



## **Multi Inquiries**

**Alexander Pinnow**

**ALEXANDER . PINNOW @ GOOGLEMAIL . COM**

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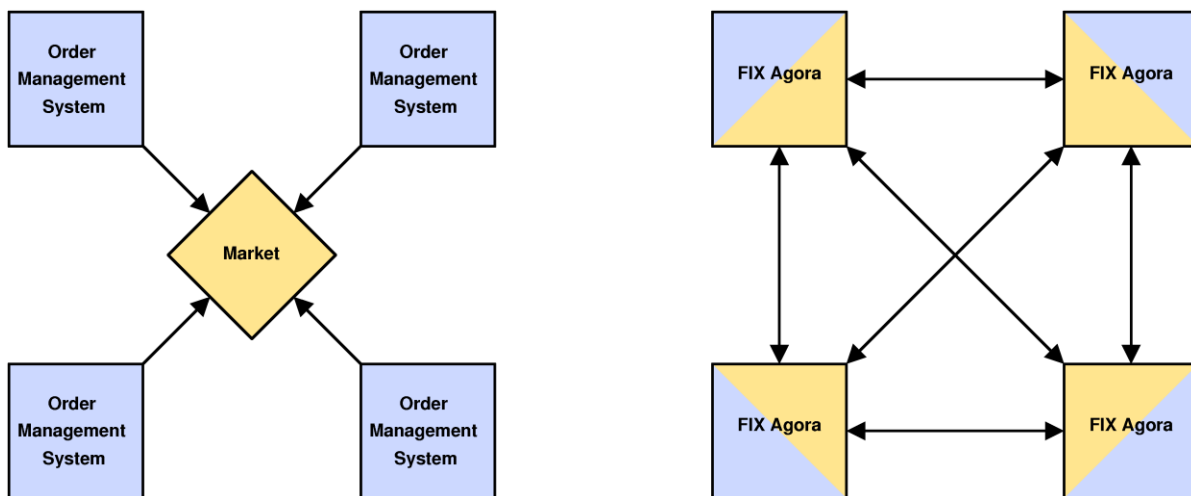
## Objectives

This guide gives step-by-step instructions for working with multi inquiries in FIX Agora. The paper describes the negotiation workflow for the buy-side and sell-side perspective.

## About FIX Agora

FIX Agora is a peer-to-peer OTC trading network for financial institutions with an integrated order management system. The application can act as buy side and sell side. FIX Agora supports indicative quoting and processing of order requests. It is equipped with multiuser spreadsheets for price calculations as market maker.

FIX Agora ships with the option for exporting trade reports into Excel® sheets and SAP® Financial Supply Chain Management (requires SAP® JCO). The application is client/server based, modular and extensible.



FIX Agora is working with the Financial Information eXchange (“FIX”) protocol. The FIX protocol is an industry driven standard for the electronic communication of trade related messages, released and maintained by FIX Protocol, Ltd.

FIX Agora is a 100% Java open source implementation running on Windows, Linux/UNIX and Mac OS (client only). It requires Oracle® JRE version of 1.6 or higher.

This software is published under the GNU Lesser General Public License, Version 2.1 (LGPLv2.1).

## Prerequisites

Download the latest version of FIX Agora that fits to your operating system from:

<http://fixagora.sourceforge.net/download.html>

Follow the instructions in the quickstart tutorial to launch the application:

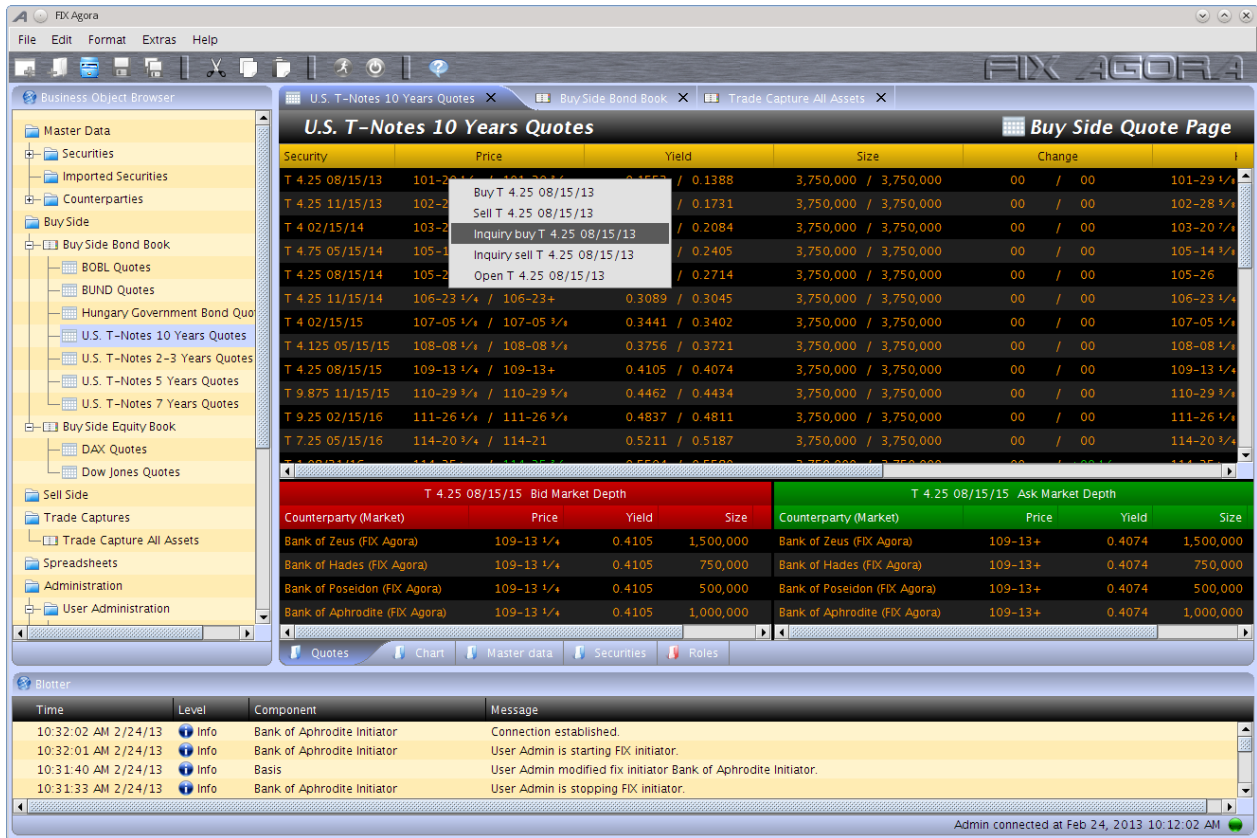
<http://fixagora.sourceforge.net/pdf/quickstart.pdf>

## Buy-Side Perspective

Bank of Midas is trading U.S. Treasuries as buy-side. The financial institution has four sell-side counterparties to trade with: Bank of Aphrodite, Bank of Hades, Bank of Poseidon and Bank of Zeus.

### Vanilla Workflow

Open the buy-side quote page *U.S. T-Notes 10 Years Quotes* as user *Admin* or *bill*. Right click on the price of the security *T 4.25 08/15/13* and choose the item *Inquiry buy T 4.25 08/15/13*.



A new inquiry ticket is showing up. It is possible to flip the side of your inquiry from bid to ask by clicking into the green (or red) box on top of the ticket.

**INQUIRY ASK (YOU BUY)**

|  |                                     |     |
|--|-------------------------------------|-----|
| Security   | T 4.25 08/15/13                     | ... |
| Market   | FIX Agora                           | ▼   |
| Counterparty 1   | Bank of Poseidon                    | ... |
| Counterparty 2   | Bank of Hades                       | ... |
| Counterparty 3   | Bank of Zeus                        | ... |
| Counterparty 4   | Bank of Aphrodite                   | ... |
| Partials Accepted  | <input checked="" type="checkbox"/> |     |
| Size   | 1,000,000                           | ▲ ▼ |
| Expire Time (Seconds)  | 180                                 | ▲ ▼ |
| Date (Settlement)  | 02/27/2013                          | ▲ ▼ |
| <input type="button" value="Submit"/> <input type="button" value="Discard"/> |                                     |     |

The ticket is pre-filled with the counterparties sending indicative quotes as sell-side into your system. You can choose up to four counterparties for an inquiry.

Set the size to the order volume you would like to buy and decide if you would accept partials of this volume. In the example the volume is set to 1,000,000. You can hit the M-key as shortcut to insert three zeros at once.

The expire-time defines the maximum duration of an inquiry process. The field is pre-filled with a time period of 180 seconds. After this time the inquiry will automatically be stopped, if no final trade state was reached.

The settlement date is pre-filled according to either the definition of the valuta of the security or the default value of the buy-side order book, if no special value is defined. Finally, hit the *Submit* button to start the inquiry.

You will see a single inquiry for any counterparty in the buy-side order book. All inquiries are marked as new. A countdown is showing the remaining expire time. Any counterparty has the opportunity to reject your inquiry.

| Status              | Security        | Counterparty (Market)         | Side          | Limit      | Last Price | Last Yield | Last Quantity | Cumulative Quantity | Order |
|---------------------|-----------------|-------------------------------|---------------|------------|------------|------------|---------------|---------------------|-------|
| Firm Quote 00:13    | T 4.25 08/15/13 | Bank of Aphrodite (FIX Agora) | Ask (you buy) | 101-28 7/4 |            |            |               |                     |       |
| Rejected            | T 4.25 08/15/13 | Bank of Hades (FIX Agora)     | Ask (you buy) | Inquiry    |            |            |               |                     |       |
| Subject Quote 02:15 | T 4.25 08/15/13 | Bank of Poseidon (FIX Agora)  | Ask (you buy) | 101-29 1/4 |            |            |               |                     |       |
| Subject Quote 02:15 | T 4.25 08/15/13 | Bank of Zeus (FIX Agora)      | Ask (you buy) | 101-29 1/4 |            |            |               |                     |       |

| Time                | Level | Component          | Message  |
|---------------------|-------|--------------------|--|
| 10:51:37 AM 2/24/13 | Info  | Buy Side Bond Book | System received quote for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.90234375 from Bank of Aphrodite settlement 02/27/2013. |
| 10:51:23 AM 2/24/13 | Info  | Buy Side Bond Book | System received quote for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.91015625 from Bank of Poseidon settlement 02/27/2013.  |
| 10:51:22 AM 2/24/13 | Info  | Buy Side Bond Book | System received quote for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.91015625 from Bank of Zeus settlement 02/27/2013.      |
| 10:51:22 AM 2/24/13 | Info  | Buy Side Bond Book | System received reject for inquiry buy 1,000,000 T 4.25 08/15/13 from Bank of Hades settlement 02/27/2013.                       |

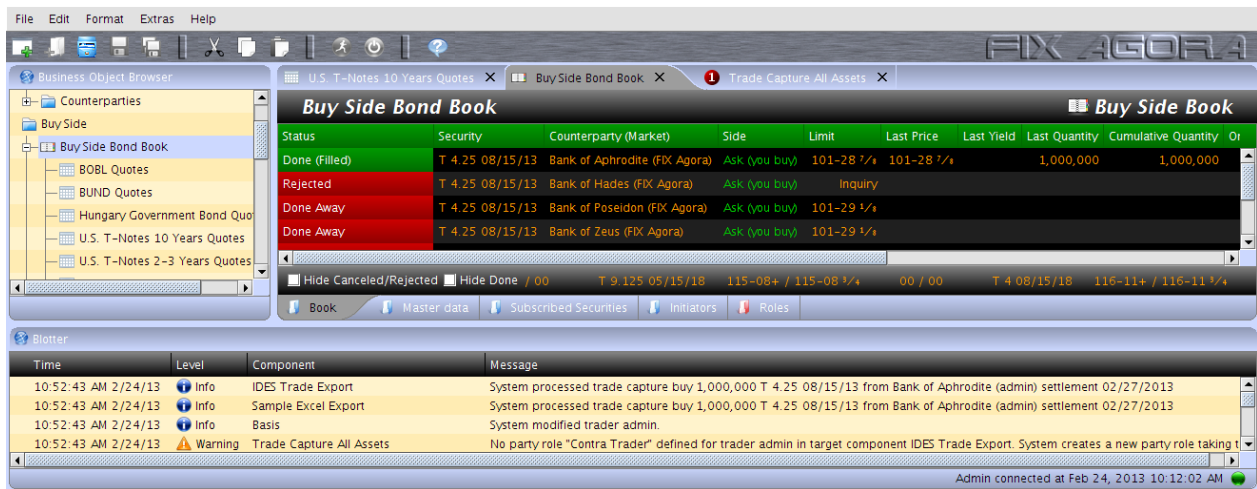
In the screenshot above Bank of Hades rejected your request. This counterparty is no longer taking part in this inquiry. The other counterparties were responding to your inquiry with a quote. Each quote is provided with a wire time. The countdown is now showing the remaining wire time. The wire time defines how long this quote stays firm. As long as a quote is marked as firm you can seal the trade and the counterparty has no chance to cancel this transaction. After the wire time is expired, the status of the quote is changing from firm to subject (see section [Subject Quotes](#) below).

If you would like to respond to a quote, double click in the entry of a specific counterparty in the order book. A ticket is showing up.

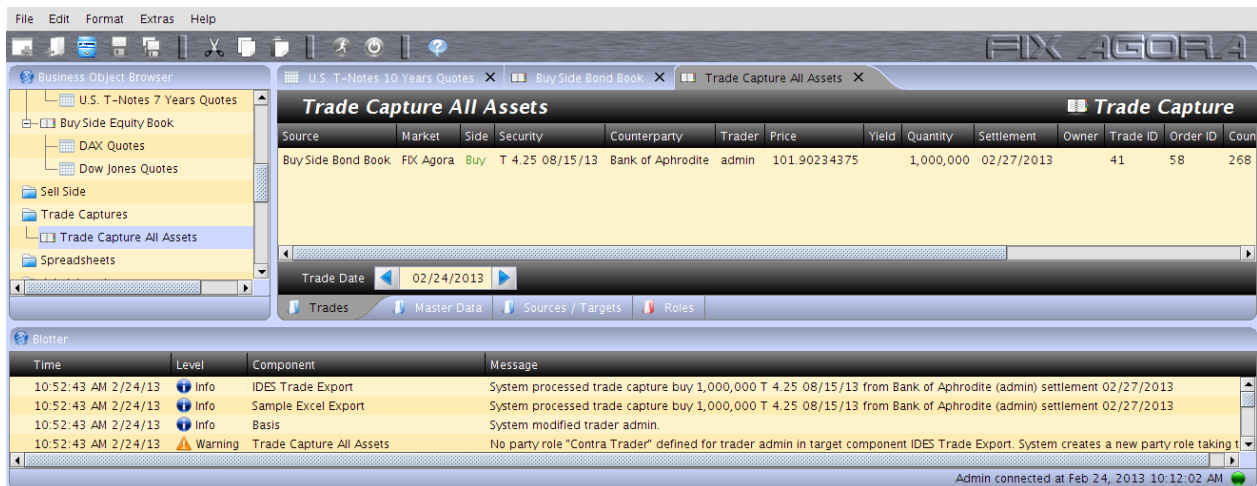
**ASK (YOU BUY) - Firm Quote 00:16**

|                   |                                     |               |
|-------------------|-------------------------------------|---------------|
| Security          | T 4.25 08/15/13                     | ...           |
| Market            | FIX Agora                           | v             |
| Counterparty      | Bank of Aphrodite                   | ...           |
| Limit (Price)     | 101-28 7/4                          | ▲ ▼           |
| Partials Accepted | <input checked="" type="checkbox"/> | Yield: 0.1716 |
| Size              | 1,000,000                           | ▲ ▼           |
| Date (Settlement) | 02/27/2013                          | ◀ ▶           |

As long as the quote is firm, you can seal the trade with this counterparty by hitting the *Lift/Hit* button. The single inquiries of all other counterparties related to this workflow will be rejected automatically.

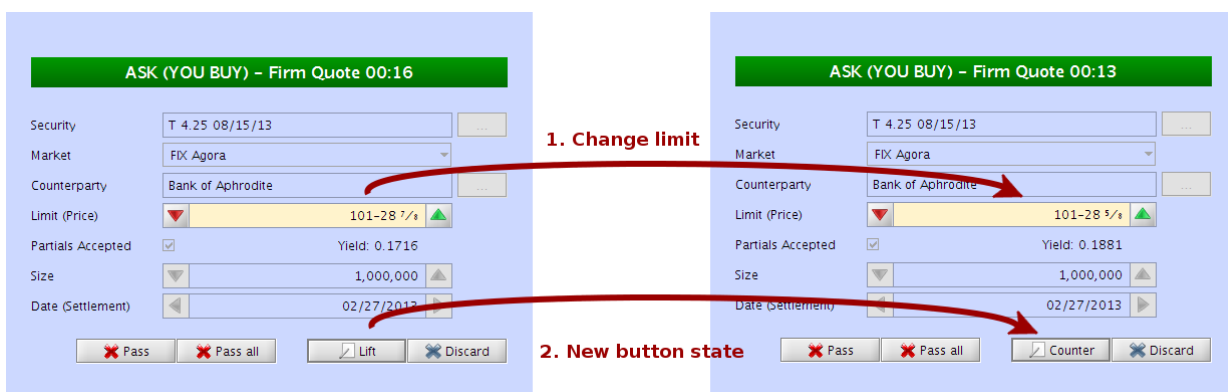


In the demo system a report is sent to the trade capture named *Trade Capture All Assets*.



### Counter Offer Workflow

After starting an inquiry you receive single quotes from different counterparties. With a double click in a quote you can open the inquiry ticket for a specific counterparty.





Instead of accepting or rejecting the quote, it is possible to send a counter offer to the sell-side counterparty, the quote belongs to. Therefore you have to modify the limit in the ticket. The execution button is changing from *Hit* or *Lift* to *Counter*.

The screenshot shows the 'Buy Side Bond Book' window in the FIX AGORA application. The main table displays the following data:

| Status   | Security        | Counterparty (Market)         | Side          | Limit      | Last Price | Last Yield | Last Quantity | Cumulative Quantity | Or |
|----------|-----------------|-------------------------------|---------------|------------|------------|------------|---------------|---------------------|----|
| Counter  | T 4.25 08/15/13 | Bank of Aphrodite (FIX Agora) | Ask (you buy) | 101-28 1/4 |            |            |               |                     |    |
| Pass     | T 4.25 08/15/13 | Bank of Hades (FIX Agora)     | Ask (you buy) | 101-29 1/4 |            |            |               |                     |    |
| Rejected | T 4.25 08/15/13 | Bank of Poseidon (FIX Agora)  | Ask (you buy) | Inquiry    |            |            |               |                     |    |
| Rejected | T 4.25 08/15/13 | Bank of Zeus (FIX Agora)      | Ask (you buy) | Inquiry    |            |            |               |                     |    |

Below the table, the 'Blotter' section shows the following messages:

| Time                | Level | Component          | Message   |
|---------------------|-------|--------------------|---|
| 11:15:33 AM 2/24/13 | Info  | Buy Side Bond Book | System sent counter for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.89453125 from Bank of Aphrodite settlement 02/27/2013 |
| 11:15:32 AM 2/24/13 | Info  | Buy Side Bond Book | Admin countered inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.89453125 from Bank of Aphrodite settlement 02/27/2013.        |
| 11:15:32 AM 2/24/13 | Info  | Buy Side Bond Book | System sent pass for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.91015625 from Bank of Hades settlement 02/27/2013).      |
| 11:15:32 AM 2/24/13 | Info  | Buy Side Bond Book | Admin passes inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.91015625 from Bank of Hades settlement 02/27/2013).              |

If you submit the new limit, your counter offer is sent to the sell-side counterparty. After you sent a counter offer to a specific counterparty, all other single inquiries related to this inquiry workflow will be automatically rejected. The sell-side has now three different options:

- **Reject:**  
If the sell-side decides to reject your counter offer, the complete inquiry is finished.
- **Accept:**  
If the sell-side decides to accept your counter offer, the trade is sealed and the complete inquiry is finished.
- **Counter Offer:**  
The sell-side can decide to respond to your counter offer with another counter offer. You will be provided with a new firm quote and the game starts from scratch (see below).

The screenshot shows the 'Buy Side Bond Book' window in the FIX AGORA application. The main table displays the following data:

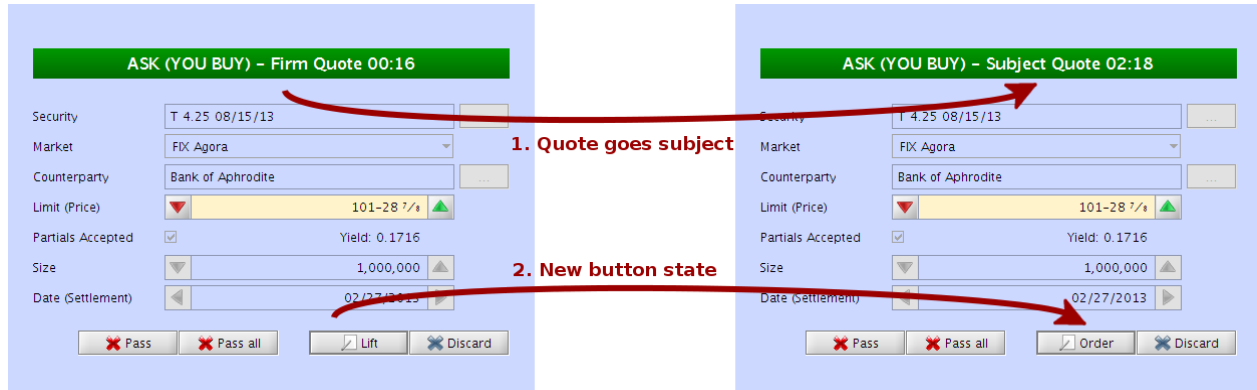
| Status           | Security        | Counterparty (Market)         | Side          | Limit      | Last Price | Last Yield | Last Quantity | Cumulative Quantity | Or |
|------------------|-----------------|-------------------------------|---------------|------------|------------|------------|---------------|---------------------|----|
| Firm Quote 00:22 | T 4.25 08/15/13 | Bank of Aphrodite (FIX Agora) | Ask (you buy) | 101-28 1/4 |            |            |               |                     |    |
| Pass             | T 4.25 08/15/13 | Bank of Hades (FIX Agora)     | Ask (you buy) | 101-29 1/4 |            |            |               |                     |    |
| Rejected         | T 4.25 08/15/13 | Bank of Poseidon (FIX Agora)  | Ask (you buy) | Inquiry    |            |            |               |                     |    |
| Rejected         | T 4.25 08/15/13 | Bank of Zeus (FIX Agora)      | Ask (you buy) | Inquiry    |            |            |               |                     |    |

Below the table, the 'Blotter' section shows the following messages:

| Time                | Level | Component          | Message  |
|---------------------|-------|--------------------|--|
| 11:15:52 AM 2/24/13 | Info  | Buy Side Bond Book | System received quote for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.8984375 from Bank of Aphrodite settlement 02/27/2013 |
| 11:15:33 AM 2/24/13 | Info  | Buy Side Bond Book | System sent counter for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.89453125 from Bank of Aphrodite settlement 02/27/2013  |
| 11:15:32 AM 2/24/13 | Info  | Buy Side Bond Book | Admin countered inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.89453125 from Bank of Aphrodite settlement 02/27/2013.         |
| 11:15:32 AM 2/24/13 | Info  | Buy Side Bond Book | System sent pass for inquiry buy 1,000,000 T 4.25 08/15/13 limit 101.91015625 from Bank of Hades settlement 02/27/2013).       |

### Subject Quotes

If the wire time for a single inquiry expires, the quote is going from firm to subject. You can respond to this quote nevertheless.



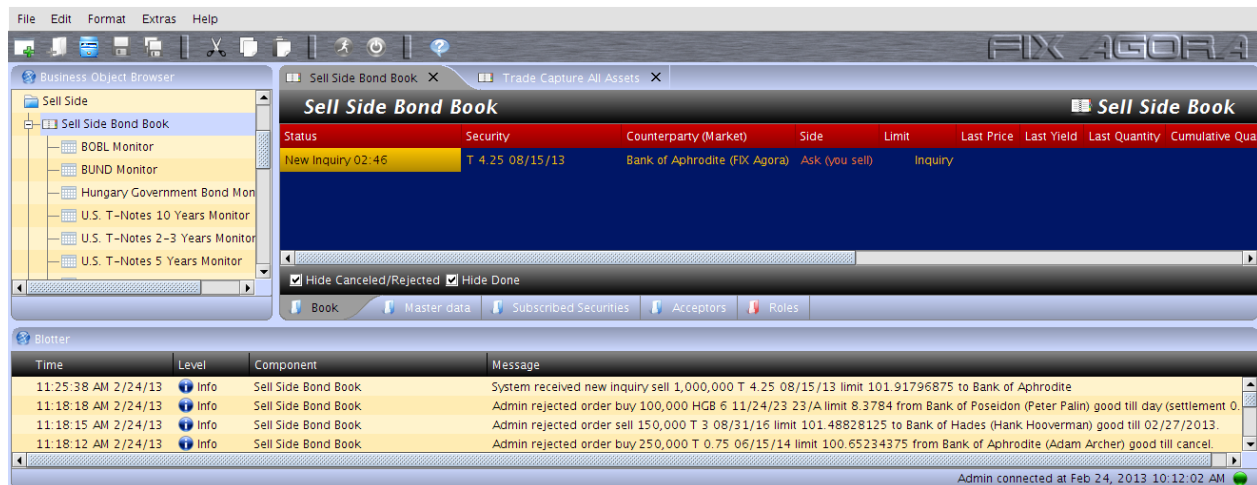
The sell-side has now the same options as if you would have sent a counter offer (see section above). The sell-side can accept or reject your order or decide to send you a counter offer as new firm quote. Regardless of your actions, the sell-side has the option to update the subject quote and provide you with a new firm quote. This procedure can be repeated until expire time for the negotiation is elapsed.

### Sell-Side Perspective

Bank of Midas is trading U.S. Treasuries as sell-side. The financial institution has four buy-side counterparties to trade with: Bank of Aphrodite, Bank of Hades, Bank of Poseidon and Bank of Zeus.

### Vanilla Workflow

Open the sell-side books *Sell Side Bond Book* and *Sell Side Equity Book* as user *Admin* or *sally*. If you work with the demo system, the simulator is randomly generating new orders and inquiries. In the case that you see only new orders in both books, simply fill or reject these orders until you receive a new inquiry.



In the following scenario we assume that the simulator was generating a new inquiry for Bank of Aphrodite asking for 1,000,000 T 4.25 08/15/13.

Be aware that this is a multi inquiry from the buy-side perspective. You should assume that there are other competitors trying to make this deal. Double-click in the line of the new inquiry to open the ticket.

ASK (YOU SELL) - New Inquiry 02:25

|                   |  |
|-------------------|--|
| Security          | T 4.25 08/15/13  |
| Market            | FIX Agora  |
| Counterparty      | Bank of Aphrodite  |
| Fill (Price)      | <div style="display: flex; align-items: center;"> <span style="font-size: 0.8em;">▼</span> <span style="flex-grow: 1; border-bottom: 1px solid #ccc; margin: 0 5px;">101-29 3/4</span> <span style="font-size: 0.8em;">▲</span> </div> |
| Partials Accepted | <input checked="" type="checkbox"/> <span style="margin-left: 100px;">Yield: 0.1388</span>   |
| Size              | <div style="display: flex; align-items: center;"> <span style="font-size: 0.8em;">▼</span> <span style="flex-grow: 1; border-bottom: 1px solid #ccc; margin: 0 5px;">1,000,000</span> <span style="font-size: 0.8em;">▲</span> </div>  |
| Wire Time         | <div style="display: flex; align-items: center;"> <span style="font-size: 0.8em;">▼</span> <span style="flex-grow: 1; border-bottom: 1px solid #ccc; margin: 0 5px;">30</span> <span style="font-size: 0.8em;">▲</span> </div>         |
| Date (Settlement) | <div style="display: flex; align-items: center;"> <span style="font-size: 0.8em;">◀</span> <span style="flex-grow: 1; border-bottom: 1px solid #ccc; margin: 0 5px;">02/27/2013</span> <span style="font-size: 0.8em;">▶</span> </div> |

✖ Reject
✔ Quote
✖ Discard

The price (or yield) is pre-filled with the value you send as indicative quote for this security. You can check these quotes in the quote monitor pages of the book this inquiry belongs to. You can modify this price according to the tick size defined in the security master data. If the buy-side allow partial fill, it is possible to downsize the order volume. The wire time defines how long the quote is firm for your counterparty. As long as the quote stays firm, the buy-side can seal the deal and you have no chance to intervene. Hit the *Quote* button to answer the inquiry.

The screenshot displays the 'Sell Side Bond Book' window in the FIX AGORA application. The main table shows a trade capture entry for 'Done (Filled)' with the following details:

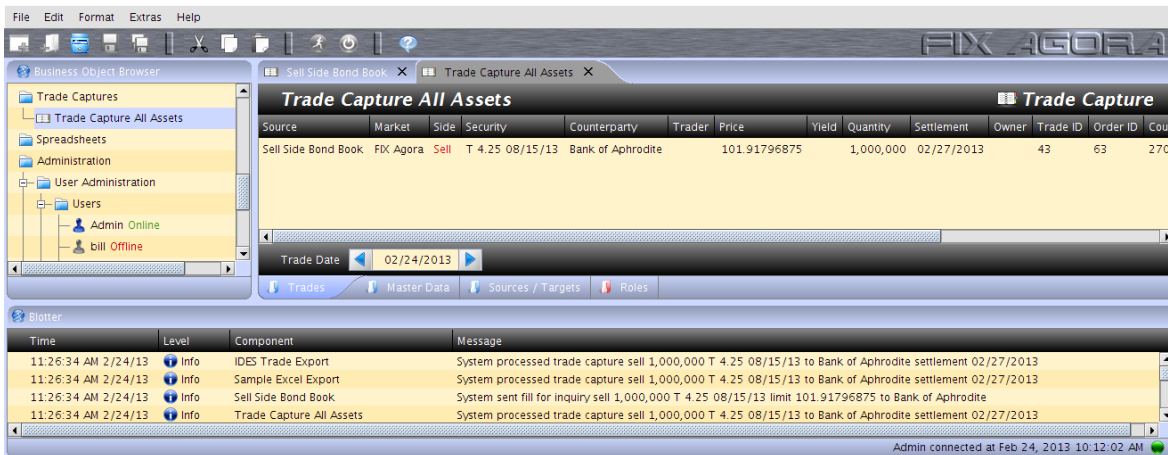
| Status        | Security        | Counterparty (Market)         | Side           | Limit      | Last Price | Last Yield | Last Quantity | Cumulative Q |
|---------------|-----------------|-------------------------------|----------------|------------|------------|------------|---------------|--------------|
| Done (Filled) | T 4.25 08/15/13 | Bank of Aphrodite (FIX Agora) | Ask (you sell) | 101-29 3/4 | 101-29 3/4 |            | 1,000,000     | 1,000,000    |

Below the table, the 'Blotter' section shows a list of system messages:

| Time                | Level | Component                | Message  |
|---------------------|-------|--------------------------|--|
| 11:26:34 AM 2/24/13 | Info  | IDES Trade Export        | System processed trade capture sell 1,000,000 T 4.25 08/15/13 to Bank of Aphrodite settlement 02/27/2013 |
| 11:26:34 AM 2/24/13 | Info  | Sample Excel Export      | System processed trade capture sell 1,000,000 T 4.25 08/15/13 to Bank of Aphrodite settlement 02/27/2013 |
| 11:26:34 AM 2/24/13 | Info  | Sell Side Bond Book      | System sent fill for inquiry sell 1,000,000 T 4.25 08/15/13 limit 101.91796875 to Bank of Aphrodite      |
| 11:26:34 AM 2/24/13 | Info  | Trade Capture All Assets | System processed trade capture sell 1,000,000 T 4.25 08/15/13 to Bank of Aphrodite settlement 02/27/2013 |

The status bar at the bottom indicates 'Admin connected at Feb 24, 2013 10:12:02 AM'.

If the buy-side decides to make this trade with you within the wire time, the status of this inquiry is changing to *Done(Filled)* and the workflow is finished. In the demo system a report is sent to the trade capture named *Trade Capture All Assets*.



### Counter Offer Workflow

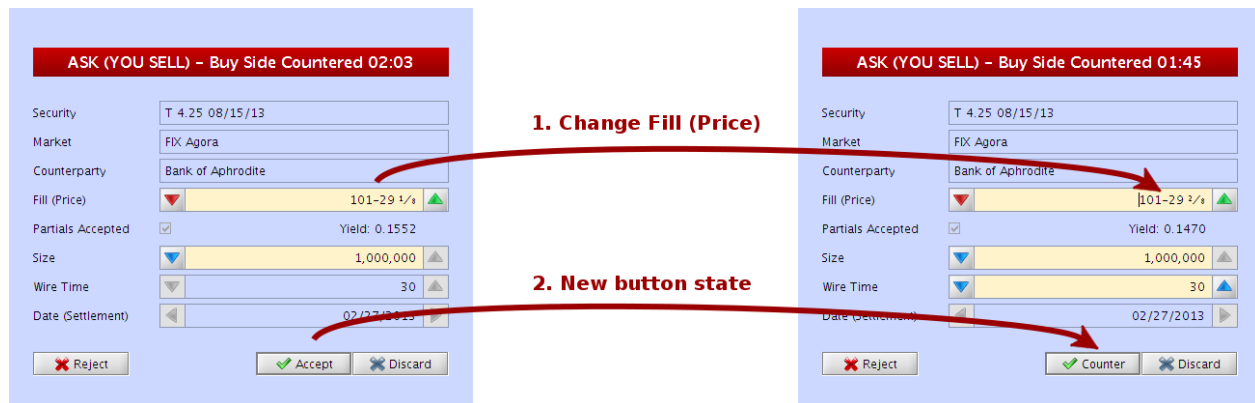
You receive a new inquiry from Bank of Aphrodite asking for 1,000,000 T 4.25 08/15/13. After answering this inquiry at a price of 101-29 <sup>3</sup>/<sub>8</sub> you wait for a response from the buy-side.



The buy-side decides to make you a counter offer. Bank of Aphrodite would like to make the deal at a price of 101-29 <sup>1</sup>/<sub>8</sub> and provides you with the new offer.



You are willing to make the deal at a price of 101-29<sup>1</sup>/<sub>4</sub>. Double-click in the line of the counter offer to open the ticket.



Adjust the price and submit your counter offer by hitting the *Counter* button. The offer is now firm for Bank of Aphrodite until wire time elapses and the game starts from scratch.



## Subject Quotes

If the wire time for a single inquiry expires, the quote is going from firm to subject. The buy-side can respond to this quote nevertheless. The status for this inquiry is changing from *Subject Quote* to *Hit* or *Lift*. Now you have three different options:

- **Reject:**  
You decide to reject the buy-side order and the inquiry is finished.
- **Accept:**  
You decide to accept the buy-side order, the trade is sealed and the inquiry is finished.
- **Counter Offer:**  
You decide to respond to the buy-side order with a counter offer, send the counterparty a new firm quote and the game starts from scratch (see above).

As long as the expiration time is not elapsed, you can refresh a subject quote with a new firm quote. Double-click in the line of the subject quote to open the ticket and resend the new quote.