



# Product Reference File Overview

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## 1.0 Introduction

This document contains guidelines for implementing the Product Reference FIXML API. CME Group Clearing uses the Product Reference FIXML API to convey comprehensive definitions of all CME Group instruments so these instruments can be easily loaded into customer systems.

Additional information on FIXML can be found on the FIX Protocol site at:  
[http://fixprotocol.org/documents/3922/FIX-5.0\\_SP1\\_VOL-3.pdf](http://fixprotocol.org/documents/3922/FIX-5.0_SP1_VOL-3.pdf)

### 1.1 *CME Clearing Contact Information*

For more information please contact:  
[ccs@cmegroup.com](mailto:ccs@cmegroup.com)

## 2.0 Implementation Considerations

### 2.1 Overview

CME Group Clearing communicates product reference data with the following message types:

- Security Definition Message – Futures, CME-Cleared Credit Default Swaps (CDS) and Strategies
- Derivative Security List Message - Options

These messages contain the structures and detailed definitions of each instrument.

For complete message definitions and samples, refer to:

- Security Definition Message – Futures
- Derivative Security List Message – Options
- Security Definition Message – Strategies
- Security Definition Message – CME-Cleared Credit Default Swaps

### 2.2 Message Dissemination

Customers must obtain and load the Security Definition Message and the Derivative Security List Message. These messages are available as static file downloads at 6:00pm daily.

This file is located on the CME Group FTP site.

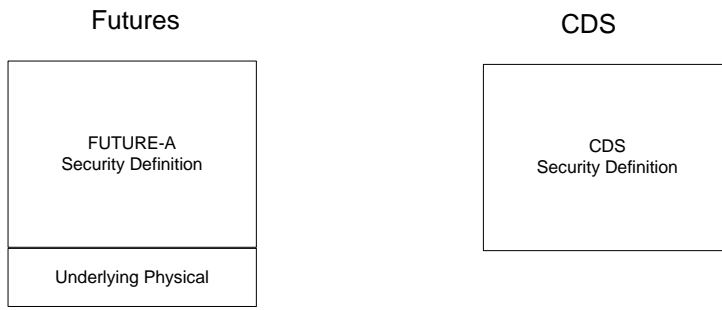
<ftp://ftp.cme.com/pub/settle/>

**Note – The Derivative Security List Message file size is very large.**

## 2.3 Message Model

### 2.3.1 Security Definition Message – Futures, Forwards, or Swaps

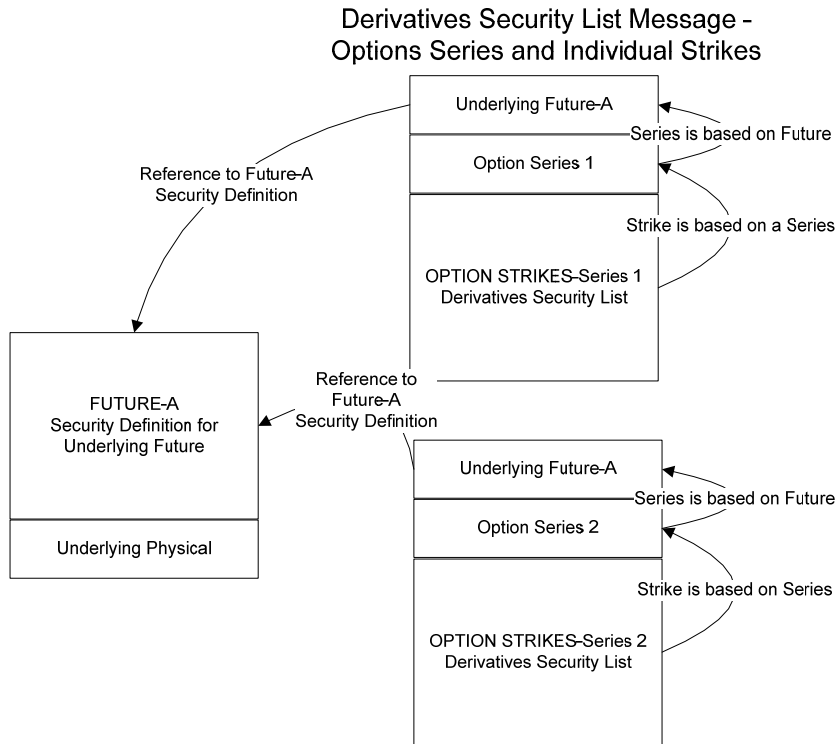
The Security Definition message is used for outright instruments which are not options, in particular: futures, forwards, or swaps. It is also used to send definitions for CDS CME-Cleared Credit Default Swaps Instruments.



### 2.3.2 Derivatives Security List Message – Options Series and Individual Strikes

The Derivatives Security List message is used for option series and individual strikes.

The following diagram illustrates the model in which a Futures contract is defined as a standalone instrument using the Security Definition message (Future-A). The Option Series is then defined using the Derivatives Security List Message. The individual strikes for a given series are then elaborated (Option Strikes-Series 1). The Option Series references the Futures instrument in order to tie back to a specific underlying instrument.



### 2.3.3 Security Definition Message – Combinations and Strategies

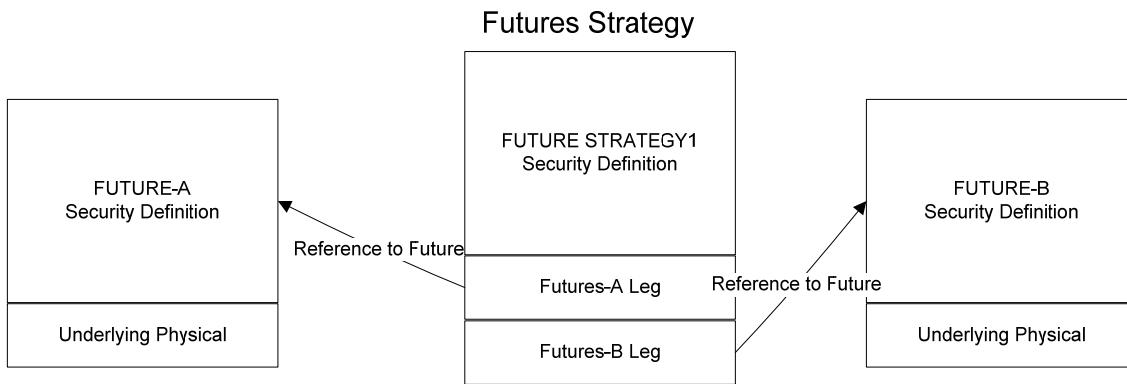
The Security Definition Message is used for all combinations and strategies. The following sections illustrate how the Security Definition Message is used for a futures strategy and an options strategy.

An Option Combo is a combination of exchange-listed outright option(s) and/or option spread(s)—either Generic or Higher Order. A Recursive Combo is a combination of exchange-listed outright option(s) and/or option spread(s) and user-defined Combo(s). A Recursive Combo cannot contain a Combo that already contains a Combo, i.e., one level of recursion allowed. A Covered Combo is a user-defined Combo covered with one or two outright futures.

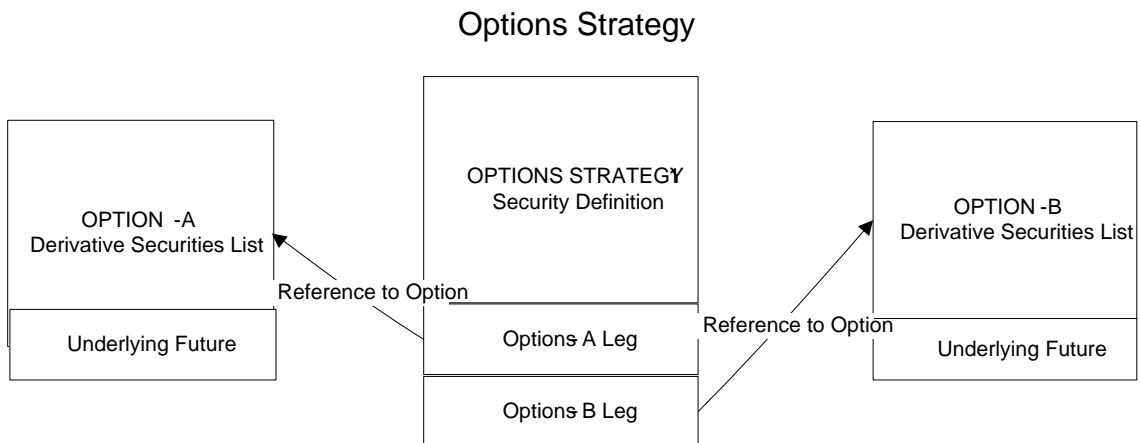
#### Security Definition Message - Strategies

The Security Definition Message is used for all strategies. The following diagrams illustrate how futures and options strategies are defined.

In the Futures Strategy diagram, FUTURE STRATEGY 1 is comprised of Future-A and Future-B.



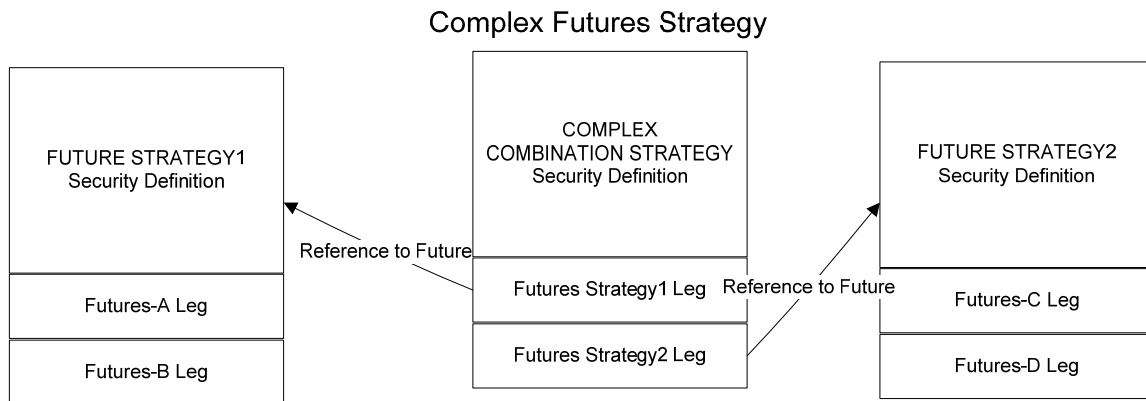
In the Options Strategy diagram, OPTIONS STRATEGY is comprised of OPTION-A and OPTION-B.



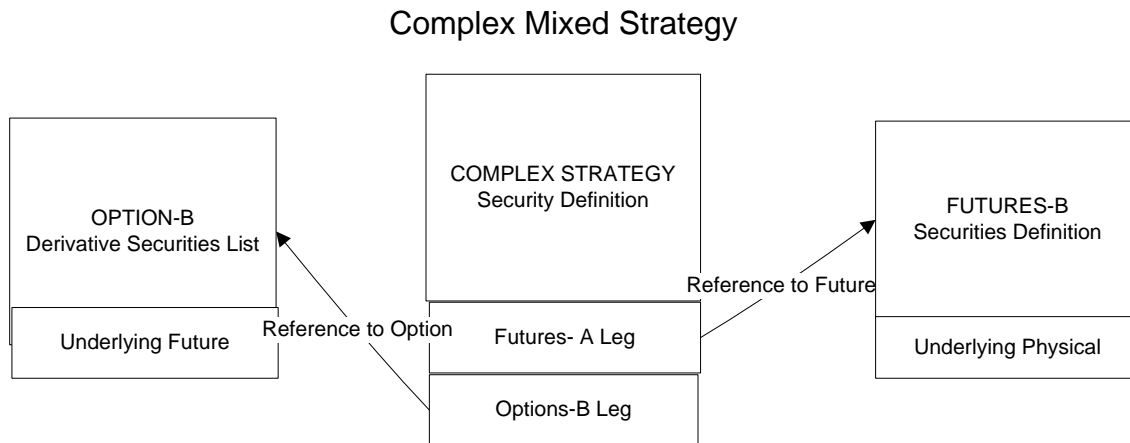
### Security Definition – Complex Strategies

The Security Definition Message is used for all strategies. Some strategies are only futures or options, and some are mixed or a strategy of a strategy. The following examples contain a complex futures strategy and a complex mixed strategy.

In the Complex Futures Strategy diagram, the Complex Futures Strategy is comprised of FUTURES STRATEGY 1 and FUTURE STRATEGY 2.



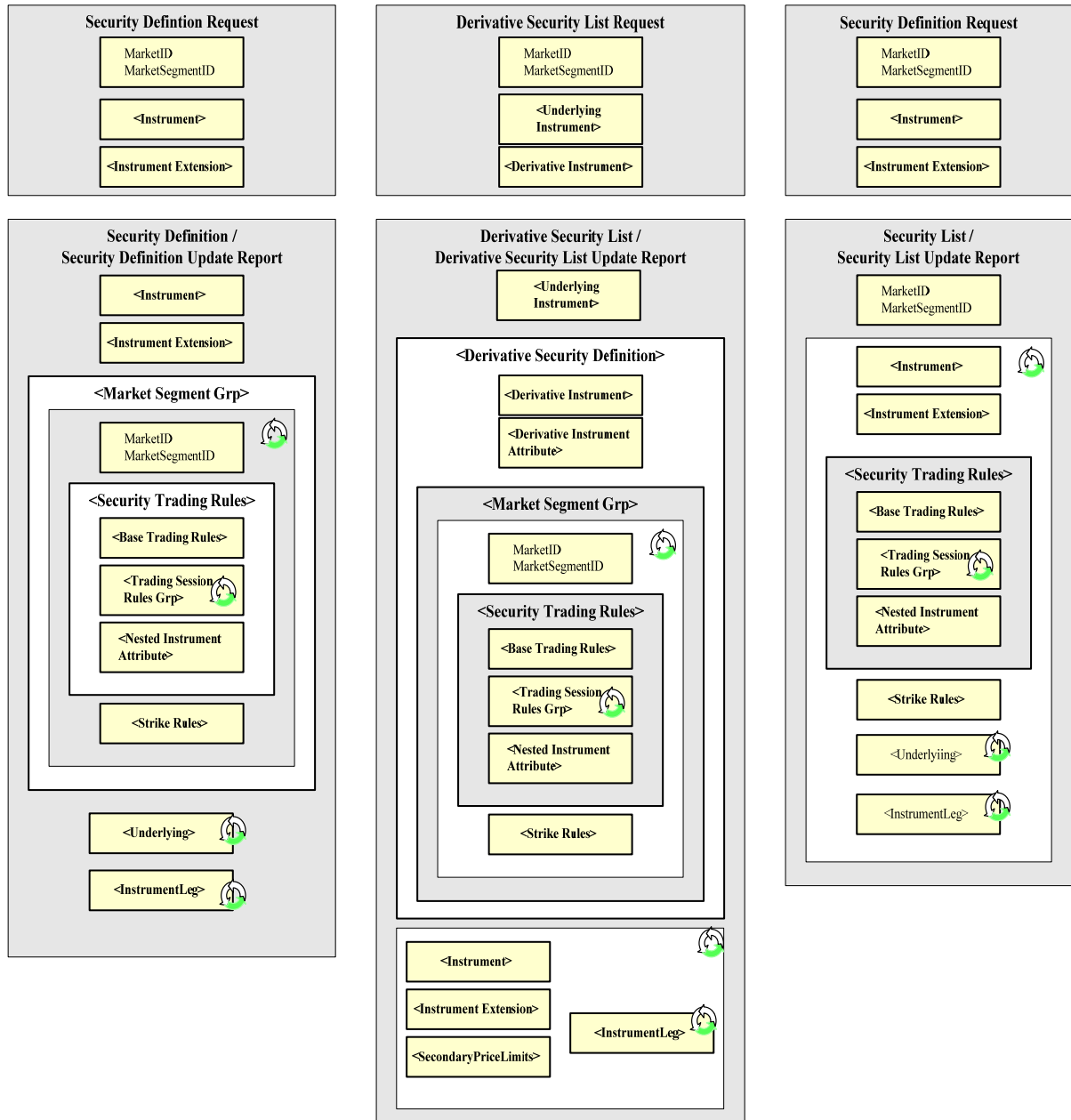
In the Complex Mixed Strategy diagram, the Complex Futures Strategy is comprised of FUTURES-B and OPTION-B.




## 2.4 Message Structure – FIX Component Blocks

There are two types of messages: Security Definition and Derivative Security List. These messages are structured by component blocks as shown in the diagram below.

The Security Definition Request and Derivative Security List Request components will be available in a future iteration. The Security Definition Request and Derivative Security List Request functionality will enable you to request market information by Market Segment (venue).



 - This symbol indicates a repeating group.

The following diagram illustrates the various component blocks. These components are defined in greater detail in the sections immediately following this diagram.



### 2.4.1 Venue (Market Segment) Block

Venue is the term for describing the means of participating in or accessing a market. The market is represented in: electronic terms, person-to-person on a trading floor, or in a privately negotiated fashion. Trading rules include Tick rules, Strike Rules and other trading characteristics that may vary based on the venue are defined in this block.

The following venues are available: “Electronic”, “Pit”, and “Ex-Pit”.

### 2.4.2 Trading Rules Component Blocks

Trading rules are separated into two components:

- **Base Trading Rules** - contain the basic set of trading rules for a given venue.
- **Trading Session Rules Grp** - contains trading rules which are specific to a Trading Session.

### 2.4.3 Instrument Component Block

This block contains the core definition of the instrument including a complete set of instrument identifiers. It also provides other key financial characteristics like the Unit of measure, the multiplier, settlement method and price quoting conventions.

### 2.4.4 Security Alternate Identifier Group Block

This block occurs within the Instrument component and contains alternate identifiers and descriptions for the instrument being defined. There are generally several alternate identifiers provided for each instrument.

### 2.4.5 InstrumentLeg Component Block

The InstrumentLeg component block is used when defining strategies (futures and options) and providing information on the legs of the strategies. The Instrument Leg is defined similar to the Instrument block and has all the information that are available in the Instrument block. The Leg may contain additional information that is pertinent to the leg, such as leg ratio and leg side which are defined in the context of the strategy.

### 2.4.6 Underlying Instrument Component Block

The Underlying Instrument component block is used to convey information about the instrument that underlies an option series (usually a future). This block is defined similar to the instrument block. This block will provide minimal information on the underlying as it is expected since the primary definition will be provided in a different security definition message.

### 2.4.7 DerivativeInstrument Component Block

The DerivativeInstrument component block is a new instrument component block used to convey the attributes of an option series. The derivative instrument block will contain the characteristics that are common to all strikes in the Option series which minimizes the redundancy when specifying the individual strikes.

### **2.4.8 InstrumentExtension Component Block**

The InstrumentExtension component block is used to communicate additional information such as price formats and trade type eligibilities that are specific to the instrument.

### **2.4.9 DerivativeInstrumentAttribute Component Block**

The DerivativeInstrumentAttribute component block is used to communicate additional information such as price formats and trade type eligibilities that are specific to the option series.

### **2.4.10 BaseTradingRules Component Block**

The BaseTradingRules component block contains TickRules, LotTypeRules, and PriceLimits, which are defined for a venue or can be applicable to all venues if the venue is specified as [N/A].

### **2.4.11 PriceLimits Component Block**

The PriceLimits component block is used to specify the price limits that are valid for trading. The PriceLimits component block is referenced in the BaseTradingRules component block.

### **2.4.12 SecondaryPriceLimits Component Block**

The SecondaryPriceLimits component block is used to specify the secondary price limits that are valid for trading. The SecondaryPriceLimits component block is referenced in the DerivativeSecurityList message.

### **2.4.13 DerivativeSecurityDefinition Component Block**

The DerivativeSecurityDefinition component block contains components related to a Series.

### **2.4.14 StrikeRules Component Block**

The StrikeRules component block contains strike rules for determining the strike prices that are valid for an option instrument. If the series allows only pre-listed strikes, the strike rules will reflect the rules used for generation of the strikes. If the series allows strikes to be dynamically created, the strike rules will reflect the full range of valid strikes.

### **2.4.15 TickRules Component Block**

The TickRules component block contains tick rules for determining the increment at which the price of an instrument moves.