



**UNIVERSITY OF PIRAEUS**

**Department of International & European Studies**

MSc in Energy: Strategy, Law and Economics

# Special Issues in energy finance & risk management

*“What is Risk Management?”*

Sat, 14 nov 2020

A photograph of a business meeting in a modern office with large windows overlooking a city. The image is overlaid with a semi-transparent red and orange geometric pattern consisting of triangles and lines. The text "Basic Principles of Risk Management" is centered in white.

# Basic Principles of Risk Management

# Risk Management: In few words

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## What Is Risk Management?

Dealing in energy trading and the existence of price volatility exposes traders to RISKS. This is why it is imperative to execute risk management strategies to mitigate and manage the risks associated with trading positions for investment or hedging purposes.

Risk managers but also the traders themselves need to have a consolidated view of these risks

- understanding market swings,
- quantifying net exposures and
- determining specific trading limits and trading mandates

serve to establish a firm handle on these energy trading risks and how to effectively manage them.

Essentially, risk management means reducing uncertainty by controlling those factors that can be controlled since it is impossible to predict the outcome of an uncertain event!

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# Types of Risk & Risk Management Governance



# Types of Risk in general



## Strategic

- Board Performance / Tone at the Top
- Shareholder Expectations
- Third-Party Relationships
- Strategic Planning
- Annual Budgeting & Forecasting
- Alliances and Partnerships
- Competition
- Macro-Economic Factors
- Socio – Political Events
- Employee Communication
- Growth
- Innovation

## Operations

- Marketing and Advertising
- Research and Development
- Customer/ Support Management
- Procurement and Inventory
- Transportation and Logistics
- Recruiting and Retention
- IT Security/ Access
- Natural Events
- Geopolitical Events
- Property, Plant and Equipment
- Scalability
- Management Information Systems
- Control Environment
- Environment / Health and Safety
- Intellectual Property / Trademarks

## Compliance

- Management Fraud
- Contract
- Ethics
- Liability
- Trade Regulations
- Customs Regulations
- Tax Compliance and Audit Management
- Accounting, Reporting and Disclosure

## Financial

- Interest Rate Changes
- Foreign Exchange Fluctuations
- Commodity Price Fluctuations
- Cash Visibility & Forecasting Capabilities
- Cash Movement – Domestic & Cross-Border
- Funding Abilities
- Liquidity Concentration
- Working Capital Management
- Insurance
- Debt Management
- Equity

# Types of Risk in energy trading

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Energy traders are likely to be exposed to any of, or a combination of the following commodity risks:

**Price risks:** These arise as a result of adverse movement in the prices of oil/gas/power that are determined by macroeconomic factors (supply/demand).

**Quantity Risk:** Quantity risks arise due to changes in the availability of the commodities or in the fluctuation of the demand.

**Cost risk:** Costs risks are a result of an increase in the costs of commodities (or the transportation).

**Regulatory risk:** When laws and regulations have the potential to impact on the prices or availability of commodities, then there is a regulatory risk.

# Sectors exposed to Risk

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## Which Sectors are More Exposed to Commodities Risk?

While risk is a part of commodity trading, traders in the following sectors of the commodity markets are mostly exposed to commodities risks.

- Mining and Minerals sector like Gold, steel, coal
- The agricultural sector like wheat, cotton, sugar
- Energy sectors like Oil, Gas, Electricity

# Risk Management Governance

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Which should be the main elements of our Corporate's  
"Risk Management Governance"?

1. Exposure identification and recognition
2. Exposure aggregation and consolidation
3. Hedging transaction execution
4. Risk mitigation/ performance assessment



The background of the slide features a blurred office scene with several people in business attire. A large, semi-transparent red geometric shape, resembling a stylized 'X' or a diamond, is overlaid on the right side of the image. The text 'Commodity Price Risk' is centered on the left side of the image.

# Commodity Price Risk

# Price Benchmarking

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## Benchmark/ Reference Prices in Commodity Markets

In the commodities markets, a benchmark is defined as **an external reference price** (i.e. outside of the control of the contracting parties) that are acceptable to both the buyer and seller to be used directly or as a base for establishing the agreed price in the contract. Crucially, for a benchmark to be recognized and adopted, it needs to reflect **actual prices being agreed / traded across the marketplace**. Fluctuations in commodity prices most often has a direct impact on the structured margins i.e. profitability of an entity.

Where pricing benchmarks are transparent and similar benchmarks are available in derivative markets, commodity price risk may be managed through hedging the exposures.

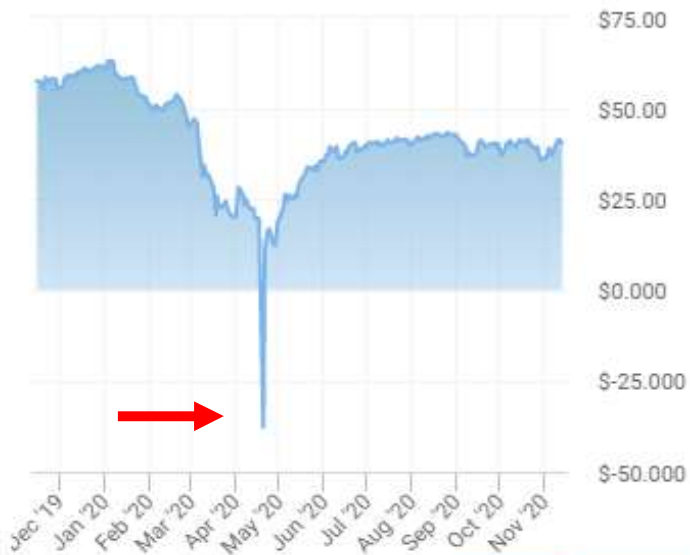
# 2020 – what a year globally!



03:27 am CST 13/11/2020

Technicals

**WTI Crude** (December Contract)  
**40.57 -1.36%**



1D | 1WK | 1M | 1YR | Max

Copy

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2020 has been an excellent year...for educational purposes in terms of RISK!

The pandemic has caused:

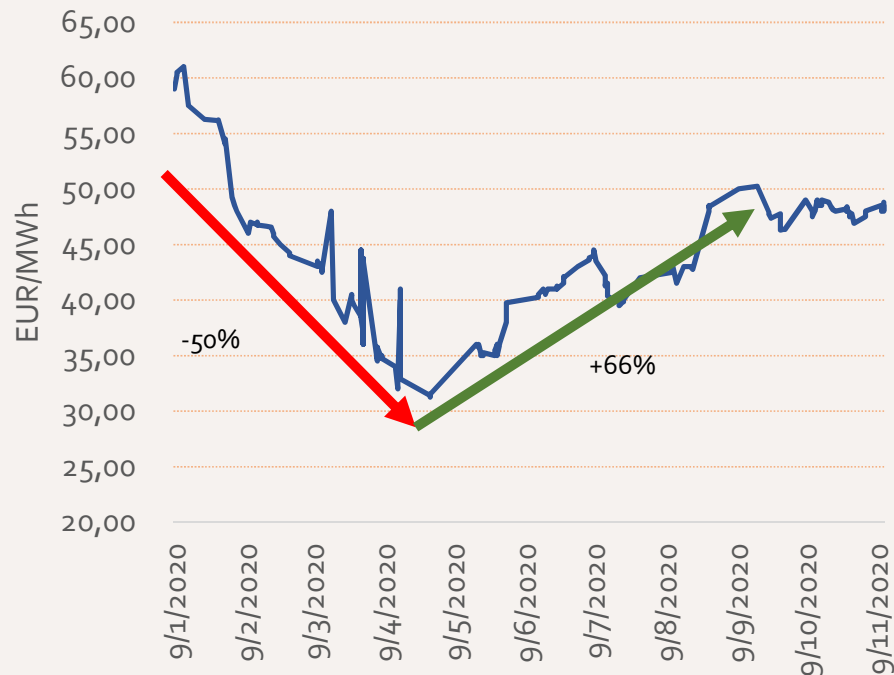
1. Extraordinary drop of demand
2. Extraordinary drop of commodities prices
3. Plenty of trading companies which cannot survive

Source: <https://oilprice.com/oil-price-charts/>

# 2020 – what a year for us!



Greek Month Ahead Power Contract in  
2020



Source: <https://e-ntelligence.eu/>

In EEX the Month Ahead power contract for the Greek Index has:

1. Lost almost 50% of its value from Jan to April
2. Gained almost 66% of its value from May to Sept
3. Extraordinary price fluctuation
  - a) Extreme cash flow pressure
  - b) Extreme need for margin calls
  - c) Hell for Risk Managers
  - d) Heaven for...some Traders

# Effects of price Ups

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## A rise in commodity prices can

- Increase sales revenue for producers or suppliers if demand is not impacted by the price increase. This in turn can lead to an increase in the value of the business.
- Increase competition as producers increase supply to benefit from price increases and/or new entrants seek to take advantage of higher prices
- Reduce profitability for businesses consuming such commodities (if the business is unable to pass on the cost increases in full), potentially reducing the value of the organization

# Effects of price Downs

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## A fall in commodity prices can

- Decrease sales revenue for producers and suppliers, potentially decreasing the value of the organization, and/or lead to change in business strategy
- Reduce or eliminate the viability of production (mining or oil/gas upstream) and primary producers may alter production levels in response to lower prices
- Decrease input costs for businesses consuming such commodities, thus potentially increasing profitability, which in turn can lead to an increase in value of the business
- Affect new investments and maintenance operations which are vital for the continuation of the processes

*Source: Commodity Price Risk Management | A manual of hedging commodity price risk for corporates, Deloitte.*



# Effects of price Ups & Downs



## Financial impact on commodity price movement

SNo	Price Movement	Impact			
		Inventory Impact	Sales	Purchasing	Earnings
1	Fall in commodity price	Higher cost of inventory which would lead to a constraint in cash flow.	Reduced sales values due to lower price - which impacts profitability	Increase in purchasing power leading to higher volumes purchased	Net realizable value is below cost and sales realizes at lower value thereby reducing earnings
2	Rise in commodity price	Lower cost of inventory which would lead to increase in cash flow	Increased sales values due to higher price	Decrease in purchasing power	Net realizable value is above cost and sales realizes at same or higher value thereby increasing earnings

Source: Commodity Price Risk Management | A manual of hedging commodity price risk for corporates, Deloitte.

A photograph of a business meeting in a modern office. In the foreground, a man in a brown suit and tie is writing on a whiteboard with a white marker. In the background, several other business professionals are standing near large windows, looking out at a cityscape. The scene is overlaid with a large orange and red geometric graphic consisting of two triangles meeting at a point. The text "We are." is written in white on the left side of the image.

**We are.**

# We are.

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An experienced team of Energy and IT experts operate under E-ntelligence ltd umbrella since 2013.

The founder & Owner:

- ***Ioannis Psarros**, Power Trader since 2008*

*Linkedin profile:*

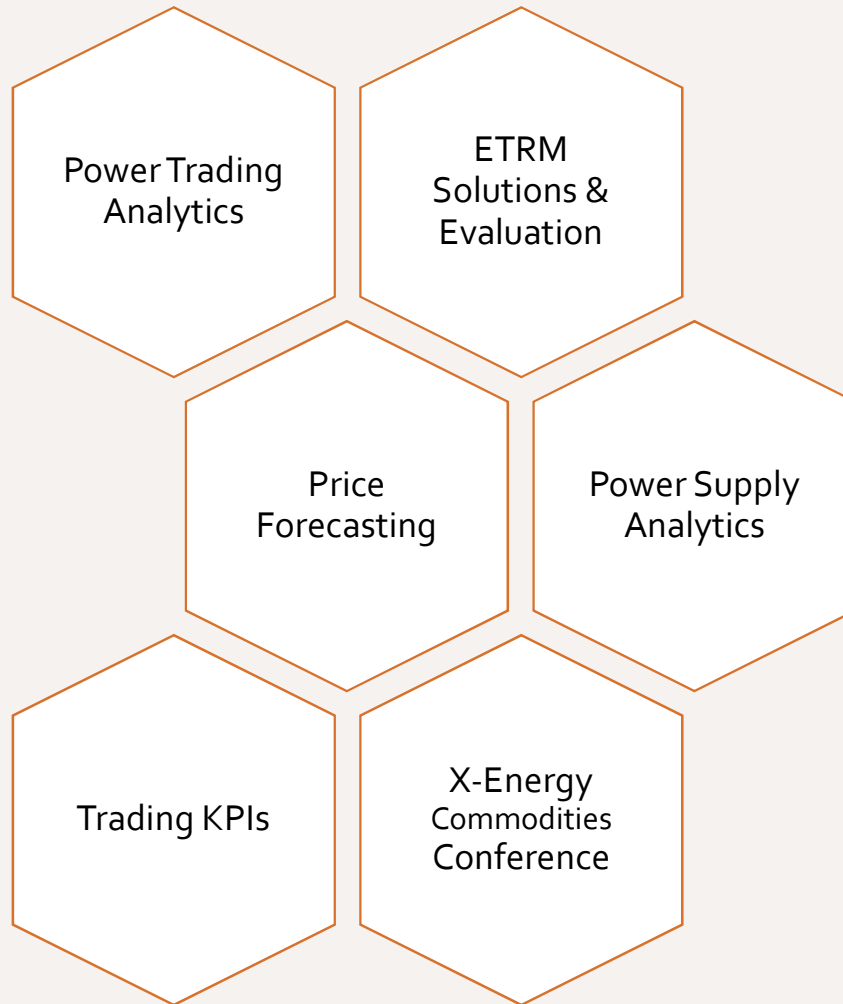
[https://www.linkedin.com/in/ioannis-psarros-85017712?lipi=urn%3Ali%3Apage%3Ad\\_flagship3\\_profile\\_view\\_base\\_contact\\_details%3BK7uO%2FQ7uTeG2TrMP5ScAOA%3D%3D](https://www.linkedin.com/in/ioannis-psarros-85017712?lipi=urn%3Ali%3Apage%3Ad_flagship3_profile_view_base_contact_details%3BK7uO%2FQ7uTeG2TrMP5ScAOA%3D%3D)



**We do.**

# We do.

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# Thank you!

14/11/2020

**Our Knowledge. Your Value.**



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