Re-innovating
the ATHEX Derivatives Market

July 2013

Version 0.60

Restructuring the Derivatives Market

Having more than 13 years of experience in the Derivatives Market

Because of the Regulation modifications due to *EMIR & ESMA Guidelines*

Taking into consideration the various participants' requests

Following the international trends by which exchanges are offering single platforms for all products

We proceed to the operational Re-inovation / Redesigning of the ATHEX Derivatives model with New services-Products & common Infrastructure

5/7/2013

Agenda

- **Basic System Changes**

- **Basic Changes on Trading**

- **New Repo Market**

- **Basic Changes on Risk, Clearing & Settlement**
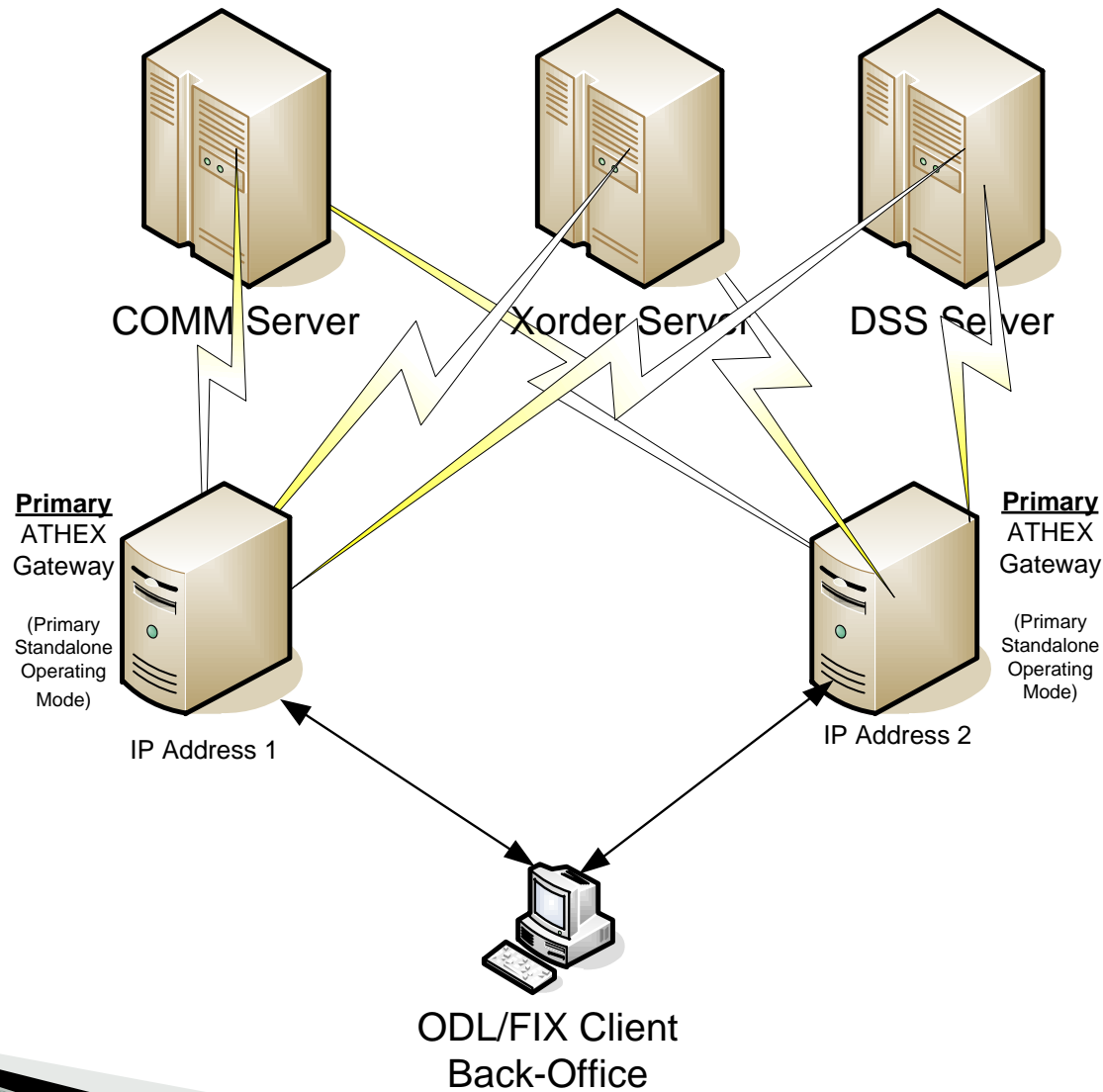
Basic System Changes
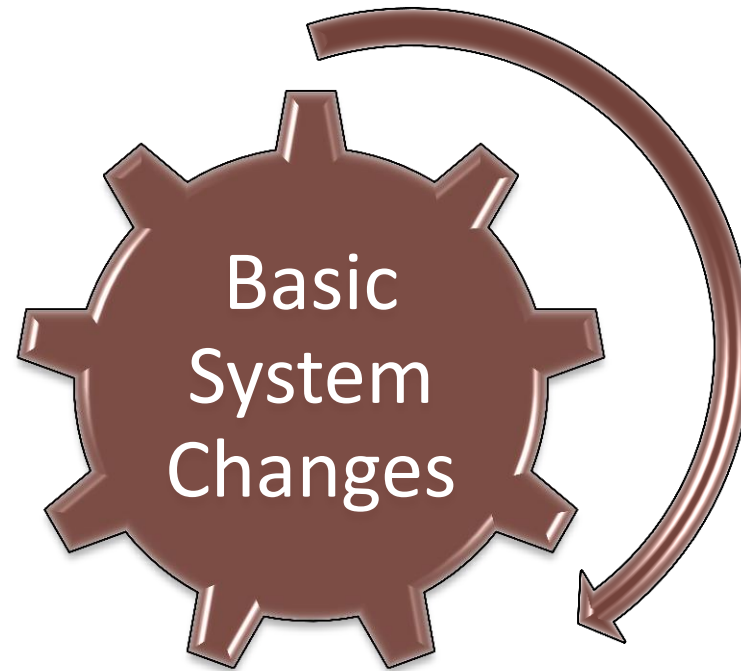
Common infrastructure

- **A single and common trading platform** for all traded products (shares, rights, bonds, warrants, futures, options, repo, etc).

    - The new trading platform will be based on the existing OASIS/ETS Trading System and ATHEX GW (ODL+FIX), which means the total abolishment of the current Derivatives Market trading system (OASIS/DTS) and OMNet API

- **A single and common clearing & settlement system** for all post trading procedures for all products

    - The new clearing system will be based on the existing clearing and settlement system that is currently used for the Cash Market (DSS – Dematerialized Securities System), which means the total abolishment of the current Derivatives Market clearing and settlement system (DCS)

- **Common Data Feed for all Markets** (Cash, Derivatives, Repo)

- **The adaptation of the Bloomberg Global ID (BBGID),** as an identifier for all products which does not change during the product lifetime

    - BBGID and Product Symbol (OASIS Symbol) will be the unique keys and not ISIN, as it in now

System changes at a glance

SYSTEMS	NOW	AFTER
Trading System for the Cash Market	OASIS / ETS (Equities Trading System)	OASIS / ETS (Equities Trading System) *It will be named* **OASIS (v4.0)**
Trading System for the Derivatives and Repo Markets	OASIS / DTS (Equities Trading System)	
API for the Cash Market	• ODL (native API), or • FIX 4.2 *Both by using the ATHEX GW (v1.1)*	• ODL (native API), or • FIX 4.4 *Both by using the* **ATHEX GW (v2.0)**
API for the Derivatives Market	OMNet API	
Clearing / Settlement System for the Cash Market	DSS (Dematerialized Securities System)	DSS (Dematerialized Securities System)
Clearing / Settlement System for the Derivatives Market	DCS (Derivatives Clearing System)	
Data Feed for the Cash Market	Cash Market Data Feed Spec	Common Data Feed Spec
Data Feed for the Cash Market	Derivatives Market Data Feed Spec	

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ATHEX GW connections

COMM Server   Xorder Server   DSS Server

Primary
ATHEX
Gateway

(Primary
Standalone
Operating
Mode)

IP Address 1

Primary
ATHEX
Gateway

(Primary
Standalone
Operating
Mode)

IP Address 2

ODL/FIX Client
Back-Office

No data feed via ATHEX GW

- As it is known, ATHEX GW does not disseminate market data feed at the members' systems, as the OMNet API does

- In the new environment, a member can receive this feed either by a data vendor, or by a direct connection to the IOCP (ie, to become a data vendor), by using the existing connectivity to ATHEX:

  ◦ Either for own use, or

  ◦ For redistributing the feed to its clients

Basic Changes on Trading

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Basic changes on trading (1)

Members and Users

- Common Members' ID (Cash & Derivatives Markets)

- Common Users' IDs

Trading Limits for Derivatives Market

- Introduction of **daily price fluctuation limits** in the Futures and Options which contributes to:
  - The limitation of the market volatility
  - The participants' protection by preventing erroneous input

- FUTURES: "±X%" on the yesterday's fixing price

- OPTIONS: "±X%" on the theoretical price

Basic changes on trading (2)

New Risk Management Model (during the trading session)

- Introduction of Credit Limits consumption also at the Derivatives Market

- Calculation of orders' & trades' risk for Futures, Options and Repo products

- FUTURES: No of contracts*Contract size*Price*ε

- OPTIONS: No of contracts*Contract size*ε*Underlying price

Market Making

- Improvements in the Market Making Model

  - Market making only through API

  - Enrichment using automated procedures (ie, no obligations when the underlying is in a pre-call phase)

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Basic changes on trading (3)

Combo Orders

- Introduction of Time Spreads to the new system (eg, sell the current expiration and buy the next one with a single order)

New
Repo
Market

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New Stock Repo model benefits

New Stock Repo Model

- **Simplify the stock lending – borrowing procedure**
  - No expirations on the stock lending – borrowing contracts
  - No need for rollovers
  - ATHEXClear will be the CCP, but without the pool

- **More participants**
  - All the Custodians can lend shares via DSS, and
  - All Cash & Derivatives Trading members can borrow shares via OASIS

Stock Repo market participants

ATHEXClear

Willing to Borrow stocks

Trading Members of both Cash and Derivatives Market

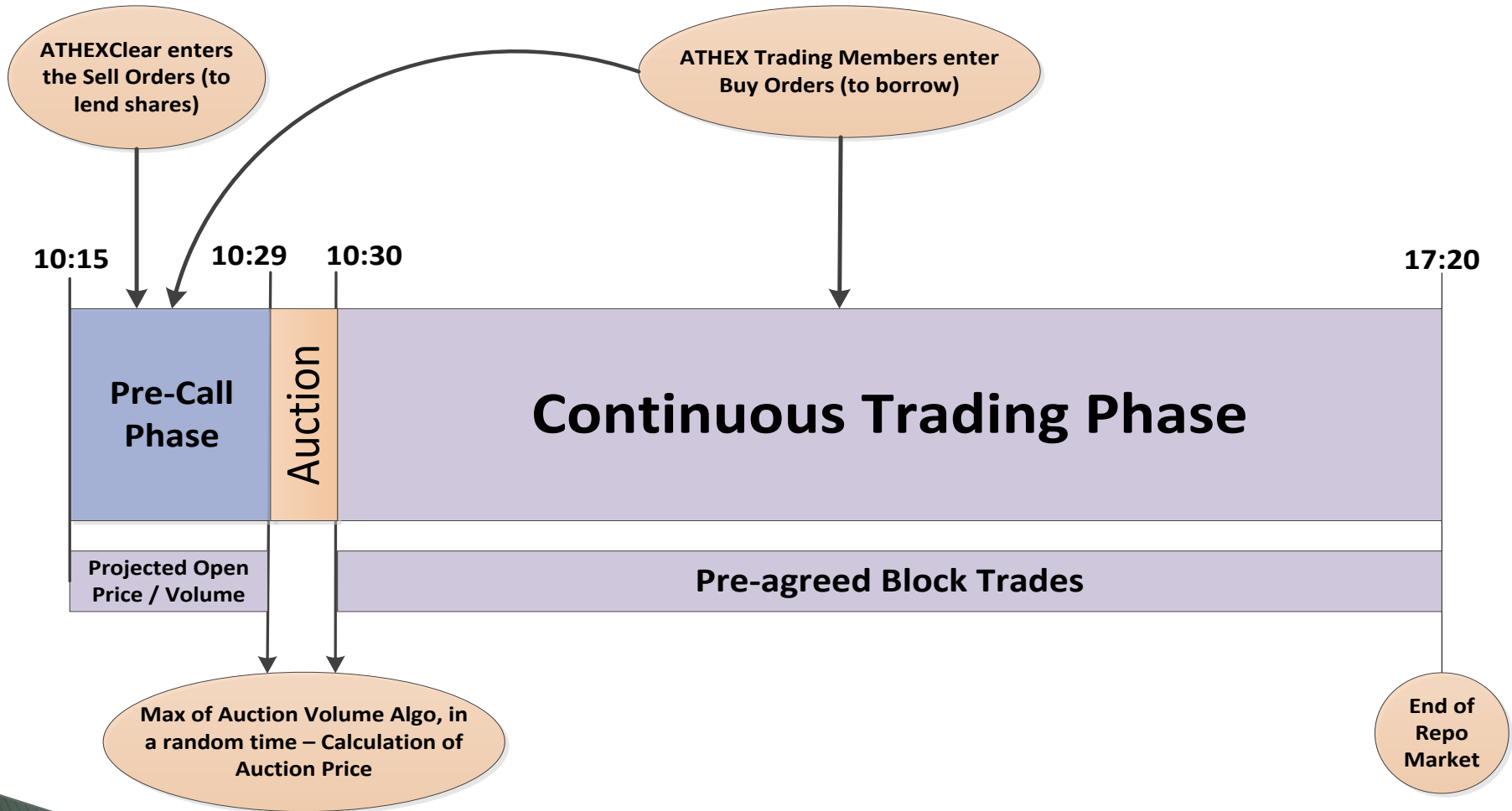*ATHEX Trading System*

Willing to Lend stocks

Custodians

HELEX Custody System

Repo Clearing

Derivatives Market Clearing Members

ATHEXClear Clearing System

Basic changes on trading

ATHEXClear enters the Sell Orders (to lend shares)

ATHEX Trading Members enter Buy Orders (to borrow)

10:15 **10:29** **10:30** **17:20**

Pre-Call Phase

Auction

Continuous Trading Phase

Projected Open Price / Volume

Pre-agreed Block Trades

Max of Auction Volume Algo, in a random time – Calculation of Auction Price

End of Repo Market

Basic Changes on Risk, Clearing & Settlement

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Basic changes on risk, clearing & settlement

Members & Users

- **Common Members IDs** for both Cash and Derivatives Markets
- **Common Users IDs**
  - New Clearing users' IDs
  - Common Clearing user ID for both Cash and Derivatives
 - New standardized roles for users' access

Position Handling
(New structure of codes/accounts)

- **Trading Account**: Defined by the Trading Member and entered at the entry of an order
- **Position Account:** Defined by the Clearing Member and is used to manage end-client position
- **Clearing Accounts & Sub-accounts:** Defined & operated by the Clearing Member.

  *Risk of Clearing Account (and required margin) comes from the total position of all clearing sub-accounts that are related to this.

Clearing and position management

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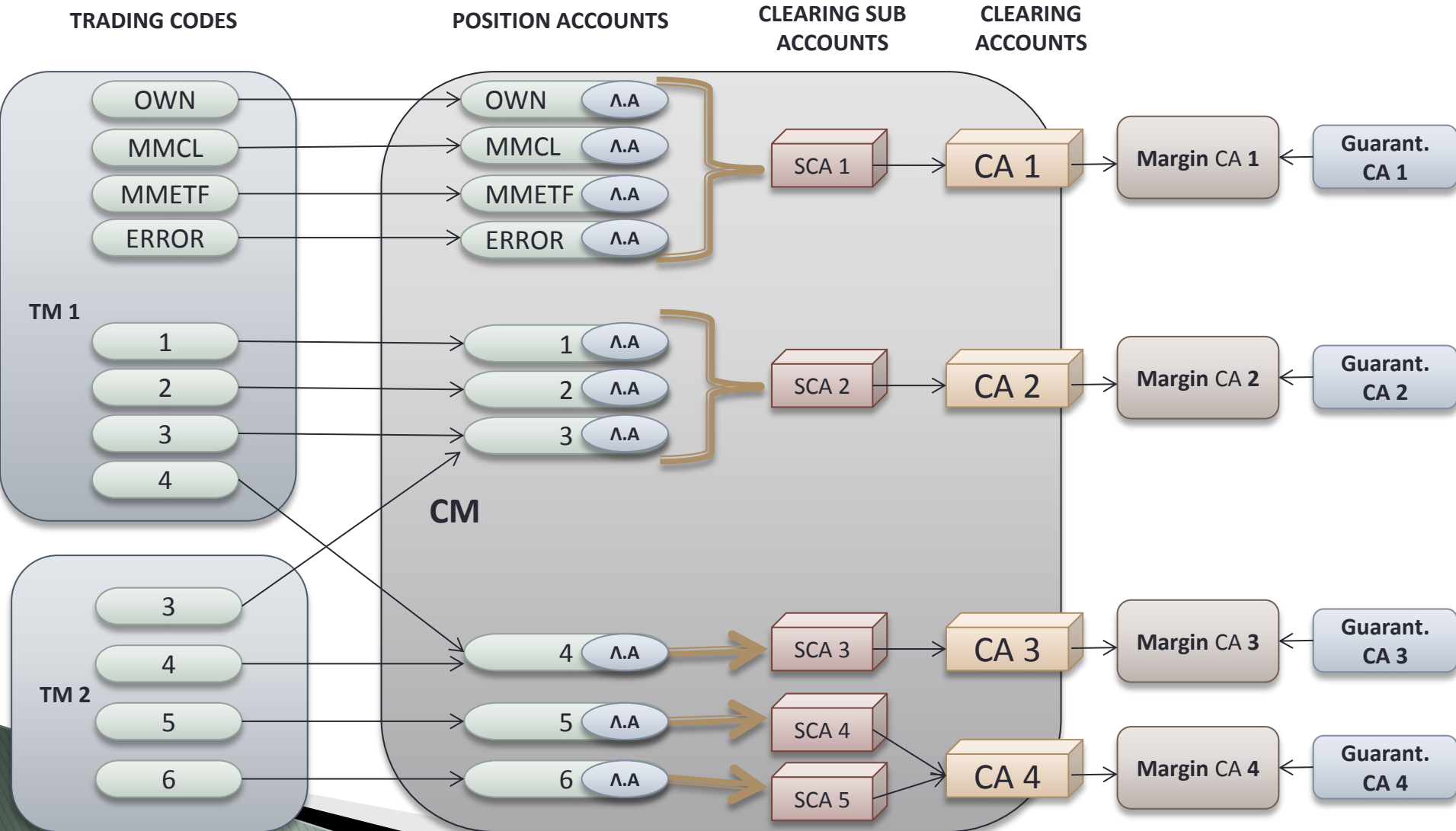
New risk management model

Risk Management

- **Derivatives Market Clearing Fund is:**
  - The sum of the contribution of each clearing member
  - Calculated on a monthly basis (ad-hoc calculations if necessary)
- **Margin is:**
  - Calculated daily for each Clearing account following the existing methodology (RIVA)
  - Taking into consideration the calculation of all collaterals that are deposited to the Clearing Account
- **Intraday Margin:**
  - When a transaction is realized the credit limit of the trading Member is reduced accordingly. The risk management system performs on frequent time periods intraday margin calculations (e.g. every 15') at a position account level.
  - If it is calculated that the "consumed" credit limit is higher than the actual risk increase, the difference will be "returned" to the Clearing Member as extra credit limit in the clearing account.

Trades handling

Trades Handling

- **Trades Uploading** from the trading system (OASIS) to the Clearing System
- **Shaping procedure**:
  - on behalf of Trading Member till a specific time during the trading day
  - on behalf of Clearing Members till a specific time during the trading day
- **Give-up procedure**
- **Trades finalization:** is realized by the end of the period where cancellation and shaping procedures are allowed. After this, Clearing Members' obligations and credit limits are calculated.
- **Physical Delivery Give-up**

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Relative information

- You can find all the related presentations, documents and software at the www.athex.gr/oasis website and more specifically at the section:

RE-INNOVATING OF ATHEX DERIVATIVES MARKET

Questions

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