



Smelter Gross Profit Drivers

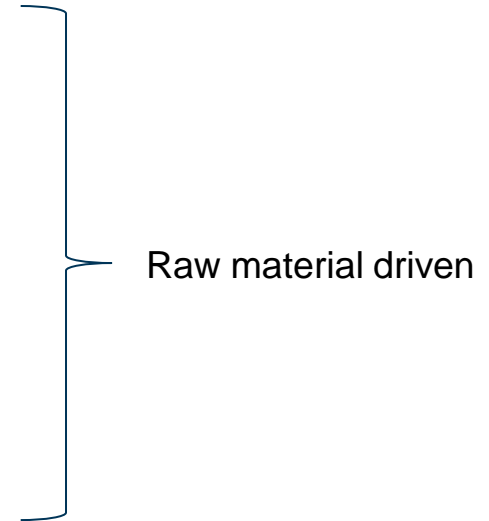
Capital Markets Day
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BOLIDEN

Gross profit Components

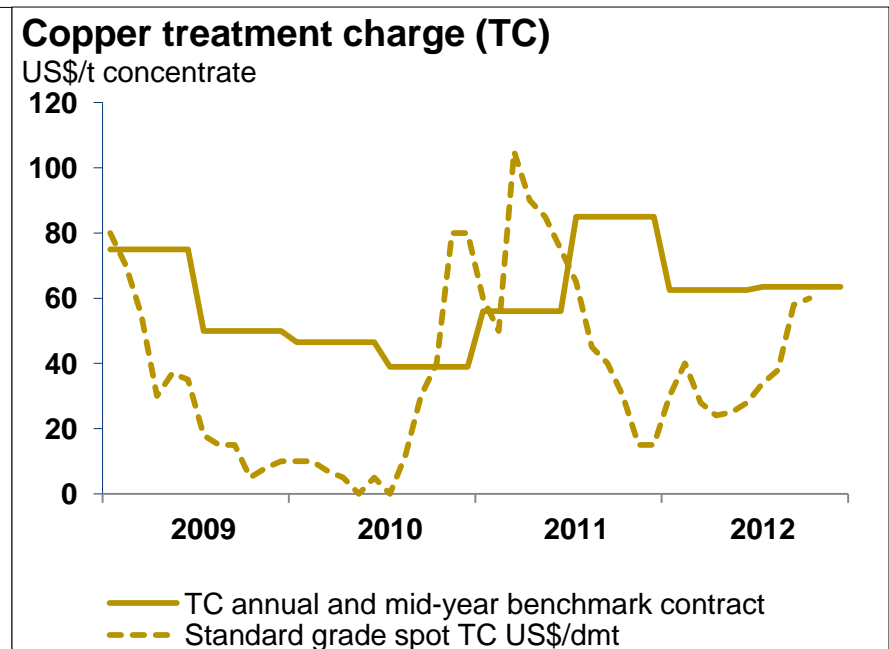
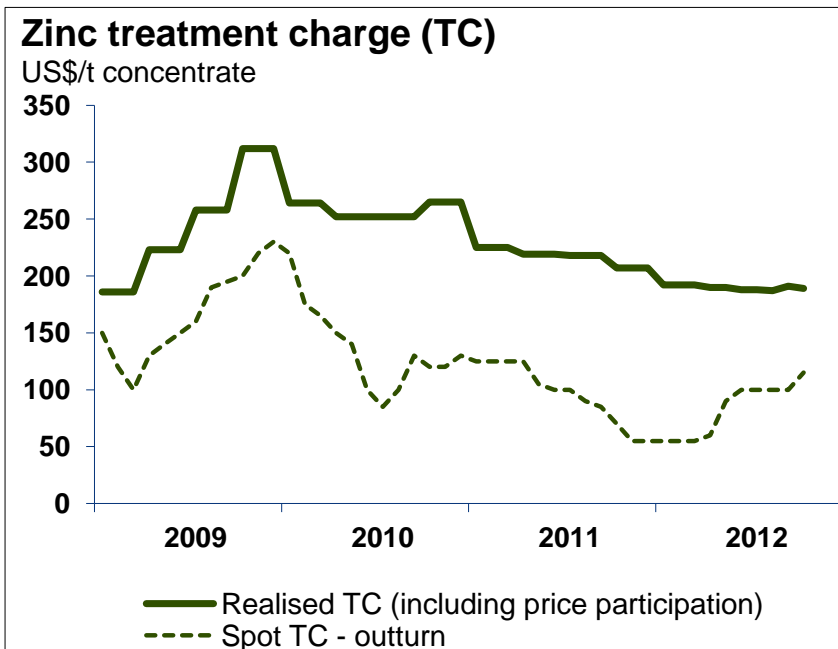
- **Treatment charge (TC)**
 - calculated/based on Dry Metric Ton (dmt) of raw material
- **Refining charge (RC)**
 - calculated/based on pound of payable metal in for copper (oz for gold and silver)
- **Free metal**
 - the difference between recovered metal and payable metal
- **Premium**
 - paid above LME price for finished products
- **By-products**
 - Sulphuric acid, Aluminium fluoride, Ni- sulphate Cu- sulphate, Selenium etc.



Treatment Charge (TC) & Refining Charge (RC)

- Paid by miners to smelters for converting raw material to metal
- Negotiated annually between miners and smelters

- Drivers
 - Supply & demand
 - Quality
 - Metal price (price escalators for zinc)



Source: © CRU (www.crugroup.com)



Free metal

- Free metal is the difference between produced (recovered) metal and payable metal
- Drivers
 - Contract terms (payables)
 - Process recovery in Smelter
 - Metal price

Typical payables & recoveries

	Cu	Au	Ag	Zn
Payable	96,6%	95,0%*	90,0%**	85,0%***
Recovery	97,5%	99,0%	98,0%	97,0%
Free metal	0,9%	4,0%	8,0%	12,0%

* subject to 1 gram minimum deduction (20 g/mt)

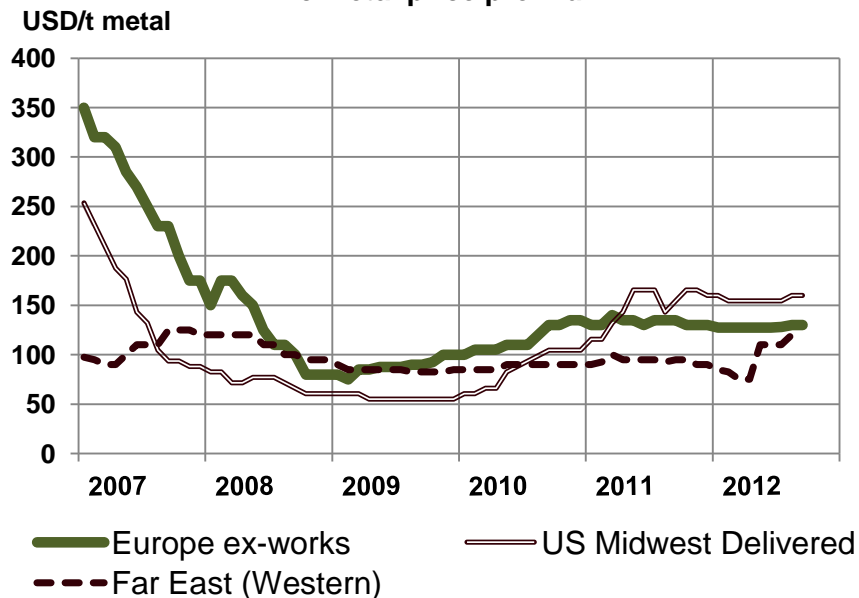
** subject to 30 gram minimum deduction (300g/mt)

*** subject to 8%-units minimum deduction (53,33%)

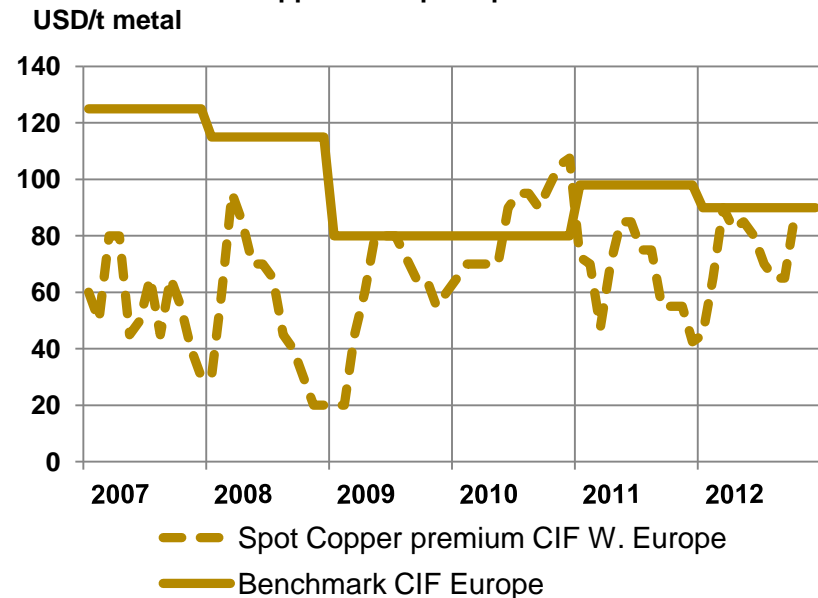
Premiums

- The value of metal premium depends on:
 - Regional supply/demand
 - The product
 - The amount of value added in customer service functions
 - Delivery and payment terms

Zinc metal price premium



Copper metal price premium

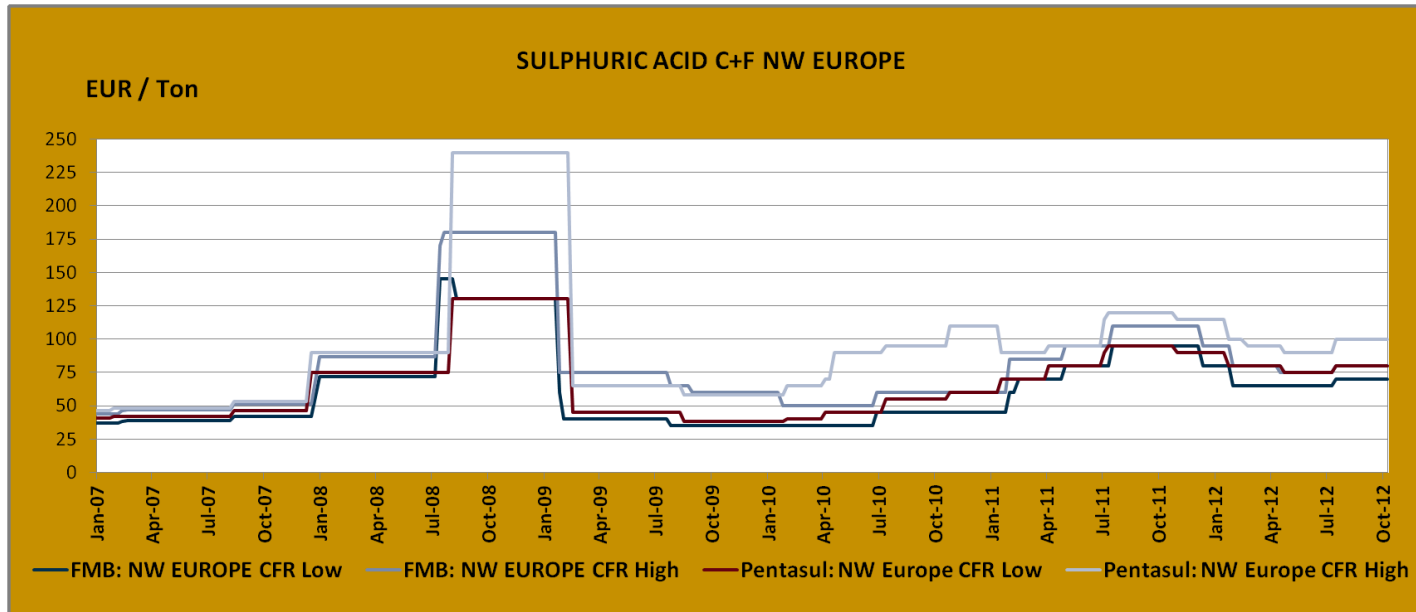


Source: © CRU (www.crugroup.com)

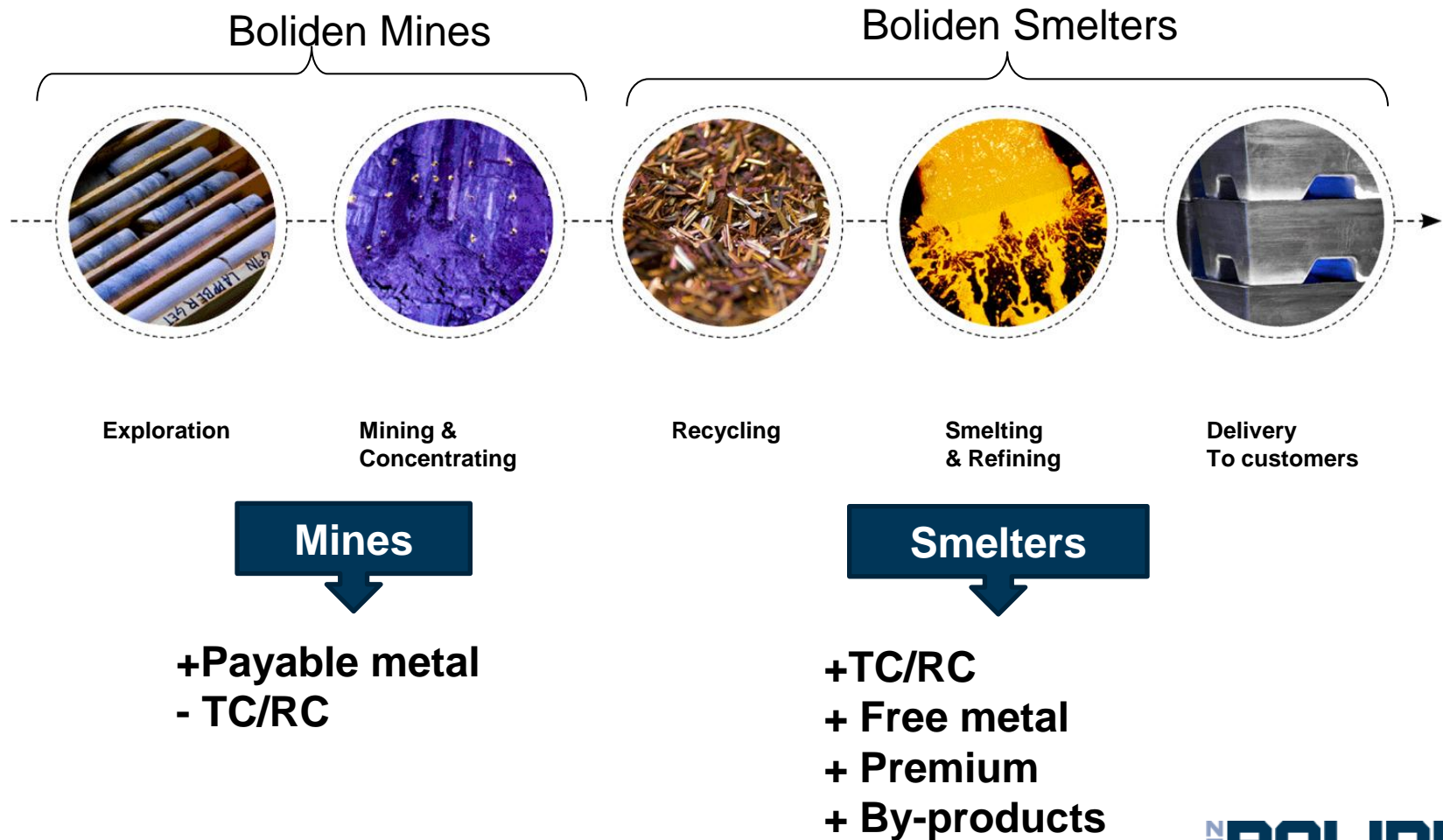


By-products

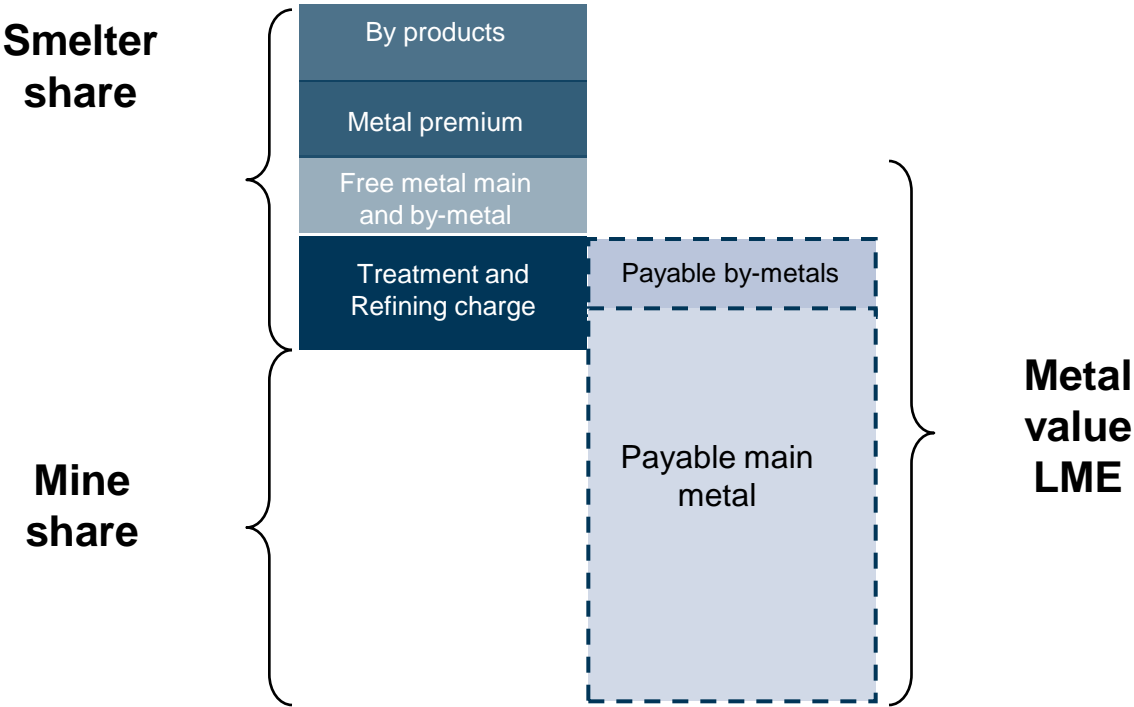
- Main by-product is sulphuric acid
- Other by-products include aluminium flourid, Copper sulphate, Nickel sulphate, selenium and other precious metals
- Priced as products, not directly based on LME
- Not payable in raw material
- Supply and demand driven price



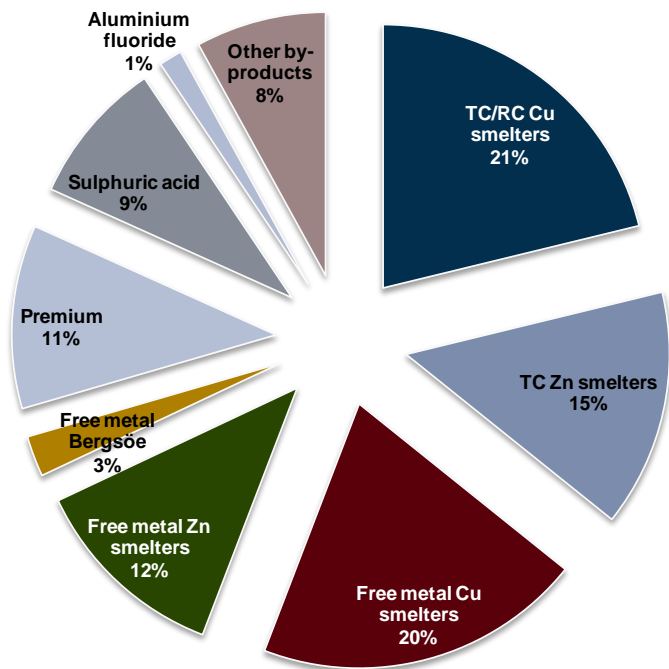
Gross Profit in The Boliden value chain



Value split between mines and smelters



Gross Profit Distribution 2012 Q1-Q3



Gross Profit component	Contains
TC/RC Copper smelters	TC/RC on Cu, Ni & Pb concentrate and secondary raw materials
TC Zinc smelters	TC on concentrate and secondary raw materials
Free metal Cu smelters	Over recovery of copper, gold, silver, lead and zinc
Free metal Zn smelters	Over recovery of zinc and silver
Free metal Bergsöe	Over recovery of lead
Premiums	Paid above LME price
By-products	Sulphuric acid, Aluminium fluoride, Cu- and Ni-sulphate, OPM's

Metals for modern life

