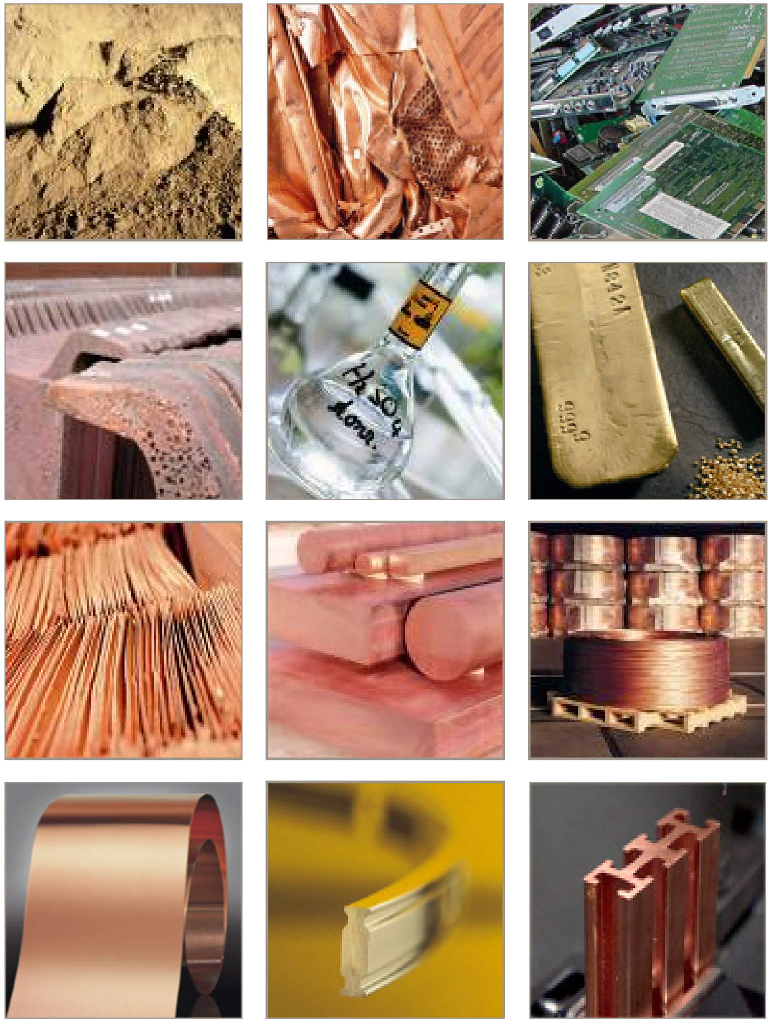
Aurubis



LME / Hedging

The London Metal Exchange (LME)

» The LME is the world's premier non-ferrous metals market offering futures and options contracts for Al, Cu, Sn, Ni, Zn, Pb, Al alloy and also for steel billets and minor metals.

- LME services:
  - Pricing
    - The LME provides a regulated, transparant forum for the trading of futures and options contracts. The LME announces each day a set of official prices used by the industry worldwide as the basis for contracts for physical material.
  - Risk management
    - The LME offers the opportunity to hedge the material price risk through its trading members.
  - Physical delivery
    - As a market of "last resort", the industry can use the LME's delivery option to sell excess stock in times of over supply or as a source of material in times of extreme shortage. In reality, physical delivery occurs in a very small percentage of cases.

Copper on the LME

- The basis for LME price quotations is USD.

- The cash and the 3 months price are the most active basis for LME trades.
  Following prompt dates are possible for LME trades:

Cash :	2 business days from date of contract
Then out to 3 months :	every London working day
Then months 3 to 6 :	weekly (every Wednesday)
And months 7 to 63 :	monthly (every 3rd Wednesday of the month)

- Trade is conducted in lots rather than tonnes. The lot size for Cu is 25t and in the form of Grade A Copper Cathodes.

- The LME also offers traded option contracts based on each of these futures contracts.

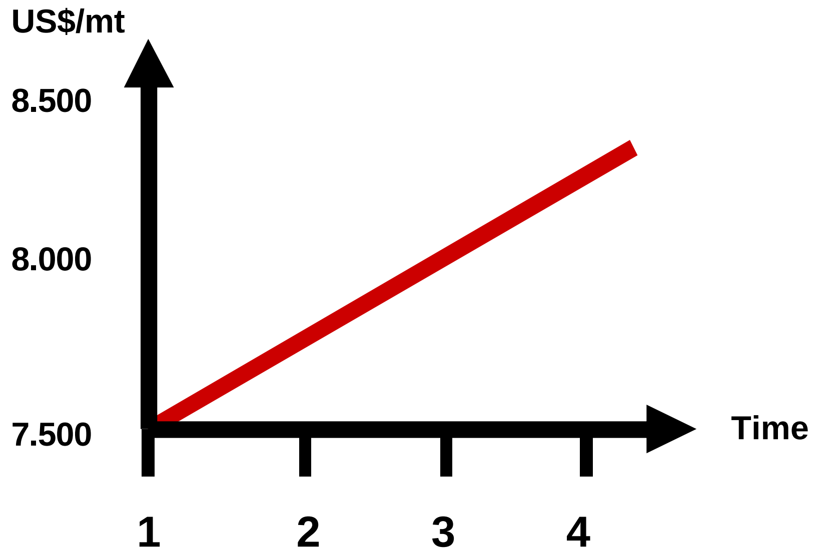
- Besides LME, Cu is also traded on COMEX in New York and on the Shanghai Futures Exchange.

- For more information:
  - Website LME: www.lme.co.uk

Glossary – Wording in the Copper Trade

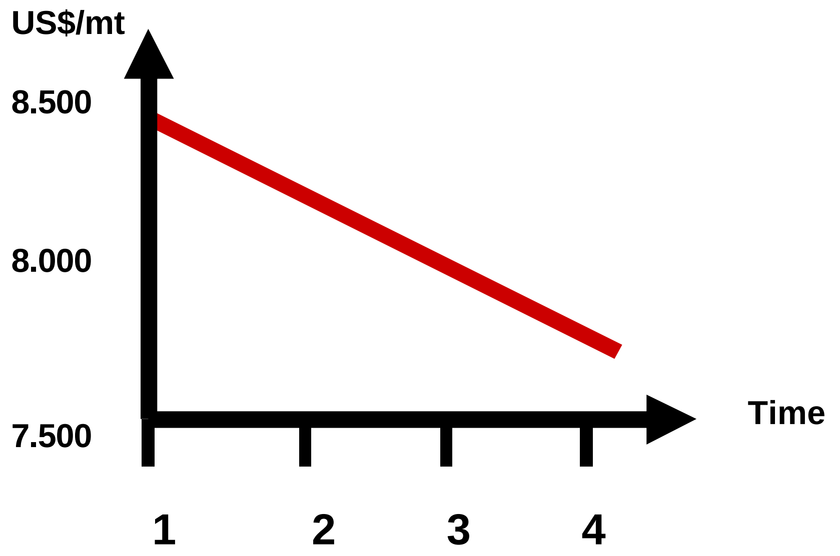
Contango:

Market situation when a nearby price is **lower** than a further forward price (covering interest – storage costs and insurance costs of the material and therefore limited)



Backwardation:

Market situation when a nearby price is **higher** than a further forward price (depending on offer and demand and therefore unlimited – apart from some limits set by LME to avoid squeezing)



Typical Wording in the Copper Trade

- Fixation methods =

1. Fixation on one LME day settlement (also called fixation on the unknown of the morning session of the LME)

2. Fixation on the LME average

3. Fixation on a (forward) spot price of the LME

Hedging objectives:

» For the **producer:**
  - » **To secure the highest possible price for the metal produced in the future.**

» For the **trader/fabricator:**
  - » **To eliminate the risk of price adversely changing between the purchase and the sale.**

    (The actual price level is in this case not important)

» For the **consumer:**
  - » **To secure the lowest possible price for the metal to be purchased in the future.**

All objectives are achieved using the same tools in a slightly different way

Practical considerations when hedging

- Cash-flow issues
- Optimum utilization of credit limits; avoiding margin calls
- Types of pricing: average, spot, unknown and known.
- Choosing a contract currency
- Carry or not to carry?
- Control and supervision: daily valuations, graphical methods, software products
- End of Year valuation of open positions
- Cost of Hedging (margin calls, broker’s commissions, option premiums)
- Board’s and shareholders understanding of hedging

Situation at Aurubis

» Aurubis is a smelter/refiner/transformer:

Our value added is the production of marketable copper cathodes from copper concentrates, scrap and recycling raw materials which are processed further into copper products.

Hence, our aim is to ensure the income from TC/RC‘s for smelting/refining and to earn the copper cathode premium as well as the surcharges for the sale of our products

We need to hedge against negative copper price fluctuations in order to neutralize the copper price while the material is processed in our plant

Copper Production – Value Added Chain

Value Added Product Level:

Value Added Current Price Equivalent:

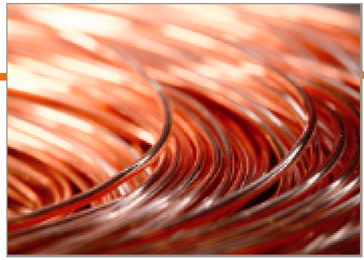
» Concentrate

LME less Treatment and Refining Charge (TC/RC)

» Cathode

LME plus Cathode Premium, for fixation on LME average

» Copper Products



plus Products Surcharge (Transformation charge)

Metal Hedging policy at Aurubis

Why does Aurubis hedge?... Because of the price volatility!

The Aurubis business model includes the buying and selling of metals and is influenced by exchange rate fluctuations.

Aurubis policy is to be fully hedged at all times, NOT to make gains based on taking speculative positions.

As soon as there is a commitment on one side, it must be balanced on the other side by an opposite transaction with the same pricing or by a paper contract.

Principles of hedging

Example:

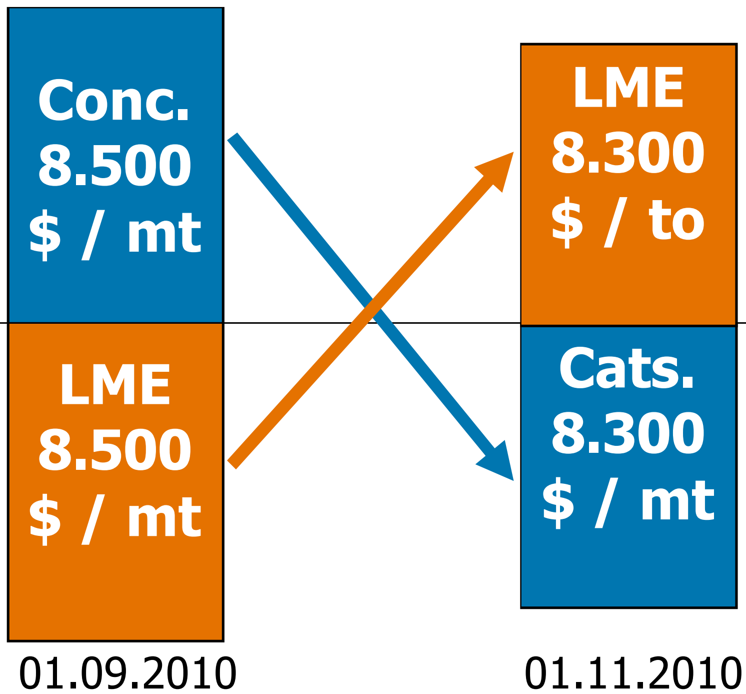
- at the time of the **physical PURCHASE** on 01.09.2010 simultaneously **SALE on the LME**

- at the time of the **physical SALE** on 01.11.2010 simultaneously **PURCHASE on the LME**

➔ neutral result !!!

Purchase

Sale



Physical trades

Loss - $ 200 /mt

LME trades

Profit + $ 200 /mt

Result: = $ 0 /mt