

April 24, 2002

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Commodity Futures Trading Commission  
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Washington, D.C. 20581

On behalf of the subcommittee on standardization, we are pleased to forward you the enclosed Recommendations for Standardization of Protocol and Content of Order Flow Data. In May 2001, a subcommittee of the CFTC Technology Advisory Committee was formed to address the need for standardization of order flow data relating to both content and protocol. This report contains the subcommittee's recommendations, which cover five broad areas and represent the efforts of a wide cross-section of the futures and options community.

The subcommittee recommends that the Commission mandate the standardization of data content and calls for the voluntary implementation of a protocol standard. For both content and protocol, we recommend separation into three sections: 1) order routing; 2) clearing; and 3) back office. These recommendations are consistent with the subcommittee's findings and with the feedback received from a wide range of industry participants. We also recommend that the content standard be implemented throughout the industry by June 30, 2003 and that this date be used as a benchmark for the protocol standardization as well. Our final recommendations call for support from both industry participants and the Commission, as we recognize that without this support, we have little hope of seeing these recommendations become a reality.

In determining these recommendations, the subcommittee recognized the many benefits to standardization of both content and protocol. Some of these benefits may not be as apparent during the transition phase, but they will be clear once the standards are implemented. Content standardization will harmonize the information that flows through the current protocols being used. This will allow more industry participants to connect with one another, which will result in a more cost effective and efficient order flow process. By agreeing to utilize the same data requirements in each processing system, regulators would have an easier time investigating market violations, and firms and exchanges would be better able to analyze risk. Having the industry agree to utilize the same data requirements for each processing system will provide timely information from one end of order flow to the other. The standardization of data content will also reduce barriers to entry and promote regulatory compliance.

Although the subcommittee is recommending that there be a voluntary, not mandated, move towards protocol standardization, we believe that there are numerous benefits to this type of standardization as well. A standardized protocol for the futures industry is in line with similar initiatives throughout the financial services community, including the equities market, where there has been an evolution that has resulted in one protocol being

used more predominantly than all others. Standardized protocols will mean faster entry into the markets and a giant step towards straight-through processing.

As noted above, the subcommittee recommends an implementation date of June 30, 2003 for both the content and protocol standardization. As we are recommending that the standardization of content be mandated, the subcommittee believes that this date can be realistically met by the industry. With respect to protocol standardization, we believe that even though the report calls for a voluntary implementation of the standard, it is important to show the priority that this implementation should have with industry participants. This date also acts as a target to aim at when allocating funds and other resources to operations projects throughout the next year.

Industry support, both from industry participants and the Commission, is an important part of the subcommittee's recommendations. We recommend that the CFTC widely circulate this report, so that it can be viewed as a high priority for the industry. The subcommittee also believes that as part of the implementation of these recommendations, an implementation committee should be formed. This committee should be comprised of representatives from all areas of the industry, including software and system providers, regulators, trade association representatives and other users in order to ensure all issues are addressed. It would be the responsibility of this committee to move the implementation process forward and continue to ensure that the industry is on board with the recommendations.

The subcommittee recommends that the implementation start with the exchanges, as their cooperation is vital to the success of this initiative. By ensuring that they recognize the importance of this project, the industry can better determine when these initiatives can be implemented.

The subcommittee recognizes that there may be substantial costs associated with the implementation of the standardized protocol. However, given that these costs will be different for all participants, we did not feel that it was appropriate to estimate the costs involved in implementing the standardized protocol and feel that this is an issue for the implementation committee to address. In any case, the subcommittee strongly believes that any implementation costs are far outweighed by the benefits of standardization.

The subcommittee, comprised of members of the CFTC Technology Advisory Committee and representing a wide range of interests, called on numerous advisors to provide their opinions and guide us in this project. These advisors came from various sectors in the financial services community, including users of the protocol and individuals who have worked on similar initiatives in the bond and securities arenas. They were able to provide the subcommittee with valuable information by sharing their knowledge with us and assisted us in developing the recommendations of this report. We would like to take this opportunity to thank each of them for their insight.

We would also like to thank each of the members of the subcommittee for their time and commitment to this project. Their dedication ensured that this report fully addressed the issues and, given the urgency of this matter, that the report was completed expeditiously.

We welcome the opportunity to discuss our recommendations with you and the other members of the Advisory Committee and we are looking forward to taking an active part in the development of the next phase of this initiative.

Sincerely,  
The Standardization Subcommittee

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# **Recommendations for Standardization of Protocol and Content of Order Flow Data**

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**Commodity Futures Trading Commission  
Technology Advisory Committee  
Subcommittee on Standardization**

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## Summary and Introduction

In May 2001, the CFTC Technology Advisory Committee formed a subcommittee to address the issue of standardization of protocol and content in the futures industry. The subcommittee, comprised of users, regulators and exchange representatives, researched the necessity of ensuring the specific data was included in processing systems, as well as the need for the industry to use specific protocol. The subcommittee was also given the task of determining how to ensure compliance with any proposed standards and the role that the Commission should take in ensuring this compliance.

In order to complete this task, the subcommittee gathered information from users within the futures industry, as well as entities that are working on similar projects throughout the financial services community. The subcommittee discussed the benefits of recommending a standard and any obstacles that may occur. Possible remedies for these obstacles were proposed, so that any problems could be properly addressed. Finally, the subcommittee discussed ways in which industry buy-in could be obtained and possible dates for implementation of the recommendations.

The subcommittee submitted an interim report to the Technology Advisory Committee and discussed its proposals at the committee's November 2001 meeting. The interim report was also posted on the CFTC's website and widely distributed throughout the industry, mainly through various industry groups, including Futures Industry Association, Managed Funds Association and National Introducing Brokers Association. Comments that the subcommittee received have been incorporated into the report.

As various areas of the financial services industry move towards straight-through processing and T + 1 settlement, protocol standardization is seen as a way to enable these initiatives to happen more quickly. Straight-through processing is a hot issue in the futures industry as well, and content and protocol standardization can facilitate the process.

The subcommittee's report also includes information on protocol standardization and straight-through processing from an international standpoint. This will help the industry determine the global effects of the subcommittee's recommendations.

The subcommittee recommends to the Technology Advisory Committee that standards for both protocol and content be implemented in order to increase efficiencies in processing and regulation. The implementation of these standards should also reduce the costs of doing

business which would increase the industry's customer base and provide a more effective way for firms to analyze risk.

Content standardization is seen as a necessary first step in this process. With unanimous consent from the subcommittee and strong support from the industry, the subcommittee recommends that content standardization be mandated for the industry. By ensuring that all necessary data fields are included in whichever protocols are used, the industry can ensure a level playing field for its participants.

Given that other areas of the financial services community have either recommended a protocol standard or are in the process of doing so, the subcommittee believes that there will be a built-in incentive for the futures industry to implement a standard as well. As the lines between asset classes become more and more blurred and as futures entities look toward securities as a way to expand business, the standardization of a protocol makes good business sense for those in the futures industry. For these reasons, the subcommittee does not recommend that there be a formal mandate, but rather a voluntary initiative with a strong recommendation from the Technology Advisory Committee, Commission and other industry groups for the standardization of protocol.

Additionally, the subcommittee realizes that technology is continuously advancing and what may be the most advanced protocol at one point in time may soon be overshadowed by other advancements. Therefore, the subcommittee does not recommend a specific protocol in this report. We recognize, however, that the FIX protocol is widely used in other areas in the financial industry and is a natural choice to implement as the standard for futures as well.

The subcommittee recommends that the industry implement the mandated content standard by June 30, 2003. This is also recommended as the date for the voluntary implementation of the protocol standardization. The subcommittee believes that the date is far enough in the future for it to lessen the burden that the implementation will cause for the industry, but not so far that it will not be given the attention that is needed to properly implement.

#### **Formation of Subcommittee**

The CFTC Technology Advisory Committee, chaired by Commissioner Tom Erickson, was formed to advise the Commission on the impact and implications of technological innovation in the financial services and commodity markets. At the Committee's meeting in May 2001, one of the more pressing issues that arose dealt

with the concept of standardized protocol and content. Numerous members of the Committee articulated the need for straight-through processing to the customer. With industry members utilizing multiple trading systems and going through multiple exchanges, straight-through processing was impossible, as many different protocols were used. Also, the lack of standardized content made it difficult for those regulating the markets to effectively monitor the activity. The Committee determined that the time to deal with these issues was now and that it was important that the industry find answers immediately, rather than waiting to make a decision. A subcommittee was formed, which was headed by Scott Johnston of the Chicago Mercantile Exchange and Yvonne Downs of the National Futures Association. Volunteers for the subcommittee came from all areas of the industry – exchanges, regulators, ECNs, and users (see Exhibit A for a list of the subcommittee's members). Commissioner Erickson also participated on the subcommittee in order to observe firsthand the workings of the subcommittee.

As the subcommittee is comprised of individuals with a strong business background, it looked at the standardization problem from a business operations standpoint, not a technical standpoint. This allowed the subcommittee to focus on policy, rather than determining what the most technologically advanced protocol would be. However, the subcommittee also realized that it would need input from others in the financial services industry, including those with strong technology experience. Therefore, the subcommittee invited several industry participants to act as advisors to the subcommittee and share their expertise (see Exhibit B for listing of the subcommittee's advisors).

### **Goals of the Subcommittee**

In its first meeting, the subcommittee decided to look at the standardization problem from various perspectives in order to determine what was needed. From a user's perspective, protocol standardization is necessary, as it is increasingly difficult to do business with numerous entities, each of which uses a different protocol to transmit information. This can be an inefficient and illogical way to run processing systems because transactions can not automatically run end-to-end.

From a regulator's standpoint, the standardization of protocol content is needed, as not all protocols contain the necessary data requirements. Specifically, account numbers and user IDs, which are essential to monitoring the activity of the market, are not included in all protocols. This means that regulators have a difficult time investigating market violations.



Therefore, the subcommittee decided to assess whether the industry would be behind its proposal. The subcommittee also decided to determine the ways in which the Commission might support the standardization effort.

**Issues Addressed by Subcommittee** The subcommittee and its advisors met several times over the course of the last year to discuss the issues that would affect the implementation and acceptance of a standard for content and protocol. Both the benefits and obstacles were addressed from a variety of different angles.

#### *BENEFITS OF STANDARDIZATION*

The subcommittee highlighted the benefits of developing industry standards for protocol and content. By standardizing the protocol and its content, more people would be able to connect to one another, which would make the entire process more cost effective. If standardization resulted in lower costs, the number of customers in the industry would increase, as would the value of the marketplace. Also, if more entities were utilizing the same protocol with the same data fields, the ability to analyze risk would be enhanced. Protocol standardization would result in a level playing field, which would go beyond the individual exchanges.

Numerous changes within the futures industry compound the need for a standardized protocol. The advent of electronic trading and the expansion of trading to a globalized marketplace have increased the number of outside vendors. Given the development of new products, including security futures products, it is imperative that the industry find the fastest way to bring these new products to market. The use of different protocols amid all these changes has made things more challenging for the industry.

Due to the multitude of counterparties that are used, managed fund entities have been unable to fully automate their systems. Standardization would allow their operations, including the back office aspect, to be more efficient. This is because each user has to translate each of the different protocols to its own system to make things flow automatically. This is less efficient than creating a standard for the industry as a whole to use.

From the FCMs' viewpoint, protocol standardization is very desirable. Their customers have many different requirements and FCMs spend a great deal of time translating their systems to fit these various requirements. Standardization has been needed for a long time and is now on the forefront due to the

expanded use of electronic trading and automated order routing systems. There will be a competitive advantage for those firms who follow the standard.

All of these benefits have increased the amount of buy-in from the industry. Customers, intermediaries, exchanges and regulators all see the direct benefits to having a standardized protocol for the industry.

#### *OBSTACLES TO STANDARDIZATION*

The subcommittee and its advisors also discussed the pitfalls that it would have to overcome in order to get industry buy-in on protocol standardization. There was concern that the subcommittee would get pushback from the industry if standardization was mandated. Some thought that it might be better if the subcommittee focused on recommending guidelines, rather than a mandate for the industry. If a standardized protocol were to be developed, it should be the result of customer demand, not government mandate. Because everyone thinks that theirs is the most effective and efficient, getting the entire industry to agree on a particular protocol would be difficult. There was also some comment that competition among protocols is good for the industry. There was concern that if a particular protocol were mandated as the standard, it would stay in place for several years, even though something better might come along.

Another problem that the subcommittee would have to contend with concerned independent software vendors. Currently, ISVs have little incentive to move to a protocol standard. Although ISVs may hear from their customers that they want standardization, this has traditionally been a low priority, as security futures products and other more pressing items have taken precedence. The subcommittee would need to convince the ISVs that standardization is important to the industry and that it would need to be made a top priority.

In order to overcome these obstacles, the subcommittee discussed the ways in which we could get the industry to adhere to a standard. It was generally believed that competition among ISVs would force them to move to the standard, even if they were unwilling to do so at the beginning. In any case, security futures products will move the financial industry to integrate more, in both derivatives and cash instruments. Also, the subcommittee would need to come up with a strong incentive for the industry to move towards a standard. The incentive could be positive or negative, but should be effective.

#### **Similar Projects in the Industry**

It was discussed that the subcommittee should be

cognizant of what other groups are doing, as the Bond Markets Association and FIA are working on similar initiatives and MFA had a similar project several years ago. The subcommittee noted that it is important that our work not run afoul of other industry trends. Towards that end, the subcommittee contacted representatives from the BMA and FIA, and had the Chairman of MFA's Standards and Technology Committee act as an advisor to the subcommittee.

#### *MANAGED FUNDS ASSOCIATION STANDARDS AND TECHNOLOGY COMMITTEE*

Several years ago, a subcommittee of the MFA Statistics and Standards Committee was formed to develop consistent, logical standards for the electronic transmission of data to and from various participants in the managed futures industry. This committee included representatives from all parts of the industry.

The MFA Committee's goal was to provide clear, comprehensive, practical-to-implement standards to be used by everyone in the industry in the hope that this would improve the efficiency, accuracy and cost structure of interchanging data with one another.

The MFA Committee determined that an industry standard for content and protocol was necessary. The Committee also compiled a substantial document that listed each type of financial instrument's data requirements, in order to ensure that each financial instrument could be included in the protocol. At the time of MFA's recommendations, it was unable to obtain industry buy-in, as there was not a pressing need for standardization in the industry. However, the representative from MFA's Committee indicated that they would support the subcommittee's recommendations for standardization.

#### *FIX/FIA RELEASE OF FIX VERSION 4.3*

FIA has been working with the FIX Technical Committee and Derivatives Working Group to add futures and options to version 4.3 of FIX, which would allow for additional capabilities. The Financial Information eXchange (FIX) Protocol is a language which defines specific kinds of electronic messages for communicating securities transactions between two parties. FIX defines only the format of the messages and the session-level interaction between two applications -- it is not a software application in its own right. The FIX Protocol is not owned by any legal entity. Rather, it is maintained and improved by a committee structure comprised of fund managers, brokers, and other industry participants. Representatives from FIX that acted as advisors to the

subcommittee recommended that the subcommittee not mandate the use of a particular version of protocol; rather, the subcommittee should encourage people to use the current version. If it is cost effective, people will race to come up to speed and use the protocol.

The FIX subcommittee is made up of firms, exchanges, ISVs and customers. The FIX subcommittee has looked at both simple and complex trades, both from a floor and an electronic standpoint. FIX version 4.3 was completed in August 2001 and futures components were added to the standard. Two changes were made with respect to futures: 1) data elements, such as CTI codes and origin were added and 2) enhanced spread functionality was included. Also, account numbers and terminal operator IDs were captured. They also added futures-style give-ups and higher level allocations. Representatives from the standardization subcommittee were present at many of the FIX subcommittee's weekly conference calls that discussed these issues in order to obtain a better understanding of FIX's objectives.

In discussing FIX and its wide use in the securities industry, several of the subcommittee members and advisors remarked that FIX version 4.3, which is the most recent version of the protocol, is flexible and has capabilities for futures trading. While other versions of FIX are able to be utilized, the subcommittee noted that each of the other versions has inherent limitations and that FIX version 4.3 is the most comprehensive, up-to-date version.

#### *BOND MARKETS ASSOCIATION VOLUNTARY PROTOCOLS INITIATIVE*

The BMA represents securities firms and banks that underwrite, trade and sell debt securities both domestically and internationally. The BMA also strives to standardize market practices and commonly used documentation, both to promote efficiency and to reduce costs. One of the projects currently underway at the BMA is the Voluntary Protocol Initiative. The primary objective of this initiative is to assure the development of an industry-wide messaging standard for essential transaction functions in fixed income securities. The goal in pursuing this objective is to promote efficiency and expedite initiatives related to straight-through processing and T+1 settlement.

In its research, the BMA noted several benefits to standardization of protocols. In order to permit the numerous electronic platforms to connect and communicate in a seamless way, they all have to speak the same language. By developing a common protocol,

the BMA will make the specifications available to all platforms to promote expansion of electronic commerce in the bond markets. Additionally, an active industry-wide standardization initiative will create a variety of new responsibilities and opportunities for technology professionals and help to create the infrastructure that these professionals need to develop connectivity innovations for their customers. Keeping abreast of the diversity of e-commerce ideas, as they pertain to straight-through processing, will also be a beneficial by-product.

In pursuing the concept of a standardized protocol for its industry, the BMA developed four business practice documents, each relating to a specific industry product. Municipal securities, agency securities, U.S. Treasury securities, and corporate bonds were the initial focus, and these plain English documents spell out the business practices and processes involved in trading these instruments. The documents cover market participants and the trade process, pre-execution communications and the post-trade process. Just recently, the BMA also developed a TBA mortgage backed securities document. The BMA will add more instruments as the process continues.

As part of the BMA's initiative, the BMA and FIX have agreed to combine efforts to develop a common industry protocol for global fixed-income market securities. This is expected to alleviate incompatibility concerns among the various electronic trading platforms. FIX added fixed-income securities in its version 4.2 in an effort to improve the global trading process. Working on a joint initiative with FIX will enable the BMA to obtain more buy-in on the proposal of a standardized protocol for the bond market industry, as FIX is widely used in the securities industry and has a solid reputation.

#### *INTERNATIONAL INITIATIVES*

In addition to looking at standardization initiatives in the United States financial services community, the subcommittee also reviewed many of the processes that were being undertaken globally as well. Many international securities and derivatives exchanges have either moved to straight-through processing or are in the process of doing so. As cross border settlements are a necessary part of international business, straight-through processing would help to facilitate this process. A common messaging protocol is seen as a tremendous asset in enabling straight-through processing to become a reality.

#### **Data Requirement Comparison**

NFA provided the subcommittee with the data fields

required for its surveillance system in order to ensure that all necessary data was included. The CME and the Chicago Board of Trade also provided the subcommittee with their data requirements, so that a variety of requirements could be analyzed.

The goal in this analysis was to establish a standard that outlines the data fields needed for the order flow process, beginning with the customer and ending with the customer. Standards have historically been defined by the regulators who needed the information in order to effectively monitor the markets; however, with the passage of the Commodity Futures Modernization Act and rapid changes taking place in the industry, a broader participative approach to standardization appears necessary.

In reviewing this information, NFA noted that there are several components to the order flow process and that data is captured in each step, either for regulatory or business purposes. For example, when the customer enters the order (Step 1), the data that is entered includes general order information (commodity, contract month and year, quantity, price, type of order, order specifications, etc.) and his account number. All of this information is required by CFTC Regulation 1.35(a-1), as is the information that would be generated automatically by the system. System-generated information includes the order ID#, clearing member ID#, and the time that the order was entered in the system. All of the above information is necessary for regulatory purposes, as it helps prevent against manipulation of the trade. Information that is needed from a business standpoint would include the time that the order was confirmed to the customer, the type of routing system used and the origin of the order (e.g. – off-exchange). Once all of this information is entered/generated in the system, the information is passed to the terminal operator.

The information that is added by the terminal operator (Step 2) includes such data as the trade ID#, logon ID# and CTI code. All of this information is required by CFTC Regulation 1.35(e) and is necessary for monitors of the system to determine if the parameters defined for these trades will generate the proper exceptions. The data generated by the system includes the terminal ID# and the time that the order was entered. This information is also necessary from a regulatory standpoint, as it allows orders to be tracked more accurately.

Step 3 in the order flow process concerns the information that is gathered at the time that the order is executed. Again, some of this information is entered into the system at the exchange and some is automatically

generated. Entered information includes quantity and price, the trader ID# and the remaining quantity (for partial fills), which is all information required by the regulations, in order to adequately guard against trade manipulations. Other items are those that are generated automatically and include the time that the trade was matched and the time that the trade was reported. It should also be noted that on an electronic exchange, trades are matched automatically and there is no manual entry done at the exchange.

The next steps of the order flow process (Steps 4 and 5) deal with information that is automatically added by the systems after the order is executed. As the order moves back to the firm, information such as the transaction code and the time that the trade was sent to clearing are now captured. These fields are required by CFTC Regulation 1.35 and provide an audit trail for the regulators to follow when analyzing a transaction. Information that is added at the clearinghouse includes the final settlement price and similar information required by the regulations (in this case, CFTC Regulation 16.01(b)). This allows firms to correctly report the realized and unrealized balances in their customers' accounts and is needed to accurately reflect pay/collect information. As the information is pushed to the regulator (Step 6), no new information is added. Rather, the information is gathered in the surveillance system, so that trades can be tracked for impropriety and markets can be monitored for manipulation.

Attached as Exhibit C is a spreadsheet that outlines the data fields required for futures, or options on futures products during the entire order flow process. The spreadsheet is broken into three areas:

- 1) the information captured during order/trade process;
- 2) the information captured for regulatory reporting purposes; and
- 3) the information for back office/administrative purposes.

To facilitate the understanding of the order flow process and the specific data fields required along the way, we have enclosed as Exhibit D a flowchart. It is not intended to be an exhaustive depiction of the various types of order routing systems, but rather a pictorial of a typical order flow process from customer/trader order initiation, to routing, to execution/trade matching, to post-execution and clearing.

As part of the subcommittee's review, it was noted that the following information was not necessarily being captured throughout the order flow process, but was necessary for regulatory purposes:

- a) ultimate account ID; and
- b) initiating trader/user ID.

Our review also entailed looking at work done by the MFA on standards for electronic transmission and FIX Protocol efforts underway by the Exchanges. The MFA project was quite extensive and detailed encompassing all areas of managed futures operations. We also looked into the FIX Protocol initiative originally undertaken to aid firms trading equity products.

## **Subcommittee Recommendations**

As a result of discussions with individuals from the futures industry and the work done on standardization in other areas of the financial services community, the subcommittee makes the following recommendations to the Technology Advisory Committee.

### *1. CONTENT STANDARDIZATION*

Based on the need for specific data requirements in the regulation of electronic markets, the subcommittee recommends that data requirements be standardized for the futures and options industry. The comparison of the data requirements for NFA, the CME and the CBOT, as well as the requirements listed in MFA Committee's report and the CFTC's comments, show that certain data fields are universally needed for accurate and timely monitoring of the trading activity on the exchanges. The systems that possess all necessary data are not only adequate from a regulatory standpoint, but also add value to the order flow of the user, which will increase the user's competitive advantage. The standardization of the data components is key to any standardization effort in the industry.

Through the feedback that the subcommittee received from industry members, it was apparent that content standardization should not only be implemented, but that this implementation should be mandatory. Therefore, the subcommittee recommends that all protocols be enhanced to include the standard data fields by the recommended implementation date. The required standardization of content is an important step towards straight-through processing.

In an effort to make the content standardization possible, the subcommittee recommends that the content be divided into three sections: 1) order routing; 2) clearing; and 3) back office. This will enable changes to more easily implemented as each area can be focused on at various times and by the individuals who are directly affected by each section.

### *2. PROTOCOL STANDARDIZATION*



The subcommittee also recommends that the Technology Advisory Committee and the Commission support the idea for a standardized protocol for the industry. Given the need for automated straight-through processing of transactions, the multitude of protocols currently in use makes this extremely costly and time-consuming. A standard protocol for the industry will allow users to run their processing systems from end-to-end with little effort.

The subcommittee further recommends that the data flow for protocols be divided into three sections, in order to more easily implement the recommendation. The sections are the same as those listed in the content standardization recommendation: 1) order routing; 2) clearing; and 3) back office.

It should be noted, however, that the subcommittee's recommendation is that the utilization of a standardized protocol be considered as best practice guidance. We do not recommend that the CFTC, or any regulatory body, mandate that a particular protocol be used. The subcommittee would like a particular protocol to be selected and have it be known that it is in the industry participants' best interests to utilize this protocol.

Additionally, while the subcommittee does not specifically recommend that a particular protocol be used, we recognize that FIX version 4.3 is an example of protocol that includes the data necessary for regulatory purposes. FIX is able to handle complex products and addresses almost all of the needs of the industry. In addition, as FIX is utilized throughout the securities industry and is expected to become the voluntary standard for the bond markets as well, this protocol may be able to be implemented with little upheaval to the futures industry. The subcommittee was conscious not to simply adopt FIX as other protocols may become available, but nonetheless noted that FIX 4.3 does contain the data necessary for futures related activity.

### *3. IMPLEMENTATION/COMPLIANCE*

Once the subcommittee finalized its recommendations concerning content and protocol standardization, the recommendation of a timeframe for implementation was discussed. The first date suggested was the implementation date for security futures products, as this was a date for profound changes in the industry. However, given that the industry does not currently know when the SFP implementation date will be, it was decided that a more firm date should be selected. As the subcommittee wanted the date to be close enough to show up on a firm's radar screen, but far enough to cause minimal disruption to a firm's operations, the date

of June 30, 2003 was agreed upon by the subcommittee. This is the date that the subcommittee strongly recommends that all protocols be changed to include the required data content standards outlined by the subcommittee. Further, we also recommend that this date be used as a guideline for when futures participants begin using the agreed-upon protocol standard. By having such a target date in mind, the industry can better allocate its resources to implement the recommended protocol.

The subcommittee recognizes that this date is highly optimistic and, given the changing face of the industry, may not be easy for all firms to implement the protocol standard by that date. It should be noted again, however, that the subcommittee's recommendation is for a voluntary implementation of the selected protocol, not a mandated use. Therefore, the subcommittee believes that this date should not result in an undue burden on the industry. It was also recommended that new companies should begin utilizing the standard upon the company's start-up, as this would prevent them from having to switch to a different protocol at a later date.

#### *4. INDUSTRY SUPPORT*

The subcommittee also advocates obtaining support for the recommendations from various industry groups. Therefore, the subcommittee's interim report was sent to FIA, MFA, FIX, NIBA and the BMA for comment. Several of these associations sent formal comment letters to the subcommittee and all have indicated they generally support the subcommittee's efforts. Further, the subcommittee and its advisors suggest launching an extensive marketing campaign through various industry publications, which will focus on the importance of standardization for the industry.

The subcommittee believes that industry buy-in will be easier to achieve than ever before, as several factors are now in place in the financial services community. First, there are protocols that have all necessary components and contain enough flexibility to make them ideal for the futures industry. As noted earlier in this report, one such protocol is FIX version 4.3. Second, FIX is used extensively in the securities industry and is currently part of the standardization initiative in the bond markets as well. As many asset classes are utilizing FIX, the use of this particular standard in the futures industry may result in substantial cost savings. Firms may even offer lower fees to those that use FIX, or whatever standard is agreed upon, as opposed to another protocol. The cost savings will increase competition in the industry, which will expand its overall business. From a regulatory perspective, a standardized

protocol with standardized content will ensure that trades can easily be followed from end to end.

#### 5. *COMMISSION SUPPORT*

Finally, the subcommittee strongly recommends that the Commission support and advocate standardization of content as mandatory and standardization of a protocol of order flow data as a “best practice” for new and existing markets. Implementing standards for both protocol and content should increase efficiencies in processing and regulation. Standardization should also reduce the costs of doing business, which should increase the industry’s customer base and provide a more effective way for firms to analyze risk.

#### **Industry Feedback**

As noted earlier in this report, the subcommittee sent its interim report to a variety of trade associations affiliated with the financial services industry, in order to obtain their support for this initiative. Comments from these organizations were also solicited, so that the subcommittee could ensure that all relevant areas were addressed.

#### *NATIONAL INTRODUCING BROKERS ASSOCIATION*

The comments that the subcommittee received from NIBA indicated that there is strong support from the association for the recommendations outlined in the interim report. With the changes taking place in the industry, procedures must necessarily change to meet the industry’s needs and NIBA believes that the subcommittee has adequately identified and addressed these needs and changes. There was concern from NIBA regarding the costs, especially to smaller FCMs and exchanges, as well as introducing brokers, of implementing the recommendations. Additionally, NIBA was concerned that the time frame for implementation [which was listed as December 31, 2002 in the draft that NIBA received] might be too soon for smaller firms to implement.

#### *FUTURES INDUSTRY ASSOCIATION*

FIA, in its comment letter to the subcommittee, stressed that the association has been very active in promoting standardization. Through its Tech Working Group, FIA prepared a gap analysis of the FIX protocol and helped enhance FIX 4.3 to be ready to support futures. FIA supports moving towards a standardized protocol for the industry, particularly with respect to the coordination of exchanges and clearinghouses.

FIA is also a proponent of the concept of standardizing data content for order flow and related information, as

the entire industry is subject to the same business and regulatory drivers. The standardization of the message content will aid all industry participants when they are communicating with multiple parties. However, FIA believes that the content standardization should be limited to order flow messages, rather than broadening the scope to include clearing and regulatory functions.

FIA believes strongly that standardization, while still the objective of the futures industry, is a business decision among firms and exchanges. Further, FIA indicated that they prefer that the subcommittee endorse standardization without adopting it as a best practice and to stop short of calling for standardization by a specific date. If a timeframe were mandated, this might put additional strain on an industry that is already under significant financial challenges. Also, there was some question as to whether a voluntary initiative could be voluntary if supported and advocated as a best practice by the CFTC.

Finally, FIA indicated that it may be premature to highlight FIX 4.3 as a viable standardized protocol, as it is new and thus unproven in the marketplace.

#### *BOND MARKETS ASSOCIATION*

As the BMA is completing a similar initiative in the bond industry and had a key senior member of its staff participate as an advisor to this subcommittee, BMA is extremely supportive of the subcommittee's efforts in this area.

#### *CFTC TECHNOLOGY ADVISORY COMMITTEE*

During the November 2001 CFTC Technology Advisory Committee meeting, it was suggested that the subcommittee determine the costs involved with the implementation of these recommendations. It was also mentioned that an implementation date of June 2003 might be too optimistic, given the other challenges facing the futures industry.

#### *THE SUBCOMMITTEE'S RESPONSE*

The subcommittee's report attempted to address the concerns noted from industry representatives. The subcommittee did not receive any feedback that might suggest that content standardization is either unnecessary or would be burdensome to implement. Therefore, the subcommittee made no changes to its recommendation that data content be standardized in all protocols.

By stressing that the protocol standardization is a

voluntary initiative, one which will no doubt be driven by a business need, the subcommittee's report intends to alleviate concerns that this is an initiative sponsored by the Commission. We believe that it is important for the government agency that oversees the industry to support any decisions made with the thought of the industry's best interests. The fact that the subcommittee is part of a CFTC advisory committee is not meant to imply that a government mandate is imminent or necessary. Rather, it should be looked on as a positive step that the Commission is aware of the industry's needs and is attempting to address those needs in a proactive way.

While the subcommittee recognizes that a recommended implementation date of June 2003 might be considered optimistic by industry participants, the subcommittee nonetheless felt that such a date was necessary to stress the importance of protocol standardization to the industry. A date keeps a focus on the initiative and provides industry representatives with something to strive for when making business decisions for the future. The subcommittee's call for voluntary implementation means that each participant can look at its own business needs and determine for itself whether or not to implement the standard and at what time to do so.

The subcommittee has numerous advisors from around the industry participating on this project and we welcome representatives from the various industry associations to assist us in the implementation of the recommendations as we move forward on this initiative.

The subcommittee also believes that it may be in the industry's best interest to form a separate committee of users and regulators to continue to evaluate data content and protocols as the technology progresses. We believe it may be most effective to utilize people from many of the trade associations that were solicited for comments, as they have a clear understanding and interest in this initiative. This newly formed committee can also act as an advisor to firms and other users who are moving forward to the standardized protocol by the recommended implementation date.

## **Conclusion**

Through its extensive discussions and research into the various aspects of the financial services industry, the subcommittee noted that now more than ever the time is right for the industry to have a standardized protocol and content. Standardization will enable regulators to more effectively monitor the markets and will also enable firms to operate more efficiently and with greater cost savings. As we see a convergence of the various sectors of the financial services industry, the need for standardization

becomes even greater. The recommendations made in this report will enable the futures industry to move towards straight-through processing and will benefit not just futures, but other areas of the financial services community as well.

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**ORDERS TABLE (Data originated at firms)**

Field	Data type	Description	Tag Number	CFTC Rule
EXCHANGE_ORIGIN	Text	Exchange of order origination		
EXCHANGE_EXECUTION	Text	Exchange of execution		
ROUTING_SYSTEM	Text	Routing System		
ORDER_ID	Text	A unique identifier assigned to each order	37	1.35(a-1)
ORDER_REF_ID	Number	Other unique number generated by system or exchange as available		
SPREAD_ORDER_ID	Text	Spread match number to link specific leg information together		
CLEARING_MEMBER_ID	Text	Firm the trader clears through	528	1.35(a-1)
TERMINAL_ID	Text	ID of the terminal connection		
TERMINAL_GROUP_ID	Text	Identification of the physical group of terminals		
BRANCH_CODE	Text	Code indicating the city location of the device used to enter the order		
SUB_GROUP	Text	ID of the trader subgroup		
LOGON_ID	Text	ID of the trader using the terminal	466	
TIME_ORDERENTRY	Date/Time	Date/time order was entered into system or received by the trading desk		1.35(a-1)
TIME_ORDERENTRY_SOURCE	Text	Indicator defining source of timestamp, i.e. order routing system, internet, deck management system, manually, timestamp machine, or fill		5(b)(2) and 5(d)(10)
TRADING_SESSION	Text	Session order was entered in	336	
TIME_ORDERMATCH	Date/Time	Date/time order was sent to be matched		1.35(a-1)
TIME_CONFIRMED	Date/Time	Date/time order was confirmed to customer		Optional
CUSTACCT_ID	Text	Customer account number	1	1.35(a-1)
OMNIBUS_ACCT_INDICATOR	Text	Indicator if omnibus account		
CTI_CODE	Text	Trade Identifier code- <input type="checkbox"/> 1—For orders placed by an executing broker for his own account. <input type="checkbox"/> 2—For orders placed by an executing broker for a firm proprietary account. <input type="checkbox"/> 3—For orders placed by an executing broker for another broker who also has access to the system <input type="checkbox"/> 4—For orders placed by an executing broker on behalf of a customer.		5(b)(2) and 5(d)(10) 5(b)(2) and 5(d)(10) 5(b)(2) and 5(d)(10) 5(b)(2) and 5(d)(10)
VERB	Text	B=Buy; S=Sell (only if not a spread)	54	1.35(a-1)
PRODUCT_CAT	Text	F=Futures, C=Call; P=Put (only if not a spread)	461	1.35(a-1)
OPTION_TYPE	Text	American or European Option		
SPREAD_TYPE	Text	Type of spread order placed e.g. calendar, butterfly, crush, etc.		
OPEN/CLOSE_TRANS	Text	Opening or Closing Transaction	77	1.33(a)
COMMODITY_CODE	Text	Unique product identifier (only if not a spread)	55	1.35(a-1)
CONTRACT_YEAR	Text	yyyy (only if not a spread)	200	1.35(a-1)
CONTRACT_MONTH	Text	mm (only if not a spread)	200	1.35(a-1)
SHORT_TERM_OPTION_DATE	Text	dd (only if not a spread)		
STRIKE	Number	(only if not a spread)	202	1.35(a-1)
ORIGINAL_ORDER_QUANTITY	Number	The original quantity of the order		1.35(a-1)
TOTAL_MATCHED_QUANTITY	Number	The total quantity of the order that has been matched		
CANCELLED_ORDER_QUANTITY	Number	The total quantity of the order that has been cancelled		

PRICE	Number	Order price in raw tick format	44	1.35(a-1)
FORMAT_ORDER_PRICE	Text	Order price in human readable format		
SPREAD_DIFFERENTIAL	Number	Order price in spread differential (raw ticks)		
		The incremental block size that would be used to fill the given quantity—e.g., a block size of 10 would mean that the given quantity of, say 50, would be filled at a minimum of 10 contracts at a time.		
BLOCK_SIZE	Number			
ORDER_TYPE	Text	Price specific order designation: e.g., market order, limit order, stop limit, market on close. Code indicating the type of restriction placed on an order (stop, trigger, immediate or cancel, fill or kill)	40	1.35(a-1)
ORDER_RESTRICTION_CODE	Text			
STOP_PRICE	Number	Stop price on order		
LIMIT_PRICE	Number	Limit price on order		
DISCRETIONARY_INDICATOR	Text	Code if order was discretionary		
DISCRETIONARY_POINTS	Number	Number of points allowed for discretion		
		Time specific order designation: e.g., Trading day only, Good until cancelled, Good until specified date...		
DURATION	Text		59	1.35(a-1)
		Date of order's expiration (e.g., if order is designated as 'good until a specified date', then this field would reflect that date.		
ORDER_EXPIRY_POINT	Text			1.35(a-1)
		For exchanges which allow trading outside of the engine, this field is used to designate the origin (e.g. off-exchange)		
ORDER_ORIGIN	Text			1.38(b) and revised 4a
		If this order is tied to another one that was cancelled or if its part of a non standard spread combination		
LINKED_ORDER_ID	Text			
LINK_REASON	Text	The reason why the order is linked e.g. OCO		
		Whether the order initiated or closed-out a position.		
OPEN_CLOSE	Text		77	
		Whether the order was matched (M) or cancelled (C).		
STATUS	Text			
INFO_SOURCE	Text	For NFA use		

**SPREAD ORDER LEG TABLE**

Field	Data type	Description	Tag Number	CFTC Rule
SPREAD_ORDER_ID	Text	Uniquely generated Spread match number to link specific leg information together		
ORDER_SPREAD_LEG_NO	Number	Generated number uniquely identifying the leg of the spread		
VERB (BUY/SELL CODE)	Text	B = Buy; S = Sell		
COMMODITY_CODE	Text	Unique product identifier of the leg	55	1.35(a-1)
CONTRACT_YEAR	Text	yyyy	200	1.35(a-1)
CONTRACT_MONTH	Text	mm	200	1.35(a-1)
PRODUCT_CAT	Text	F = Futures, C = Call, P = Put	461	1.35(a-1)
OPTION_TYPE	Text	American or European Option		
STRIKE	Number	(only for options)	202	1.35(a-1)

**TRADES TABLE (Data originated at exchanges)**

Field	Data type	Description	Tag Number	CFTC Rule
TRADE_ID	Text	A unique identifier assigned to each trade		1.35(e)
TRANS_REF_ID	Number	Other unique number generated by system or exchange as available, either to the trade as a whole or to each side of the trade.		
TRADER_ID	Text	Unique identifier for user initiating trade		
ORDER_ID	Text	A unique identifier assigned to each component order in a trade	37	1.35(a-1)
CARD_SEQUENCE_NUMBER	Text	Sequence number on the trader's card [open outcry]		5(b)(2) and 5(d)(10)
LINE_SEQUENCE_NUMBER	Text	Sequence number of trade listed on trader's card [open outcry]		5(b)(2) and 5(d)(10)
SPREAD_ORDER_ID	Text	Spread match number to link specific leg information together		
TRANS_CODE	Text	Code representing what type of transaction the record represents (00=Opening position, 03=misclear, 07=firm adjustment, 08=firm transfer, 09=exchange for physical, 27=giveup or APS transfer, 30=trade, 60=Sell side = Issue Buy Side = Stop, 99= closing price)		1.38(b)
TIME_PIT_RECEIVED	Date/Time	Date and time when order is accepted by the broker either electronically or manually		5(b)(2) and 5(d)(10)
TIME_PIT_SOURCE	Text	Indicator defining source of timestamp, i.e. order routing system, Internet, deck management system, manually, timestamp machine or fill		5(b)(2) and 5(d)(10)
TIME_TRADEMATCH	Date/Time	Date and time when matched	60	5(b)(2) and 5(d)(10)
TIME_TRADETOCLEAR	Date/Time	Date and time when sent to clearing	229	5(b)(2) and 5(d)(10)
AS-OF_INDICATOR	Text	Indicator if as-of trade		
SESSION/SYSTEM	Text	Session trade occurred		
PRODUCT_CAT	Text	F=Futures, C=Call; P=Put	461	5(b)(2) and 5(d)(10)
OPTION_TYPE	Text	American or European Option		
SPREAD_TYPE	Text	Type of spread order placed		
OPEN/CLOSE_TRANS	Text	Opening or Closing Transaction	77	
COMMODITY_CODE	Text	Unique product identifier	55	5(b)(2) and 5(d)(10)
CONTRACT_YEAR	Text	yyyy	200	5(b)(2) and 5(d)(10)
CONTRACT_MONTH	Text	mm	200	5(b)(2) and 5(d)(10)
STRIKE	Number		202	5(b)(2) and 5(d)(10)
VERB	Text	B=Buy, S=Sell	54	5(b)(2) and 5(d)(10)
SPLIT-FILL_INDICATOR	Text	Indicator whether trade was part of a split fill; or larger side of split fill		
PARTIAL_QUALIFIER	Text	Indicator whether order was filled with one or more matching trades (P = partial fill, L = last partial fill)		
QUANTITY	Number			5(b)(2) and 5(d)(10)
REMAINING_QTY	Number	For a partial fill, the quantity of remaining contracts to fill		5(b)(2) and 5(d)(10)
PRICE	Number	Order price in raw tick format	44	1.35(e)

FORMAT_TRADE_PRICE	Text	Order price in human readable format		
DECIMAL_POSITION	Number	Number to indicate where decimal point is in trade price		
CABINET_PRICE_INDICATOR	Text	Code indicating if cabinet trade		
SPREAD_DIFFERENTIAL	Number	Order price in spread differential (raw ticks)		
CLEARED_FLAG	Boolean	For NFA use		
GIVEUP_FIRM_NUMBER	Text	For give-up trades, clearing firm number identifying the firm that will receive the position established.		
APS_GUS_INDICATOR	Text	Indicator for average price system or give-up code (T = transfer, O = offset, A = allocation/acceptance)		
APS_GUS_TRANSACTION_ID	Text	Unique number linking to GUS or APS system table		
TIME_TRADE_REPORTED	Date/Time	For off-exchange trades, the time the trade was reported to the exchange	113	1.38(b)

OTHER\_TIMING\_CODES      Text      Other exchange timing codes and data to support time assigned for execution, such as "CTR Process Type", "Out-of-Sequence Indicator", "Error Codes", CTR start time, CTR end time, etc.

*It is important to also note that there will be trades for which there will be no corresponding orders. Specifically, the clearinghouse must perform various "housekeeping" type trades with respect to option exercise/assignment, futures delivery and options that expire out-of-the-money. Since no corresponding order information would exist for such trades, the existing trade data model would not provide sufficient data. Consequently, in order to accommodate these trades, an additional block will have to be added to the trade record. In this case, the supplemental block will include:*

CLEARING_MEMBER_ID	Text	The applicable Clearing Member ID	528	5(b)(2) and 5(d)(10)
CUSTACCT_ID	Text	Customer account number	1	1.35(a-1)
ACTION	Text	A description of the clearinghouse action (e.g., option expiration, futures delivery, option exercise/assignment...)		

**CROSS REQUEST TABLE**

Field	Data type	Description	Tag Number	CFTC Rule
CROSS_TRADE_INDICATOR	Text	Indicator whether trade was a cross trade		
CROSS_REQ_ID		(only if not a spread)		
CROSS_REQ_SPREAD_ID		if spread		
TIME_CROSS_REQUEST	Date/Time	Date the cross request was entered		
COMMODITY_CODE	Text	Unique product identifier (only if not a spread) F = Futures, C = Call, P = Put (only if not a	55	1.35(a-1)
PRODUCT_CAT	Text	spread)	461	1.35(a-1)
OPTION_TYPE	Text	American or European option		
SPREAD_TYPE	Text	Type of spread order placed		
CONTRACT_YEAR	Text	yyyy (only if not a spread)	200	1.35(a-1)
CONTRACT_MONTH	Text	mm (only if not a spread)	200	1.35(a-1)
STRIKE	Number	(only if not a spread)	202	1.35(a-1)
SPREAD_TYPE	Text	Type of spread order placed		
CROSS_INTENT_CODE	Text	Code indicating whether the cross request place		
QUANTITY	Number	was to either buy, sell or both		
FIRM_NUMBER	Text	Quantity specified in the cross request		
BRANCH_CODE	Text	Clearing firm number identifying the firm		
PARTICIPANT	Text	responsible		
SUBGROUP	Text	Code indicating the city location of the device		
MEMBER_REF_ID	Text	used to enter the order		
		Participant number of the individual who entered		
		the cross request		
		Subgroup of the individual who entered the cross		
		request		
		Code that uniquely identifies the entity		
		responsible for the cross request entered		

**CROSS REQUEST LEG**

Field	Data type	Description	Tag Number	CFTC Rule
CROSS_REQUEST_SPREAD_ID	Number	(only if spread) Generated number uniquely identifying the leg of		
CROSS_REQUEST_SPREAD_LEG_NO	Text	the spread		
COMMODITY_CODE	Text	Unique product identifier of the leg	55	1.35(a-1)
CONTRACT_YEAR	Text	yyyy	200	1.35(a-1)
CONTRACT_MONTH	Text	mm	200	1.35(a-1)
PRODUCT_CAT	Text	F = futures, C = call, P = put	461	1.35(a-1)
OPTION_TYPE	Text	American or European option		
STRIKE	Number	(only if option)	202	1.35(a-1)



**REGULATORY - OPEN INTEREST BY FIRM**

Field	Data type	Description	Tag Number	CFTC Rule
CLEARING_MEMBER_ID	Text	Name of the clearing member		
EXCHANGE	Text	Exchange designation of multi-listed products		17.00(g)
REPORTING_DATE	Date/Time		113	17.00(g)
CLEARING_MEMBER_ID	Text	Firm the trader clears through		17.00(g)
PRODUCT_CAT	Text	F=Futures, C=Call; P=Put	461	17.00(g)
OPTION_TYPE	Text	American or European Option		17.00(g)
OPEN/CLOSE_TRANS	Text	Opening or Closing Transaction	77	
COMMODITY_CODE_1	Text	Exchange-assigned commodity code for the futures or option contract	55	17.00(g)
COMMODITY_CODE_2	Text	Exchange-C12assigned commodity code for the futures or option contract		17.00(g)
CONTRACT_YEAR_1	Text	Expiration date or delivery date of the reported futures or options contract	200	17.00(g)
CONTRACT_MONTH_1	Text	Expiration date or delivery date of the reported futures or options contract	200	17.00(g)
CONTRACT_DAY_1	Text	Expiration date or delivery date of the reported futures or options contract		17.00(g)
CONTRACT_YEAR_2	Text	True expiration date of an option identified by only year and month		17.00(g)
CONTRACT_MONTH_2	Text	True expiration date of an option identified by only year and month		17.00(g)
CONTRACT_DAY_2	Text	True expiration date of an option identified by only year and month		17.00(g)
CONTRACT_YEAR_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(g)
CONTRACT_MONTH_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(g)
CONTRACT_DAY_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(g)
PROPRIETARY_OR_CUSTOMER	Text	"P" or "C"		
EFP_BOUGHT	Number			
EFP_SOLD	Number			
EFS_BOUGHT	Number			

EFS_SOLD	Number		
STRIKE	Number	202	17.00(g)
OPEN_LONG	Number	Open long positions for firm at beginning of trading day	18.00(a)
OPEN_SHORT	Number	Open short positions for firm at beginning of trading day	18.00(a)
TRADE_BOUGHT	Number	Positions bought for firm on trading day	16.00(a)
TRADE_SOLD	Number	Positions sold for firm on trading day	16.00(a)
CLOSE_LONG	Number	Open long positions for firm at end of trading day	18.00(a)
CLOSE_SHORT	Number	Open short positions for firm at end of trading day	18.00(a)
TRANSFERS_BOUGHT	Number	Buy transfers for day	
TRANSFERS_SOLD	Number	Sell transfers for day	
DELIVERY_ISSUES	Number	Delivery notices issued for day	17.00(g)
DELIVERY_STOPS	Number	Delivery notices stopped for day	17.00(g)
EXERCISE_BOUGHT	Number	Exercise notices for buy	
EXERCISE_SOLD	Number	Exercise notices for sell	
ASSIGN_BOUGHT	Number	Assignments for buy	
ASSIGN_SOLD	Number	Assignments for sell	
GIVEUP_BOUGHT	Number	Give ups of long positions	
GIVEUP_SOLD	Number	Give ups of short positions	
ADJUSTMENTS_LONG	Number	Adjustments to long positions	
ADJUSTMENTS_SHORT	Number	Adjustments to short positions	

#### REGULATORY - PAY COLLECT

Field	Data type	Description	Tag Number	CFTC Rule
REPORTING_DATE	Date/Time		113	16.00(a)
CLEARING_MEMBER_ID	Text	Firm the trader clears through	528	16.00(a)
ORIGIN	Text	House or Customer		16.00(a)
PRODUCT_CAT	Text	F=Futures, C=Call; P=Put	461	16.00(a)
OPTION_TYPE	Text	American or European Option		
COMMODITY_CODE	Text	Unique product identifier	55	16.00(a)
CONTRACT_YEAR	Text	yyyy	200	16.00(a)
CONTRACT_MONTH	Text	mm	200	16.00(a)
STRIKE	Number		202	16.00(a)
GROSS_PAY_AMT	Number	Total amount due from clearinghouse in specified contract		
GROSS_COLLECT_AMT	Number	Total amount due to clearinghouse in specified contract		
NET_PAY_COLLECT	Number	Net of payments due and from clearinghouse		

#### REGULATORY - DAILY ACTIVITY

Field	Data type	Description	Tag Number	CFTC Rule
EXCHANGE_ID	Text	Unique identifier for an exchange		

REPORTING_DATE	Date/Time		113	16.00(a)
PRODUCT_CAT	Text	F=Futures, C=Call; P=Put	461	16.00(a)
OPTION_TYPE	Text	American or European Option		
COMMODITY_CODE_1	Text	Exchange-assigned commodity code for the futures or options contract	55	16.00(a)
COMMODITY_CODE_2	Text	Exchange-assigned commodity code for a futures contract or other instrument that a position is exercised into from a date-specific or flexible option		
CONTRACT_YEAR_1	Text	Expiration date or delivery date of the reported futures or option contract	200	16.00(a)
CONTRACT_MONTH_1	Text	Expiration date or delivery date of the reported futures or option contract	200	16.00(a)
CONTRACT_DAY_1	Text	Expiration date or delivery date of the reported futures or option contract		
CONTRACT_YEAR_2	Text	True expiration date of an option identified by only year and month		
CONTRACT_MONTH_2	Text	True expiration date of an option identified by only year and month		
CONTRACT_DAY_2	Text	True expiration date of an option identified by only year and month		
CONTRACT_YEAR_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		
CONTRACT_MONTH_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		
CONTRACT_DAY_3	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		
FIRST_NOTICE_DAY	Date			
LAST_TRADING_DAY	Date			
DELTA_FACTOR	Number			
VOLUME_OF_TRADING	Number			
VOLUME_OF_EFP	Number			
VOLUME_OF_EFS	Number			
OPEN_INTEREST	Number			
DELIVERY_NOTICES	Number			

STRIKE	Number		202	16.00(a)
OPENING_HIGH	Number	Highest sale or bid during the opening period		16.01(b)
OPENING_LOW	Number	Lowest sale or bid during the opening period		16.01(b)
OPENING_HIGH_TYPE	Text			16.01(b)(1)(ii)
OPENING_LOW_TYPE	Text			16.01(b)(1)(ii)
CLOSING_HIGH	Number	Highest sale or bid during the closing period		16.01(b)
CLOSING_LOW	Number	Lowest sale or bid during the closing period		16.01(b)
CLOSING_HIGH_TYPE	Text			16.01(b)(1)(ii)
CLOSING_LOW_TYPE	Text			16.01(b)(1)(ii)
HIGH_BID_ASK_ACT	Text	Whether source of high was best bid, best ask or an actual transaction price		16.01(b)
LOW	Number	Low for day		16.01(b)
LOW_BID_ASK_ACT	Text	Whether source of low was best bid, best ask or actual transaction price		16.01(b)
SETTLEMENT	Number	Final settlement price	63	16.01(b)
SETTLE_UNDERLYING	Number	Final settlement price in underlying		
		Whether source of settle was best bid, best ask, nominal or actual transaction price		
SETTLE_BID_ASK_ACT	Text			16.01(b)

#### REGULATORY - LARGE TRADER

Field	Data type	Description	Tag Number	CFTC Rule
CLEARING_MEMBER_ID	Text	Firm the account clears through	528	17.00(d),(e)
REPORTING_FIRM	Text	Number assigned by the CFTC to identify reporting firms		
CUSTACCT_ID	Text	Customer account number	1	17.00(d),(e)
SPECIAL_ACCOUNT_ID	Text	Unique identifier assigned by the reporting firm to each special account		
EXCHANGE_ID	Text	Unique identifier for an exchange		
REPORTING_DATE	Date/Time	Date of large trader report		17.00(d),(e)
PRODUCT_CAT	Text	F=Futures, C=Call Option, P=Put Option, N=Delivery Notice (Issue/Stop), EP=EFP, ES=EFS, T=Transfer Trades	461	17.00(d),(e)
OPTION_TYPE	Text	American or European Option		
COMMODITY_CODE_1	Text	Exchange-assigned commodity code for the futures or options contract	55	17.00(d),(e)

COMMODITY_CODE_2	Text	Exchange-assigned commodity code for a futures contract or other instrument that a position is exercised into from a date-specific or flexible option		
CONTRACT_YEAR_1	Text	Expiration date or delivery date of the reported futures or options contract	200	17.00(d),(e)
CONTRACT_MONTH_1	Text	Expiration date or delivery date of the reported futures or options contract	200	17.00(d),(e)
CONTRACT_DAY_1	Text	Expiration date or delivery date of the reported futures or options contract		17.00(d),(e)
CONTRACT_YEAR_2	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(d),(e)
CONTRACT_MONTH_2	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(d),(e)
CONTRACT_DAY_2	Text	Expiration date or delivery month and year of the future or other instrument that a position is exercised into from a date-specific or flexible option		17.00(d),(e)
STRIKE	Text		202	17.00(d),(e)
LONG_POSITION_QTY	Number	Long position, delivery notices, stopped, purchases of futures for cash, or purchases of swaps for cash		17.00(d),(e)
SHORT_POSITION_QTY	Number	Short position, delivery notices issued, sales of futures for cash, or sales of swaps for cash		17.00(d),(e)
ADD_CHANGE_DELETE	Text	Indicator for adding a new record or changing/deleting a previous record		

**BACK OFFICE - PRODUCT MASTER**

Field	Data type	Description	Tag Number	CFTC Rule
		F=Futures, C=Call Option, P=Put		
PRODUCT_CAT	Text	Option	461	
OPTION_TYPE	Text	American or European Option		
COMMODITY_CODE	Text	Unique product identifier	55	
STRIKE	Number	Zero if future contract	202	
COMMODITY_NAME	Text	Descriptive name of commodity		
CURRENCY_CODE	Text	USD = US dollars		
SETTLEMENT_METHOD	Text	Cash or Delivery		
CONTRACT_SIZE	Number	Underlying quantity size		
CONTRACT_FACTOR	Number	Contract Multiplier		
TICK	Number	Incremental price move		
CONTRACT_UNIT_DESC	Text	e.g., cents per pound		
		Quantity which, if reached,		
POSITION_LIMIT	Number	triggers reporting requirements		
PRICE_LIMIT	Number	Contract daily price limit		
		Time of day when trading for the		
OPEN_TIME	Date/Time	contract begins		
		Time of day when trading for the		
CLOSE_TIME	Date/Time	contract ends		

**BACK OFFICE - MONTHLY PRODUCT MASTER**

Field	Data type	Description	Tag Number	CFTC Rule
		Date of entry (greatest date will		
CHANGE_DATE	Date/Time	represent current specs)		
		F=Futures, C=Call Option, P=Put		
PRODUCT_CAT	Text	Option	461	
OPTION_TYPE	Text	American or European Option		
COMMODITY_CODE	Text	Unique product identifier	55	
CONTRACT_MONTH	Text	mm	200	
CONTRACT_YEAR	Text	yyyy	200	
STRIKE	Text		202	
		Allowable price movement which		
		defines allowable trading range for		
LIMIT_MOVE_SIZE	Number	the day		
FIRST_TRADE_DATE	Date/Time			
FIRST_INTENTION_DATE	Date/Time			
FIRST_NOTICE_DATE	Date/Time			
FIRST_DELIVERY_DATE	Date/Time			
LAST_TRADE_DATE	Date/Time			
LAST_NOTICE_DATE	Date/Time			
LAST_DELIVERY_DATE	Date/Time			
SUSPENSION_START_DATE	Date/Time			
SUSPENSION_END_DATE	Date/Time			

**BACK OFFICE - CONNECTION ACTIVITY**

Field	Data type	Description	Tag Number	CFTC Rule
TERMINAL_ID	Text	ID of terminal connection		
SUB_GROUP	Text	ID of the trader subgroup		
LOGON_ID	Text	ID of the broker using the terminal	466	
ACTION	Text	ON: Log on / OFF: Log off Time of action (i.e., time of log on or log off)		
ACTION_TIME	Date/Time			

**BACK OFFICE - TRADERS**

Field	Data type	Description	Tag Number	CFTC Rule
LOGON_ID	Text	Trader's unique identifier	466	
NAME	Text	For entities other than individuals		
LAST_NAME	Text			
FIRST_NAME	Text			
ADDRESS1	Text			
ADDRESS2	Text			
ADDRESS3	Text			
CITY	Text			
STATE	Text			
POSTAL_CODE	Text			
COUNTRY_CODE	Text			
TELEPHONE_DAY	Text			
TELEPHONE_EVENING	Text			
TELEPHONE_EMERGENCY	Text			
EMAIL	Text			
FAX	Text			
ENTITY_IS_INDIVIDUAL	Bool			
ENTITY_IS_SOLEPROP	Bool			
ENTITY_IS_TRUST	Bool			
ENTITY_IS_CORP	Bool			
ENTITY_IS_PARTNERSHIP	Bool			
ENTITY_IS_JOINT	Bool			
ENTITY_IS_OTHER	Text			
PRINCIPLE_BUSINESS	Text	Commercial, Hedge...		
TRADING_PRIVLEDGES	Text			
START_DATE	Date/Time			
END_DATE	Date/Time			

**BACK OFFICE - CLEARING MEMBERS**

Field	Data type	Description	Tag Number	CFTC Rule
CLEARING_MEMBER_ID	Text	Clearing firm's unique identifier	528	
NAME	Text			
LAST_NAME	Text	If clearing member is an individual		
FIRST_NAME	Text			

ADDRESS1	Text
ADDRESS2	Text
ADDRESS3	Text
CITY	Text
STATE	Text
POSTAL_CODE	Text
COUNTRY_CODE	Text
TELEPHONE_DAY	Text
TELEPHONE_EVENING	Text
TELEPHONE_EMERGENCY	Text
ENTITY_IS_INDIVIDUAL	Bool
ENTITY_IS_SOLEPROP	Bool
ENTITY_IS_TRUST	Bool
ENTITY_IS_CORP	Bool
ENTITY_IS_PARTNERSHIP	Bool
ENTITY_IS_JOINT	Bool
ENTITY_IS_OTHER	Text
START_DATE	Date/Time
END_DATE	Date/Time

**BACK OFFICE - CLEARING MEMBER CONTACTS**

Field	Data type	Description	Tag Number	CFTC Rule
CLEARING_MEMBER_ID	Text	Clearing firm's unique identifier	528	
CONTACT_TYPE	Text	Compliance, Legal, Financial, IT		
LAST_NAME	Text			
FIRST_NAME	Text			
ADDRESS1	Text			
ADDRESS2	Text			
ADDRESS3	Text			
CITY	Text			
STATE	Text			
POSTAL_CODE	Text			
COUNTRY_CODE	Text			
TELEPHONE_DAY	Text			
TELEPHONE_EVENING	Text			
TELEPHONE_EMERGENCY	Text			
EMAIL	Text			
FAX	Text			

**BACK OFFICE - TRADER/CLEARING RELATIONSHIPS**

Field	Data type	Description	Tag Number	CFTC Rule
LOGON_ID	Text		466	
CLEARING_MEMBER_ID	Text		528	
TERMINAL_ID	Text			
SUB_GROUP	Text	ID of the trader subgroup		
START_DATE	Date/Time			
END_DATE	Date/Time			



GIVEUP\_FIRM\_ID                      Text                      If trade is placed for a customer with the intention of giving it up from one clearing firm to another.

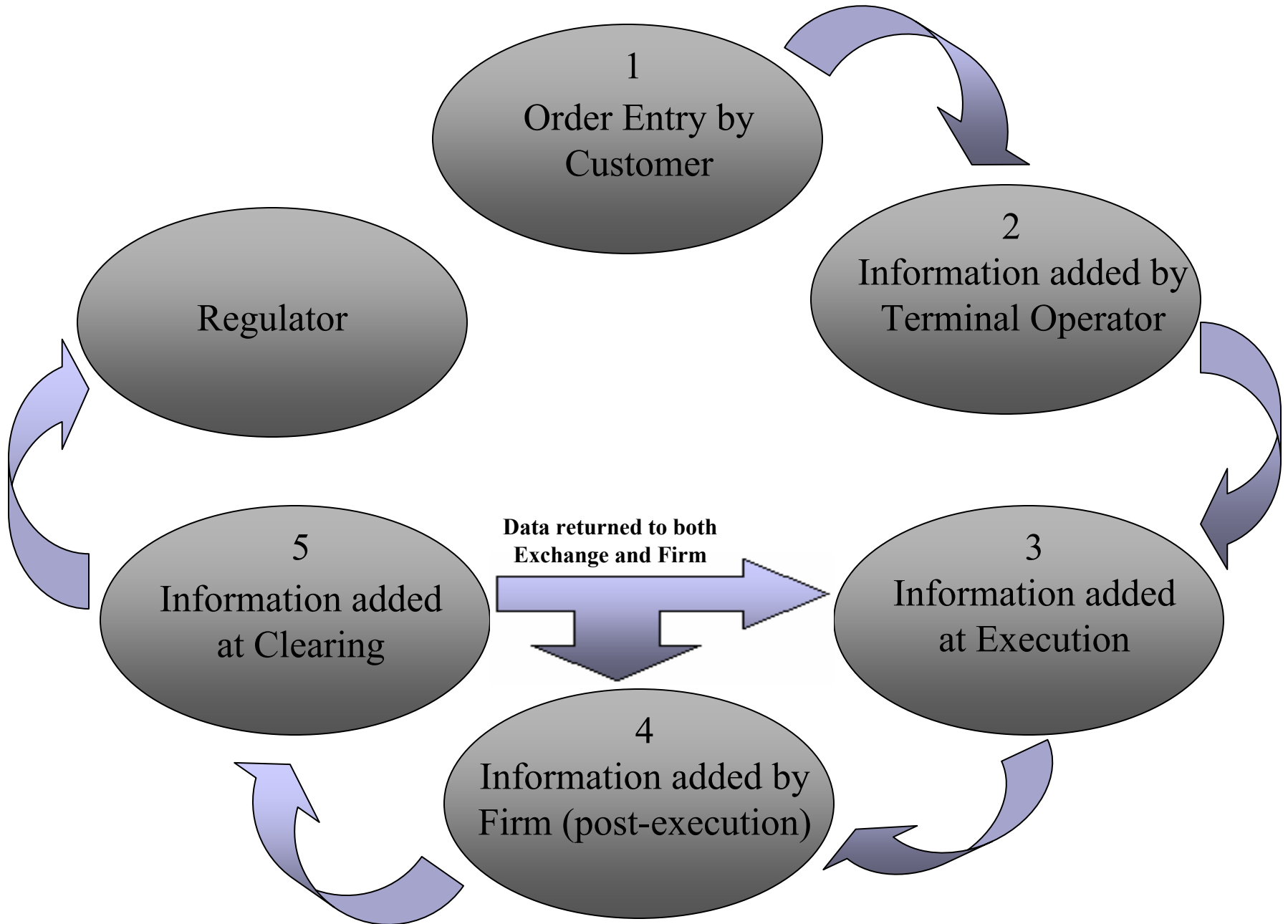
**BACK OFFICE - ACCOUNT RELATIONSHIPS**

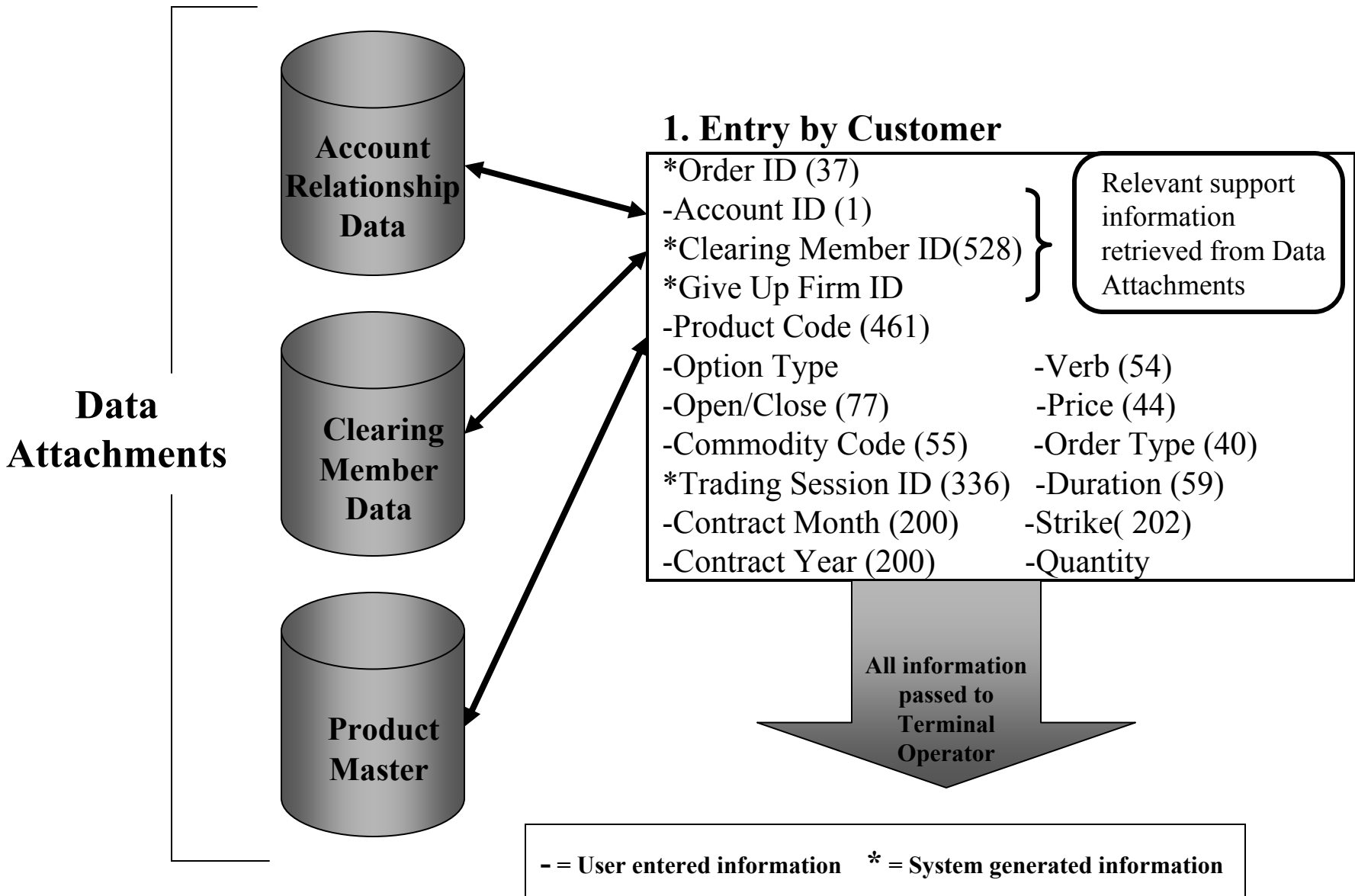
Field	Data type	Description	Tag Number	CFTC Rule
LOGON_ID	Text		466	
SUB_GROUP	Text	ID of the trader subgroup		
CLEARING_MEMBER_ID	Text		528	
CUSTACCT_ID	Text			
		O = Owner of the account; D = Discretion over account; B = Both Owner and Discretion; C = Clear account		
CONTROLLER_TYPE	Text			
ACCOUNT_TYPE	Text	Spec, Hedge, Error, Omnibus		
OPEN_DATE	Date/Time			
CLOSE_DATE	Date/Time			

**BACK OFFICE - TRADING PRIVILEGES**

Field	Data type	Description	Tag Number	CFTC Rule
LOGON_ID	Text		466	
SUB_GROUP	Text	ID of the trader subgroup		
CLEARING_MEMBER_ID	Text		528	
TRADING_PRIVILEGES	Text			
START_DATE	Date/Time			
END_DATE	Date/Time			

# ORDER / TRANSACTION FLOWCHART

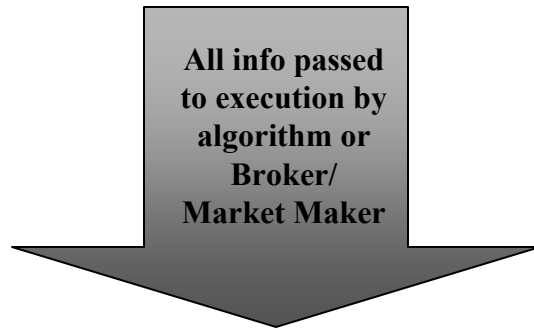






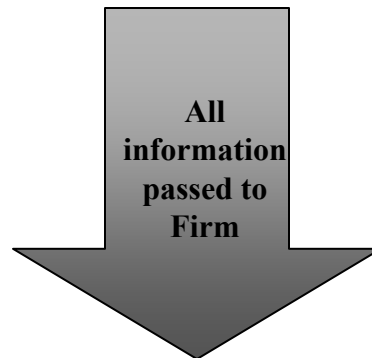
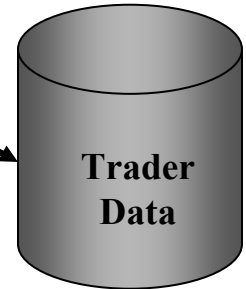
## **2. Info Added by Entry of Terminal Operator**

- Trader ID
- \*Exchange Origin
- Subgroup ID
- CTI Code
- \*Action (log on or off)
- \*Time Order Entered
- Logon ID (466)
- \*Terminal ID

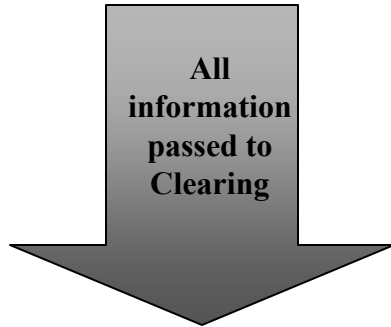
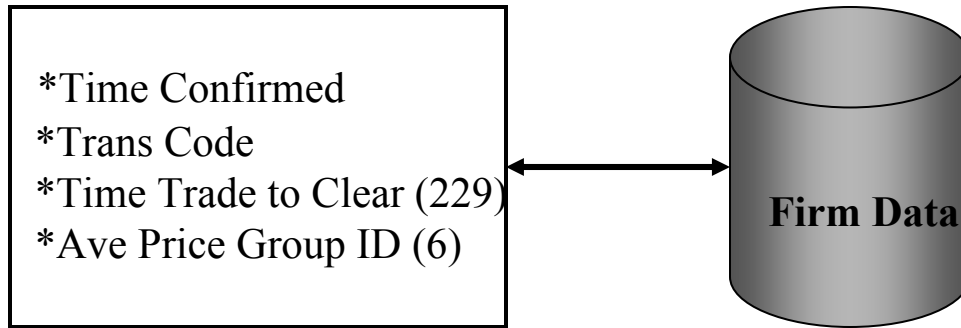


### 3. Info Added by Entry at Time of Execution

-Exchange Execution	*Time Order Match
*Trade ID	*Time Trade Match (60)
*Time Trade Reported (113)	-Account ID (Traders)
-Order Origin	-Quantity
-Linked Order ID	-Price (44)
-Link Reason	-Remaining Quantity
	-Trader ID



#### 4. Info Added by Entry at Firm (post-execution)



#### 5. Info Added by Entry at Clearing

