



# **MARKET AXESS DEALER OPERATIONS MANUAL**

**Draft: August 30, 2000**

## Disclaimer

Market Axess Corporation ('Market Axess') has developed the Market Axess Dealer Operating Procedure ('DOP') for the purpose of providing relevant technical information and requirements to Participating Dealers of the Market Axess service which, subject to the execution of the dealer agreement with Market Axess, would enable participating dealers to provide the various services through Market Axess.

The Documentation is, and contains information that is, proprietary to Market Axess and is confidential. You may use the Documentation solely for your internal use for the purpose of evaluating or using the system. You shall not copy or redistribute all or any of the Documentation without Market Axess' prior written permission, except you may make copies for internal use solely for the purpose stated above. Market Axess owns all intellectual property rights in the Documentation and it shall at all times be and remain the sole and exclusive property of Market Axess.

THE DOCUMENTATION IS BEING PROVIDED TO YOU ON AN 'AS IS' BASIS, WITHOUT WARRANTY OF ANY KIND BY Market Axess OR ITS AFFILIATES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. Market Axess CORPORATION AND ITS AFFILIATES SHALL NOT BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE, LOSS OF COST OR SAVINGS, OR DAMAGE SUFFERED, OR COSTS AND EXPENSES INCURRED BY YOU OF ANY NATURE, OR FROM ANY CAUSE WHATSOEVER, WHETHER DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL ARISING OUT OF THE FURNISHING, PERFORMANCE, OR USE OF, OR INABILITY TO USE THE DOCUMENTATION.

Microsoft, MS-DOS, Windows, Windows NT and Internet Explorer are registered trademarks of Microsoft Corporation in the United States and/or other countries. Netscape and Netscape Communicator are registered trademarks of Netscape Corporation. RSA is a registered trademark of RSA Security Corporation.

**Table Of Contents**

Preface .....	6
Document Feedback .....	6
<b>SYSTEM REQUIREMENTS .....</b>	<b>8</b>
About This Section .....	8
Summary of Requirements .....	8
Hardware .....	8
Connectivity .....	9
Network Security .....	9
Important Dealer Requirements .....	9
Firewall/Proxy Server Considerations .....	9
Market Axess Software Security .....	10
Downloading the Market Axess Viewer .....	11
Installing the Market Axess Viewer .....	11
Software Upgrades .....	11
Connecting to the Market Axess System .....	11
<b>ADMINISTRATION.....</b>	<b>13</b>
About This Section .....	13
Contact Information .....	13
* Operating Hours .....	13
Dealer Account Activation .....	13
New Users .....	13
Amended/Deleted Users .....	14
Client Permissioning .....	14
Dealer Account Relationships .....	14
Required Documentation .....	15
Dealer Authorization of Client .....	15
Client Activation .....	15
Steps to Logging Into the Market Axess System .....	16
About The Login Screen .....	16
About The Legal Disclosure Screen .....	18
About The Home Screen .....	19
Start / End of Day Procedures .....	20
Failure/Restart Procedures .....	20
new releases .....	20
Testing Policies .....	20
Installing upgrades .....	20
<b>PRIMARY ISSUANCE .....</b>	<b>21</b>
About This Section .....	21
Procedures .....	21
Overview of The Indication of Interest Process Model .....	21
Summary of The Steps for Creating and Pricing Issues on the Market Axess System .....	23
Step 1 - Creating and Modifying a Draft .....	27
Step 2 - Announcing the Issue .....	32
Step 3 - Launching the Deal .....	36
Step 4 - Closing the book .....	39
Step 5 - Allocation of Bonds .....	40
Step 6 - Pricing the bond .....	42
Step 7 - Deal Accepted and price confirmed .....	45
Data Uploads and Downloads .....	45
Responsibilities .....	45
Recovery Procedures After System Failure .....	45
Historical Data Storage and Access .....	46
Archiving Historical Data .....	46

Accessing Historical Data .....	46
Security .....	46
Disaster Recovery .....	46
IOI Information on Dealer's side .....	46
IOI Information on Investor's side .....	46
<b>SECONDARY TRADING INVENTORY SYSTEM (DEALER) .....</b>	<b>47</b>
Application Programming Interface Specifications .....	47
What is the Market Access API.....	47
API Characteristics:.....	47
API Components.....	48
Recovery from API downtime.....	48
Inventory Daily Procedure.....	49
Logging Into the Inventory System .....	49
About the Inventory Screen .....	49
Security Details.....	51
Creating & Editing Inventories .....	52
Adding an Inventory Item .....	52
Editing an Inventory Item.....	54
<b>RESEARCH.....</b>	<b>56</b>
Procedures .....	56
Contribution/Categorization of Research for Multex .....	56
Auto Contribution .....	56
Manual Contribution .....	56
Establishing Research Documentation Standards. ....	57
Entitlement Process for Research.....	57
<b>APPENDIX A .....</b>	<b>1</b>
<b>APPENDIX B-Dealer User Amendment Form .....</b>	<b>3</b>
<b>APPENDIX C- Client Authorization Form .....</b>	<b>5</b>

**List of Figures**

Figure 1 - Connection Screen .....	12
Figure 1- Login Screen.....	17
Figure 2 - Legal Disclosure Screen .....	18
Figure 3 - Home Screen .....	19
Figure 4 - Overall Primary Issuance Process .....	22
Figure 5 - Step-by-Step Bond Issuance and Pricing .....	24
Figure 6 - Drafts as they appear on the calendar.....	28
Figure 7 - Creating a New Issue Draft .....	30
Figure 8 - Save Draft Confirmation .....	30
Figure 9 - Issue Details .....	31
Figure 10 -Click Book from the Calendar Screen to Announce the Deal.....	33
Figure 11 - Announce Deal from the Issue Book Screen.....	34
Figure 12 - Announce Deal Confirmation.....	34
Figure 13 - Launched Issue, Verified by Investor.....	37
Figure 14 - Indication History Screen.....	38
Figure 15 - IOI Detail screen.....	39
Figure 16- Allocation of Bonds .....	41
Figure 17 - What the dealer sees when an allocation is confirmed.....	42
Figure 18 - Invoking Final Pricing Screen .....	43
Figure 19 - Pricing the Deal .....	44
Figure 20 - You Have Confirmed Your Price .....	44
Figure 21 - Inventory Screen .....	50
Figure 22 – Security Detail Screen .....	52
Figure 23 - Add Item Screen.....	53
Figure 24 – Inventory Edit Mode Area .....	54
Figure 25- Edit Item Screen .....	55

**List of Tables**

Table 1- Connection Information.....	12
Table 2 - Summary of Steps for Primary Issuance.....	25
Table 3- Calendar Field and Button Definitions .....	27
Table 4 - Create Issue Screen Fields and Buttons .....	29
Table 5 - Issue Book Fields and Buttons .....	35
Table 6- Inventory Main Screen Fields and Buttons On System Toolbar.....	50

## **Preface**

This document provides an overview of procedures to be followed by dealers who are participating in the Market Axess service.

Sections regarding use of Market Axess Research and Secondary Trading are forthcoming.

Copies of this document may be obtained from Market Axess by calling (877) 638-0037, or it can be downloaded from [www.marketaxess.com](http://www.marketaxess.com) via the Online Axess link.

## **Document Feedback**

Please email any documentation feedback to [dfrawley@marketaxess.com](mailto:dfrawley@marketaxess.com)



## SYSTEM REQUIREMENTS

## 1

## ABOUT THIS SECTION

---

The following section covers the general Market Axess system requirements and the security issues.

## SUMMARY OF REQUIREMENTS

---

The following are the minimum technical requirements necessary to use Market Axess service.

- ☑ **An Internet connection** - either a dedicated or a dial-up Internet connection. Reliability and performance will depend on a number of factors including the speed of your Internet connection and the reliability of your Internet service provider.
- ☑ **The Market Axess Viewer**, which is software similar to a browser that provides the user interface to the trading system. The viewer can be downloaded from [www.marketaxess.com](http://www.marketaxess.com) via the *Online Axess* link.
- ☑ **A Netscape or Microsoft Internet Explorer browser**, version 4.0 or greater—this browser is used to deliver all non-trading services such as Research and administrative functions.
- ☑ **A workstation as described below.**

## HARDWARE

---

Dealers will provide all hardware related to the use of Market Axess application in their environment. The minimum requirements for a Market Axess Syndicate or Secondary Trading Application user are:

### ***Microsoft/Intel***

Windows 98 or Windows NT 4  
Pentium, 32Mb RAM  
Graphics SVGA (1024\*768) resolution  
56Kbps network access  
Application requires 5Mb disk space

### ***Sun Microsystems***

SUN Solaris 2.5.1

Ultra-5, 32Mb RAM  
Graphics SVGA (1024\*768) resolution  
56Kbps network access  
Application requires 5Mb disk space

**Requirements for research contribution are:**

Dealers contribute research through Multex application  
Windows 98 or Windows NT 4  
Pentium class, 32 Mb RAM  
Disk Space 5Mb installed

## CONNECTIVITY

---

Dealers may also develop automated interfaces to Market Axess using Market Axess API. Market Axess provides a DTD (XML-based) for the interface, and a communications protocol. In addition, Market Axess provides (and supports) a reference implementation of the API. The minimum requirements for the API are:

Solaris 2.5.1  
Ultra-5, 128Mb RAM  
100-T network access  
C++ Compiler 4.2

Dealers will provide network connectivity from their trading desk to Market Axess data center. Current requirements are a failover-pair of T1 lines

## NETWORK SECURITY

---

### Important Dealer Requirements

- Dealers will take reasonable and customary measures to secure access to the Market Axess network.
- Dealers will implement a firewall that restricts network access to only authorized users.

### Firewall/Proxy Server Considerations

The Market Axess software supports SSL (Secure Sockets Layer) tunneling for firewalls. The software requests permission from the HTTP server to establish an encrypted session using port 443, the default SSL port. Upon approval, the client software initiates an SSL connection to Market Axess.

The Market Axess software also supports proxy authentication. Refer to the document *Installing the Market Axess Viewer* for details about proxy authentication settings. The document is available at <http://www.marketaxess.com>.

## Market Axess Software Security

### *Your Unique Username and Password*

Each Market Axess user is assigned a unique user-name and password.

You can change your password any time, for added security.

To change your user name and password:

1. Log into the system your user name and password
2. Click the Change Password button on the Home page.

**IMPORTANT:** The password should be treated with the same care and precaution you would use to protect highly confidential information.

### *Permissioning*

Each participating dealer controls the user authorization for electronic trading privileges for their firm. Dealers and Investors have unique permission to access the system. Permissions are based on the user-name.

Investors and dealers using the system will be allowed to access only the functions you have been authorized to use.

### *Verification of The Source of the Request by IP*

Only authorized users from known IP addresses will be allowed into the system.

The IP, or Internet Protocol address is a unique address of a computer attached to a TCP/IP or Internet network. Every client and server station must have a unique IP address. Client workstations have either a permanent address or one that is dynamically assigned to them each dial-up session. IP addresses are written as four sets of numbers separated by periods; for example, 204.171.64.2.

The IP address of the user accessing our system is registered on our authentication servers and used for verification that the request for information comes from a registered and authorized user.

### *Secure Encryption*

The session between you and Market Axess is encrypted point-to-point using RSA. RSA is a highly secure cryptography method by RSA Data Security, Inc., Redwood City, CA, (www.rsa.com). It uses a two-part key. The owner keeps the private key; the public key is published.

Specifically, Market Axess uses a 1024 bit public/private key pair to transmit a 64-bit session key. All keys are uniquely created for each user, per session—providing a high level of security.

### *Secure Connection Via the Market Axess Viewer*

The Market Axess Viewer is a thin-client application that establishes a secure, point-to-point, outbound connection from your network to Market Axess Distribution Servers. Market Axess does not call into your network. The RSA encrypted socket connection has been highly optimized to deliver real-time, interactive contents securely across the public Internet—small packets, low bandwidth. Only update messages specific to the client are transmitted.

### *Minimum Resources Required On Your PC*

The Market Axess software consumes minimal computer and network resources on your local PC. Market Axess servers manage all the market intelligence centrally—including authentication,

permissions, navigation, calculation, screens, price updates, and transaction flows. More importantly, Market Axess can add content and capabilities without impacting your desktop or internal computer systems.

### Downloading the Market Axess Viewer

The Market Axess Viewer for Windows and Unix platforms can be downloaded from [www.marketaxess.com](http://www.marketaxess.com) via the Online Axess link.

The Online Axess pages require a user name and password for access. You can obtain these by contacting Market Axess at (877) 638-0037.

### Installing the Market Axess Viewer

Instructions for installing the Viewer are provided on the Online Axess download page. If you need to configure the Viewer for proxy authentication, see below.

If your Market Axess viewer does not appear with a login screen, please call the Market Axess Client Service Desk, at (877) 638-0037.

### Software Upgrades

From time-to-time Market Axess will provide Dealers with software upgrades for Market Axess Viewer. It is important that the dealer take the steps to install the upgrades as soon as possible.

Occasionally, dealers may be required to run Beta tests of the software upgrade before installing the software on their user's equipment. Notifications will be sent regarding any testing procedures that might be required of dealers.

Subscribed investors will also be receiving upgrades of viewers around the same time as the Dealers. Any calls regarding installation of the viewers should be redirected to the Market Axess support line.

### Connecting to the Market Axess System

To connect to the Market Axess system, go to **Options: Connection** on the menu bar to display the connection screen.

The screenshot shows a 'Connection' dialog box with the following fields and options:

- Server 1:** IP Address: trade.marketaxess.com; Port Number: 443
- Server 2:** IP Address: trade.marketaxess.com; Port Number: 443
- HTTP Proxy Server:**
  - Enable HTTP Proxy Server Support
  - IP Address: (empty)
  - Port Number: (empty)

Buttons: OK, Cancel

Figure 1 - Connection Screen

The dealer will provide the investor with specific instructions to connect to the system.

To connect, fill in the data as indicated on Figure 1 - Connection Screen. You will need the following information. Fill in this form to keep this information handy in the event you have to reenter it:

Table 1- Connection Information

Server 1 IP Address	
Port Number	(Generally 443)
Server 2 IP Address	Enter the IP address for server 1, unless a different server is used.
Port Number	(Generally 443)
HTTP Proxy Server	Check this if a proxy server will be used.
Proxy IP Number	
Proxy Port Number	(Generally 443)

After entering the data, click the **OK** button. Be sure you restart the viewer after entering or editing this information.

## ABOUT THIS SECTION

---

This section describes the administrative functions required of the dealers that will host the Market Axess System. Dealers are responsible for authorizing clients to access the system.

## CONTACT INFORMATION

---

If you have any questions about the Market Axess system here is how to contact us:

Client Service Desk                      877 638 0037

E-mail                                      clientservices@marketaxess.com

Each Dealer will be requested to provide Market Axess with a list of key contact names that will be provided to clients and may be displayed on the web site. The contact names should include staff responsible for documentation, trade confirmation and general inquiries.

## \* OPERATING HOURS

---

The Market Axess system operates between 7:30 a.m. to 5:00 p.m. eastern standard time.

Trade information placed after hours is saved by the system and executed only during active trading hours.

**[VERIFY]**

## DEALER ACCOUNT ACTIVATION

---

### New Users

A Dealer System Administrator should be assigned for each participating dealer, to handle all the user administrative issues.

To activate new users on the Market Axess system dealers will need to follow the procedures detailed below:

1. **Determine Role** - For new users, the Dealer System Administrator must determine the role for the user on the Market Axess System from the Roles and Responsibilities Matrix (see Appendix A).

2. **Complete User Add/Amend form** - The Dealer System Administrator must complete the **Dealer User Amendment Form**, see APPENDIX B-Dealer User Ammendment Form. The System Administrator must sign the form.
3. **Fax form to Market Axess** - The Dealer must fax the completed form to Market Axess Operations.
4. **Market Axess Operations will update the Market Axess Trading System permissioning** module with the level of access consistent with the role defined by the Dealer.
5. **Market Axess Operations will advise new users by phone** of their user-names and passwords.

### Amended/Deleted Users

The Dealer Amendment Form in APPENDIX B must be completed as indicated above, clearly indicating that the form refers to amendments for or deletion of an existing user, and be faxed to Market Axess.

Market Axess Operations will make changes and confirm by e-mail to the Dealer System Administrator.

## CLIENT PERMISSIONING

---

For an investor client to be activated on the Market Axess system they must:

1. Have an existing or open a new account relationship with the participating dealers.
2. Complete the required Market Axess documentation.
3. Be activated by each of the participating dealers.

Further details on how each of these requirements impact participating dealers are given below.

### Dealer Account Relationships

1. At dealer's discretion, any clients who do not already have an existing relationship may be required to complete the dealers' standard new account documentation.
2. Market Axess will facilitate distribution of the dealer new account forms to clients as requested.
3. Through regular contact between Market Axess Sales Staff and the Dealer Sales Managers it is anticipated that Dealers will be aware of target clients before those clients complete the documentation.
4. It is anticipated that in future a set of standard dealer new account documentation will be available which clients could obtain through the Market Axess web site.
5. On a monthly basis Market Axess will provided the participating dealers with a list of all new clients unless the client has specifically requested that their name not be provided to all dealers.

## Required Documentation

1. The Market Axess User Agreement, which is signed between the client and Market Axess.
2. The Market Axess Supplemental Account Agreement, which is signed between the client and Dealer. Market Axess will obtain a Supplemental Account Agreement from each client on behalf of the dealer and forward it to the dealer.
3. The Client Activation form, which provides Market Axess with the necessary information to set up the client and their users.

## Dealer Authorization of Client

1. Clients only have access to conduct trades with a dealer or to view the dealers' inventory and research once the dealer has authorized them.
2. Dealers authorize the client overall as well as the client traders.
3. When authorizing the client's traders, the dealer determines which of its products the client trader can access.
4. When authorizing clients the dealer determines whether or not the client is a QIB (Qualified Institutional Buyer) and sets an expiration date on the QIB status.

See Client Activation for details on activating an investor account.

## CLIENT ACTIVATION

---

1. Clients will fax the Market Axess Client Activation Form, the User Agreement and the Supplemental Account Agreements to the Market Axess Client Service Desk. Clients will send the original copies to MA via mail.
2. Upon receiving the fax copy of the activation form and agreements from the Client, Client Services will generate the Client Authorization form (APPENDIX C) that will be e-mailed to each of the Dealers System Administrators. Dealers need to reply by e-mail to confirm receipt of the activation form.
3. The fax copy of the Supplemental Account Agreement will be e-mailed to the Dealer System Administrator.
4. Original copies of the Supplemental Account Agreement will be sent to the Dealers via mail when Market Axess Client Services receives them from the Client.
5. Dealers will sign the fax copy of the Supplemental Account Agreement and fax it back to Market Axess.
6. Dealers will review the Client Authorization form and will indicate on the form (either by inputting into the PDF form or by printing and manually completing the form as follows:

In the Organization Section of the Form, enter the following:

- a. *Whether dealer approves the client as a QIB.*
- b. *The QIB expiration date.*
- c. The client's account number at the dealer
- d. The client's salesperson at the dealer.
- e. Credit limits (single deal, 1 day aggregate, 3 day aggregate).

In the Trader Authorization Section of the Form enter the following:

- a. *The products that the trader is authorized to trade.*
- b. The salesperson at the dealer responsible for each product to which the trader is authorized.

Items in italics are mandatory; the remaining may be filled in at the option of the dealer.

7. After completion of the above details the System Administrator at the dealer must print and sign the Form and fax it back to Market Axess Client Services.
8. At this point Market Axess will authorize the Client's Users on the system and advise them of their user-names and passwords.
9. The original copy of the Client Authorization form from the dealers will be mailed to Market Axess Client Services

## STEPS TO LOGGING INTO THE MARKET AXESS SYSTEM

---

1. Run the Market Axess viewer to display Figure 1- Login Screen.
2. Enter your designated user name and password. (Note that it is your user name and password that identifies you to the system as either a dealer or an investor).
3. Click the **Logon** button (Figure 1) to display Figure 2 - Legal Disclosure Screen.
4. Click **Accept** to display Figure 3 - Home Screen.

### About The Login Screen

Figure 1 provides a window that displays messages from the system and a space to input your user name and password. Notice that the phone numbers for technical support are available on this screen.

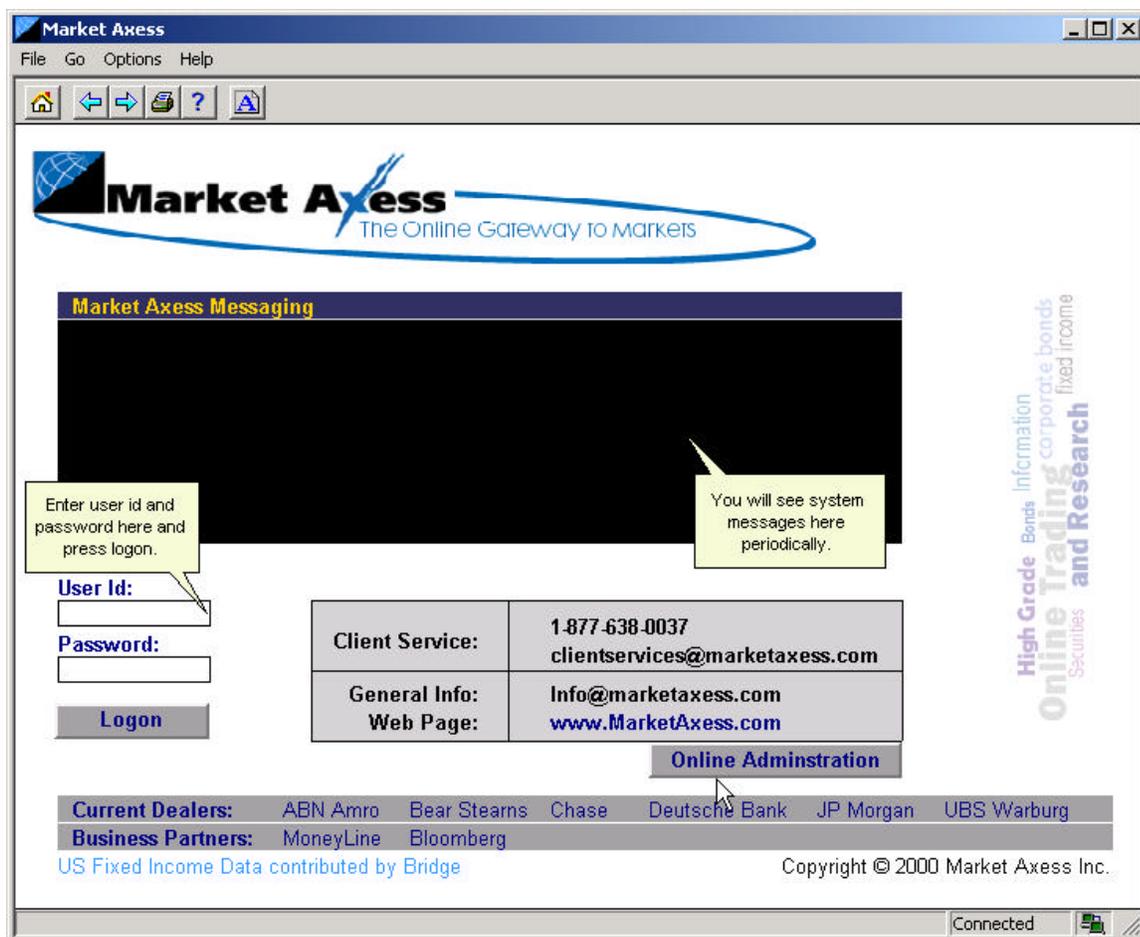


Figure 1- Login Screen

## About The Legal Disclosure Screen

The legal disclosure screen provides an important legal agreement relevant to the trading system. In order to move on to your next screen, you have to click ACCEPT, each time you log in.

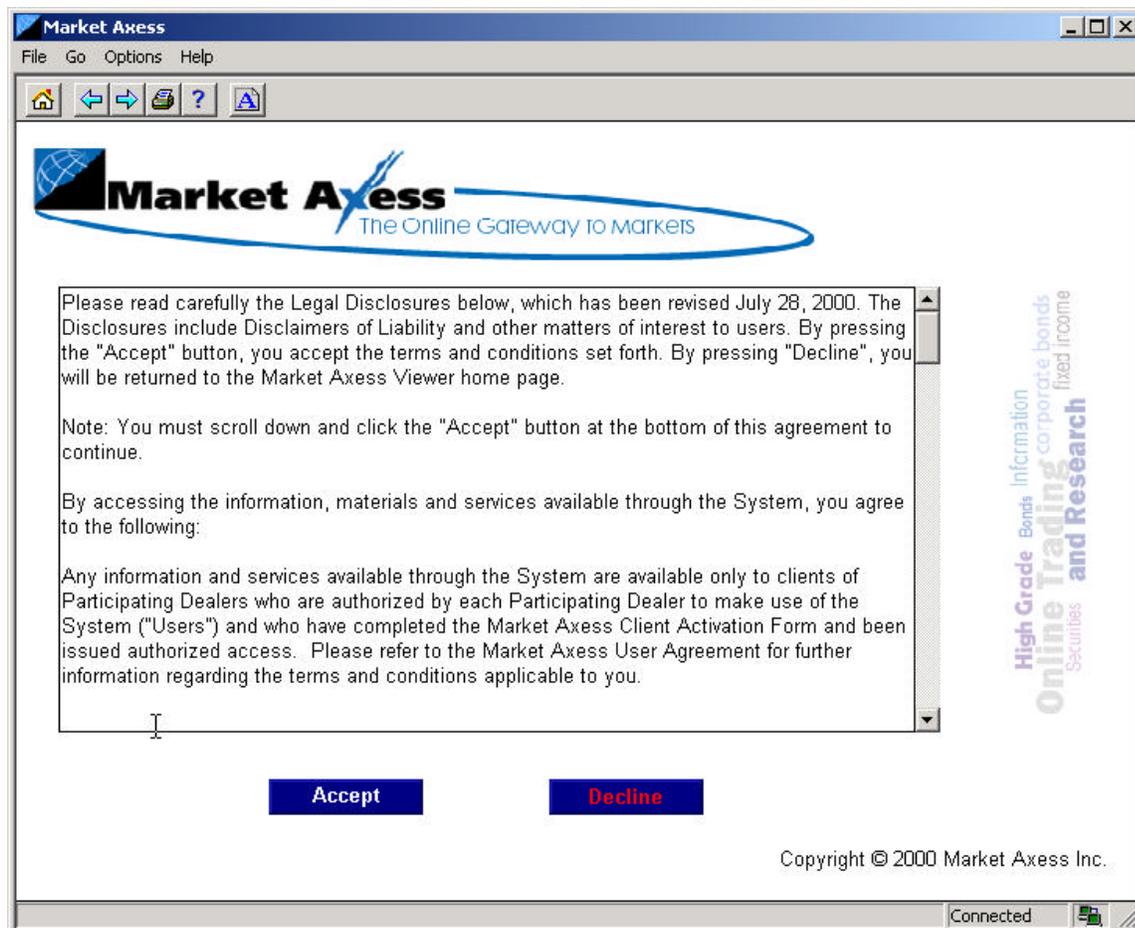


Figure 2 - Legal Disclosure Screen

## About The Home Screen

The Market Axess home screen provides buttons to access the various Market Axess modules, including:

- ☑ The **New Issue Trading** button, navigates to the primary issuance system, sometimes referred to as the syndication system. The Primary Issuance system allows dealers to create new issues, request and review Indications of Interest (IOIs) and allocate issues to interested investors. For more details about this system refer to the document Dealer Operating Procedures.
- ☑ The **Secondary Inventory** button, navigates to the Inventory system. The Inventory System allows users to view and search through an available inventory of bond products and allows dealers to enter and manage their inventories. The Inventory System for the dealer is discussed in this document.
- ☑ The **Launch Research** button, which launches your Internet browser to display the Market Axess Research login screen. The research system allows investors and dealers to search through dealer research documents.
- ☑ **Notices**

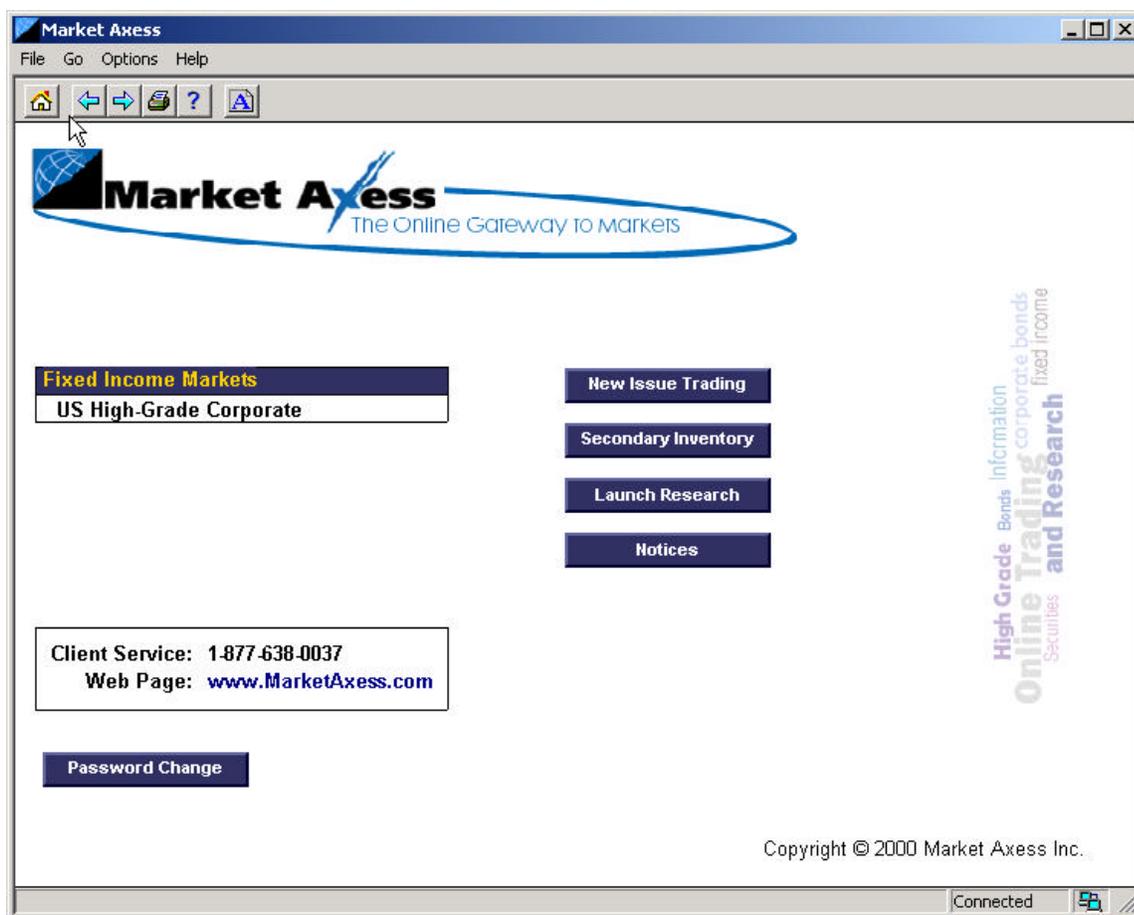


Figure 3 - Home Screen

## **START / END OF DAY PROCEDURES**

---

This section is forthcoming

## **FAILURE/RESTART PROCEDURES**

---

This section is forthcoming

## **NEW RELEASES**

---

### **Testing Policies**

This section is forthcoming

### **Installing upgrades**

This section is forthcoming

## **ABOUT THIS SECTION**

---

This section deals with the Primary Issuance System, sometimes referred to as the Syndication system. It covers the primary issuance process and the step-by-step procedures for creating and pricing issues on the system.

## **PROCEDURES**

---

### **Overview of The Indication of Interest Process Model**

The following is a brief overview of Primary Issuance process model implemented by the Market Axess System. See Summary of The Steps for Creating and Pricing Issues on the Market Axess System, for details regarding how to create an issue step-by-step using the system.

The Primary Axess System implements the Indication of Interest used by investors to convey interest in new issues to Dealers. The principal states of this process, as implemented, are as follows:

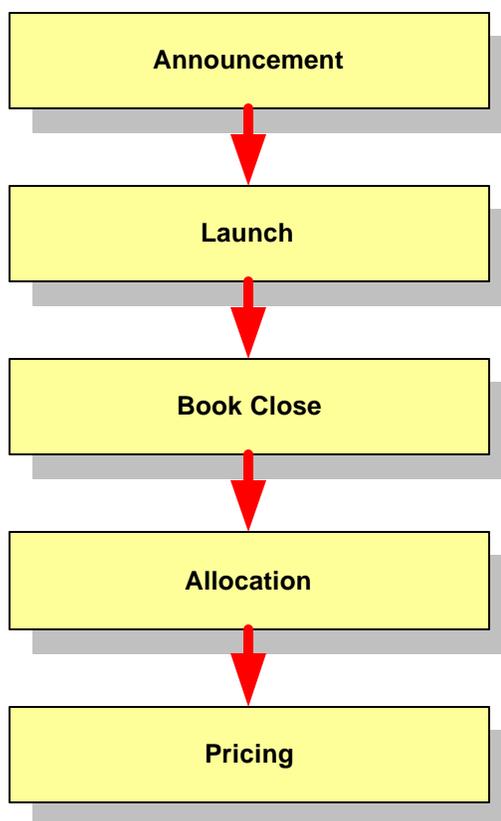


Figure 4 - Overall Primary Issuance Process

### ***Announcement***

Dealers “announce” an issue on the system by placing it on the Market Axess Calendar viewed by the investors. Once announced, investors are permitted to submit IOIs to participating Dealer underwriters.

### ***Launch***

As the new issue progress moves forward, and adequate initial interest is indicated, the bookrunner of the issue will “launch” the issue. Launch causes re-verification messages to flow to all investors with outstanding IOIs on that issue. Investors can verify continued interest, or cancel their IOI.

### ***Book Close***

The book is closed and investors are no longer allowed to modify their IOIs before securities can be allocated.

### ***Allocation***

Once the bookrunner has determined the quantities of the new issue that they are willing to make available to each investor who has submitted an IOI, they can then transmit “Allocation” messages to the investors. These messages provide the details on the allocation made available, and require the investor to verify continued interest, or cancel their IOI.

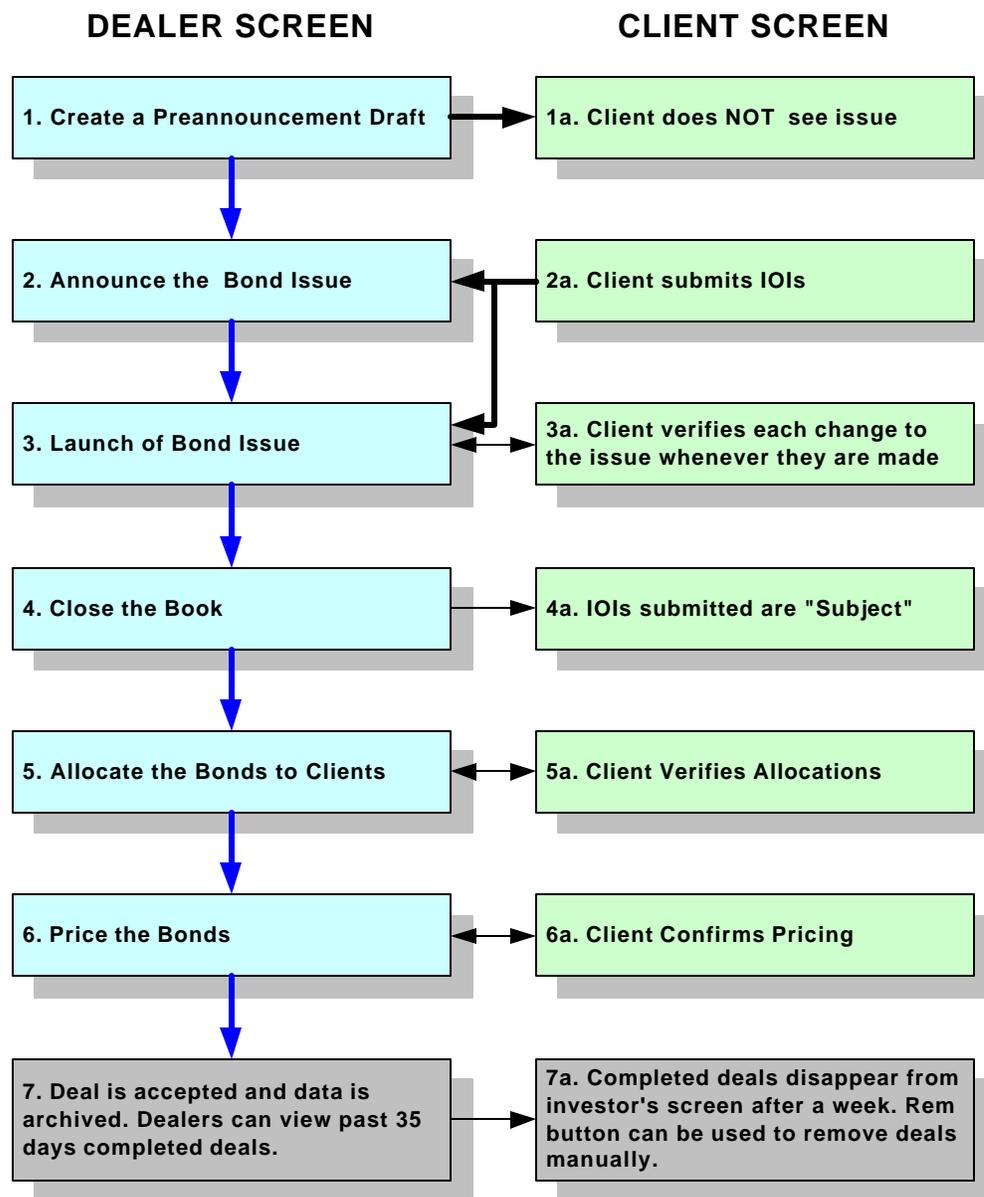
### ***Pricing***

Once the Allocation process is complete, the bookrunner will price the issue. The terms of pricing are transmitted to all investors who have verified continued interest post-allocation. Investors are presented with a Final Pricing Screen, where they must review the details of the new issue and their IOI. They can then accept or decline the terms offered.

### **Summary of The Steps for Creating and Pricing Issues on the Market Axess System**

The following is a step-by-step description of how to create and price a new issue on the Market Axess Dealer system. Notice here that there are more steps involved than the five steps described in the process model. The steps in the diagram below correspond to the actual steps required to create and price an issue on the on-line trading system. The explanation includes both what the dealer has to do and what the investor sees and how he or she must respond. A more detailed explanation of these steps is presented in.

Table 2.



*Figure 5 - Step-by-Step Bond Issuance and Pricing*

The following is an explanation of the steps required to create an issue and generate an indication of interest (IOI) on issues. This descriptive information corresponds to the illustration shown on Figure 5 - Step-by-Step Bond Issuance and Pricing. Detailed information that includes screen shots follows this description.

Table 2 - Summary of Steps for Primary Issuance

Dealer Screen	Investor Response
<p><b>1. Create a Pre-Announcement Draft</b></p> <p>A draft of the deal is created with minimum amount of information, including the Issuer, Title, Size and Maturity. When the dealer creates the draft, it appears on the Dealer calendar screen demarked by three asterisks (***) .</p> <p><b>2. Announce the Bond Issue</b></p> <p>When more specifics of the bond are known and inputted into the system, the bond issue is formally announced on the Dealer system. This action makes the bond information immediately available on the investor's calendar window. At this point, investor may begin submitting IOIs.</p>	<p><b>1a. Client does NOT see issue.</b></p> <p>The bond issue does NOT yet appear in the Investor's screen and <b>No</b> IOIs (Indication of Interest documents) can formally be submitted through the system</p> <p><b>2a. Client submits IOIs</b></p> <p>During the period between the announcements of the offering to just before the book is closed, investors review the status of their IOIs, and review any changes to the information concerning an IOI—e.g., allocation and pricing information. Any change to the details concerning an offering requires the investor to verify or cancel their IOI, based on the new information</p>
<p><b>3. Launch of Bond Issue</b></p> <p>The dealers formally launch the bond issue and the interested parties who have requested manual verification will have to manually verify that they are interested in this bond issue and reverify if any changes to the issue have been made. Once the issue is launched, additional IOIs can be submitted.</p> <p><b>4. Closing the book</b></p> <p>Once the book is closed any IOIs submitted will be considered "Subject".</p> <p>Dealers could reopen the book if necessary.</p>	<p><b>3a. Client verifies the IOI</b></p> <p>Whenever a change to the new issue is made, the client or investor will receive a notification asking them to verify that the IOI is correct. They can cancel the IOI at this point as well. When the verification goes through, the dealer gets a code on his screen.</p> <p><b>4a. No Modify Button available</b></p> <p>As soon as the book is closed, the investor can no longer modify IOIs into the system. Investors may still submit IOIs but they are considered "Subject".</p>

<p><b>5. Allocate Bonds to Clients</b></p> <p>After each lead dealer closes their book, the IOIs that they are managing will have to be allocated issues. Dealers allocate bonds manually to each investor according to their requirement and the system performs a check to determine if the allocation is acceptable or has failed to meet investor requirements.</p> <p><b>6. Price the Bond</b></p> <p>The dealer prices the bond on line.</p>	<p><b>5a. Client Verifies Allocations</b></p> <p>The investor can respond by confirming or declining the price.</p> <p><b>6a. Client Confirms Pricing</b></p> <p>Each investor can respond by confirming if the price is acceptable (if they had not selected Auto Verify)</p>
<p><b>7. Deal Accepted</b></p> <p>Once deals are accepted and the syndication process is completed, the dealer can review past deals for up to 35 days. After that, the deals disappear from the screen and are archived by Market Axess. Contact Market Axess Client Services at 877-638-0037 if you want to retrieve archived information.</p>	<p><b>7a. Completed deals disappear from client's screen.</b></p> <p>The completed deals remain viewable by investors for one week. Investors can use the REM (Remove) button to delete IOIs.</p>

## Step 1 - Creating and Modifying a Draft

### Creating the Draft

Dealer Screen	Investor Response
<p><b>1. Create a Pre-Announcement Draft</b></p> <p>A draft of the deal is created with minimum amount of information, including the Issuer, Title, Size and Maturity. When the dealer creates the draft, it appears on the Dealer calendar screen demarked by three asterisks (***)</p>	<p><b>1a. Client does NOT see issue.</b></p> <p>The bond issue does NOT yet appear in the Investor's screen and <b>No</b> IOIs (Indication of Interest documents) can formally be submitted through the system</p>

### Steps for Creating a Draft Issue

To create a new issue draft, follow these steps:

1. From the **Calendar** screen (Figure 6) click the **Create Issue** button, on the top toolbar to display the **Create Issue** screen (Figure 7).
2. Fill in the data with the information described in
3. Table 3- Calendar Field and Button Definitions
4. Click the **Save Draft** button on the bottom of the **Create Issue** screen. If you want to cancel the draft, click the **Cancel** button.
 

**Note:** the draft will appear on the screens of other lead dealers. However, it can only be modified by the dealer that created the issue.
5. Click the **Yes** button on **Save Draft** confirmation screen shown (Figure 8).
6. View the new draft in the calendar (Figure 6).

### About the New Issue Calendar Screen

The New Issue Calendar screen (Figure 6) is the "home page" of the Primary Issuance System. It lists all of the new issues in which the dealer has a position (lead, manager, bookrunner, etc.) All new issues will be kept on this screen until 35 days after pricing.

The table below defines each of the columns in the calendar screen.

Table 3- Calendar Field and Button Definitions

<b>Home Button</b>	Navigates to the Market Axess System Main Menu.
<b>Notices Button</b>	Navigates to important legal notices about syndication issues.
<b>Calendar Button</b>	Navigates to Calendar of new issues viewable by the dealer.
<b>Page 1 of X</b>	Top right of the screen indicates which page is being viewed of the total number of pages.

- Prev/Next Buttons** Bottom right of the screen enables navigation through the pages of new issues.
- Create Issue Button** Navigates to the Create Issue screen where a dealer can establish a new issue on the system.
- Number of Issues** On bottom left of screen is indicated the number of viewable issues.
- Title** The title of the security, in BLUE font. Generally (not always) the title takes this form:  
*Company Coupon Size of offering in thousands.*  
 Clicking on the title displays the Issue Details.
- AnDt** The Announce Date of the bond.
- PrcDt** The Pricing Date is the date that the bond will price.
- Sz** The Size of Offering in thousands.
- Maturity** The date that the bond will mature. This data can take various forms. It could be a year, or an actual date as MM/DD/YY. In the early stages of the bond definition, this can be an approximate number and be defined as just the year.
- Bookrunner** Dealer(s) who will allocate the new issue (lead or one of the joint leads).
- Issue** Clicking on issue causes Issue Detail screen to display.
- Book Button** Navigates to the Issue Book screen from which the deal is announced, launched, closed, etc.

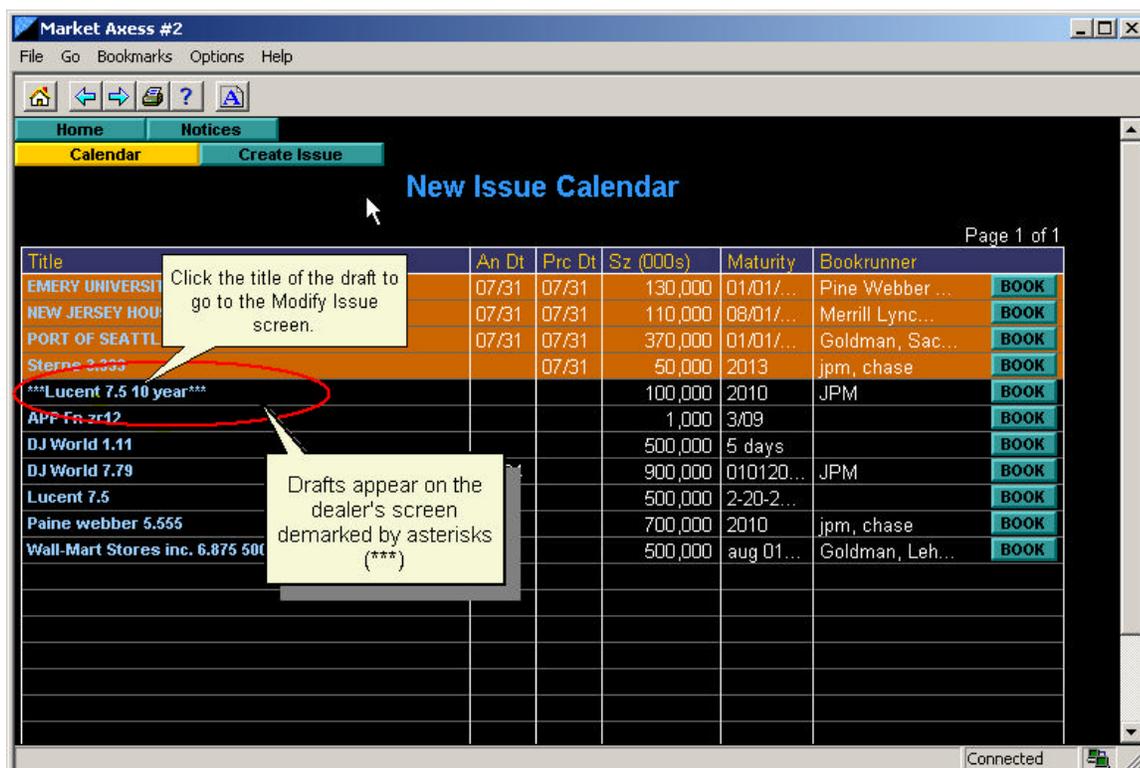


Figure 6 - Drafts as they appear on the calendar

### ***About the Create Issue Screen***

The Create Issue screen (Figure 7) enables a dealer to enter a new issue into the syndicate (primary issuance) system. When a dealer has the minimum amount of required information about the bond, regardless if it is actual or approximate, a draft of that new issue can be saved. The minimum amount of required information includes: Issuer, Title, Size and Maturity (indicated by a red asterisk at the end of the field \*).

If a dealer enters at least the minimum amount of required information, and clicks the **Save Draft** Button, the new issue will be available in the Syndicate system to the dealer only. This is indicated by three asterisks around the title (\*\*title\*\*) of the new issue on the New Issue Calendar screen. The new issue will be available to clients only when the dealer has **announced** the new issue (See Step 2 - Announcing the Issue, page 32).

*Table 4 - Create Issue Screen Fields and Buttons*

<b>Home Button</b>	Navigates to the Market Axess System Main Menu (Viewer Home Page).
<b>Notices Button</b>	Navigates to important legal notices about syndication issues.
<b>Calendar Button</b>	Navigates to Calendar of new issues viewable by the dealer (current page).
<b>Create Issue Button</b>	Navigates to the Create Issue screen where a dealer can establish a new issue on the system.
<b>Issuer</b>	Issuer Name.
<b>Title</b>	Title of new bond issue.
<b>Joint Leads</b>	If there are Joint Leads, the dealer can select the yes radio button and then choose among the listed dealers; If no Joint Leads, dealer chooses the no radio button.
<b>Managers</b>	Managers and Co-managers of issue.
<b>Bookrunners</b>	Lead(s) of the new issue. Non-Market Axess leads would be listed here also.
<b>Coupon</b>	Coupon for the issue if one is available.
<b>Cpn Type</b>	Characteristics of coupon such as Fixed or Floating basis.
<b>Cpn Freq</b>	Characteristics of coupon such as Annual or Semi-annual.
<b>First Coupon</b>	Date of first cash flow (if information available).
<b>Maturity</b>	Maturity date or, in early stages, approximate maturity date.
<b>Announce Date</b>	Announcement date of the new issue.
<b>Scheduled Pricing Date</b>	Scheduled pricing date of the new issue.
<b>Scheduled Pricing Time</b>	Scheduled pricing time of the new issue.
<b>Settlement Date</b>	Settlement date of the new issue.
<b>Pricing Benchmark</b>	US Treasury against which the new issue is being priced.
<b>% POT</b>	Percentage of the deal that will be sold to investors directly (as opposed to Retention).
<b>Moody's</b>	Moody's rating.
<b>S&amp;P</b>	S&P rating.
<b>Fitch IBCA</b>	Fitch IBCA rating.

<b>Duff &amp; Phelps</b>	Duff & Phelps rating.
<b>Min Size IOI</b>	Minimum quantity acceptable for indications of interest
<b>IOI Increment</b>	Acceptable incremental quantities that can be added to minimum.
<b>Indicated Price</b>	Indicated pricing of issue (used after launch to indicate launch spread).
<b>Pre-marketing</b>	Indicated pricing of issue (used before launch as pre-marketing guidance).
<b>Roadshow</b>	url of the roadshow.
<b>Prospectus</b>	url of the prospectus.

Figure 7 - Creating a New Issue Draft

Figure 8 - Save Draft Confirmation

## Steps to Modifying The Draft

The draft can only be modified by the dealer that initially created it.

To modify a draft, follow these steps:

1. From the Calendar screen, Figure 6, click the issue title. This will display the **Modify Issue** screen.
2. Make necessary modifications and click **Save Draft**.

## The Modify Issue Screen

The Modify Issue screen is used to add, delete or modify information about the particular issue noted on the top of the screen in yellow. To access the Modify Issue screen, click the title of the New Issue Calendar screen. All issues can be modified until the price has been sent to clients for confirmation.

The modify issue screen is similar to the Create Issue screen, except that the buttons on the bottom allow you to **Save, Delete and Cancel**.

## Reviewing Issue Details

The calendar screen provides only a summary of the bond issues. Details about each issue can be accessed by clicking on the issue title as shown on Figure 6, to display the Issue Detail screen, shown below.

1	Issuer	General Electric						
	Title	General Electric 6.936 300,000						
	Joint Leads							
	Managers	BSC,CMB,JPM						
	Bookrunner	JP Morgan						
	Coupon	6.936	4	Maturity	Jan. 15, 2025	5	Moody's	Aaa
2	Size	300,000 (000s)		Announce Date	08/08/00		S & P	AA+
	Cpn Type	Fixed		Sched Pricing Date	08/08/00		Fitch IBCA	NA
	Cpn Freq	Semi-Annual		Sched Pricing Time			Duff & Phelps	NA
	First Coupon	01/01/01		Settlement Date			Min Size IOI	1,000 (000s)
	% Pot	100		Pricing Benchmark	UST 20 Y		IOI Increment	500 (000s)
	Indicated Prc							
	Pre-Marketing							
	Road Show	<a href="http://www.marketaxess.com">www.marketaxess.com</a>						
3	Prospectus	<a href="http://www.marketaxess.com">www.marketaxess.com</a>						

Figure 9 - Issue Details

The fields and information on this screen are defined in Table 4 on page 29.

Below is a listing of the information, with the abbreviations expanded.

- |  |   |
|--|---|
| <p><b>1</b></p> <ul style="list-style-type: none"> <li>• Issuer</li> <li>• Title</li> <li>• Joint Leads</li> <li>• Managers</li> <li>• Bookrunner</li> </ul>                           | <p><b>3</b></p> <ul style="list-style-type: none"> <li>• Indicated Prc</li> <li>• Marketing</li> <li>• Road Show</li> <li>• Prospectus</li> </ul>   |
| <p><b>2</b></p> <ul style="list-style-type: none"> <li>• Coupon</li> <li>• Size</li> <li>• Coupon Type</li> <li>• Coupon Frequency</li> <li>• First Coupon</li> <li>• % POT</li> </ul> | <p><b>4</b></p> <ul style="list-style-type: none"> <li>• Maturity</li> <li>• Announce Date</li> <li>• Scheduled Pricing Date</li> <li>• Scheduled Pricing Time</li> <li>• Settlement Date</li> <li>• Pricing Benchmark</li> </ul> |
|  | <p><b>5</b></p> <ul style="list-style-type: none"> <li>• Moody's</li> <li>• S&amp;P</li> <li>• Fitch IBCA</li> <li>• Duff &amp; Phelps</li> <li>• Minimum Size of IOI</li> <li>• IOI Increment required.</li> </ul>               |

## Step 2 - Announcing the Issue

### Announcement

Dealer System	Investor System
<p><b>2. Announce the Bond Issue</b></p> <p>When more specifics of the bond are known and inputted into the system, the bond issue is formally announced on the Dealer system. This action makes the bond information immediately available on the investor's calendar window. At this point, investor may begin submitting IOIs.</p>	<p><b>2a. Client submits IOIs</b></p> <p>During the period between the announcements of the offering to just before the book is closed, investors review the status of their IOIs, and review any changes to the information concerning an IOI—e.g., allocation and pricing information. Any change to the details concerning an offering requires the investor to verify or cancel their IOI, based on the new information.</p>

### Steps to Issue Announcement

To announce a bond issue, follow these steps:

1. Click the **Book** button on the same line as the title of the draft issue (Figure 10).
2. Click the **Announce** button at the bottom of the book screen (Figure 11).
3. Click **Yes** on the Announce Deal confirmation screen (Figure 12).  
Note that the button on the bottom has changed to **Launch Deal**.

- Click the **Calendar** button on the upper toolbar to verify that your bond issue has been announced and that the asterisks have disappeared from the listing.

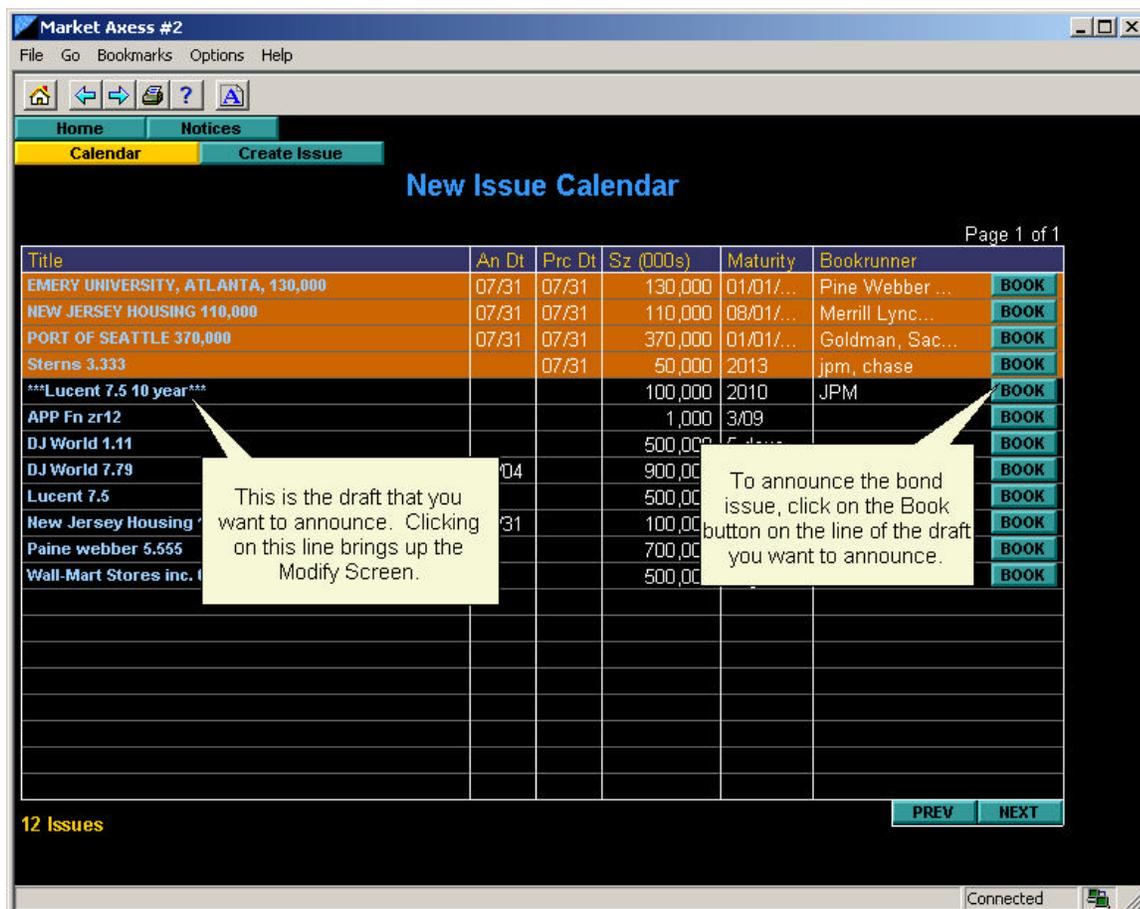


Figure 10 -Click Book from the Calendar Screen to Announce the Deal

See About the New Issue Calendar Screen for more information on the Calendar screen.

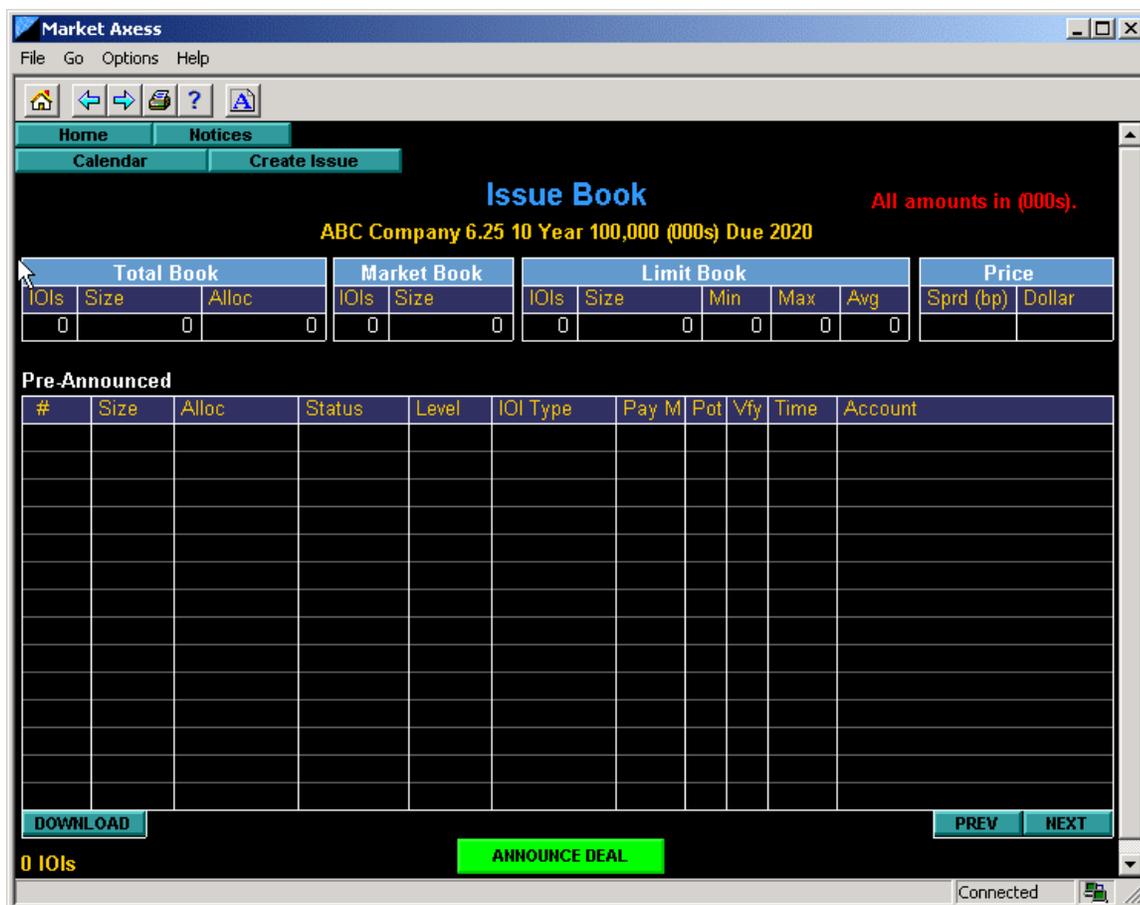


Figure 11 - Announce Deal from the Issue Book Screen



Figure 12 - Announce Deal Confirmation

### About the Issue Book Screen

The Issue Book screen is a 'control panel' for the particular issue stated at the top of the screen in yellow. From this screen a dealer will announce and launch, close and/or reopen the issue book, and see all details of each indication of interest (IOI) submitted from a client.

Table 5 - Issue Book Fields and Buttons

<b>Home Button</b>	Navigates to the Market Axess System Main Menu.
<b>Notices Button</b>	Navigates to important legal notices about syndication issues.
<b>Calendar Button</b>	Navigates to Calendar of new issues viewable by the Dealer.
<b>Create Issue Button</b>	Navigates to the Create Issue screen where a dealer can establish a new issue on the system.
<b>Issuer (yellow)</b>	Issuer Name.
<b>All amounts in (000s)</b>	Indicates that all sizes are in thousands.
<b>Total Book</b>	Indicates the total number of IOIs, size and allocation (if available) at any given point.
<b>Market Book</b>	Indicates the total number and size of those IOIs submitted with a market level.
<b>Limit Book</b>	Indicates the total number, size, and minimum, maximum and average spread of those IOIs submitted with a limit level.
<b>Price</b>	Indicates the spread and price of the new issue after it has been priced.
<b>Status Message</b>	Indicates the status of the issue book (pre-announced; announced; launched; closed; re-opened; priced).
<b># Column</b>	Each IOI has a line number associated with it for easy location.
<b>Size Column</b>	Indicates the size of the IOI (in 000s).
<b>Alloc Column</b>	Used to allocated bonds at the appropriate time in the deal (not <b>active</b> in this image)
<b>Status Column</b>	Indicates the action that was just executed on that particular IOI (D=dealer; I=Investor; D-Launch= dealer launched the deal; I-Launch=Investor has confirmed the launch; etc.)
<b>Level Column</b>	Indicates the market/limit level at which the IOI has been submitted.
<b>Amt Column</b>	Indicates the amount of the IOI.
<b>Pymt Column</b>	Indicates the type of payment the client wishes to use for this deal.
<b>Pot Column</b>	Indicates whether the client selected to receive allocations from pot or retention.
<b>Avf Column</b>	Indicates if the client elected to auto-verify their IOI at launch.
<b>Time Column</b>	Indicates the date/time the last action on this IOI was taken.
<b>Account Column</b>	Indicates which account has submitted the IOI.
<b>Prev/Next Buttons</b>	Bottom right of the screen enables navigation through the pages of new issues
<b>Number of Issues</b>	In bottom left of screen is indicated the number of viewable issues.
<b>Download Button</b>	Enables dealer to download the list of IOIs to an Excel spreadsheet.
<b>Announce Deal Button</b>	Enables dealer to announce the new issue to clients thus advancing the deal from a pre-announced state to an announced state.

### **Reviewing IOIs**

IOIs are submitted into the system before launching the deal. The dealer can review IOIs submitted by investors by clicking the Book button.

## Step 3 - Launching the Deal

### Launching

Dealer Side	Investor Side
<p><b>3. Launch of Bond Issue</b></p> <p>The dealers formally launch the bond issue and the interested parties who have requested manual verification will have to manually verify that they are interested in this bond issue and reverify if any changes to the issue have been made. Once the issue is launched, additional IOIs can be submitted.</p>	<p><b>3a. Client verifies the IOI</b></p> <p>Whenever a change to the new issue is made, while the book is open, the client or investor will receive a notification asking them to verify that the IOI is correct. They can cancel the IOI at this point as well. When the verification goes through, the dealer gets a code on his screen.</p>

### Steps to Launching the Deal

To launch a deal follow these steps:

1. Click the **Book** button for the security you want to launch on the same line as the title of the draft issue (Figure 10).
2. Click the **Launch** button on the Book screen to display the Launched Issue screen (Figure 13).
3. From the Issue screen, you can access the History and Details of the launch.

*Note that the **Status** column reads **D-Launch**.*

The Investor will now be alerted via a color change on his screen and will take appropriate action to respond to the launch.

The dealer may continue modifying the bond issue as more information comes in. The investor will be alerted via a color change when changes are made to the bond issue and will submit a verification that they are still in on the deal. The dealer will know that the investor has verified the IOI by the status code, which will change from D-Launch to I-Launch when the investor presses the Verify IOI button.

**Market Axxess**

File Go Options Help

Home Notices

Calendar Create Issue

### Issue Book

All amounts in (000s).

AOL 7.40 65,000,000 notes due 2010 65,000,000 (000s) Due 2010

Total Book			Market Book		Limit Book					Price	
IOIs	Size	Alloc	IOIs	Size	IOIs	Size	Min	Max	Avg	Sprd (bp)	Dollar
1	10,000	0	1	10,000	0	0	0	0	0		

**Launched** Page 1 of 1

#	Size	Alloc	Status	Level	IOI Type	Pay M	Pot	Vfy	Time	Account	
243	10,000		D-launch	Market	AON	None	P	Y	16:47	jrucker	HIS DET

When the investor verifies the change in the bond issue, they press a verify button and the status column changes from D-launch to I-Launch.

Click HIS to go to the Indication of History screen.

Click DET to get the details.

**DOWNLOAD** **PREV** **NEXT**

**Status Changed** **CLOSE BOOK**

Connected

Figure 13 - Launched Issue, Verified by Investor

### About the Indication History Screen

The Indication History screen summarizes the history of actions on a particular IOI. It records the time and date of each of the stages of the history, from start to end.

To access the History screen, click the His button on the Issue Book screen (Figure 13). This will display the Indications History screen, shown below.

I/N	Size	Alloc	Status	Level	IOI Type	Pay M	Pot	Vfy	DateTime
I	10,000	0	I-Autofy	Market	AON	None	P	Y	08/08/2000 16:47:31
I	10,000	0	I-Submit	Market	AON	None	P	Y	07/25/2000 15:39:40

Figure 14 - Indication History Screen

### IOI Detail Screen

To access the IOI Detail Screen, click the DET button in the Issue Book screen as shown on Figure 13.

The IOI detail screen provides the dealer with detailed information about the particular Indication of Interest. This screen takes the form of a small pop-up window which overlays the main screen. There are no scroll buttons. You can minimize this screen by clicking the  box on the upper right.

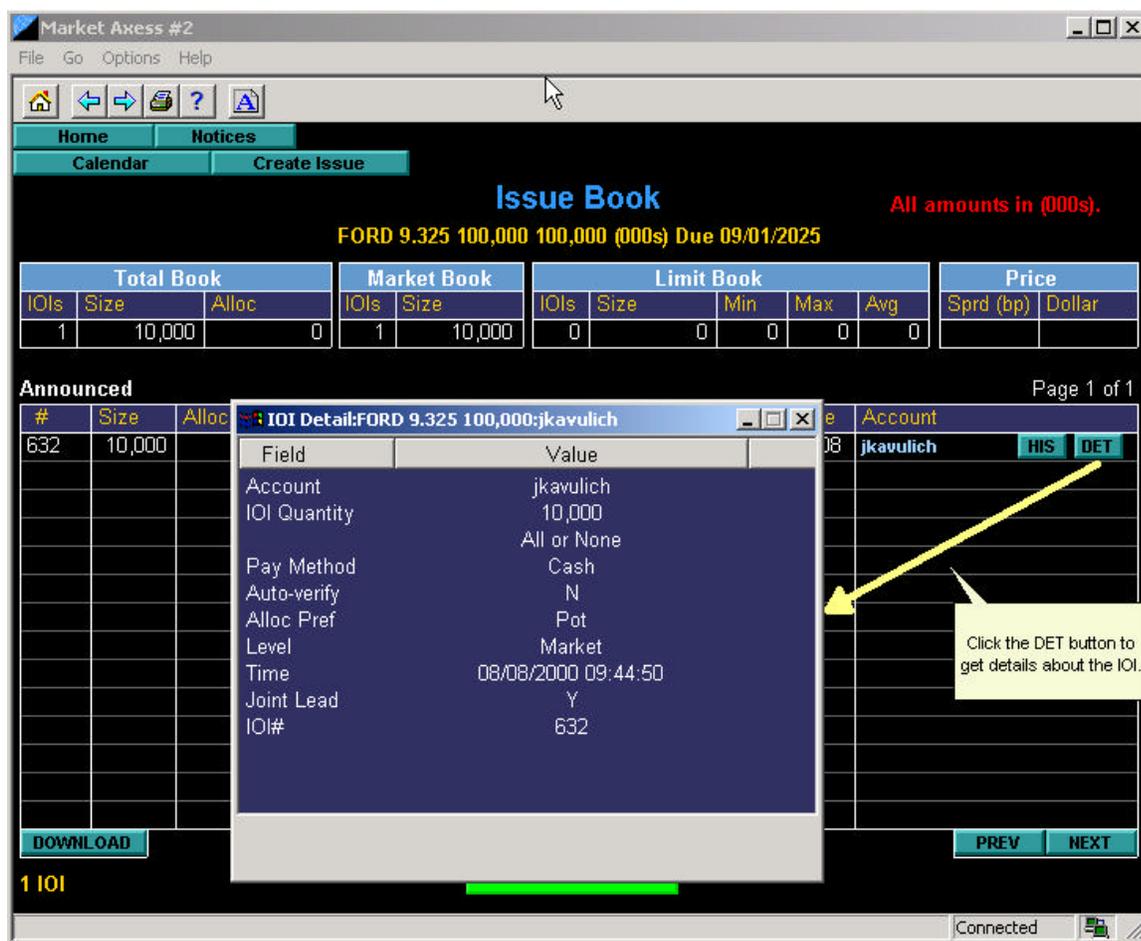


Figure 15 - IOI Detail screen

## Step 4 - Closing the book

### Closing the Book

#### Dealers Side

##### 4. Closing the book

Once the book is closed any IOIs submitted will be considered "Subject".

Dealers could reopen the book if necessary.

#### Investor Side

##### 4a. No Modify Button available

As soon as the book is closed, the investor can no longer modify IOIs into the system. Investors may still submit IOIs but they are considered "Subject".

### Steps to closing the book

To close the book, follow these steps:

1. Access the book for the specific bond you want to close by clicking the **Book** button on the calendar screen (Figure 6).
2. Click the **Close Book** button at the bottom of the book, see Figure 13. Note that the Close Book button appears only after a bond has been launched.

## Step 5 - Allocation of Bonds

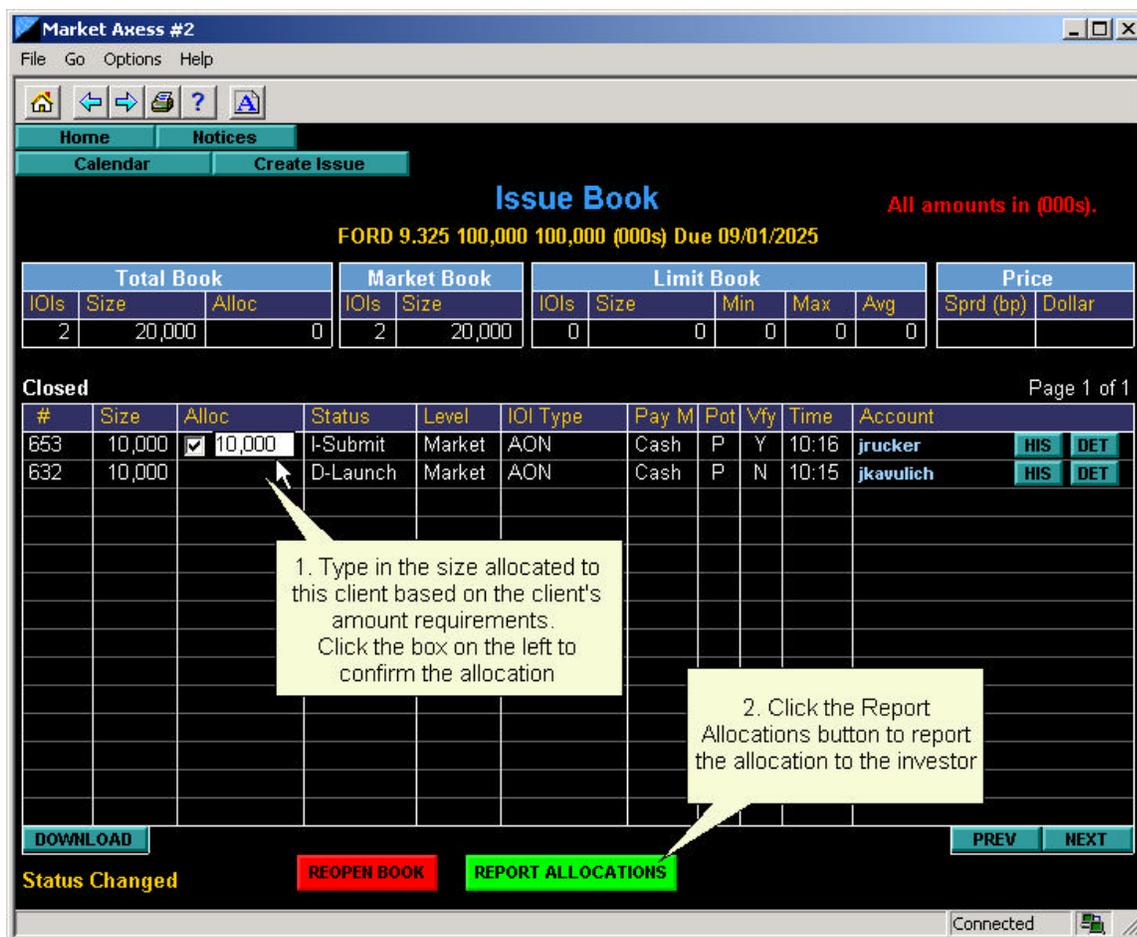
### *Allocation Detail*

Dealer Side	Investor Side
<p><b>5. Allocate Bonds to Clients</b></p> <p>After each lead dealer closes their book, the IOIs that they are managing will have to be allocated issues. Dealers allocate bonds manually to each investor according to their requirement and the system performs a check to determine if the allocation is acceptable or has failed to meet investor requirements.</p>	<p><b>5a. Client Verifies Allocations</b></p> <p>The investor can respond by confirming or declining the price.</p>

### *Steps to Allocating Bonds*

To allocate bonds, follow these steps:

1. From the Issue Book screen (Figure 16), click in the **Alloc** box and enter the number of bonds allocated to the client.
2. Click the **Report Price** button to determine if the allocation meets client requirements.
3. Adjust the allocations as required to meet the requirements of the clients.
4. When you are satisfied with the allocation, click the check box to the left of the allocation amount field.
5. Click the **Report Allocations** button to report the allocation to the investor.



**Market Axess #2**

File Go Options Help

Home Notices  
Calendar Create Issue

**Issue Book** All amounts in (000s).  
FORD 9.325 100,000 100,000 (000s) Due 09/01/2025

Total Book			Market Book		Limit Book					Price	
IOIs	Size	Alloc	IOIs	Size	IOIs	Size	Min	Max	Avg	Sprd (bp)	Dollar
2	20,000	0	2	20,000	0	0	0	0	0		

**Closed** Page 1 of 1

#	Size	Alloc	Status	Level	IOI Type	Pay M	Pot	Vfy	Time	Account	HIS	DET
653	10,000	<input checked="" type="checkbox"/> 10,000	I-Submit	Market	AON	Cash	P	Y	10:16	jrucker	<input type="checkbox"/>	<input type="checkbox"/>
632	10,000	<input type="checkbox"/>	D-Launch	Market	AON	Cash	P	N	10:15	jkavulich	<input type="checkbox"/>	<input type="checkbox"/>

1. Type in the size allocated to this client based on the client's amount requirements. Click the box on the left to confirm the allocation

2. Click the Report Allocations button to report the allocation to the investor

DOWNLOAD REOPEN BOOK REPORT ALLOCATIONS PREV NEXT

Status Changed Connected

Figure 16- Allocation of Bonds

**Step 5a - Allocation confirmation**

The investor confirms the allocation or has the option to cancel the IOI and the dealer views the confirmed allocations.

Below is an example of what the investor sees when the dealer reports an allocation. The *Allocation is available, please verify* notification displays beneath the bond title. To the right, the Verify Allocation button appears. The issue is shaded in orange. The Investor clicks on the Verify Allocation button and the blue confirmation screen appears. The investor will then click Yes, to verify the allocation. This does not yet mean that he has accepted the deal because the issue has not yet been priced.

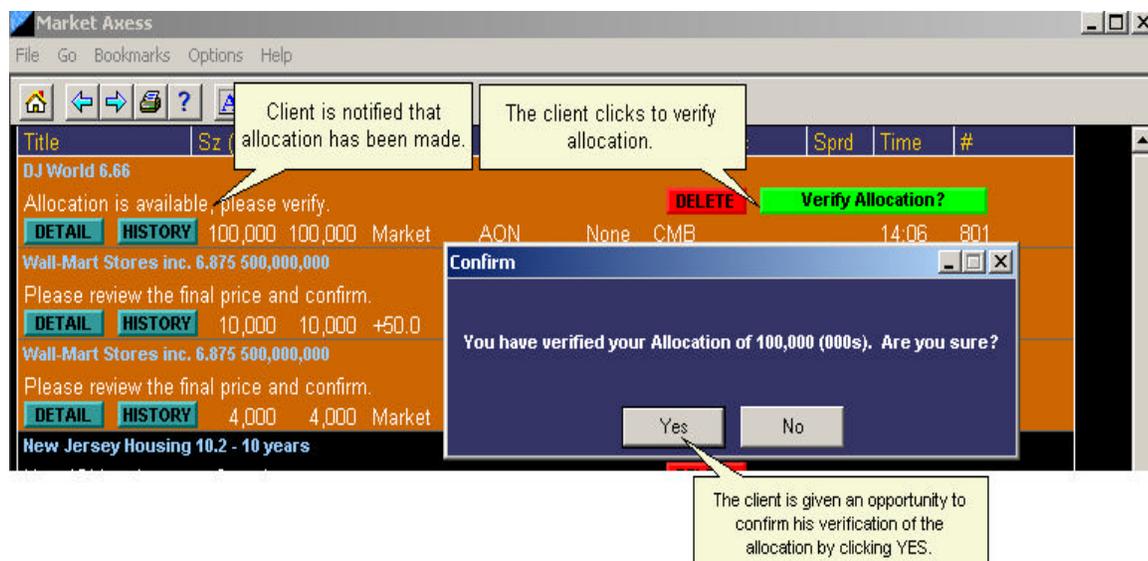


Figure 17 - What the dealer sees when an allocation is confirmed

### **How the dealer identifies a confirmed allocation**

When the Investor verifies the allocation, the Dealer will see a change in the Status for that IOI from D-Alloc to I-Alloc. This indicates that now the allocation has been verified and accepted by the investor. This process could occur very quickly for all the IOIs for the book.

## **Step 6 - Pricing the bond**

### **Pricing**

Dealer Side	Investor Side
<p><b>6. Price the Bond</b> The dealer prices the bond on line</p>	<p><b>6a. Client Confirms Pricing</b> Each investor can respond by verifying if the price is acceptable (if they did not selected AutoVerify)</p>

### **Steps to Pricing the Bond**

To price the bond:

1. Click the **Report Price** button (Figure 18 - Invoking Final Pricing Screen)
2. Enter the price, spread and benchmark price in the **Final Deal Pricing** screen, shown on Figure 19.
3. Click the **Price** button and that will return you to the Book screen. The status for all IOIs will read D-Priced.

### **Investor**

The investor will see an orange overlay over the priced security and to alert him to check their IOIs. The IOI listing will show a Review Pricing Details button. The investor will click the Review Pricing Details button, review and click to accept the price. Before they confirm the price, the user will see this confirmation screen ( Figure 20 - You Have Confirmed Your Price).



**Market Axess #2**

File Go Options Help

Home Notices

Calendar Create Issue

### Final Deal Pricing

\* indicates required field

Issuer: ABC Company \*

Title: ABC Company 6.25 10 Year \*

Joint Lead:  Yes  No

Manager:  Bear  Chase  JPM

Bookrunner: ABC

Coupon: 625.000 Maturity: 2020 \*

Size: 100,000 000s \* Moody's: NA

Cpn Type: Fixed Announce Date: S & P: NA

Cpn Freq: Semi-Annual Sched Pricing Date: Fitch IBCA: NA

First Coupon: Settlement Date: Duff & Phelps: NA

% Pot: 100 Pricing Benchmark: Min Size IOI: 0 000s

IOI Increment: 0 000s

Launch Sprd: (url)

Pre-Marketing: (url)

Road Show: (url)

Prospectus: (url) **UPLOAD**

Price: 0.0000 \* Day Count Basis: Actual/360

Spread: 0.0 \* Price of Benchmark (at Pricing): 0.0000

**PRICE** **DELETE** **CANCEL**

Connected

Enter the price, spread and price of benchmark

Click PRICE to price the deal. The system will alert you if details are missing.

Figure 19 - Pricing the Deal

**You have confirmed your Price. Are you sure?**

Please note that placing an indication of interest is not a guarantee of receiving any allocation. The underwriter and issuer are not obligated to allocate any of the securities to you. Please see Notices for more information about the new issue allocation process.

I have received the most recent preliminary prospectus for this offering and I understand that the offering terms may change before the issue is cleared for final sale.

You have confirmed your Price. Are you sure?

Accept and Yes No

Figure 20 - You Have Confirmed Your Price

## Step 7 - Deal Accepted and price confirmed

### 7. Deal Accepted

Once deals are accepted and the syndication process is completed, the dealer can review past deals for up to 35 days. After that, the deals disappear from the screen and are archived by Market Axess. Contact Market Axess Client Services at 877-638-0037 if you want to retrieve archived information.

### 7a. Completed deals disappear from client's screen.

The completed deals remain viewable by investors for one week. Investors can use the REM (Remove) button to delete IOIs.

## DATA UPLOADS AND DOWNLOADS

---

## RESPONSIBILITIES

---

## RECOVERY PROCEDURES AFTER SYSTEM FAILURE

---

To ensure that data is not lost during a system outage, dealers should contact clients to confirm that their most recent correspondence had been received.

- If the client has submitted an IOI, it is the dealer's responsibility to respond to the IOI.
- In the case of a system outage, the dealer should verify the IOI details verbally.
- **D-LAUNCH** indicates to the dealer that IOI verification has been sent to the client. If the dealer does their allocation and the system goes down, the dealer should verify the allocation with the client.
- **D-ALLOC**-is the message the dealers will see when they allocate shares to a client. Once dealer sets a price, they should verify it with the client if the system goes down
- **D-PRICE**-is the message the dealer will see once they have sent pricing details to the client. Therefore, if the API goes down at any stage of the syndication process, the dealer should verify the most recent details of the transaction with the client.

## HISTORICAL DATA STORAGE AND ACCESS

---

### Archiving Historical Data

The system displays the historical trading data for seven days on the investor side and 45 days on the dealer side. Afterwards, the data is archived by Market Axess and kept for a period of seven years.

### Accessing Historical Data

The data stored by Market Axess has the same level of permissioning as the data accessed during trading. Dealers accessing the data can only see those trades managed by them.

#### *Future*

Data is going to be available on request, or via the web, so that dealers can request records for the prior fiscal year, for example.

### Security

Physically the data is secured at the Market Axess site. Anyone accessing the data will require proper on-line permissioning.

### Disaster Recovery

For information about Disaster Recovery procedures, contact the Market Axess information desk.

### IOI Information on Dealer's side

The IOI information is left on-line for 45 days and then it is only available on request. Note that since investors will not see the IOI data after the first week, dealers may receive requests from investors to verify data, which is available for the 45 days after the transaction was completed.

### IOI Information on Investor's side

Investors see IOI data for seven days after the transaction is complete and then it is only available on request.

SECONDARY TRADING INVENTORY  
SYSTEM (DEALER)

## 4

**APPLICATION PROGRAMMING INTERFACE SPECIFICATIONS**

---

**What is the Market Axess API**

The Market Axess *API* allows participating dealers to connect their proprietary or in-house inventory systems to the Market Axess system in order to:

- Send inventory contribution information to Market Axess.
- Receive trade confirmations from Market Axess.
- Support the Market Axess trading system protocol.

See the Market Axess API documentation for additional technical details about the API.

**API Characteristics:*****Messaging:***

- XML is the message format; Market Axess provides to DTD.
- TCP/IP is the communications protocol.
- Messaging is asynchronous.
- Message receipt must be acknowledged by recipient.
- Sequence numbers facilitate message tracking and retransmission requests.

***Session:***

- Heartbeat generated by Market Axess every thirty seconds during inactive periods.
- The API client (on the dealer side) acknowledges the heartbeat immediately upon receipt. No processing is required by the dealer's system because the API handles heartbeat receipt and acknowledgement.
- If the API client fails to acknowledge two successive heartbeats, the connection is presumed failed and Market Axess will drop the session.
- Heartbeat message provides timestamp for clock synchronization.

**Network:**

- Each dealer has two dedicated T1 lines provided by IXNet/Global Crossing.
- Only one line is active; the other serves as backup.

**Security:**

- Market Axess maintains login-based restrictions on system privileges in LDAP. Therefore, when a session is created, it embodies the permissions for system access according to the permissions set for the login for which the session was created.
- 128-bit message encryption using RSA BSAFE Crypto libraries.
- Firewalls isolate dealer network from Market Axess network.
- Dedicated frame relay circuits connected via IXNet/Global Crossing network terminate on dedicated routers at dealer site; no exposure to public internet.

**API Components**

The API has three protocol components:

1. The Communications Protocol, which facilitates session and message management.
2. The Message Protocol, which dictates XML message composition according to the Market Axess-provided DTD-the section Message Protocol provides details about this topic.
3. The Implementation Protocol, which utilizes a call-level interface that abstracts details that are not pertinent to business functionality-for example, encryption, heartbeat, connection management have been abstracted to calls through the API.

**Recovery from API downtime**

If the API goes down, the result will be as follows:

- The dealers second T1 line will become active

If both lines are down:

- Prices on the inventory system will become stale
- Trades on both the dealer and client side will not be possible

**Actions to take if the API goes down:**

- Notify the participating dealers
- Senior management within MA will be notified
- Dealer will contact any clients they are trading with

**How will the secondary trading system respond when the API goes down?**

- Once a client enters details of the trade including the spread, all of the data pertaining to that trade will be saved
- When the system is brought back up, the details of that trade will become retrievable
- **If the system goes down prior to the client entering the spread, all data entered to that point will be lost**

- The trade will need to be rebuilt once the system is functioning properly

## **Inventory Daily Procedure**

- We recommend that inventory is updated throughout the day to ensure up to date prices.
- Inventory and prices will be held on the system indefinitely.
- Items will be deleted through the dealer API.
- Data sent through the API will reflect on the system instantaneously.

### ***Requirements:***

- Dealer submits data through API.
- Data submitted should contain either the Cusip or ISIN.
- All securities should be issued in US dollars.

### ***When data is rejected by the database:***

1. A report will be generated for the dealer.
2. A report will produced within Market Axess.
3. This report will be used by a MAX officer to determine the reason the data has been rejected
4. If we determine the data should be part of our database, we will add it.
5. The dealer is responsible for providing details (Cusip, maturity, issue date, and coupon) of securities not available through our vendors.

## **Logging Into the Inventory System**

Follow the procedures described in Steps to Logging Into the Market Axess System, page 3. In the Home Screen, click on the Secondary Inventory button to display the Inventory Screen (Figure 21).

## **About the Inventory Screen**

The inventory of bond issues is displayed in Figure 21 - Inventory Screen, below. Note that the default sort of this screen is by Maturity. Following the figure is a detailed description of all of the features of the Inventory screen.

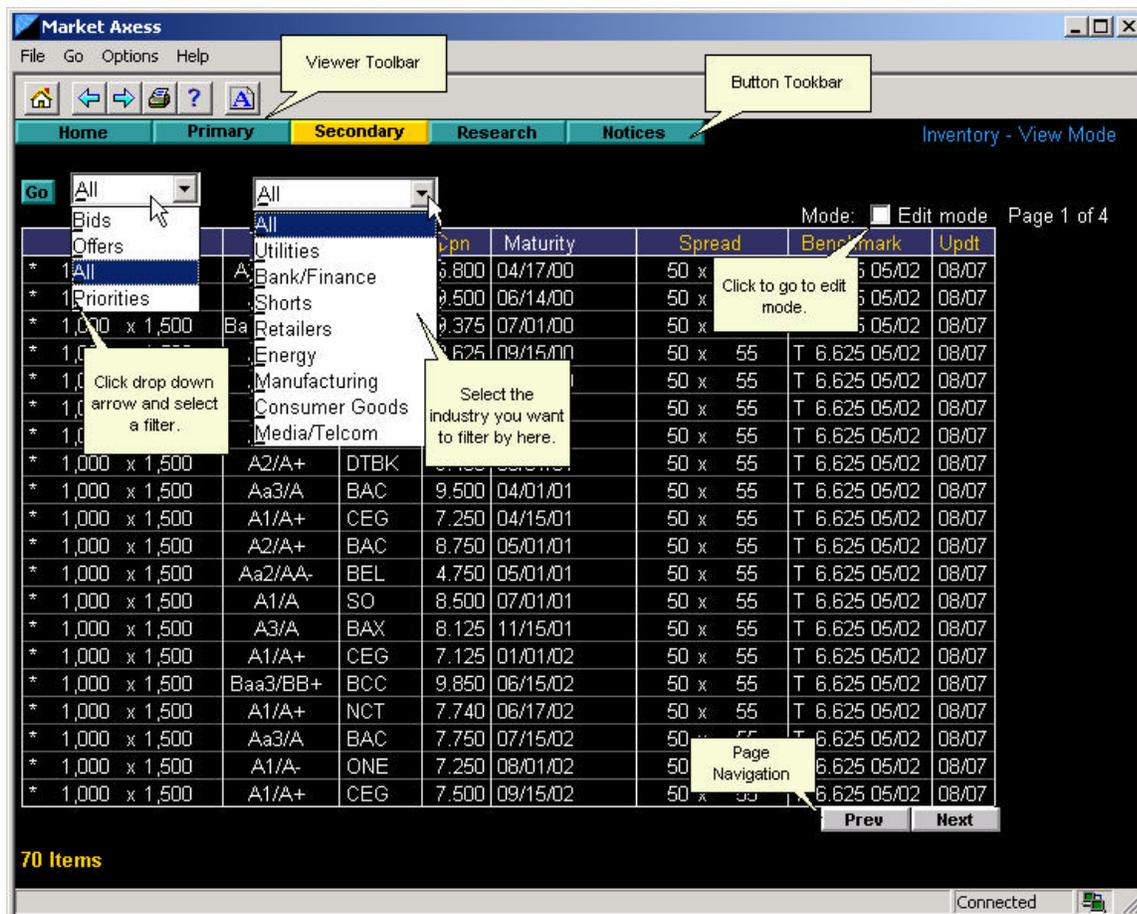


Figure 21 - Inventory Screen

### **Filtering the securities on this screen**

On the upper left of the screen, click the dropdown arrows to filter by bids or offers or by sector.

### **Navigating The Inventory**

Click the **Prev** or **Next** to navigate through the pages.

Table 6- Inventory Main Screen Fields and Buttons On System Toolbar

<b>Home</b>	Navigates to the Home or main page of Market Axess System.
<b>Primary</b>	Navigates to the Primary Issuance Module. The is the same as the New Issue Trading button on the Home screen Figure 3.
<b>Secondary</b>	Navigates to the Inventory Module. Because in this case, this is the current screen, this button will be a lighter color.
<b>Research</b>	Navigates to the Research Module. Clicking this button causes your internet browser to launch and Navigates to the Inventory web page.
<b>Notices</b>	Navigates to the notices area.

## Filters

<b>First box , type filter</b>	When you click the dropdown arrow on the field to the left, you can select from: <u>A</u> ll, <u>B</u> ids, <u>O</u> ffers, <u>P</u> riority to filter listings. Click the <b>Shift</b> key together with the underlined letter to access that filter via the keyboard
<b>Second box Book</b>	When you click the dropdown arrow of the field to the right, you can select from: <u>A</u> ll, <u>U</u> tilities, <u>B</u> ank <u>F</u> inance, <u>S</u> hort, <u>R</u> etailers, <u>E</u> nergy, <u>M</u> anufacturing, <u>C</u> onsumer <u>G</u> oods, <u>M</u> edia Telecom. Click the <b>Shift</b> key together with the underlined letter to access that filter via the keyboard.
<b>Go button</b>	Click the <b>Go</b> button after you make the Type and Book selections.
<b>Mode (edit or view)</b>	Click on this link to toggle between edit mode and view mode.

## Columns

<b>SZ (000)</b>	The size of the offering in thousands. The * means that the security is a dealer priority.
<b>Rating</b>	The security rating. Format is Moody's/S&P.
<b>Ticker</b>	The ticker symbol.
<b>Cpn (Coupon)</b>	Security's coupon payment.
<b>Maturity</b>	The date the security matures.
<b>Sprd (Spread)</b>	The spread is the yield differential of the underlying bond at the defined benchmark. The spread for the security (120 x 110, for example) is expressed in basis points (abbreviated as bps). A basis point is equivalent to a .01 percentage point or 1/100 of a percent. Example: The difference between a bond yielding 4.85% and one yielding 4.96% is 11 basis points.
<b>Benchmark</b>	The security against which the underlying bond is priced.
<b>Updt (Update)</b>	The time the security was updated. Note that military time is used when the security is updated during the day. Dealers may enter the date as mm/dd/yyyy if the security was not updated that day. Batch uploads of inventory occur at different times during the day. Each dealer determines the times for upload. Manual edits are inputted continuously during the trading day.

## Security Details

To get details about each security, click on the line item anywhere between the **ratings** and the **maturity** columns. This brings up a pop-up screen as displayed below:

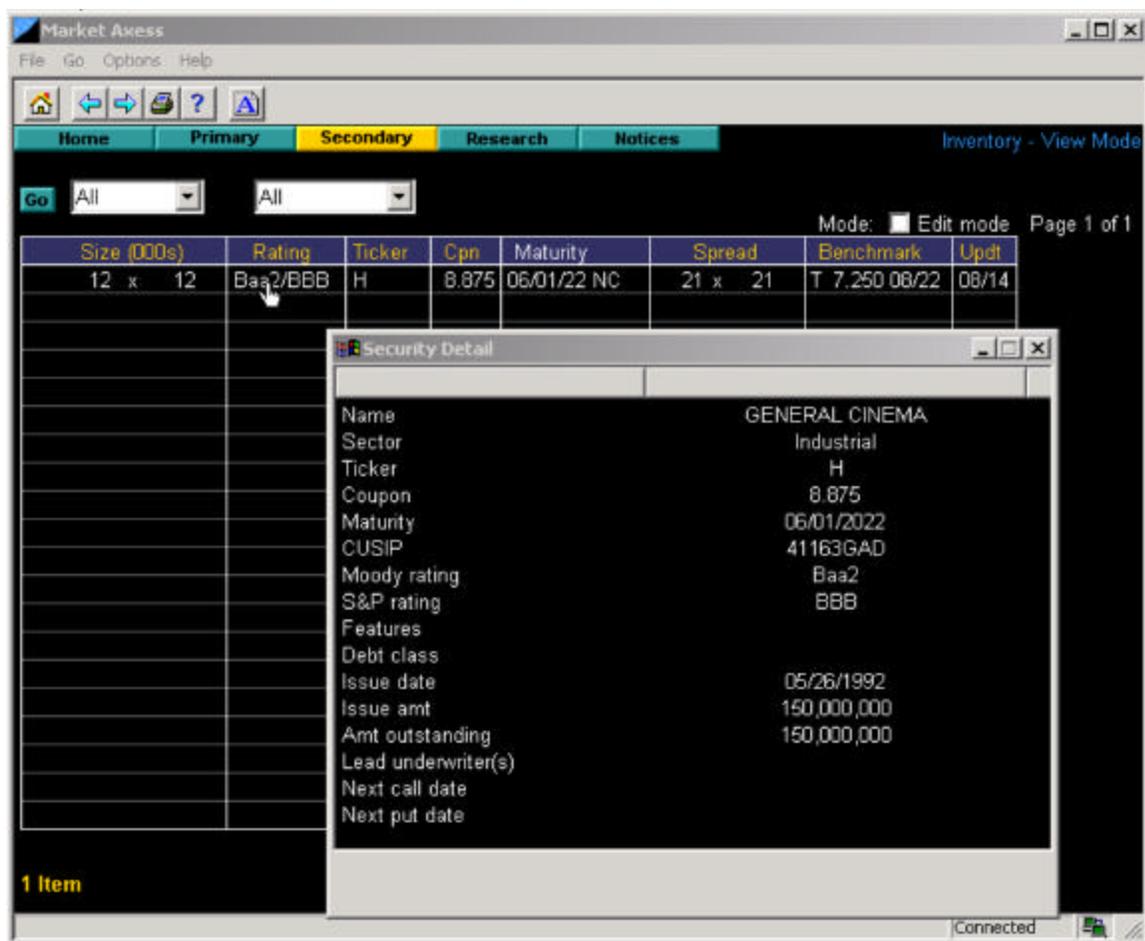


Figure 22 – Security Detail Screen

To enlarge the pop-up screen, click on the edge of the window and drag while holding the left mouse button.

## CREATING & EDITING INVENTORIES

This section is for dealers who need to enter new inventory items, edit existing inventories or cancel existing inventories.

The section provides the step-by-step instructions in one convenient section, referring to the screens in subsequent section. Sections following the step-by-step instructions provide details about each screen.

### Adding an Inventory Item

To add an item to the inventory, follow these steps:

1. Click the **Add** button located on the lower left of the Inventory Screen (Figure 21) to display the Add Item screen shown on Figure 23.
2. Enter the ticker number into the **Ticker** field and click the Search button, to display the list of available securities.

- Enter the required data and click the **Add** button. Click **Cancel** to ignore any information typed in and return to the listing screen.

### About the Add Item Screen

The Add Item Screen has two sections.

- The **data table** portion on the upper section is a listing of the available bond issues that the dealers can add to their inventory. The bond issues list appears when the dealer enters a ticker search. The issues that appear on the listing box are extracted from the Market Axess reference database.
- The **edit fields** on the lower part of the screen. Here the dealer can input the Spread, Size, Benchmark and Book information to the selected security. They also have the option of clicking the Priority box to mark the security as a priority item.

Note: It has been agreed that dealers participating in the Market Axess system should mark no more than 10% of the inventory items as priority items.

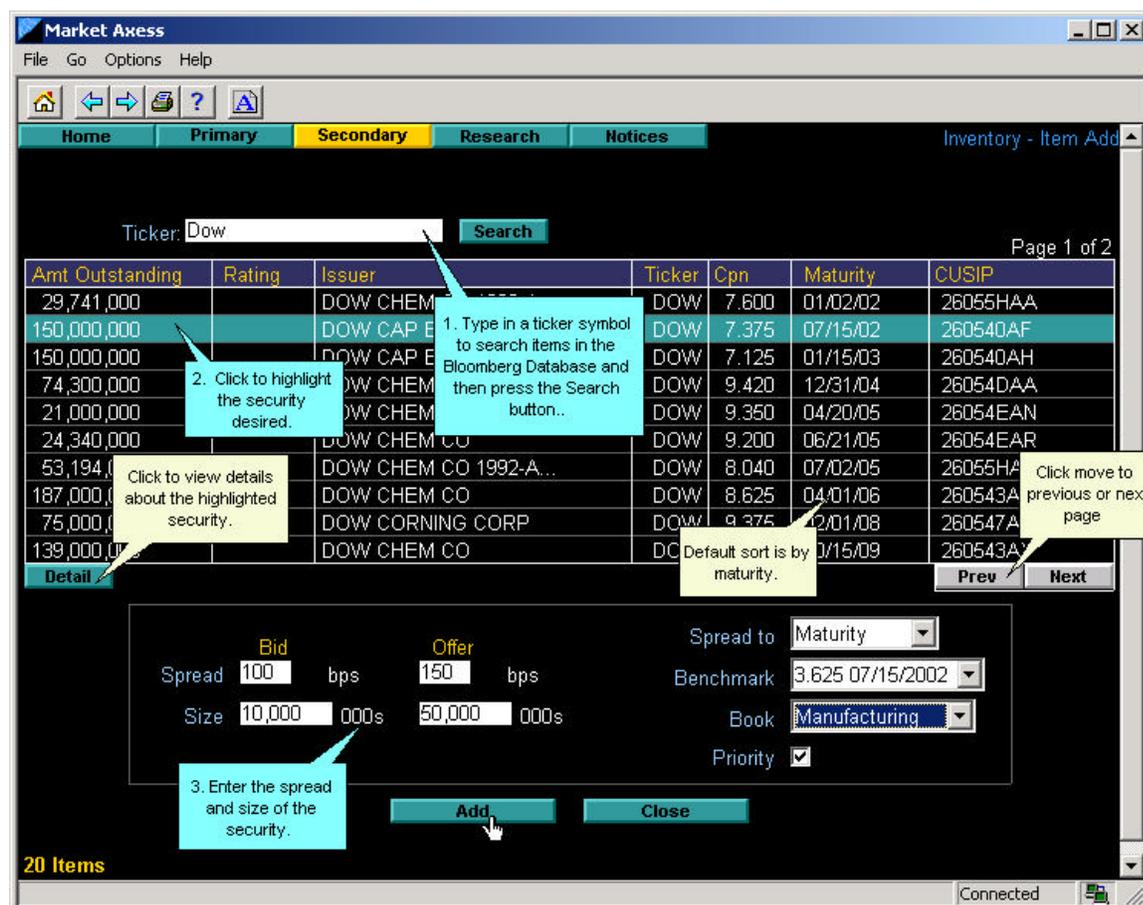


Figure 23 - Add Item Screen

## Editing an Inventory Item

To edit an item in the inventory, follow these steps:

1. Click the **Edit** option on the main screen (Figure 21). This will display the listing in **Edit mode** as shown on Figure 24. Notice that on the right of that screen, there is a box that is labeled View Mode.
2. Click the box to return to the view mode.

### About the Edit Mode Area

This screen is almost identical in format as the screen shown on Figure 21 - Inventory Screen. The following is a list of editing functionality available in this screen:

- The size of issue can be edited on screen.
- The spread can be edited on screen.
- You can click the edit button (to the right of each issue line) to edit the inventory entry.
- You can delete an inventory entry by clicking delete, next to the edit button. There is no UNDO, for this deletion action, but the system will provide a confirmation screen before deletion takes place.

Size (000s)	Rating	Ticker	Cpn	Maturity	Spread	Benchmark	Updt	
* 100 x 1,500	A3/BBB+	BPOP	5.800	04/17/00	50 x 55	T 6.625 05/02	12:41	edit delete
* 1,000 x 1,500	A2/A+	DTBK	9.500	06/14/00	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	Baa1/BBB+	NST	9.375	07/01/00	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A+	CEG	8.625	09/15/00	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A+	BMO	9.800		50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	Ca/D	HLT	13.625		50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 760	Aa3/A	BAC	9.625		50 x 55	T 6.625 05/02	12:41	edit delete
* 1,000 x 1,500	A2/A+	DTBK	9.400	03/01/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	Aa3/A	BAC	9.500	04/01/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500		G	7.250	04/15/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500		C	8.750	05/01/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500		L	4.750	05/01/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500			8.500	07/01/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A3/A	BAX	8.125	11/15/01	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A+	CEG	7.125	01/01/02	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	Baa3/BB+	BCC	9.850	06/15/02	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A+	NCT	7.740	06/17/02	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	Aa3/A	BAC	7.750	07/15/02	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A-	ONE	7.250	08/01/02	50 x 55	T 6.625 05/02	08/07	edit delete
* 1,000 x 1,500	A1/A+	CEG	7.500	09/15/02	50 x 55	T 6.625 05/02	08/07	edit delete

Figure 24 – Inventory Edit Mode Area

### About the Edit Item Screen

To edit an existing inventory entry, go to the Inventory Edit Mode Form (See Figure 24 – ). Or, if you are in the View screen, click the Edit mode.

You can enter data directly on the Size and Spread fields (light background). Click the **Edit** button to the right of the inventory entry to bring up the Edit Item screen.

Amt Outstanding	Rating	Issuer	Ticker	Cpn	Maturity	CUSIP
	Baa2/BBB	GENERAL CINEMA	H	8.975	06/01/22	41163GAD

Spread	<b>Bid</b>	21	bps	<b>Offer</b>	21	bps	Spread to	Maturity
Size	12	000s		12	000s		Benchmark	7.250 08/15/2022
							Book	Industrials
							Priority	

Figure 25- Edit Item Screen

Change the entries as desired. Notice that the entry formats are identical to the Add Entry screen. The only difference is that this screen has the **Apply benchmark to all bonds in this book**, function that allows you to change the benchmark for all of the entries in the particular book at once.

Under the **Bid** and **Offers** columns, enter the total **size** of the offering and the **spread**.

Click the drop down arrows to select the **Spread to**, **Benchmark**, **Book** and **Priority** options.

## PROCEDURES

---

For a user manual that details procedures on the Research System from the point of view of the investor, refer to the attached document **Market Axess Dealer User Manual: Research**.

## CONTRIBUTION/CATEGORIZATION OF RESEARCH FOR MULTEX

---

There are 2 methods for delivering research to Market Axess (via Multex):

- An automated process (using Multex Auto Contribution).
- A manual process (using Multex publishing software).

### Auto Contribution

The auto contribution method is recommended for broker-dealers who have a centralized database of research documents which are tagged with content subjects such as analyst, sector, product type, company, region, type of analysis, etc: The process of preparing a document for uploading into the Multex system involves the following:

1. Preparing a header file using the format explained in the *Multex Auto Contribution Document (attached)*. This header file provides the required cataloguing information for the document file, and it refers to the document file name.
2. Uploading the header file and the document to the Market Axess Research system via FTP.

Some companies may create an automatic system of creating the header file from their own catalog data and uploading the documents to the Market Axess system.

### Manual Contribution

The manual contribution method is recommended for companies that do not have an established internal database of documents. To post documents manually to the Market Axess Research system, the Multex publishing software is installed on the user's computer. This program allows users to submit new documents to the system via the Internet as follows:

1. Individuals responsible for submitting documents into the system, access the software, fill in the relevant content information associated with each report. (Please refer to the attached Multex document: **Maximizing the Usage And Visibility of Your Research Documents**).
2. The software submits the reports and the relevant cataloguing information

## Establishing Research Documentation Standards.

Both the auto contribution and manual methods require that standards be established by your research department for applying relevant content information tags to the various types of reports that are to be published to Market Axess.

## Entitlement Process for Research

Each participating dealer currently has the ability to tier client entitlements into two different groups: **1)US-QIB** and **2)NON-US INSTITUTION**. Research published for U.S. institutional distribution is commonly also appropriate for distribution to non-U.S. institutions. However, some research produced outside of the U.S. cannot be distributed to U.S. institutions.

When publishing a research report to Market Axess, it must be tagged for distribution to either one or both of these entitlement groups.

By default, Market Axess clients are not provided with access to research unless they are entitled by a dealer through our **Client Authorization** process. Entitlements are implemented at the individual user level.

The entitlement rights granted to the user will determine which documents they will be able to access on Market Axess.

While the Research department is responsible for tagging the documents for the appropriate entitlement groups, an administrative contact at each dealer is responsible for assigning entitlements on the client level.

### **Example:**

A European credit research report is tagged for distribution to only the Non-US Institution group, while a U.S. credit research report is tagged for distribution to both the US-QIB and Non-US Institution groups. A client who has entitlement rights for the US-QIB group will have access only to the U.S. credit research report, while a client who has rights for Non-US Institution group will have access to both the U.S. and European credit research report.



Forthcoming



APPENDIX B-DEALER USER AMMENDMENT FORM



# Dealer User Amendment Form

**Dealer Name:**

ABN Amro                      Deutsche Bank                      Chase Manhattan Bank  
 Bear Stearns                      JP Morgan                      UBS Warburg

**Please select:**

Add                      Edit                      Delete

Name: \_\_\_\_\_ Title \_\_\_\_\_  
First Name                      Middle Initial                      Last Name

Phone # (\_\_\_\_) \_\_\_\_\_ Fax # (\_\_\_\_) \_\_\_\_\_ E-Mail \_\_\_\_\_

**Please select Role and Position:**

Role	Position			
Trader	Trading Manager	Trader	Trader Assistant	Syndicate Desk
Support Contact	Trading Support	Compliance Officer	System Administrator	
Sales People	Relationship Manager	Sales Manager	Sales Person	Sales Assistant

**Desk:**

**(For Traders and Support Contacts Only)**

	High Grade	High Yield	Agencies	Municipals	Emg. Mkts	Eurobonds	Pfandbriefe
Primary							
Secondary							

Research:      No Research      US QIB      Non-US Institu

\_\_\_\_\_  
 Authorized By System Administrator

\_\_\_\_\_  
 Date



# APPENDIX C- CLIENT AUTHORIZATION FORM



## CLIENT AUTHORIZATION Organization

Please provide the following information about your client. Upon completion, please fax all pages of this form to (212) 235-0647. **\*\*\*Red fields are mandatory.**

### Dealer Information

\*QIB:

Credit Limits (in USD '000s):

\*Expiration Date:

Single Day:

\*Account Number:

1 Day Aggregate:

\*Default Salesperson:

3 Day Aggregate:

Note Field 1:

Completed By:

Note Field 2:

Completed By:

Note Field 3:

Completed By:

\*Authorized By: \_\_\_\_\_

\*Date:

Please continue on next page

