

Inside the New Options Symbology

Although the options symbology initiative appears to be simple on the surface, it is far more complex. Is your firm ready for the 2009 mandate? *By Shubham Mehrish and Sanjay Taneja*



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The financial services industry has survived several major technological challenges in the past few years including Y2K, the euro conversion, decimalization and an onslaught of regulatory initiatives. In 2009, the Options Symbology Initiative (OSI), which requires modification of the options symbol, will impact trade processing to the same extent as these prior events. This change will involve increasing the length and definition of the options symbol fields and changing from fraction to decimal pricing.

While these modifications may seem minor, the change to a firm's internal systems as well as to its interfaces with external entities will be critically impacted.

We will discuss the challenges that financial institutions are likely to face in the implementation of OSI and recommend approaches that will help in keeping the OSI remediation cost low, and ensure implementation consistency, quality and completeness.

BACKGROUND

Today, many organizations that support trading in listed options are restricted in their ability to identify and process exchange listed options contracts. These organizations typically use a configuration of three to five alpha characters, called the Options Price Reporting Authority (OPRA) code. The first one to three characters identify the option's root symbol and the remaining two alpha characters identify the expiration month, call/put indicator and strike price.

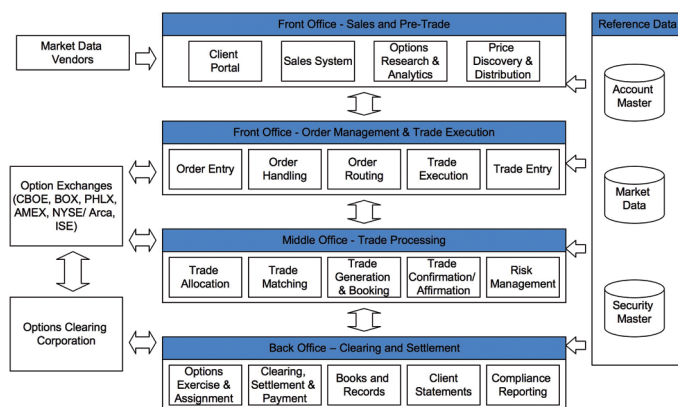
However, as the business has grown and diversified, the format of this symbol has created several limitations. These limitations include inconsistencies between "three characters symbol" and root symbol of the underlying security—for example, over-the-counter (OTC) securities—resulting in illogical representations of options in relation to the underlying security. Another inconsistency includes decimal formats of options strike price and price of the underlying security.

THE OPTIONS SYMBOLOGY INITIATIVE

To address these issues, the Options Clearing Corporation (OCC) has decided to replace the five-character OPRA code with a new 21-character Symbology Key for identifying and trading options.

The objectives of OSI are to introduce consistency in trading,

clearing and settlement of listed options where all market participants utilize explicit data elements to identify and trade option series. Another initiative is to represent all strike prices in decimal formats to make it consistent with the number of decimal places in the trading increment of the underlying instrument.



While these may seem like minor changes, it will impact front-to-back processing within broker-dealers. The following diagram depicts some of the applications that may be impacted.

In reference to options-specific applications, the symbol modification and decimal pricing will impact all of the following:

- All facets of front-end of options order management systems and option-related assignment and exercise systems.
- Reports, statements and files to customers and regulatory bodies.
- Data repositories containing the options master data. This includes security master databases, which store options data. Changes will involve expansion/addition of database columns, program fields, copybooks, libraries, and so on.
- Trade processing, clearing, trade matching, cancel/correct, reconciliations as well as books and records applications.
- All internal and external interfaces with options exchanges, market data vendors and clearing entities.
- Profit and loss, compliance, regulatory and commission applications.

To ensure that every application handling options and options symbols is remediated, an end-to-end analysis will be required. Not complying with the mandate would result in an institution not being able to offer options products to its clients.

In our opinion, institutions are expected to face OSI-related challenges in the following areas: Timeline, Governance Model, Impact Analysis, Solution Implementation and Testing.

BEST PRACTICES FOR OSI REMEDIATION

We recommend these best practices to financial firms considering solutions for complying with the OSI directives:

- a. Time to Start:** Several institutions, hoping for an extension in timelines from the OCC, are either adopting a half-hearted approach or waiting to start the impact analysis. In our opinion, OCC is unlikely to grant a significantly long extension and given numerous challenges in OSI implementation, institutions should start the impact analysis immediately. Also, given the business impact, we recommend that effort for remediation be overseen by senior management on the business side.
- b. Governance Model:** Given that the impact of the change to application infrastructure is at the enterprise level, it is best to manage the effort at the program level. OSI remediation is similar to the Y2K effort and requires a lot of coordination to manage development releases, application testing and testing with external interfaces—i.e., options exchanges, market data vendors and clearing entities. Recognizing this and putting in place a central program office and testing group is critical. The central program office needs to identify and ensure implementation consistency, manage scope and budget, manage dependencies between various applications, and look for ways to reduce overall program costs by identifying synergies and commonalities that can be applied across the impacted applications.
- c. Impact Analysis:**
1. Given the vast scope of OSI impact, it is easy for certain impacted areas to be missed out. Hence, the institutions should first get the inventory of all potentially impacted applications before commencing the impact analysis.
 2. Ensure all business logic embedded in applications is analyzed and documented. An example is logic in internal security numbers used by broker-dealers. An “As-Is” analysis will help create business logic for the new symbology key.
 3. Ensure analysis is comprehensive and thorough. In addition to the standard requirement, OCC has announced non-standard symbology requirements for flexible options, options undergoing corporate actions and index options listed in half strike points. Some market data vendors have been allowed to use 18 and 17 character symbology keys.
- d. Solution Implementation:**
1. Prioritize OSI changes based on impact—business, regulatory impact, operational risk—and implementation effort. Critical applications such as security master databases, applications interfacing with street side and market data vendors should be changed first. It is also important to factor in dependencies on internal initiatives before prioritizing the impact.
 2. Ensure that all impacted applications adopt a consistent solution with common user interface (UI) standards and naming conventions. Examples are:
 - i. A uniform options symbol display format is used across all applications that display data to customers in the form of

reports, statements, user interface or any other interface.

- ii. Back-end systems, including databases, are kept agnostic to the display mechanisms or formats adopted by front-end applications, if these are different. This approach will protect the front-end applications from limitations of back-end systems and improve the time-to-market for changes related to user interface. This will also reduce load on backend systems.

3. Communicate and get agreement from all impacted application groups on the common specifications like UI standards and naming conventions before making changes.
 4. Do not change historical options data as there is no regulatory mandate yet.
 5. Some firms may want to leverage OSI as a legacy modernization tool to retire legacy applications and databases.
 6. Leverage tools that potentially offer bulk, automated OCC remediation capabilities. Prudent use of such tools can result in significant efficiencies in impact analysis and accelerate the development process. Several product vendors offer automated OCC remediation capabilities.
 7. Use “factory” approaches for OCC impact analysis and solution implementation. An example is the creation of a common pool of resources that can assist in impact analysis and solution implementation across application groups.
- e. Testing:** Testing for this effort will require thorough internal end-to-end testing as well as industry-wide testing. Since OSI impacts applications across the front, middle and back offices, it is ideal that a comprehensive, end-to-end testing strategy is in place before commencing internal and industry-wide testing. Further, given the challenges of such large-scale testing, we recommend that institutions use automated functional regression testing tools. Use of such tools will accelerate the testing efforts and significantly reduce testing costs.

CONCLUSION

OSI sounds simple but can create significant implementation challenges for institutions if they do not adhere to consistent and stringent solution frameworks. We believe that adoption of the above mentioned approaches and best practices will help in keeping the overall OCC remediation cost low and ensure implementation consistency, quality and completeness. ■

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