivities are based on estimated 2018 PAX exposure before the curtailment.

Curtailment effects on UEBIT in Bauxite&Alumina

- Aunorte and Paragominas 50% curtailment – lost volume and margin
- Higher alumina sourcing costs compensated by significantly higher realized alumina sales prices
- Additional non-operational costs related to the curtailment of around 100 MNOK

Curtailment effects on UEBIT in Primary Metal

- Albras 50% curtailment – lost volume and margin
- Worsened operational parameters for Norwegian smelter system reflecting alternative alumina qualities
- Significantly higher alumina cost due to higher external alumina volumes at higher market prices

\*Simplified calculations based on key assumptions:

- Effects calculated based on 2018 variables costs margins
- Fixed costs assumed constant compared to 2017 levels
- Average Q118 realized PAX of 390 USD/t used as a proxy for «normalized» alumina price level without the curtailment. No change to LME price



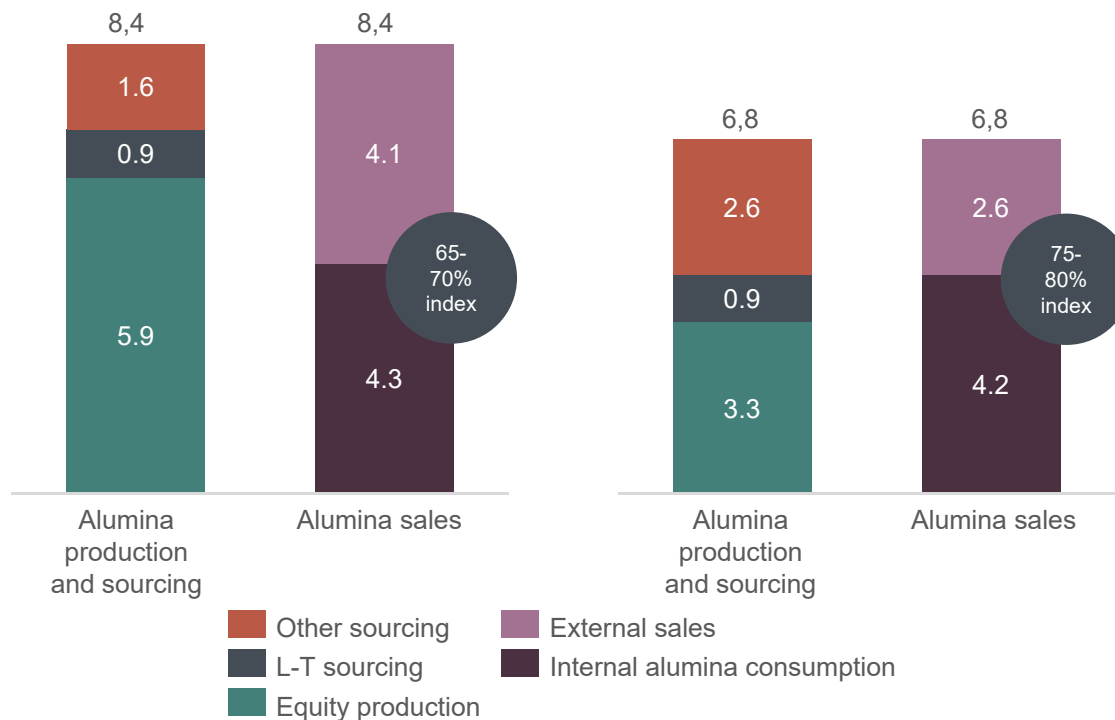
# Hydro alumina portfolio before and after Alunorte curtailment

## Alumina sourcing and sales overview <sup>1)</sup>

Million tonnes

Full Alunorte production (2017)

After Alunorte curtailment (2018E)



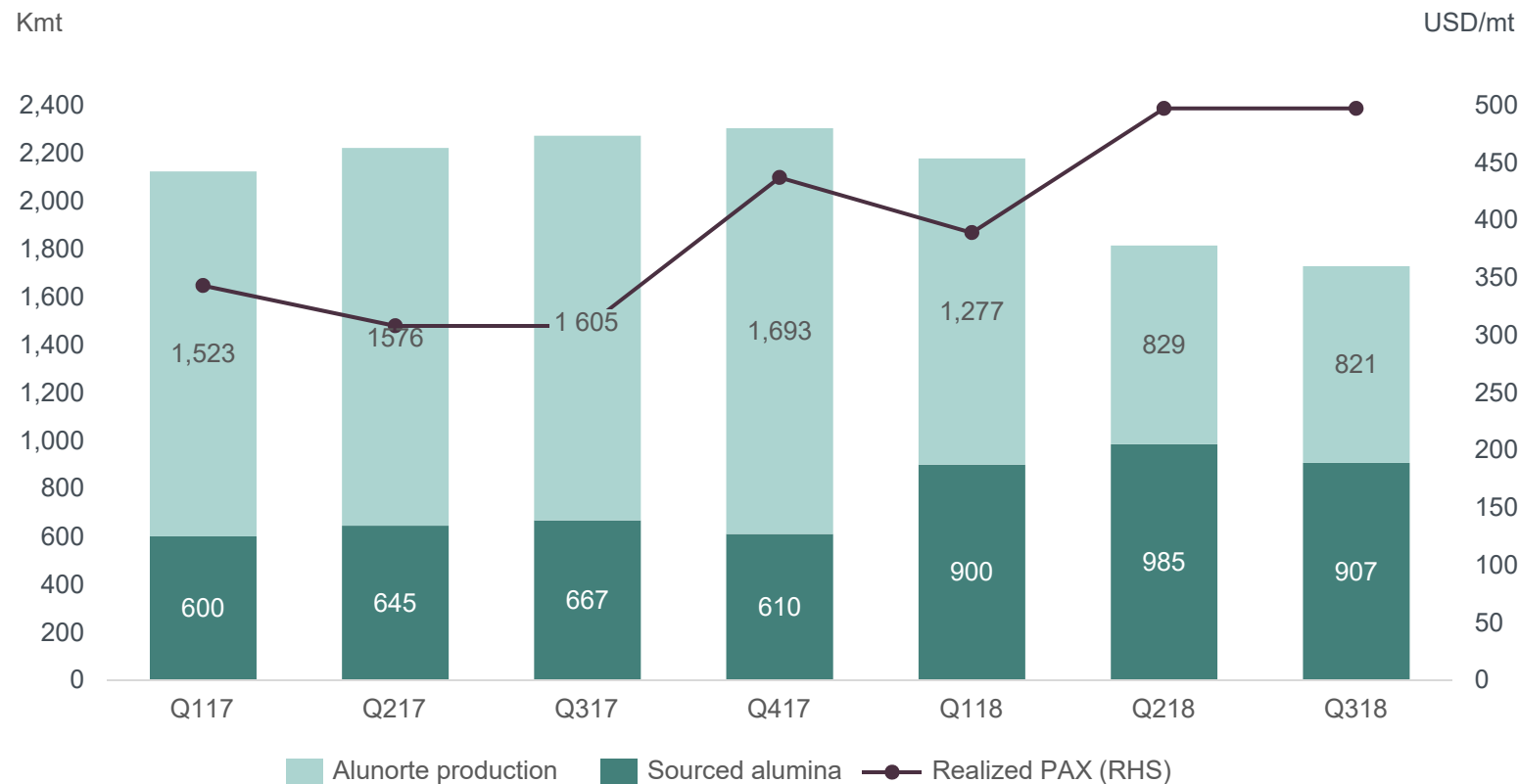
<sup>1)</sup> Alunorte was curtailed in March, Albras in April 2018. Alunorte equity production (92% share). Internal alumina consumption calculated on consolidated basis – including 100% Albras and Svalco, and with 50% Qatalum share.



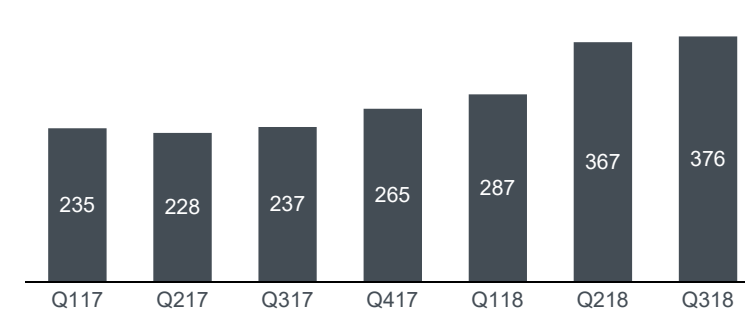
# Additional alumina sourcing lifts upstream implied costs



## Total alumina sales based on source



## Implied alumina cost <sup>1)</sup>, USD/t



## Implied all-in primary cost <sup>2)</sup>, USD/t



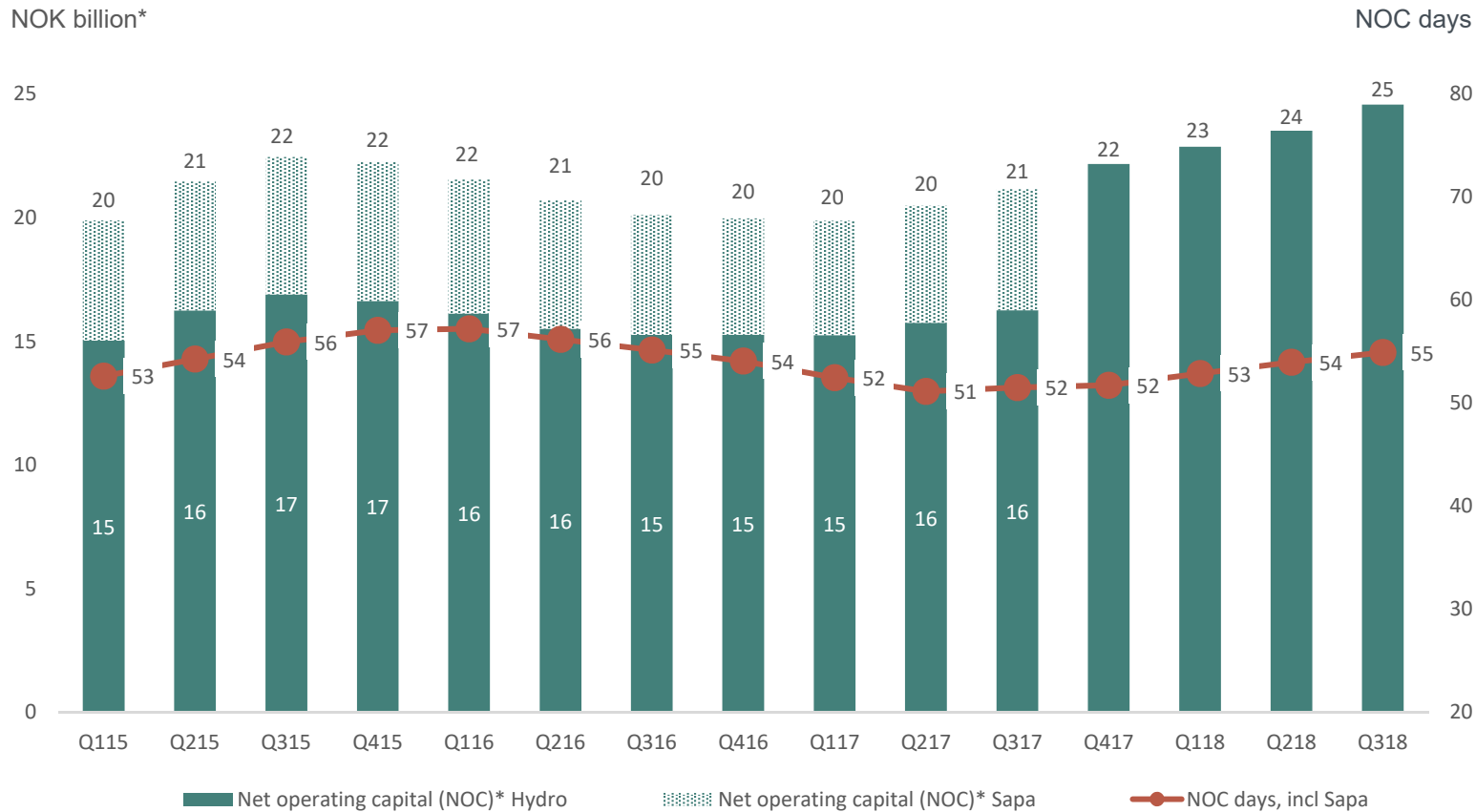
1) Realized alumina price minus Underlying EBITDA for B&A, per mt alumina sold

2) Realized all-in aluminium price less Underlying EBITDA margin, including Qatalum, per mt aluminium sold. Rounded to nearest USD 25

# NOC build-up reflects higher prices and market uncertainty



## Increased raw material inventories



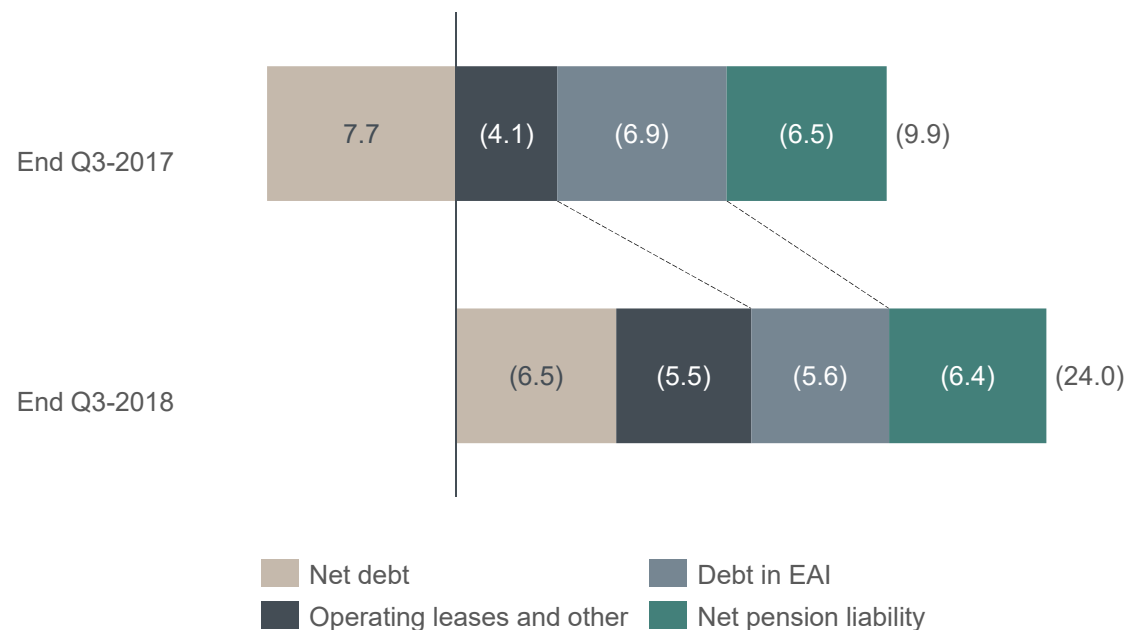
- Net operating capital generally follows LME
- Extruded Solutions average working capital around 5-6 BNOK
- Lift in net operating capital and NOC days throughout 2018 due to market uncertainty and price increases

\* Last twelve months moving average  
Hydro with fully consolidated Extruded Solutions from Q4 2017.

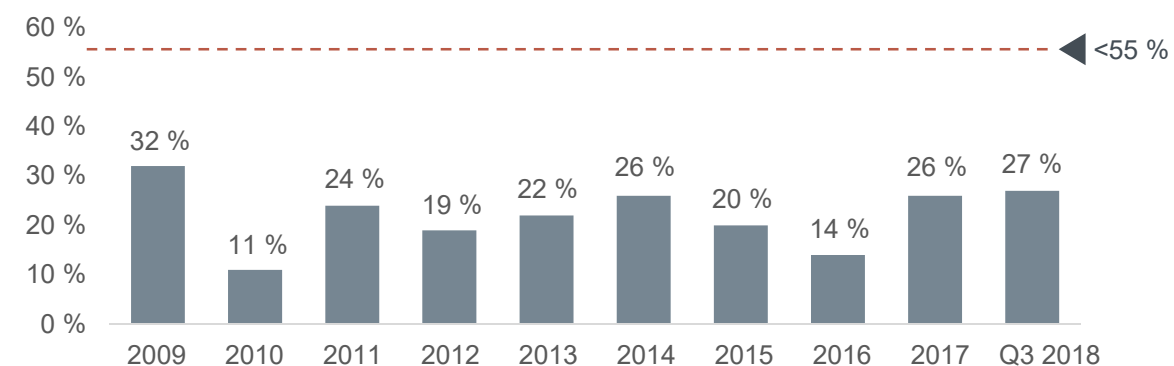
# Maintaining a solid balance sheet and investment-grade credit rating



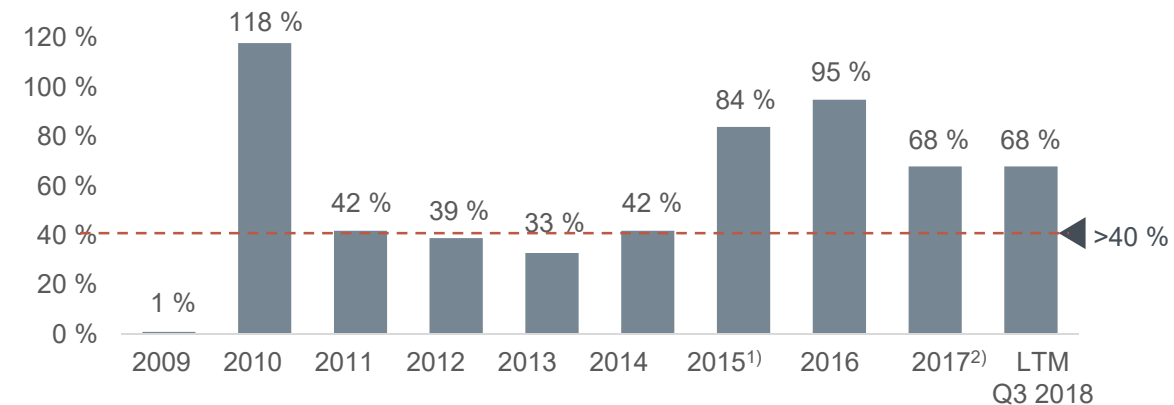
Adjusted net debt  
NOK billion



Adjusted net debt / Equity



Funds from operations / Adjusted net debt

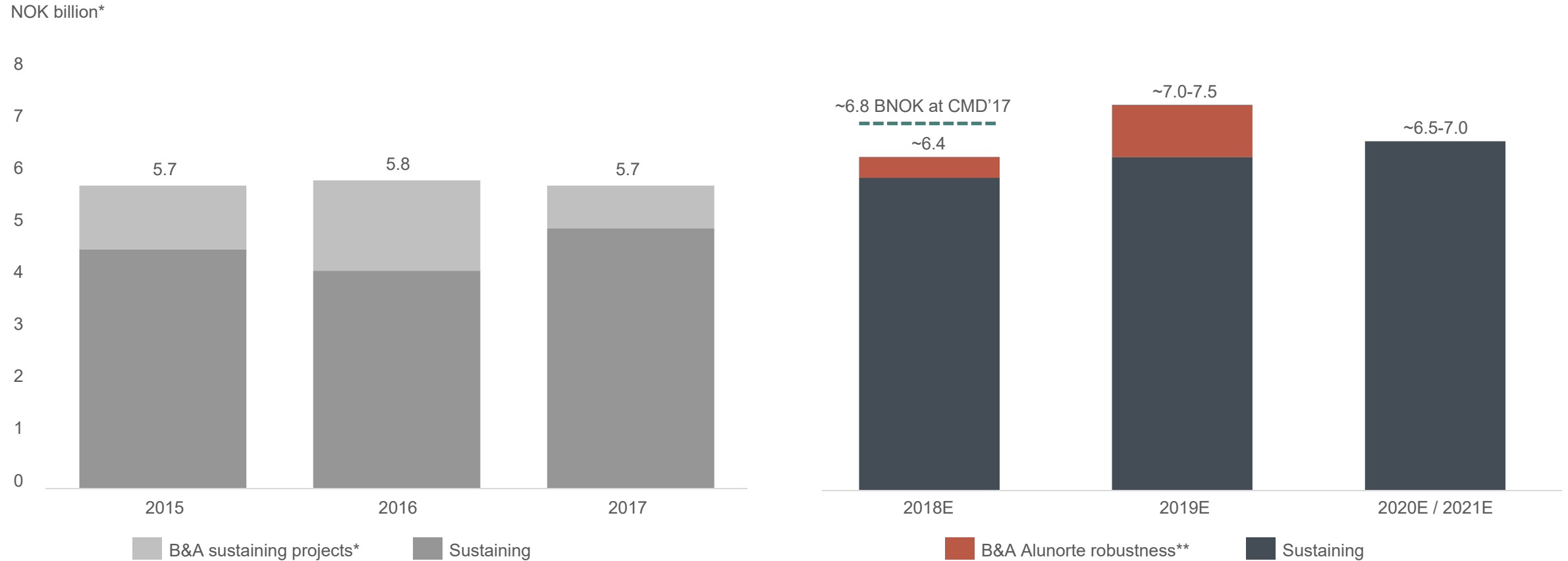


1) 2015 FFO/aND ratio has been restated due to change of definition  
2) Extruded Solutions reflected as 50% equity accounted investment Q1-Q3 2017 and fully consolidated from Q4 2017

# Average sustaining capex ~6.5-7.0 BNOK 2018-2021E

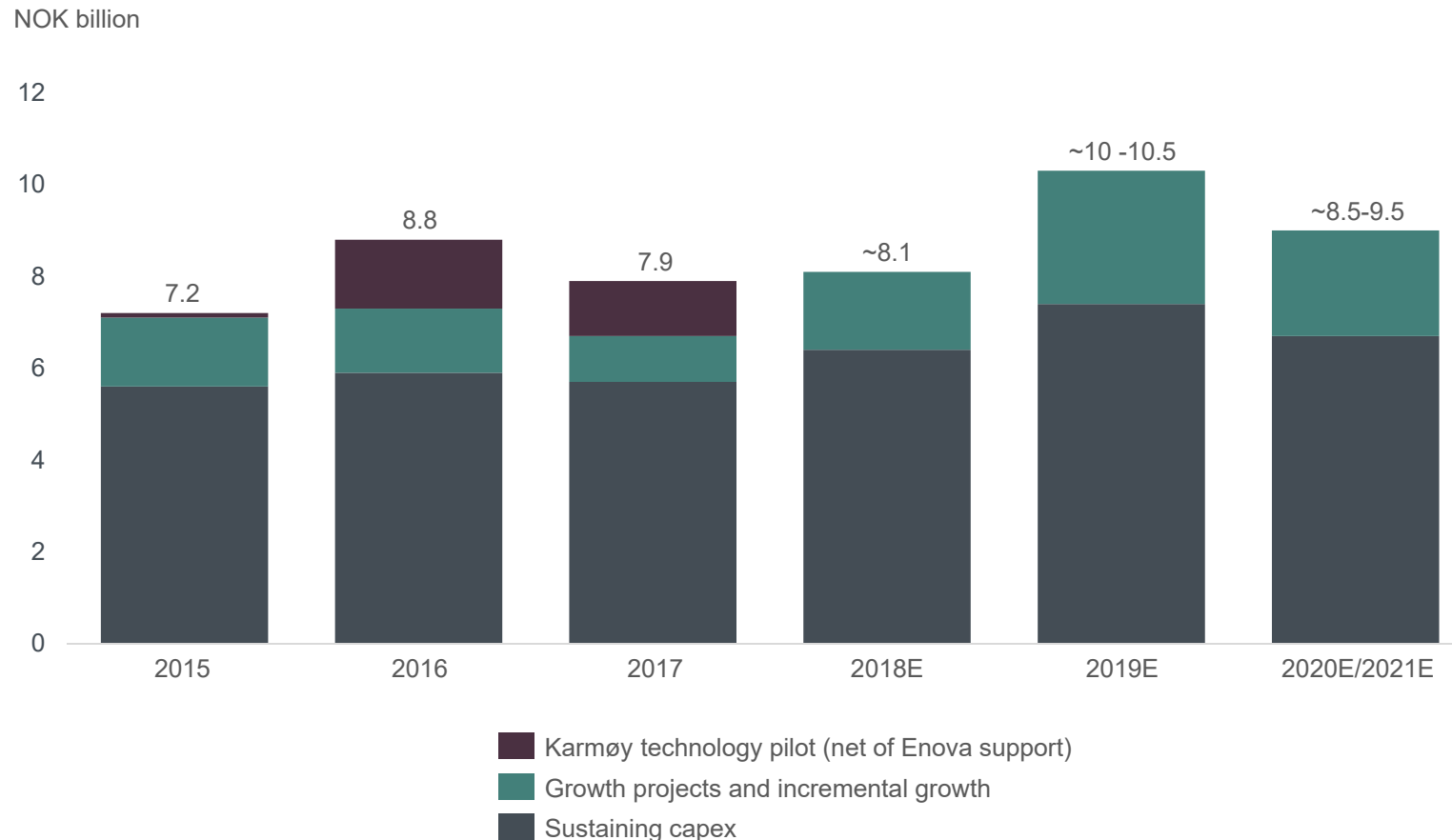


Majority of sustaining capex allocated upstream, including investments in Alunorte robustness



\*Red mud disposal area at Alunorte, tailing plateau investments at Paragominas  
 \*\* Investments in water treatment and management system as well as in enhanced operational robustness at Alunorte  
 Sustaining capex including Extruded Solutions

# Growth capex focused on incremental growth and productivity improvements



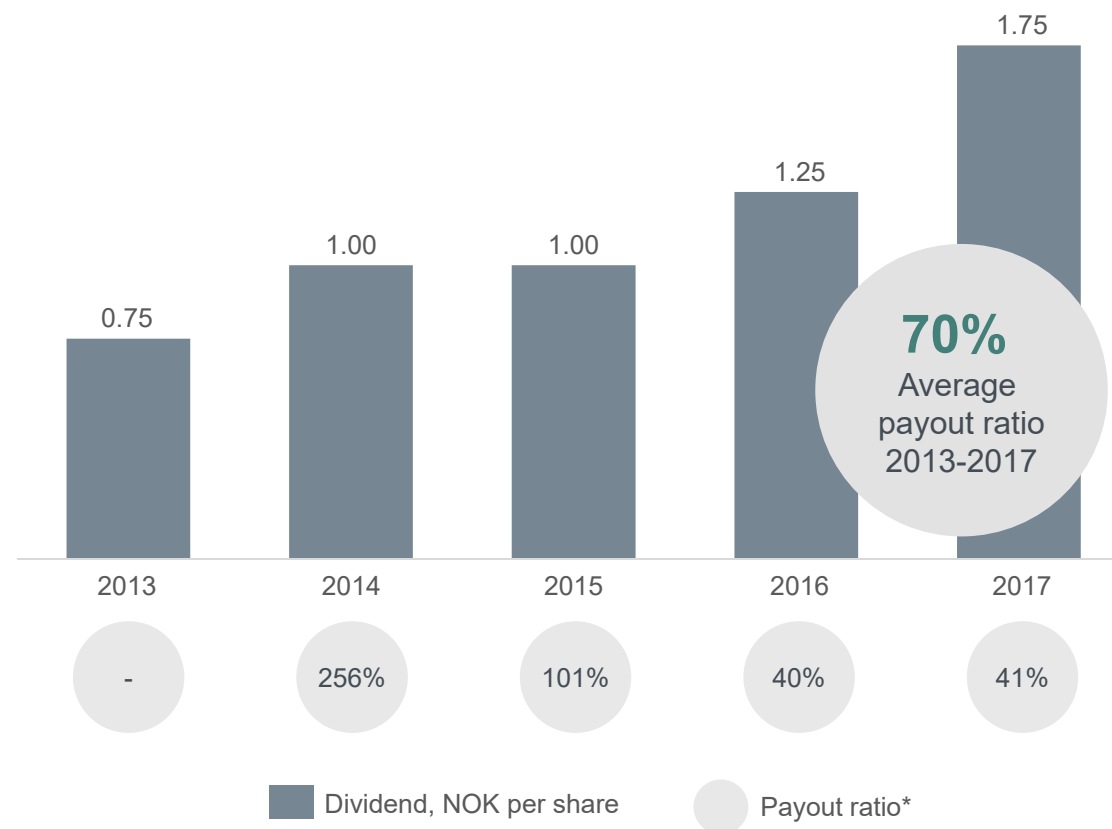
- Sustaining projects for 2018-2021:
  - Pipeline replacement in B&A
  - PM rectifiers and asset integrity Albras
  - Smelter relining
  - Alunorte robustness
- Ongoing growth projects:
  - Husnes upgrade and restart
  - Capacity creep and Industry 4.0 in PM
  - Selected customer-driven growth in ES
  - Productivity improvements across the portfolio
- Capex related to specific growth projects will be announced when decision is made

# Aiming for competitive returns to shareholders



- Aiming for competitive shareholder returns compared to alternative investments in peers
- Dividend policy:
  - Ordinary dividend: 40% of net income over the cycle
  - Floor of NOK 1.25 per share, committed to a predictable dividend level
  - Paid NOK 1.75 per share in 2017
- Five-year average ordinary payout ratio 2013-2017 of 70%
- Share buybacks and extraordinary dividends as supplement in periods with strong financials and earnings outlook

Dividend per share and payout ratio



\*Payout ratio – dividend paid divided by reported EPS from continuing operations

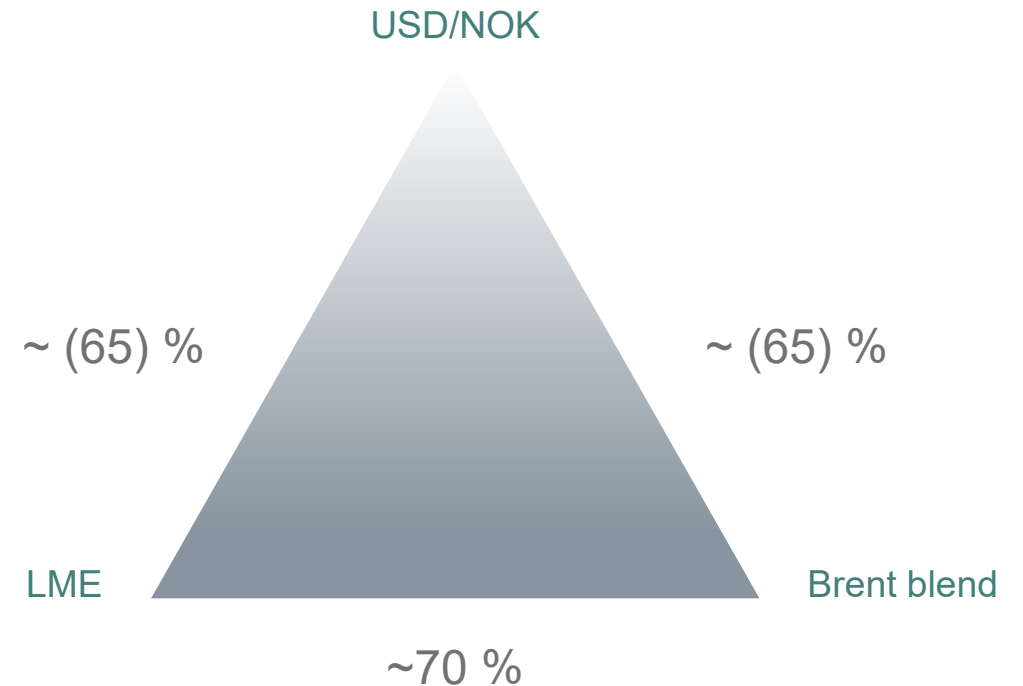
# Limited financial hedging, flexible business model



Historical correlations between commodities and currencies indicate a natural earnings hedge

- Hedging strategy
  - Fluctuating with the market: revenues primarily exposed to LME, PAX and USD
  - Volatility mitigated by strong balance sheet
  - Strengthening relative position to ensure competitiveness
- Diversified business
  - Upstream cyclicality balanced with more stable earnings downstream
  - Exposed to different markets and cycles
- Bauxite & Alumina
  - Currency exposure, mainly USD and BRL
  - Exposed to LME and Platts alumina index prices
- Primary Metal
  - Operational LME hedging - one-month forward sales
  - Currency exposure, mainly USD, NOK and BRL
- Metal Markets, Rolled Products, Extruded Solutions
  - Operational LME and currency hedging to secure margin
- Flexibility to hedge LME or currency in certain cases
- Long-term debt in currencies reflecting underlying exposures and cash generation, also considering attractiveness in main financial markets

Cross-correlations between currencies and commodities  
Monthly correlations 1994 - 2017





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# Sensitivities and scenarios

# Significant exposure to commodity and currency fluctuations



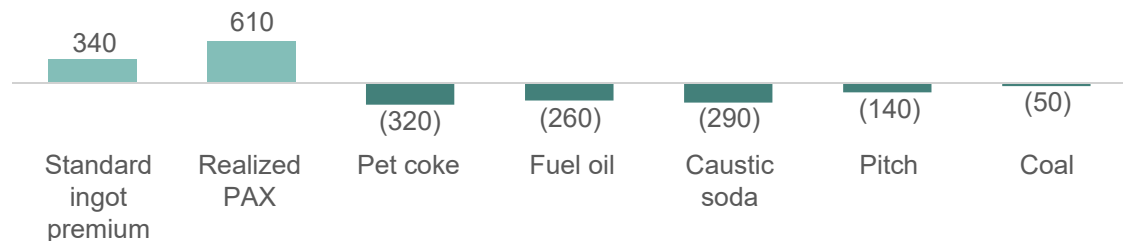
Sensitivities affected by the Alunorte and Albras curtailments

## Sensitivities with full production

Aluminium price sensitivity +10%, NOK million



Other commodity prices, sensitivity +10%, NOK million



Currency sensitivities +10%

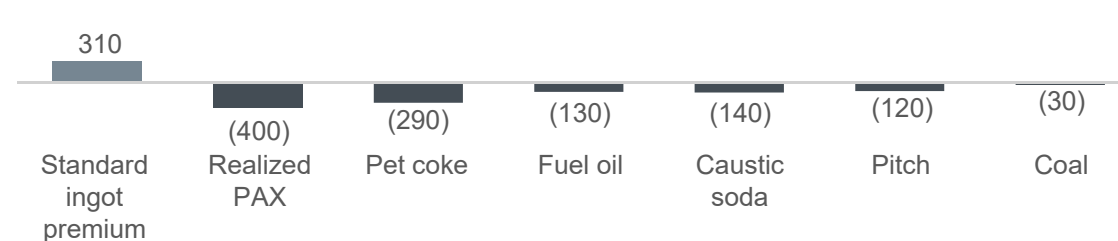
NOK million	USD	BRL	EUR
UEBIT	3 970	(1 060)	(250)

## Sensitivities with 50% production

Aluminium price sensitivity +10%, NOK million



Other commodity prices, sensitivity +10%, NOK million



Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	2 870	(1 060)	(250)

Annual sensitivities based on YTD Q3 18 realized prices as a starting point LME USD 2 200 per mt, standard ingot premium (Europe duty paid) 175 USD/t, realized PAX 460 USD/t, fuel oil USD 495 per mt, petroleum coke USD 435 per mt, caustic soda USD 610 per mt, coal USD 85 per mt, USD/NOK 8.0, BRL/NOK 2.2, EUR/NOK 9.6. LME and PAX sensitivities reflect financial exposures to movement in the respective prices, net of LME/PAX indexed costs. The net exposures might deviate from the net physical position. B&A and PM sensitivities reflect internal pricing of alumina assuming planned 2018 PAX exposure before the curtailment. The 50% sensitivities are simplified estimates based on full year 50% curtailment of Alunorte and Albras, ignoring any effects from the Force Majeure clauses.

BRL sensitivity calculated on a long-term basis with fuel oil assumed in USD. In the short-term, fuel oil is BRL-denominated. Fixed costs in B&A and PM assumed constant between the production scenarios.

<sup>1)</sup> U NI sensitivity calculated as U EBIT sensitivity after 30% tax

# Bauxite & Alumina sensitivities

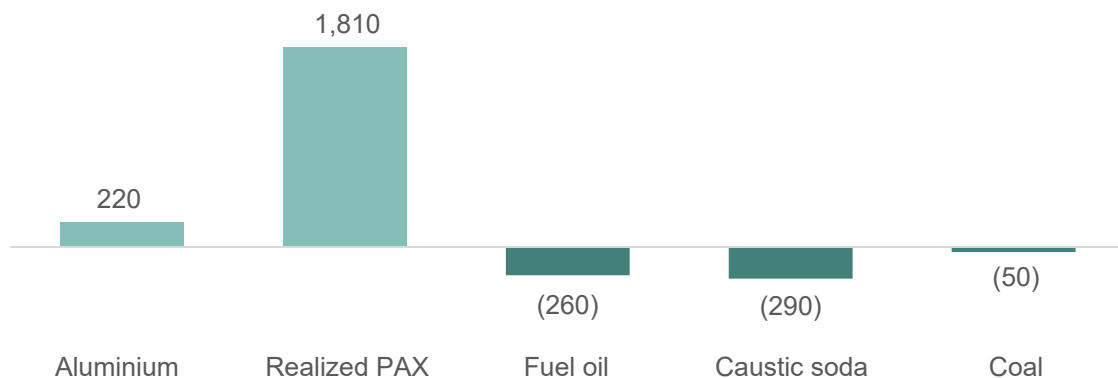


## Sensitivities affected by the Alunorte curtailment

### Sensitivities with full production

Annual sensitivities on underlying EBIT if +10% in price

NOK million



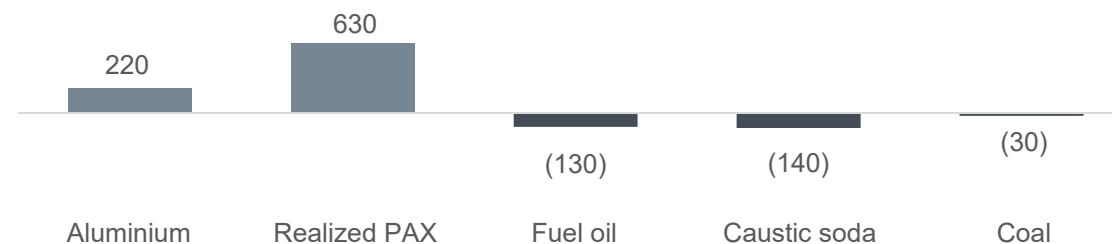
### Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	1 510	(720)	-

### Sensitivities with 50% production

Annual sensitivities on underlying EBIT if +10% in price

NOK million



### Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	640	(720)	-

Annual sensitivities based on YTD Q3 18 realized prices as a starting point LME USD 2 200 per mt, standard ingot premium (Europe duty paid) 175 USD/t, realized PAX 460 USD/t, fuel oil USD 495 per mt, petroleum coke USD 435 per mt, caustic soda USD 610 per mt, coal USD 85 per mt, USD/NOK 8.0, BRL/NOK 2.2, EUR/NOK 9.6. LME and PAX sensitivities reflect financial exposures to movement in the respective prices, net of LME/PAX indexed costs. The net exposures might deviate from the net physical position. B&A and PM sensitivities reflect internal pricing of alumina assuming planned 2018 PAX exposure before the curtailment. The 50% sensitivities are simplified estimates based on full year 50% curtailment of Alunorte and Albras, ignoring any effects from Force Majeure clauses.

BRL sensitivity calculated on a long-term basis with fuel oil assumed in USD. In the short-term, fuel oil is BRL-denominated. Fixed costs in B&A and PM assumed constant between the production scenarios.

# Primary Metal sensitivities

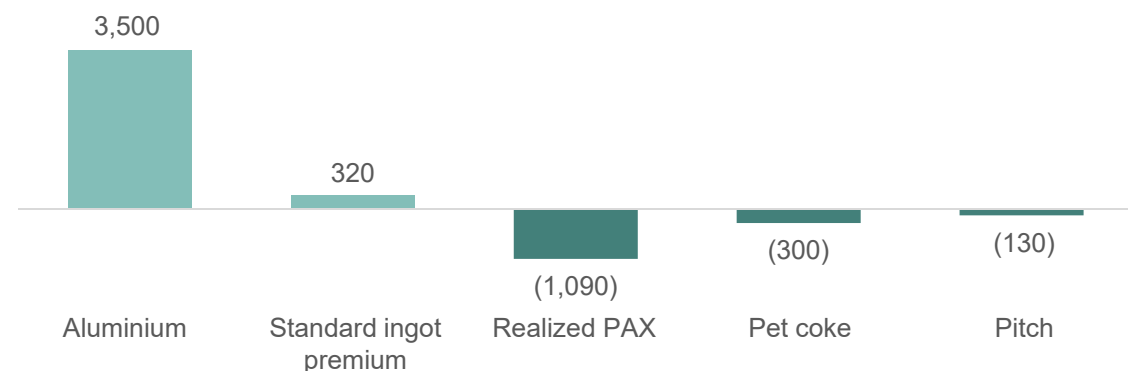


## Sensitivities affected by the Albras curtailment

### Sensitivities with full production

Annual sensitivities on underlying EBIT if +10% in price

NOK million



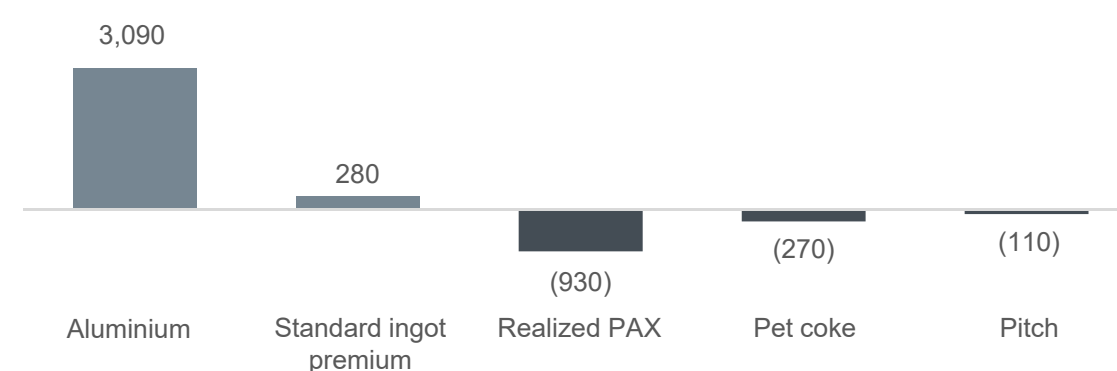
### Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	2 000	(340)	(260)

### Sensitivities with 50% production

Annual sensitivities on underlying EBIT if +10% in price

NOK million



### Currency sensitivities +10%

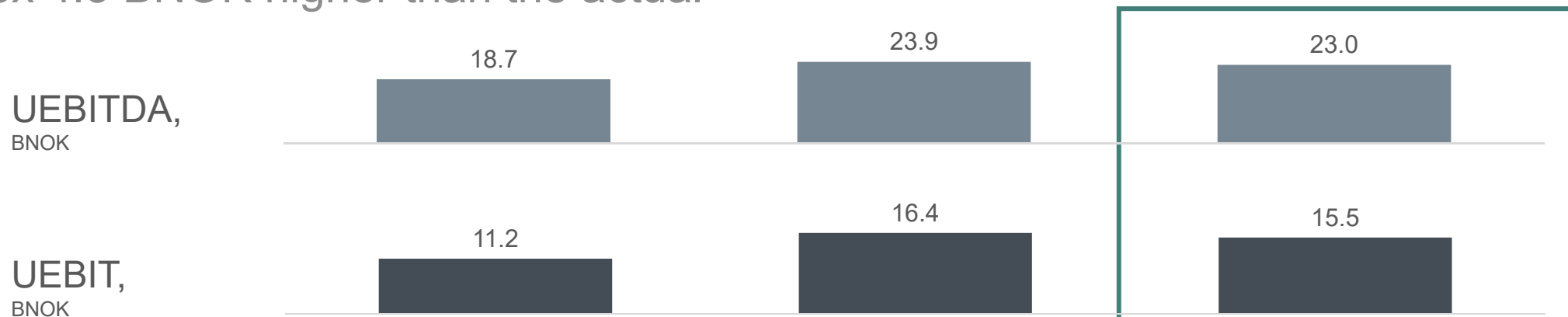
NOK million	USD	BRL	EUR
UEBIT	1 800	(340)	(260)

Annual sensitivities based on YTD Q3 18 realized prices as a starting point LME USD 2 200 per mt, standard ingot premium (Europe duty paid) 175 USD/t, Realized PAX 460 USD/t, fuel oil USD 495 per mt, petroleum coke USD 435 per mt, caustic soda USD 610 per mt, coal USD 85 per mt, USD/NOK 8.0, BRL/NOK 2.2, EUR/NOK 9.6. LME and PAX sensitivities reflect financial exposures to movement in the respective prices, net of LME/PAX indexed costs. The net exposures might deviate from the net physical position. B&A and PM sensitivities reflect internal pricing of alumina assuming planned 2018 PAX exposure before the curtailment. The 50% sensitivities are simplified estimates based on full year 50% curtailment of Alunorte and Albras, ignoring any effects from Force Majeure clauses. Fixed costs in B&A and PM assumed constant between the production scenarios.

# Basis for long-term scenarios



Estimated UEBITDA YTD Q3 annualized at full production and average Q1 PAX alumina index 4.3 BNOK higher than the actual



	YTD Q3 18 annualized <sup>1)</sup>	YTD Q3 18 annualized at full production and avg realized prices <sup>4)</sup>	YTD Q3 18 annualized at full production and avg Q118 realized PAX <sup>5)</sup>
Production capacity Alunorte, Paragominas, Albras	Jan –Feb 100%; Mar-Dec 50% <sup>2)</sup>	100%	100%
Realized LME, USD/t	2 200	2 200	2 200
Realized premium, USD/t	340	340	340
Realized PAX, USD/t	460	460	390
USD/NOK	8,0	8,0	8,0
BRL/NOK	2,2	2,2	2,2
Better program, BNOK	(0,5)	2.3 <sup>3)</sup>	2.3 <sup>3)</sup>

1) YTD Q3 18 annualized except for Albras excess power sales, which are YTD Q3 18 actual.

2) Alunorte was curtailed in March, Albras in April 2018

3) Better program at full production assuming 2.3 BNOK realized in Better program by 2018 (1.8 BNOK delivered by end-2017 and 0.5 BNOK delivered in 2018 target).

4,5) Based on simplified curtailment effect calculations in Primary Metal and Bauxite&Alumina (see p.52)

5) Adjustment based on Hydro price sensitivities for realized PAX alumina index from YTDQ318 average of 460 USD/t to Q118 average of 390 USD/t. Sensitivities based on estimated 2018 PAX exposure before the curtailment. Including alumina costs adjustment for the Neuss smelter in Rolled Products

# UEBITDA potential at full production



Scenarios are not forecasts, but represent earnings potential based on sensitivities

## Indicative UEBITDA-range in 3 scenarios



### Additional factors influencing earnings (not included in the scenarios):

Production volumes, alumina sales pricing on PAX, energy prices, downstream margin developments, raw material cost development, premiums, inflation, currency, depreciation, other

YTD Q318 annualized underlying EBITDA at full production and average Q118 realized PAX index as a basis (see p. 65). USD/NOK 8.0, BRL/NOK 2.2, realized premium above LME 340 USD/mt, PAX 390 USD/mt assumed for all scenarios. Other assumptions unchanged.

Improvements used for scenarios exclude Extruded Solutions.

1) Assuming 2.3 BNOK realized in Better program by 2018 (1.8 BNOK delivered by end-2017 and 0.5 BNOK delivered in 2018 target). Future improvement efforts in real 2015 terms, before depreciation.

# FCF potential at full production and average 2018-2021E sustaining capex



Scenarios are not forecasts, but represent earnings potential based on sensitivities

Indicative Free cash flow (FCF) range in 3 scenarios



**Additional factors influencing earnings (not included in the scenarios):**

Production volumes, alumina sales pricing on PAX, energy prices, downstream margin developments, raw material cost development, premiums, inflation, currency, taxes, investments, interest expense, depreciation, other

YTD Q318 annualized underlying EBITDA at full production and average Q118 realized PAX index as a basis (see p. 65). USD/NOK 8.0, BRL/NOK 2.2, realized premium above LME 340 USD/mt, PAX 390 USD/mt assumed for all scenarios. Average 2018-2021E sustaining capex of 6,5-7 BNOK. Other assumptions unchanged.

Improvements used for scenarios exclude Extruded Solutions.

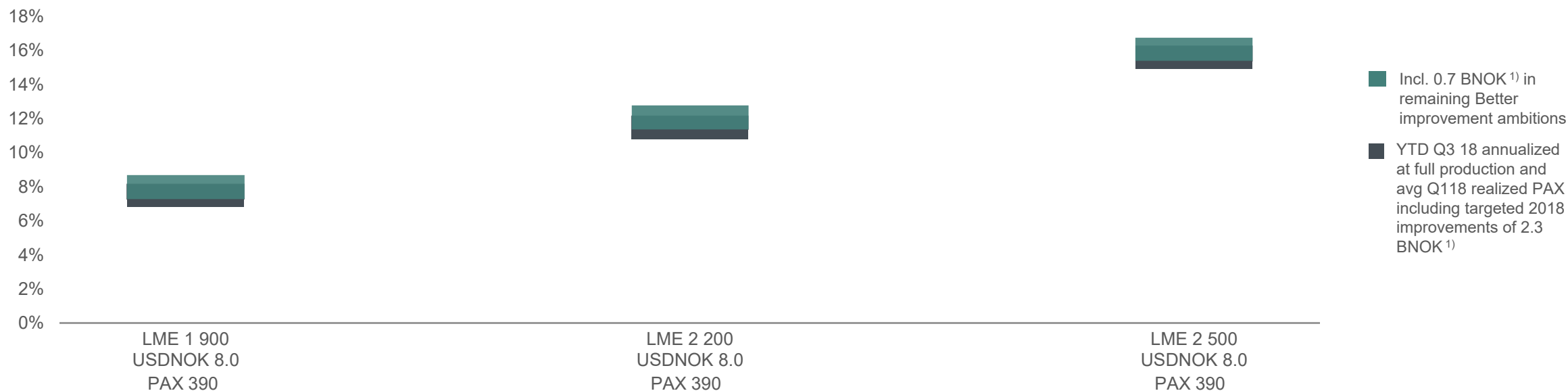
1) Assuming 2.3 BNOK realized in Better program by 2018 (1.8 BNOK delivered by end-2017 and 0.5 BNOK delivered in 2018 target). Future improvement efforts in real 2015 terms, before depreciation.

# URoaCE potential at full production



Scenarios are not forecasts, but represent earnings potential based on sensitivities

Indicative URoaCE range in 3 scenarios



## Additional factors influencing earnings (not included in the scenarios):

Production volumes, alumina sales pricing on PAX, energy prices, downstream margin developments, raw material cost development, premiums, inflation, currency, taxes, interest expense, other

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03

# Financial targets and aspiration

# Driving long-term shareholder value

Balancing capital allocation and financial strength

## Solid balance sheet and liquidity

- Maintain financial flexibility
- Enable access to capital markets
- Navigate through the cycles
- Manage business risks
- Act on opportunities



## Capital expenditures

- Sustaining capex to ensure operational excellence
- Investments to keep market share, reduce costs, strengthen margins

## Predictable dividend

- Deliver competitive cash returns to shareholders

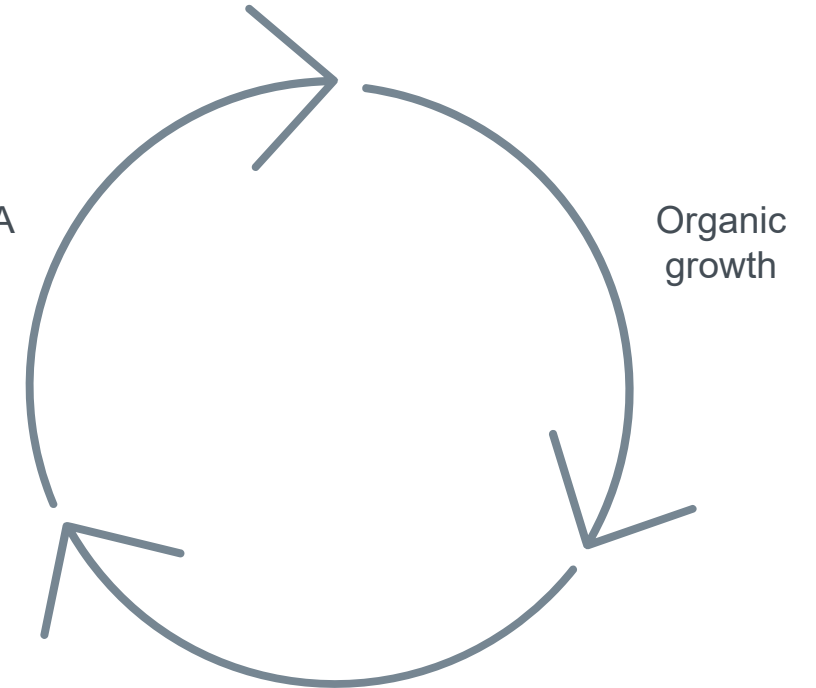


## Long-term shareholder value\*

- Reinvest in profitable growth
- or*
- Return to shareholders



M&A



Distribution to shareholders

\* Allocation based on best risk-adjusted returns

# Hydro's aspiration underpinned by firm financial targets



Medium and long-term

	Ambition	Timeframe	CMD 2018 status
<i>Better</i> improvement ambition	3.0 BNOK	2016-2019	(0.5) BNOK 2018E
Dividend payout ratio	40% of net income	Over the cycle	~70% <sup>1)</sup> 2013-2017
FFO/adjusted net debt <sup>2)</sup>	> 40%	Over the cycle	68% LTM Q3-18
Adjusted net debt/Equity	< 55%	Over the cycle	27% Q3-18
URoACE	Competitive <sup>3)</sup>	Over the cycle	8.9 % <sup>4)</sup> LTM Q3-18

*Better Bigger Greener*

1) Payout ratio 5 year average – dividend per share divided by earnings per share from continuing operations for the last 5 years

2) FFO – funds from operations

3) Measured against a relevant peer group

4) Underlying return on average capital employed after tax (URoACE)

## Maintaining financial strength and flexibility

- Balance sheet strength and liquidity
- Predictable and competitive dividend
- Continuous cost and margin improvements
- Disciplined capital allocation
- Focus on net operating capital management
- Effective risk management



Ted



Hydro