NEW ECONOMIC SCHOOL
Masters in Economics of Energy and Natural Resources

Economics of Metals

Module 3, 2019-2020

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Course information

Course Website:

Instructor's Office Hours:

Class Time:

Room Number:

TAs:

Course description

The course will cover all the major aspects of economics of metals. This will include fundamental concepts like cost curves and pricing regimes as well as practical aspects such as hedging strategies, metal-linked financial products and contractual pricing mechanisms. Upon completion of the course a student
- will learn fundamentals of main metals,
- will understand key principles of metals trading (including physical and financial markets),
- will be able to model the pricing for different metals,
- will understand how megatrends affect demand for and supply of main metals,
- will be able to build basic DCF models for mining companies.

Course requirements, grading, and attendance policies

The course will contain of 2 lectures and 1 seminar per week.
The course grade will be set taking into account the following performance items: end-lecture quizzes (20%), essay (30%) and final exam (50%).

Course contents

1. Introduction
    a. Metals in the context of human being history
    b. Metals in the context of all commodities
    c. Classification, specifics, characteristics of different metals (market volumes, prices, etc)
2. Fundamentals: demand, supply, prices
    a. Demand models

   b. Costs curves and pricing regimes
   c. Value in use concept
   d. Byproduct concept
   e. Production value chain
   f. Relevant megatrends (past and future)
   g. Recycling
   h. Investments cycles
3. Metals and financial markets
   a. Financial products
   b. Investments products (ETF, Streaming, etc.)
   c. Hedging
      i. General principles and approaches
      ii. Examples
   d. Valuation of mining companies (metrics, specifics, DCF, LoM, пр.)
4. Metals trading
   a. Pricing benchmarks
   b. Incoterms (CIF, FOB, DAP, FCA, ExW, etc.)
   c. Logistics, arbitrage
   d. Full pricing concept
   e. Trading structure
   f. Typical contracts and sales approaches

Description of course methodology

The lectures will be illustrated with slides and will include real life cases.

Sample tasks for course evaluation

1. There is a copper sales contract where the price is determined as of M+1 or M+3 LME cash month average at buyer's option (where M – is moth of delivery). The seller would like to change the pricing to M LME cash average. What would be the equivalent pricing then?
2. The Company produces 50kt of copper as well as 2kt of cobalt as byproduct. The cost production of 1 tn of copper is 5000 USD. What would be the effective cost of copper taking into account cobalt credit with different prices of cobalt? At what price of cobalt the effective cost of copper production will be less than 4000 USD?

Course materials

Required textbooks and materials

TBD

Additional materials

TBD

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Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.

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