

INTELLECT TREASURY FIXED INCOME SECURITIES FRONT OFFICE MODULE

USER MANUAL

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Contact Persons

Ashutosh Tiwari , ashutosh.tiwari@intellectdesign.com
Vishal Agarwal , vishal.agarwal@intellectdesign.com

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1.0 Introduction

The document is intended to be used by the business team of FIS Front Office to know the features available in the module and how to navigate through them.

Intellect Treasury Fixed Income Securities module is a rich application covering wide features of Bond Market. It supports capture of manual trades as well as trades flowing direct from trading platforms through interfaces. It provides real time limit checking and 'what if' analysis to support decision making.

The products supported in Fixed Income Securities are

- ▮ T-Bills (Discount Bonds)
- ▮ T-Bonds
- ▮ Fixed Coupon Bonds
- ▮ Floating Rate Notes
- ▮ ABS/MBS based Amortizing Bonds
- ▮ Inflation Linked Bonds(ILB)
- ▮ Call/Put products(Bonds with embedded option)
- ▮ Repo & Reverse Repo

1.1 Product Features

Following are the features available

- ▮ Online Interfaces with Market Data Sources (Security Master Data & rates) & Trading Platforms like Reuters, Bloomberg etc.
- ▮ Security Maintenance
- ▮ Manual Deal Capture
 - ▮ Outright
 - ▮ Repo/Reverse Repo deal booking(With Multiple Securities)
- ▮ Pre-Trade Analysis
- ▮ Online Limit Management like Issuer limit, pre settlement, Duration Limit, Issuer Size limit etc.
- ▮ Maker-Checker
- ▮ Configurable Decision Support Blotters
 - ▮ Deal Blotter
 - ▮ Position Blotter
 - ▮ Holding Blotter

- ▮ FS Blotter
- ▮ Summary Blotter
- ▮ Audit Requirements and traceability
 - ▮ Concurrent Audit
 - ▮ Deal Compare
- ▮ Online & EOD Reports

1.2 Acronyms/Abbreviations /Common Terminologies used


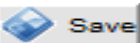


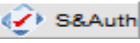
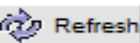


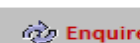


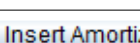


Key	Definition
FLOW	Flow is to define the deal type either Buy or Sell
CCY	CCY denotes the currency used for the transaction.
PORTFOLIO	Logical grouping of security holding under virtual warehouses as applicable. These codes are part of static data maintenance;
STRATEGY	It refers to grouping of Securities based on holding strategy (maturity or for trading? – e.g. like AFS, HFT, HTM) based on which accounting treatment shall differ, sale etc
AFS	Available For Sale
HFT	Held For Trading
HTM	Held Till Maturity.
BPS	Represents combination of Book-Portfolio-Strategy
FIS	FIXED INCOME SECURITY
FO	FRONT OFFICE
OUTRIGHT	Simple Buy/Sell of the Securities.
REPO	Repurchase Agreement
BLOTTER(S)	A Blotter refers to an excel-like window to see details of trades with various other required attributes as per given selection criteria;
EOD	End Of Day.
P&L	Profit & Loss.
COH	Cost of Holding.
MTM	Mark To Market.
EOM	End of Month






QTY	Quantity.
ISIN	International Securities Identification Number

1.3 Key Deal Shortcuts

Key	Operation	Description
SHIFT + INSERT	Paste a copied deal reference number .	To paste a deal number on a Deal capture screen and retrieve the deal details on pressing <ENTER>
COPY+INSERT	Copy and Insert	To copy and Insert a deal

1.4 Key Icons

Icons	Operation	Description
	Clear	To clear the fields on a Screen
	Save	To Save the Deal Details.
	Delete	To Delete an existing Deal
	Authorize	To Authorize a deal
	Save & Authorize	To Save & Authorize a deal at one go if an user is so entitled..
	Refresh	To Refresh any output data;
	What if	To view Pre-deal Analysis of the risks involved before booking the actual deal.
	Remarks	To put any possible Remarks for the Deal
	Enquire	To Fetch the deals using Deal Query Screen as per filters / criteria selected;
	Security Code	To get the Security code from the Security Master Search Screen
	Cash flow generation	To Generate Cash flows for the created/modified Security in Security Master Screen
	Amortization	To Insert the amortization entries for existing securities through Security Master Screen(Cashflow Tab)
	Refresh	To Refresh the Blotter manually
	Save	Save the Blotter output details

	Print	Print the blotter output details
	User Preferences	Preference creation and settings
	Exit	Exit the window
	Help	Open a help file
	Search	Search on key fields

1.5 Key Operational Features

Key features provide quick navigation techniques for faster access through the application for various purposes. Following are some of the key operational features -

1.5.1 Date Shortcuts

Intellect System supports wide range of date formats such as DD-MON-YY, DD-MM-YY, and DDMMYYYY etc

For example in Date field(s) in the application, user can input date(say June 1,2015) like

010615,
01-06-15,
01JUN15,
01-JUN-15.
01062015,
01-06-2015,
01JUN2015,
01-JUN-2015

Any of the above date formats is acceptable. User can also click on date field to open up the calendar and select the date.

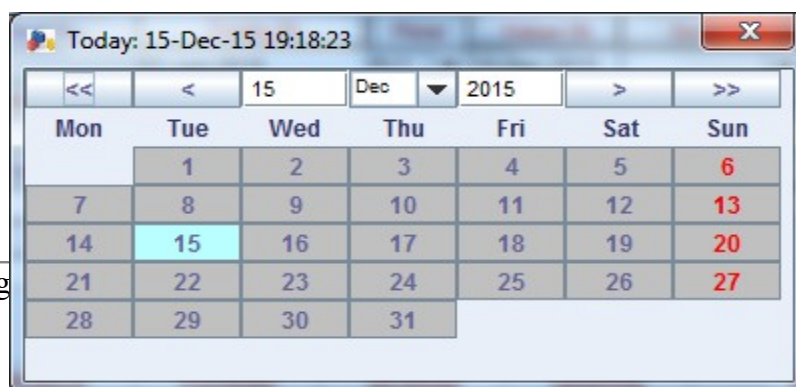


Figure 1-A: Date Selection

User can enter the required date with inputs like 1D / 1W / 1M / 2Y etc. where D stands for Day, W for Week, M for Month and Y for Year. The system arrives at the date by adding / subtracting such an input to / from some other reference date like for a) Value Date, it is with reference to Transaction Date, b) Maturity Date with respect to Value Date and so on and so forth.

1.5.2 Amount Shortcuts

Application supports shortcuts to enter the deal amount in quick time. Key shortcuts to enter the amount values are K,L,M,B and T. For Ex. 1K denotes 1000 in terms of amount.

Symbol	Description
K	K Stands for Thousand (1000)
L	L stands for Lakhs (100000)
M	M stands for Million (1000000)
B	B stands for Billion (10000000)
T	T stands for Trillion(1000000000)

1.5.3 Search Window

Dealer can select an input with the help of search windows provided for the fields counter-party and securities.

1.5.3.1 Counter Party Search

On clicking counter party label, the below screen will pop up -

User can click on Search —button to fetch all the counter parties available in the system or can make selective search by furnishing some part of information under fields like Cust Num / Short Name / Long Description etc.

Cust Num	Account Number	Base Code	Short Name	Long Description	Reuters Code	Global Alias	Country	Branch
83655	55558	ABU DHABI MU...	ABU DHABI COMM BK MU...		4006		Demo2 Bank...	I
83604	462	AFRICAN DEVE...	AFRICAN DEVELOPMENT ...		4006		Demo2 Bank...	I
83658	55561	ALLAHABAD BA...	ALLAHABAD BANK DELHI		4006		Demo2 Bank...	I
83657	55560	ALLAHABAD BA...	ALLAHABAD BANK KOLKA...		4006		Demo2 Bank...	I
83656	55559	ALLAHABAD BA...	ALLAHABAD BANK MUMBAI		4006		Demo2 Bank...	I
83599	877	AMANA BANK	AMANA BANK		4006		Demo2 Bank...	I
83661	55564	AMERICAN EXP...	AMERICAN EXPRESS CHE...		4006		Demo2 Bank...	I
83662	55565	AMERICAN EXP...	AMERICAN EXPRESS DELHI		4006		Demo2 Bank...	I
83660	55563	AMERICAN EXP...	AMERICAN EXPRESS KOL...		4006		Demo2 Bank...	I
83659	55562	AMERICAN EXP...	AMERICAN EXPRESS MU...		4006		Demo2 Bank...	I
83613	121	AMUNDI	AMUNDI		4006		Demo2 Bank...	I
83663	55566	ANDHRA BANK ...	ANDHRA BANK MUMBAI		4006		Demo2 Bank...	I
83664	55567	ARAB BANGLA ...	ARAB BANGLADESH BANK...		4006		Demo2 Bank...	I
83665	55568	AXIS BANK MU...	AXIS BANK MUMBAI		4006		Demo2 Bank...	I
83668	55571	BANK OF BARO...	BANK OF BARODA CHENNAI		4006		Demo2 Bank...	I
83667	55570	BANK OF BARO...	BANK OF BARODA MUMBAI		4006		Demo2 Bank...	I
83591	125	BANK OF CANA...	BANK OF CANADA		4006		Demo2 Bank...	I
83592	242	BANK OF CEYL...	BANK OF CEYLON LONDON		4006		Demo2 Bank...	I
83669	55572	BANK OF CEYL...	BANK OF CEYLON CHENNAI		4006		Demo2 Bank...	I
83623	741852	BANK OF CEYL...	BANK OF CEYLON, COLO...		SL		Demo2 Bank...	I
83588	123	BANK OF ENGL...	BANK OF ENGLAND		4006		Demo2 Bank...	I
83587	122	BANK OF JAPAN	BANK OF JAPAN		4006		Demo2 Bank...	I
83671	55574	BANK OF NOVA...	BANK OF NOVA SCOTIA M...		4006		Demo2 Bank...	I
83596	568	BARCLAYS BANK	BARCLAYS BANK		4006		Demo2 Bank...	I
83672	55575	BARCLAYS BA...	BARCLAYS BANK MUMBAI		4006		Demo2 Bank...	I
83634	121	BAUHL	BAUHL		4006		Demo2 Bank...	I
83612	123	BIS	BANK FOR INTERNATIONA...		4006		Demo2 Bank...	I
83615	234	BLACK ROCK A...	BLACK ROCK ADVISORS		4006		Demo2 Bank...	I

Figure 1-C: Counterparty Search Results Window

On pressing 'OK' on selection of a record, a counter party gets selected and populated back onto the main screen.

1.5.3.2 Security Search

By clicking on the 'Security' label on security master screen or deal capture screen, a new Security search window will open up. Dealer can select the required Security from the list of securities as shown in the below screenshot.

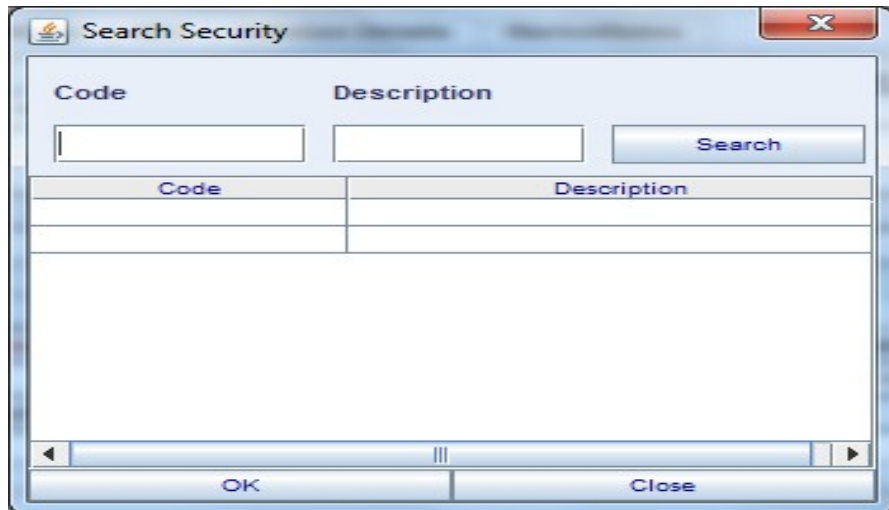


Figure 1-D: Search Security Window

Dealer/User can enter either security code or description and click on the Search Button. The listing shall happen as per the input provided. However, one can also click on the 'Search' button without entering any text under Code / Description, for system to list all the securities as per the below screenshot

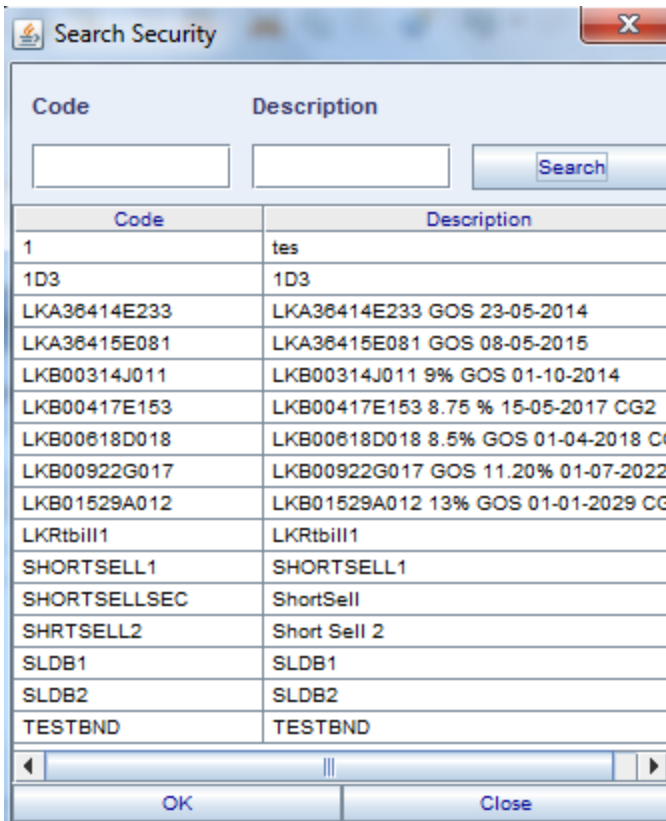


Figure 1-E: Search Security Window

1.6.1 Toolbar/Menu bar Management/Shortcuts

1.6.1.1 Operations under File

Key	Operation	Description
Ctrl-X	Exit	Exit/Close the Deal Capture Screen

1.6.1.2 Operations under Actions

Key	Operation	Description
Ctrl-V	Save	To Save the Deal
Ctrl-S	Save and Auth	To Save & Authorize the deal
Ctrl-D	Delete	To delete/cancel the deal
Ctrl-L	Clear	To clear the deal

Ctrl-A	Authorize	To Authorize the deal
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1.6.1.3 Operations under Help

Key	Operation	Description
Ctrl-F1	Help	Opens a help file
About FIS	FIS Description	Opens FIS Description

2.0 Deal Management Process

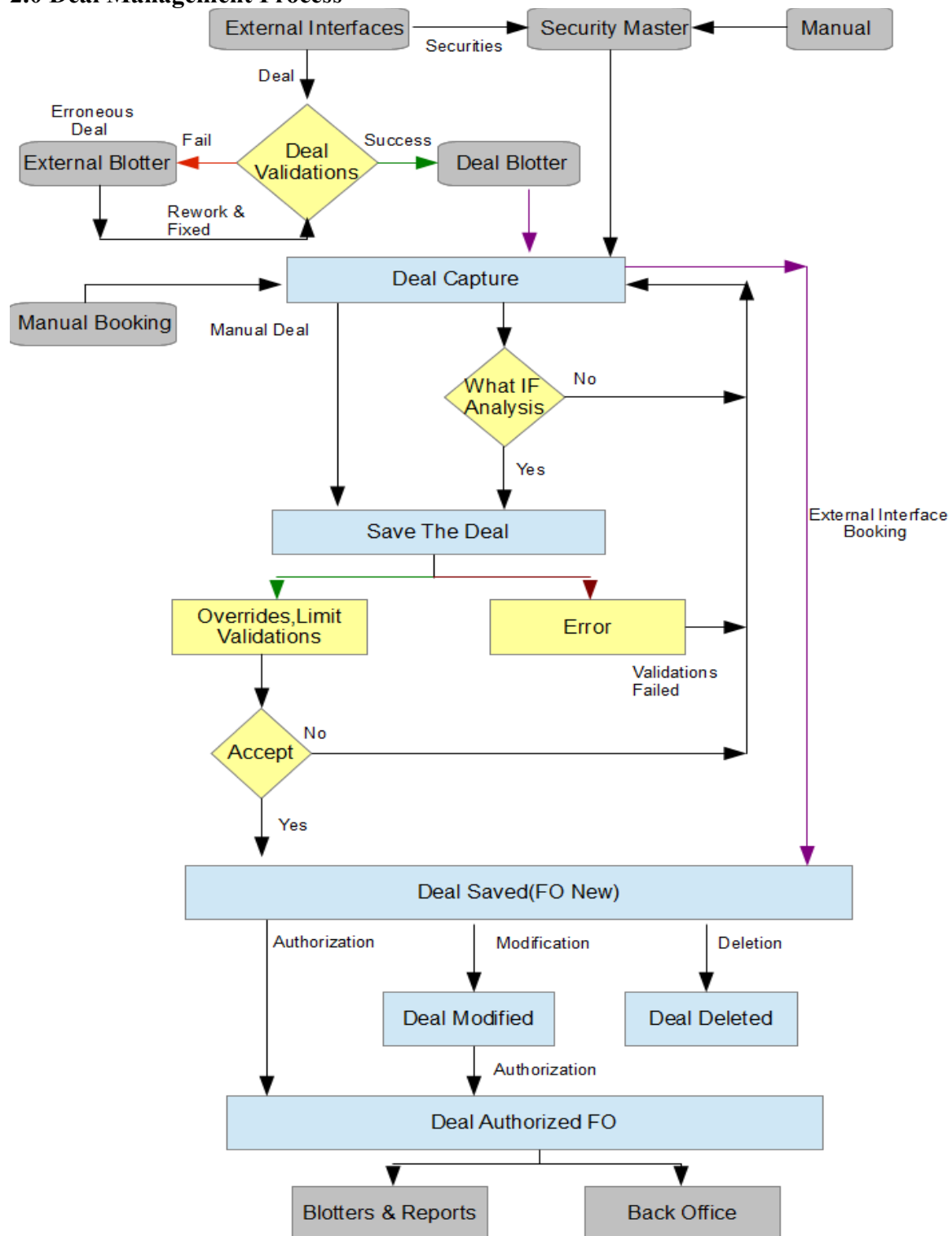


Figure2-A : FO Basic Deal Flow

2.1 Deal Capture

In Deal capture screen following are the options available:

- ▮ Outright Deal Capture
- ▮ Repo(Reverse Repo) Deal Capture
- ▮ Advance Repo Capture
- ▮ Internal Deal Capture

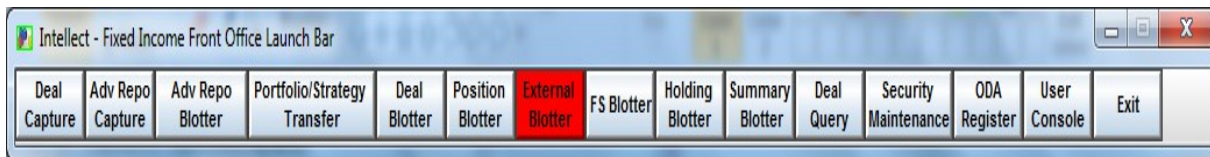


Figure 2-B-: Fixed Income Front Office Launch Bar

Figure 2-C- : FO Deal Capture Screen

2.1.1 Outright Deal Capture

Outright Deal Tab is used to book deals for both coupon-bearing and discounted debt securities. Mandatory Inputs for a deal booking are marked with Red Labels while the fields with blue labels are conditional mandatory and black ones are optional (similar color coding at field labels is applicable all across the application on any input screen).

To capture a new outright deal, dealer should specify the basic details. See below a Sample Screenshot for Outright Deal Capture Screen.

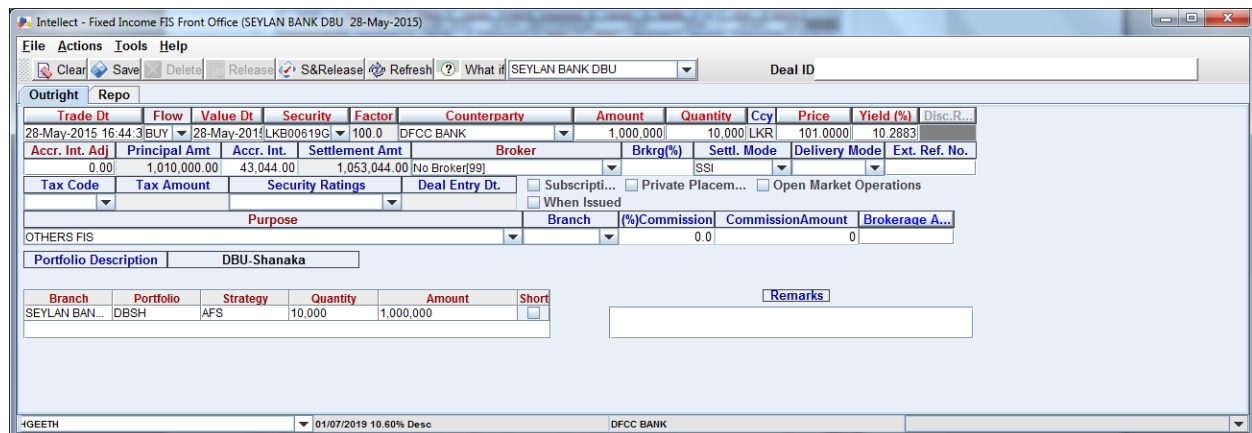


Figure 2-D: Outright Deal Booking

Mandatory Fields for a Deal capture are as follows:

Field	Description
Flow	-Flow denotes whether is the security is being bought or sold
Value date	This is the day on which actual payments or receipts of funds take place
Security	User can select the security code maintained through the security master
Counter-party	The other party with whom a deal is done

Quantity	Quantity to buy or sell, Amount will be auto calculated on input of quantity value and upon a click on Amount label
Amount	It is essentially system calculated value based on quantity input. Alternately, amount also can be an input based on which trading quantity shall be calculated by the system upon a Click on Quantity label .
Price	Deal Price for the security. If Price is entered, Yield is calculated. If Yield is entered, Price is calculated. <u>Market Price will be displayed as Default Price.</u>
Yield	Yield for the security. If Price is entered, Yield is calculated. If Yield is entered, Price is calculated
Disc Rate	This field enabled based on product selected i.e discounted instruments and values calculated by the system during price-yield conversion.
Settlement Adj Amount	User can enter an amount to adjust against the calculated settlement amount. In case of nil amounts, user has to input zero.
Dealer	Shows the dealer id of the User who enters a deal
Broker	User can select the broker through whom the deal is made. The drop down shows all brokers maintained in Broker Master Maintenance
Purpose	User can select the purpose from the drop down list, as maintained in the system, for which the deal is being made;
Branch	List down all the branches list, for multi branch option, user has to select one as applicable. For a single branch environment, the branch is auto-selected.
<u>Commission Amount</u>	<u>Based on the Commission % maintained and Yield Commission Amount is calculated</u>
<u>Settlement Mode</u>	<u>Based on Settlement Mode Settlement Account will get stamped in Cashflows tables. Different Settlement Modes can be setup in Settlement Maintenance.</u>

Conditional mandatory fields are as follows:

Field	Description
Accrued interest	The accrued interest to be paid to or received on a secondary market trade of a coupon bearing instrument for the break period since the last coupon paid date till the value date
Settlement Amount	Final Settlement amount upon considering Principal Amount, accrued interest and Settlement adjustment amount. It is a system output value.
Principal	Price * Quantity (output)

Amount	
Brokerage Amount	<u>Brokerage gets calculated based on the setup maintained and User can manually override enter the brokerage amount to be paid.</u>
Tax Code	Based on the code that is selected from the drop down list the corresponding accounting entries on tax charged on interest received or interest payment get generated

2.1.2 Repo/Reverse Repo Deal Booking

Repo/Reverse Repo Tab is used to book such deals against approved securities by regulators. To capture new Repo/Reverse deal, dealer should specify the basic details. Inputs for deal booking process include fields like Trade Dt, Flow, Value Dt L1, Security, Counterparty, Amount, Quantity, Tenor-Days, Leg1 Price, Margin(%), Rate(%), Dealer, Broker, Purpose along with BPS.

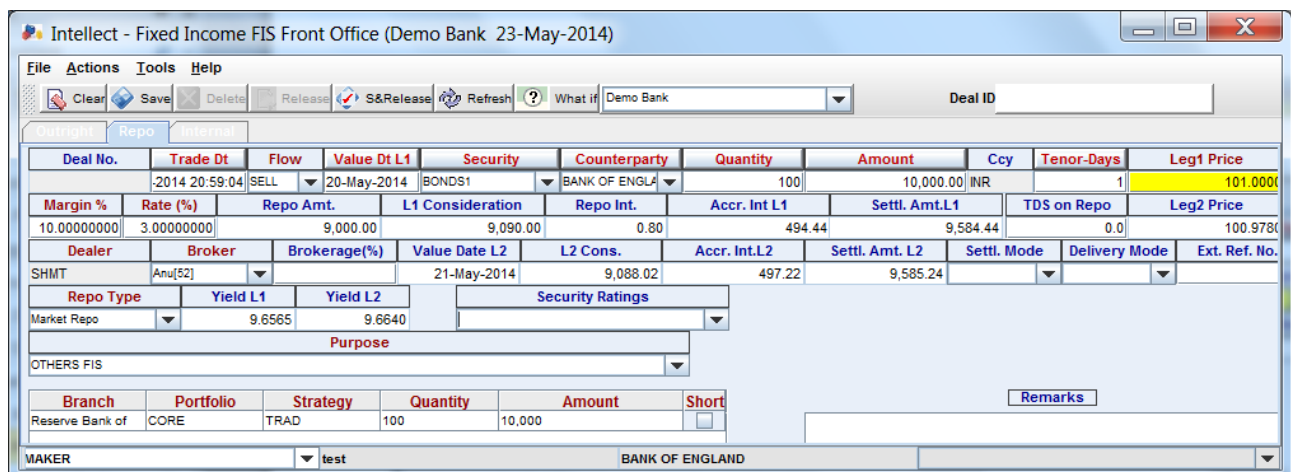


Figure 2-E: Repo/ Reverse Repo Deal

All the fields marked in Red are Mandatory fields for deal booking purpose and the one marked in blue are conditionally based on requirement (Optional fields).

Mandatory Fields for Deal Input shown below table:

Field	Description
-------	-------------

Trade date	By default system displays current application date
Flow	Flow denotes whether is the security is being bought or sold
Counter-party	Counterparty with whom deal is booked
Quantity	Quantity to buy or sell, Amount will be auto calculated by clicking on Amount label
Amount	Amount based on which quantity to be sold / bought. If Amount is an input, quantity can be calculated by system on 'Click' on quantity label.
Value date Leg1	Value date for Leg1,
Tenor-Days	This denotes Repo tenor. Value Date Leg 2 = Value Date Leg 1 + Tenor-Days
Leg1 price	User can enter the deal price if it is different than the populated Market value as maintained in the system.
Margin (%)	Margin to be applied on the Value of the underlying Security
Rate (%)	This denotes the Repo interest rate to be charged per annum
Dealer	Dealer who is booking the deal is displayed here
Broker	User can capture the broker through whom the deal is made. The drop down shows all brokers maintained in Broker Master Maintenance
Repo Type	It allows the user to mark the relevant Repo Type for the deal from a dropdown list maintained. For More Information refer to the Section

Conditionally mandatory fields shown are as follows in below table:

Field	Description
Repo Amount	The amount received after deducting the margin from the Face Value is referred to as Repo Face Value
L1 Consideration	$(\text{Price} * \text{Quantity}) / (1 + \text{Margin} \%)$
Repo Interest	Repo interest is calculated on the first leg consideration amount for the repo tenor at Repo rate
Accrued interest Leg1	The accrued interest till value date Leg1 to be paid to or received from counter-party is computed automatically
Settlement Amount Leg 1	This is sum of Leg1 Consideration and Accrued Interest Leg1. Settlement amount Leg1 = Leg1 Consideration + Accrued Interest Leg1
Leg2 Price	In case of BSB(Buy and Sell Back), SBB(Sell & Buy Back) deals, there is no Repo Interest. Instead the Leg2 Price is entered

Brokerage	User can enter the brokerage as % of Settlement Amount
Value date L2	Value Date Leg 2 = Value Date Leg 1 + Tenor-Days
Leg2 Consideration	Second leg consideration amount will be equal to the first leg consideration amount plus the Repo interest amount or multiplication of Leg2 Price & quantity in case of SBB & BSB deals.
Accrued Interest L2	The accrued interest till value date Leg2 to be paid to or received from counter-party is computed automatically
Settlement Amount Leg 2	This is sum of Leg2 Consideration and Accrued Interest Leg2 Settlement amount Leg2= Leg2 Consideration + Accrued Interest Leg2 – TDS
Settlement Mode	User can select from the drop down the mode the way the settlement should take place
Yield L1	Yield for Leg 1 is computed and displayed
Yield L2	Yield for Leg 2 is computed and displayed
Settlement Mode	Based on Settlement Mode Settlement Account will get stamped in Cashflows tables. Different Settlement Modes can be setup in Settlement Maintenance.

2.1.3 Advance Repo Deal Booking

Advance Repo capture screen is used to book deals by selecting multiple securities. The Securities are added to the deal with the help of grids provided at the bottom of the screen. User can add or remove/delete the selected securities. The grid provides the basic information related to Securities selected.

Below is the screenshot of a deal capture in FO.

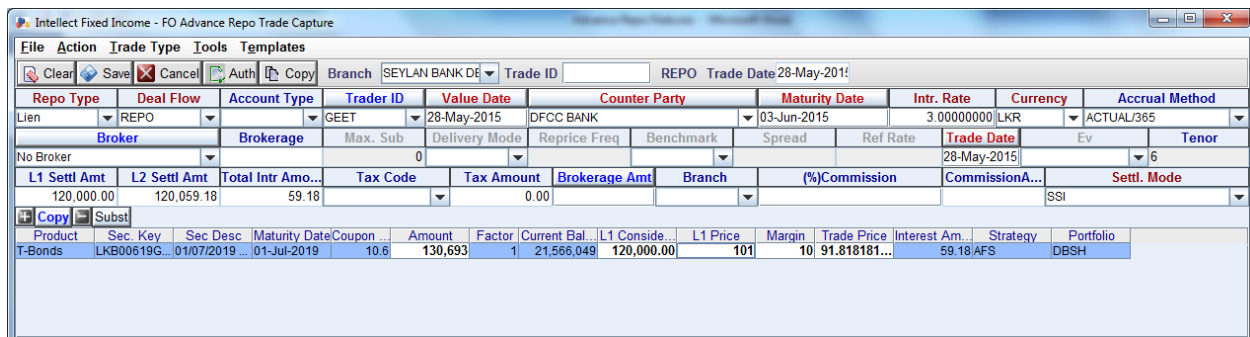


Figure 2-F: Advance Repo Capture Screen

Mandatory Fields for Deal Input shown in below table:

Field	Description
Repo Type Deal Type	User can book two types of deals “Assured Liquidity Support (ALS)” or “ Market Repo ” (maintained as dropdown) and Lien .
Deal Flow Sub-Trans	Repo or Reverse Repo. By default system displays Repo
Value Date	This is the day on which actual payment or receipt of fund takes place, this date can be greater than or equal to trade date
Trade Date	By default system displays current application date
Maturity date	This is leg-2 Value date which will be greater than Value date.

Conditionally mandatory fields shown in below table:

Field	Description
Trader ID	Trader ID refers to the User or Dealer ID.
Accrual Method	User can select the accrual method that the deal is made. Refer to the Section 5.1 for More Information.
Brokerage	Brokerage Amount, calculated based on the Brokerage rate setup is displayed
L1 Settl Amt	L1 Settlement Amount is the sum of Leg1 Consideration Amount of all the securities attached for the deal
L2 Settl Amt	L2 Settlement Amount will be equal to the L1 Settlement amount plus the Total Interest Amount
Total Intr Amount	Sum of Interest Amount on each security
Tax Code	Based on the code that is selected from the drop down list, the corresponding accounting entries on tax charged on interest received or interest payment gets generated, if applicable.
Tax Amount	Based on the Tax Code Selected, Tax amount will be calculated.
Commission %	Commission Percentage as setup for the deal parameters is displayed here
Commission Amount	Based on the Commission % maintained and Yield Commission Amount is calculated
Account Type	Account type can be CRE,CRP which can be selected and based on it Handoff will be generated for FIS trades.
Settlement Mode	Based on Settlement Mode Settlement Account will get stamped in Cashflows tables. Different Settlement Modes can be setup in Settlement Maintenance.

Below are the GRID fields defined for the multiple security attachments in Advance Repo Deal:

Field	Description
Product	Drop-down which lists all the products (like T-Bills, T-Bonds, etc.) eligible for Deal type and Sub trans combination.
Security Key	Displays the ISIN of the selected Security.
L1 price	Price to trade one unit (Quantity) of a security. <u>This is Market Price which is maintained in Security master Market rates Tab.</u>
Margin	Margin to be applied on the Face Value of the underlying Security. It is a user input field and is recorded in percentage terms
Trade Price	Is automatically calculated as $\frac{(1 - \text{Margin}) * \text{L1 Price}}{(1 + \text{Margin})}$
Interest Amount	Repo interest is calculated on the first leg consideration amount for the repo period, Interest rate and Accrual Method
Strategy	User can select from multiple strategies configured in the system

2.1.4 Key Input validations

System validates the deal based on the deal inputs given by dealer/user. So it does the basic field validations which are filled during deal booking.

- ⌘ User has to input all the mandatory fields listed in above sections else error will be thrown at the deal saving.
- ⌘ The Deal should be booked on Proper BPS combination which is defined through BPS maintenance setup screen.
- ⌘ Fields should be entered with proper data in acceptable format.

2.1.2 Deal Actions

2.1.2.1 Steps for Booking Outright Deals

1. Select the outright deal panel from the deal capture screen from fixed income launch bar.
2. Choose the Flow either to Buy or Sell.
3. Value Date will be defaulted with spot date.
4. Select the security from the security field.

5. Choose the customer from the counter party field.
6. Enter the amount or quantity of the selected security in amount or quantity field respectively.
7. Enter the values for Price or Yield field. System calculates yield to price and vice-e-verse.
8. Click on Price or Yield label to calculate the principal amount, accrual interest and settlement amount for the deal.
9. Choose the broker from the broker field.
10. Click on the purpose field. Choose the purpose from the available list shown in drop down.
11. Click on the branch field. Choose the branch from the dropdown. Generally this branch field is populated automatically based on branch linked to the logged in Dealer.
12. Click on the portfolio field. Choose the portfolios available from the drop down list.
13. Click on the strategy field. Choose the strategies available from the drop down list.
14. Click on **S&Auth** button to authorize the deal from Front office.
15. There will be a pop-up screen showing the Error/Overrides messages.
16. Click on accept all button to accept the overrides or In case of Error, dealer has to correct the data and re-enter.
17. Deal number would be generated and can be seen in the user console.

There are also check boxes available on the screen - User can select any of the options i.e., Subscription or When Issued or Private Placement or Open Market Operations as applicable while booking a deal.

2.1.2.2 Booking Repo/Reverse Repo Deals

1. Select the Repo deal Tab from Deal capture Screen.
- 2. Repeat the steps 2,3,4,5 mentioned for booking outright deal(s)

3. Enter the Number of days for the deal in Tenor Days field.
4. Enter the Leg 1 Price for the deal.
5. Click on the margin% field. Enter the Margin % for the deal.
6. Enter the Rate % for the deal in Rate field.
7. Select the broker from the broker field.
8. Select the Repo Type which is applicable for the deal from the available list.
9. To calculate Repo Amount, Leg1 consideration, Repo Interest and Settlement amount for Leg1 and Leg 2, Click on the tenor Days label. System will automatically calculate other field values.
10. Follow steps mentioned in steps 10-17 from outright deal booking method.

2.1.2.3 Steps to Book Advance Repo Deal

1. Click on the Advance Repo Capture button on the Fixed Income Launch Bar.
2. Choose the Deal type to book deal.
3. Choose the Sub Trans values to book repo or reverse repo deal from the available dropdown list.
4. Select the Trader ID from trader ID field or traders can be searched from trader ID search window.
5. Choose the Customer from the counterparty field.
6. Enter the rate for the underlying deal from interest rate fields.
7. Select the currency from currency field.
8. Choose the Accrual Method Field.
9. Select the broker for the deal.
10. Enter the trade date for the deal.
11. -Choose the portfolios available from the portfolios field.
12. Select the securities from the grid down structure. Select the security with ISIN Number.

13. -The details of selected security populated in the grid structure.
14. -Enter the Amount of the Security.
15. Based on amount entered, current balance and factor field will be populated automatically.
16. Enter the Leg1 Price of the security. Focus automatically shifts to margin and Trade price field.
17. Click on Trade Price, Margin field. Enter the respective values.
18. Based on the values provided, System calculates the L1 consideration and repo interest amount automatically.
19. Click on + Button to add more the securities in the deal.
20. Follow the steps 14 -17 from outright deal booking method.

2.1.2.4 Saving and Authorizing a Deal

Dealer can save the deal by pressing '**Save**' icon or by clicking on **Menu-->Action --> Save** option.

The screenshot shows the Intellect - Fixed Income FIS Front Office interface. The title bar indicates 'Demo Bank 23-May-2014'. The 'Actions' menu is open, showing the 'Save' option (Ctrl-V). The main window displays a deal with ID SEC1414300268. The deal details are as follows:

Dt	Flow	Value Dt	Security	Factor	Counterparty	Amount	Quantity	Ccy	Price	Yield (%)	Disc.Rate
014	BUY	20-May-2014	AU3CB0142255	100	BANK OF ENGLAND	10,000	100	INR	102.0000000	3.0182529	

Below the grid, there are fields for 'Principal Amt' (10,200.00), 'Accr. Int.' (144.93), 'Settlement Amt' (10,344.93), 'Dealer' (SHMT), 'Broker' (Anu[52]), 'Brokerage(...)' (0.0), 'Settl. Mode', 'Delivery Mode', and 'Ext. Ref. No.'. There are also checkboxes for 'Subscription', 'Private Placement', and 'Open Market Operations'. The 'Purpose' field is set to 'OTHERS FIS'. At the bottom, there is a table with columns 'Branch', 'Portfolio', 'Strategy', 'Quantity', 'Amount', and 'Short'.

Branch	Portfolio	Strategy	Quantity	Amount	Short
Reserve Bank of	CORE	AFS	100	10,000	

The status bar at the bottom shows 'MAKER' (test), 'BANK OF ENGLAND', 'Status: FO_AUTHORIZED', and 'Ver: 1'.

Figure 2-G: Saving of a Deal

Once the deal is saved, the deal can be authorized by clicking on the '**S&Auth**' icon or by going through the **Menu -> Actions -> Save&Auth**.

Intellect - Fixed Income FIS Front Office (Demo Bank 23-May-2014)

Deal ID: SEC1414300268

Dt	Flow	Value Dt	Security	Factor	Counterparty	Amount	Quantity	Ccy	Price	Yield (%)	Disc.Rate
014	BUY	20-May-2014	AU3CB01422551	100	BANK OF ENGLAND	10,000	100	INR	102.0000000	3.0182529	

Settl. Amt	Principal Amt	Accr. Int.	Settlement Amt	Dealer	Broker	Brokerage(...)	Settl. Mode	Delivery Mode	Ext. Ref. No.
0	10,200.00	144.93	10,344.93	SHMT	Anu[52]	0.0			

Tax Code: Tax Amount: Security Ratings:

Purpose: OTHERS FIS

Subscription: ☐ Private Placement: ☐ Open Market Operations: ☐ When Issued: ☐

Branch	Portfolio	Strategy	Quantity	Amount	Short	Remarks
Reserve Bank of	CORE	AFS	100	10,000	<input type="checkbox"/>	

MAKER: test BANK OF ENGLAND Status: FO_AUTHORIZED Ver: 1

Figure 2-H: Authorizing of a Deal

Once the deal is authorized in Front Office, it is available in Back Office for further processing.

2.1.2.5 Deal Modification

Dealer can modify the deal till it is not settled in Back Office.

User can retrieve the deal by using key shortcuts or from deal blotter. Once the deal values are modified, the deal can be saved through ‘Save’ option. Deal status will change from FO_AUTH to FO_MODIFIED

2.1.2.6 Deal Deletion / Cancellation

Select the deal from the Deal Blotter by double clicking it. The selected deal will get populated in the Deal Capture window and now click on the Delete Button. Else click on menu Actions -> Delete. A confirmation message will appear, to confirm whether you want to delete the deal. After confirmation, the deal will get deleted / cancelled or reversed based on the existing deal status as follows :

Deal Status	Action Performed	Revised Status
FONEW(Entered & Not Authorized)	Deletion	Deal is completely deleted from the system.
FOAUTH(BOSENDERBACK) (This Action can be performed only if the deal is sent back by BO)	Deletion	Deal is completely deleted from the system.
BO AUTH	Cancellation/reversal	Deal would be completely reversed authorized.

Once the deal is deleted, system cannot restore the deal and User has to manually book the deal again.

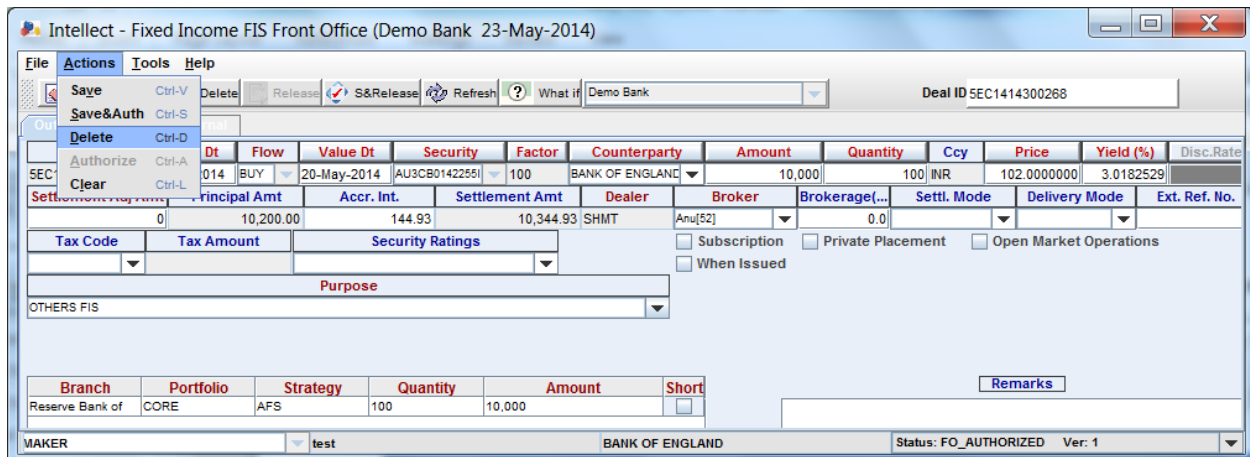


Figure 2-I: Deal Deletion Screen

2.1.2.7 Internal Deal

Internal Deal is purely for the bank's internal purpose, For example it could be used if the bank wants to change the dealer on whose name the deal has been booked or if the bank wants to change the portfolio details of the deal that has been booked. Accounting entries will not be created or generated while doing these changes as these will not reflect any change in holdings of the securities.

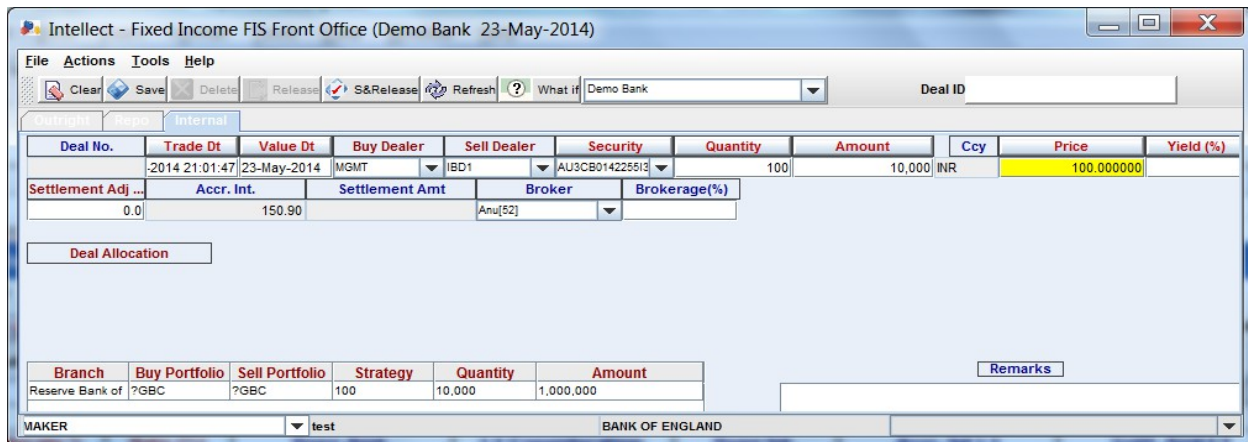


Figure 2-J: Internal Deal Capture Screen

2.1.2.8 Limit Workflow Authorization QUEUE:

New deal is booked with overrides and Fo Save is done. For Fo Auth the deal must first be approved through Workflow Blotter.
Deal appears in Pending for Auth queue from where it is approved by right click.
Deal appears in Pending for Auth queue from where it is approved by right click.

Workflow Blotter - Intellect Foreign Exchange Front Office

Profile: All Desk: [ALL] Branch: [ALL] Portfolio: [ALL] CCY: [GBP, EUR, USD, INR, ...]

MM_FRONTOFFICE
MM Pending Auth Queue(115)
MM Authorized Queue(56)
FI_FRONTOFFICE
FIS Pending Auth Queue(352)
FIS Authorized Queue(79)
SWIFT_Queues
UnProcessedQueue(0)
ProcessedQueue(0)
FailureQueue(0)
RTGS Queue(0)
Swift Queue(0)
Delivered Queue(0)
FX_FRONTOFFICE
Over Limit Queue(321)
FX Authorized Queue(26)
FX Rejected Queue(0)
My Deals

Over Limit Queue(321)

Sta...	WID	Ref Num	Module	Product	Customer	Ccy Bought	Amount Bought	Ccy Sold
	1EC1514803681L1	1 1EC15148036...	1 FX	SWAP	DFCC BANK	USD	10,000	GBP
	1EC1514803657L1	1 1EC15148036...	1 FX	SWAP	ALBILAD BANK...	GBP	2,000,000	EUR
	1EC1514803498	1 1EC15148034...	1 FX	SPOT	DFCC BANK	EUR	500,000	GBP
	1EC1514803497	1 1EC15148034...	1 FX	SPOT	DFCC BANK	GBP	1,000,000	EUR
	1EC1514803496	1 1EC15148034...	1 FX	SPOT	DFCC BANK	USD	1,000,000	GBP
	1EC1514803492	1 1EC15148034...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	GBP
	1EC1514803432	1 1EC15148034...	1 FX	SPOT	CENTRAL BAN...	USD	1,000,000	LKR
	1EC1514803395	1 1EC15148033...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	GBP
	1EC1514803394	1 1EC15148033...	1 FX	SPOT	DFCC BANK	USD	1,000	GBP
	1EC1514803285	1 1EC15148032...	1 FX	CASH	DFCC BANK	LKR	2,820,900,000	USD
	1EC1514803283	1 1EC15148032...	1 FX	FORW...	DFCC BANK	EUR	20,000,000	GBP
	1EC1514803279	1 1EC15148032...	1 FX	FORW...	BARCLAYS LO...	GBP	1,000	AUD
	1EC1514803271	1 1EC15148032...	1 FX	SPOT	BARCLAYS LO...	JPY	20,000,000	AUD
	1EC1514803270	1 1EC15148032...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	LKR
	1EC1514803269	1 1EC15148032...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	LKR
	1EC1514803268	1 1EC15148032...	1 FX	SPOT	BARCLAYS LO...	AUD	2,169,596.61	GBP
	1EC1514803264	1 1EC15148032...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	GBP

After approval the deal moves to Authorized queue and we are able to authorize the deal:

Workflow Blotter - Intellect Foreign Exchange Front Office

Profile: All Desk: [ALL] Branch: [ALL] Portfolio: [ALL] CCY: [GBP, EUR, USD, INR, ...]

MM_FRONTOFFICE
MM Pending Auth Queue(115)
MM Authorized Queue(56)
FI_FRONTOFFICE
FIS Pending Auth Queue(352)
FIS Authorized Queue(79)
SWIFT_Queues
UnProcessedQueue(0)
ProcessedQueue(0)
FailureQueue(0)
RTGS Queue(0)
Swift Queue(0)
Delivered Queue(0)
FX_FRONTOFFICE
Over Limit Queue(321)
FX Authorized Queue(26)
FX Rejected Queue(0)
My Deals

FX Authorized Queue(26)

Sta...	WID	Ref Num	Module	Product	Customer	Ccy Bought	Amount Bought	Ccy Sold
	1EC1514803646L1	1 1EC15148036...	1 FX	SWAP	ALBILAD BANK...	GBP	1,000,000	EUR
	1EC1514803441	1 1EC15148034...	1 FX	FORW...	ALBILAD BANK...	USD	1,000,000	LKR
	1EC1514803369	1 1EC15148033...	1 FX	SPOT	BARCLAYS LO...	USD	25,000,000	AUD
	1EC1514803337	1 1EC15148033...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	GBP
	1EC1514803287L1	1 1EC15148032...	1 FX	SWAP	ALBILAD BANK...	USD	1,000	LKR
	1EC1514803286	1 1EC15148032...	1 FX	CASH	ALBILAD BANK...	USD	1	LKR
	1EC1514803284	1 1EC15148032...	1 FX	CASH	DFCC BANK	USD	1,000,000	LKR
	1EC1514803282	1 1EC15148032...	1 FX	FORW...	DFCC BANK	GBP	1,000,000	USD
	1EC1514803272	1 1EC15148032...	1 FX	SPOT	BARCLAYS LO...	USD	1,000,000	LKR
	1EC1514803263	1 1EC15148032...	1 FX	SPOT	BARCLAYS LO...	GBP	1,000,000	AUD
	1EC1514803223L1	1 1EC15148032...	1 FX	SWAP	DFCC BANK	USD	10,000	GBP
	1EC1514803222	1 1EC15148032...	1 FX	SPOT	CENTRAL BAN...	USD	10,000	GBP
	1EC1514803040	1 1EC15148030...	1 FX	SPOT	CENTRAL BAN...	USD	10,000	LKR
	1EC1514803023	1 1EC15148030...	1 FX	SPOT	CENTRAL BAN...	USD	1,000	LKR
	1EC1514802831	1 1EC15148028...	1 FX	SPOT	DFCC BANK	USD	1,000	GBP
	1EC1514802791	1 1EC15148027...	1 FX	SPOT	ALBILAD BANK...	EUR	5,000,000	USD
	1EC1514802790	1 1EC15148027...	1 FX	SPOT	ALBILAD BANK...	EUR	5,000,000	GBP

2.1.3 Usability Features

2.1.3.1 Pre Trade Analytics

2.1.3.1.1 What-if Analysis

What- IF is used to see the effect of booking an intended deal without actually booking it in the

system.

Once the user inputs all the data in Deal capture screen and clicks on 'What-If' button, all the resultant Errors/Overrides in terms of applicable limit breaches will be displayed. It further indicates if any of the mandatory fields does not have a value.

It further carries out 'common checks' like value date validity / non-maintenance of certain applicable limits etc. The limits which would get breached due to the deal would be highlighted in red color while 'green' would suggest it to be within limit.

2.1.3.1.1 Steps for What-If

- I. Click on the Deal Capture screen on the launch bar.
- II. Input of deal details and before saving
- III. Click on the What-If button on the Deal Capture

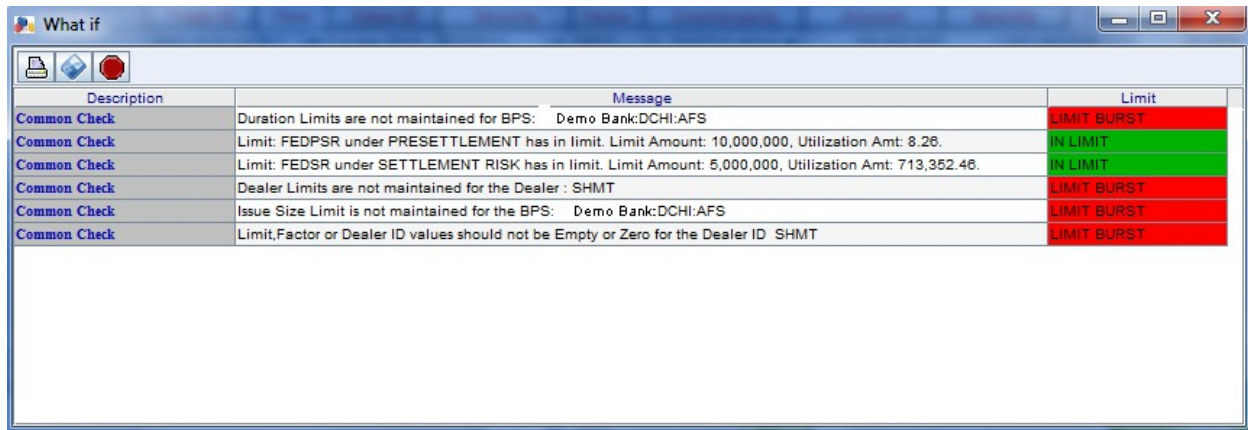
The screenshot shows the Intellect Fixed Income FIS Front Office interface. The title bar indicates 'Intellect - Fixed Income FIS Front Office (Demo Bank 23-May-2014)'. The menu bar includes 'File', 'Actions', 'Tools', and 'Help'. The toolbar contains buttons for 'Clear', 'Save', 'Delete', 'Release', 'S&Release', 'Refresh', and a 'What if' button which is circled in red. To the right of the 'What if' button is a dropdown menu currently showing 'Demo Bank' and a 'Deal ID' input field. Below the toolbar, there are tabs for 'Outright', 'Repo', and 'Internal'. The main area displays a deal summary table with columns: Deal No., Trade Dt, Flow, Value Dt, Security, Factor, Counterparty, Amount, Quantity, Ccy, Price, Yield (%), and Disc. Rate. The data row shows: 23-May-2014, BUY, 20-May-2014, BONDS1, 100.0, BANK OF ENGLAND, 10,000, 100, INR, 101.0000, 9.6565. Below this is a table for 'Settlement Adj Amt', 'Principal Amt', 'Accr. Int.', 'Settlement Amt', 'Dealer', 'Broker', 'Brokerage...', 'Settl. Mode', 'Delivery Mode', and 'Ext. Ref. No.'. The 'Settlement Amt' is 10,594.44 and the 'Dealer' is SHMT. There are also checkboxes for 'Subscription', 'Private Placement', 'Open Market Operations', and 'When Issued'. A 'Purpose' dropdown is set to 'OTHERS FIS'. At the bottom, there is a table with columns: Branch, Portfolio, Strategy, Quantity, Amount, and Short. The data row shows: Reserve Bank of, CORE, TRAD, 100, 10,000. The 'Short' checkbox is checked. The 'Remarks' field is empty. The bottom status bar shows 'MAKER' as 'test' and 'BANK OF ENGLAND'.

Figure 2-K: What-If in Deal Capture

Below what-if screen shows output based on

- a) deal data and various limits applicable for a deal and
- b) non-input of any mandatory field data to book a deal -

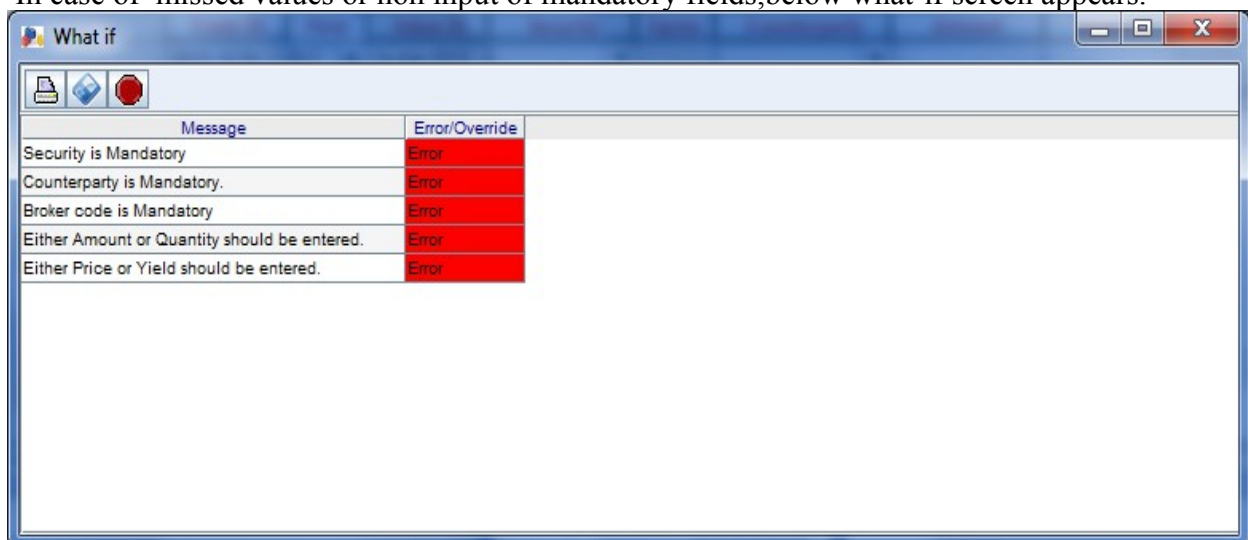
In case of limit breach for any deal, below what-if screen shows which limit is breached and its description.



Description	Message	Limit
Common Check	Duration Limits are not maintained for BPS: Demo Bank:DCHI:AFS	LIMIT BURST
Common Check	Limit: FEDPSR under PRESETTLEMENT has in limit. Limit Amount: 10,000,000, Utilization Amt: 8.26.	IN LIMIT
Common Check	Limit: FEDSR under SETTLEMENT RISK has in limit. Limit Amount: 5,000,000, Utilization Amt: 713,352.46.	IN LIMIT
Common Check	Dealer Limits are not maintained for the Dealer : SHMT	LIMIT BURST
Common Check	Issue Size Limit is not maintained for the BPS: Demo Bank:DCHI:AFS	LIMIT BURST
Common Check	Limit,Factor or Dealer ID values should not be Empty or Zero for the Dealer ID SHMT	LIMIT BURST

Figure 2-K(a): What-if Screen with limit Checks

In case of missed values or non input of mandatory fields,below what-if screen appears.



Message	Error/Override
Security is Mandatory	Error
Counterparty is Mandatory.	Error
Broker code is Mandatory	Error
Either Amount or Quantity should be entered.	Error
Either Price or Yield should be entered.	Error

Figure2-K(b): What-if Mandatory Field Checks

2.1.3.1.2 Overrides & Error Window

During the time of saving and authorizing a deal, the system would verify –

- ▮ if the particular deal is going to breach any of the applicable limits defined in the system.
- ▮ any applicable limit is not maintained for the concerned dealer or BPS etc.

If such violations are set as Overrides (i.e. which can be overruled to go forward), the following message pop-up would open up. On accepting such overrides (as per applicable business rule), the user can move forward to book a deal.

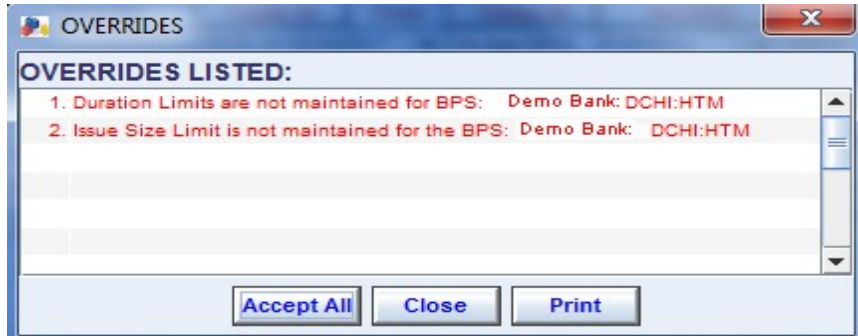


Figure 2-M: Override Window

If the above exceptions are defined as 'Errors', the following pop-up would open up restricting the user from going forward. The user can go back, change the deal values suitably if one wants to book the deal as per the limits set.

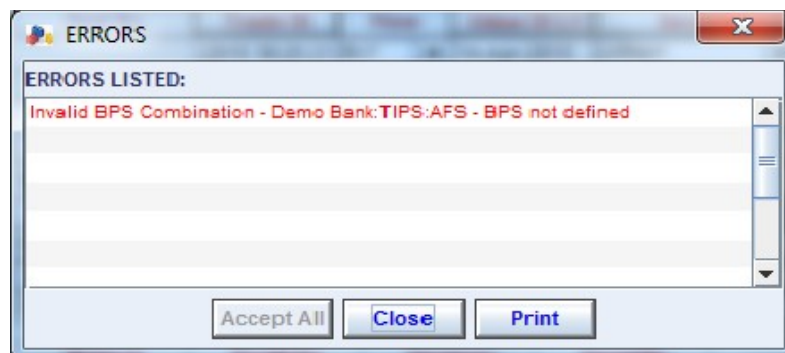


Figure 2-N: Error Window

2.1.3.1.3 Limits Monitoring & Regulatory checks

Limit monitoring consists of Limit definition, online limit checking, update utilization and risk authorization. Using limit definition maintenance setup (*Refer Setup Document for more information*), different limits are maintained in the system.

System performs online Limit checks on following transactions -

- ▮ New Deal Entry
- ▮ Deal Modification
- ▮ Deal Deletion
- ▮ Deal Reversals
- ▮ Deal Amendments
- ▮ Put/Call Exercise

Limit Monitoring involves following checks/steps:

1) Calculation of Applicable limit amount. This step depends on following factors

- ▮ Limit defined is Daylight or Overnight.
- ▮ Limit type defined(ex.PSR,SR etc)
- ▮ Effective & Expiry date
- ▮ Flow of the deal that is Buy or Sell(Inflow, Outflow, Net, Gross)

2) Risk Utilisation computations. This step depends on following factors

1. Limit Type(Pre-settlement, Trading etc)
2. Entities defined in Limit definition(dealer, security etc)
3. Flow of the deal that is Buy or Sell(Inflow, Outflow, Net, Gross)

Based on the limit amount and the computed risk utilization, limit Checking would be done in the system.

Following are some of the applicable limits and their associated functionality for FIS Asset class:

2.1.3.1.3.1 Trade Limits

Trading limits are checked / monitored online during deal booking process defined in limit definitions. As per definition, system checks entities defined for trading like Security, dealer etc. If the entity combination defined in limit matches with deal details then trading limits will be checked. Based on limit definition details, system computes the total exposure including present deal. This is compared against the Limit amount to prompt for override/error/warning.

Trading limit is checked for combinations of following entities

- ☐ Dealer
- ☐ BPS
- ☐ Security
- ☐ Product
- ☐ Issuer
- ☐ Broker
- ☐ Counter-party
- ☐ Security currency
- ☐ Issuer country

On settlement of a Deal the Trading limits where Dealer is an entity in the limit definition are reset by the Deal amount.

2.1.3.1.3.2 Pre-Settlement Risk (PSR)

Pre-Settlement is computed by the System during Deal Entry (Including all the events that modify the deal.) before Settlement. System identifies all the applicable PSR limits based on the other criteria in Limit definition.

For example if PSR is defined for a particular counterparty, then system checks if the Deal's counterparty matches with the definition before applying the check.

For all the applicable PSR Limits, the calculated PSR is saved along with deal details.

Based on the PSR Limit details, system aggregates the deals and computes the total PSR which is checked against the Limit amount maintained at the Limit Definition. If the PSR exceeds the Limit amount user gets an override/warning/error with the information about the excess, and the PSR computed.

System updates the PSR utilization if no errors are generated or override is accepted.

Although in PSR maintenance screen tenor is mandatory, while doing calculations tenor part is not considered.

2.1.3.1.3.3 Issuer Limits

Issuer limit is required for FIS products. Issuer limits are checked for net(Buy -(sell or matured or cancelled) for all the deal booked into the system across all products issued by one issuer.

2.1.3.1.3.4 Issuer Group Limit

The limits are similar to Issuer limits. In Issuers group limits, Issuers are grouped to form one issuer group. Issuer limits are checked for net(Buy -(sell or matured or cancelled) for all the deal booked into the system across all products for one issuer group.

2.1.3.1.3.5 Issuer Concentration Limit

Issuer concentration tracks the investment percentage done by the bank out of the total market value of bonds issued.

Issue Concentration limit is applicable to only FI securities and is maintained at BPS level. Limit maintained at BPS level is applicable to all securities in that BPS.

The limit defined is in terms of percentage of the issue size of the security. On any of the above events, the percentage of security holding with respect to the issue size is compared with the percentage allowed. If the percent holding is greater than the set percentage, there is a breach.

2.1.3.1.3.6 Duration Limit

Duration limit is set on a BPS level to restrict the exposure to interest rate risk.

It is applicable only to FIS module and calculates the weighted average duration at BPS level and Also compares it against the set limit.

2.1.3.1.3.7 Portfolio(BPS) Limit

Portfolio limit is set on BPS level and its applicable to all FIS products like government securities, T-Bills, CP's etc. Limits are maintained across instruments for the BPS available in the system

2.1.3.1.3.8 Dealer Deal size Limits

Minimum and maximum deal size limits are set for a dealer. If the dealer books a deal for an amount below the minimum deal size limit or above the maximum deal size limit, the limit bursts.

Minimum and maximum deal size limit is also set at a module level. Limit is checked on deal booking and deal modification. What if shows in limit if the deal amount is within the range and limit burst if the deal amount is less than or greater than the minimum and maximum limits set respectively. If the limit is burst, the system shows an override / error to the user.

2.1.3.1.3. 9 Cut Loss/Take Profit Limit

Cut Loss/Take Profit Limit are based on dealer hierarchies.

While selling a security, WAP for that security BPS is checked against the sale price. Such stop loss and take profit margins are maintained in defined hierarchies.

When booking a sale deal, if cut loss and take profit is exceeding for the Dealer, then system considers next dealer in the hierarchies. This is to check the approving hierarchy for the sale deal for given loss / profit limit. If none of the cut lose/take profit limits for maintained hierarchies is sufficient for the sale deal, then the deal will not be booked under an error condition. If it is found to be within limits under any of the hierarchies, the deal can be put through as an override.

2.1.3.1.3. 10 Business Checks

Business checks are performed in the system in respect of back valued date check, transaction or value date falling on holidays.

2.1.3.2 Deal Compare

This option is used to compare the deal with its previous version(s). This feature helps in identifying the deal modification history acting as audit log along the deal lifecycle. See below sample screenshot for a deal comparison -

Deal Compare Ref. No: 3EB1510401126				
	Version - 2	Version - 2	Version - 1	Version - 1
Deal No	3EB1510401126	3EB1510401126	3EB1510401126	3EB1510401126
Deal Date	22-May-2015	22-May-2015	22-May-2015	22-May-2015
Dealer Id	5460	5460	5460	5460
Branch Name	ASHU	ASHU	ASHU	ASHU
Securtiy Code	SLDB2	SLDB2	SLDB2	SLDB2
Deal Flow	BUY	BUY	BUY	BUY
Deal Type	REPO	REPO	REPO	REPO
Customer Name	BANK OF JAPAN	BANK OF JAPAN	BANK OF JAPAN	BANK OF JAPAN
Portfolio Code	DCHI	DCHI	DCHI	DCHI
Deal Quantity	10000	10000	10000	10000
Deal Face Value	1000000	1000000	1000000	1000000
Trade Date	14-Apr-2015	14-Apr-2015	14-Apr-2015	14-Apr-2015
Value Date	14-Apr-2015	22-Apr-2015	14-Apr-2015	22-Apr-2015
Broker Name				
Brokerage	0	0	0	0
Purpose	P0019	P0019	P0019	P0019
Strategy Code	HTM	HTM	HTM	HTM
Deal Price	101	100.8894	101	100.8894
Yield	0	0	0	0
Accr Int	0	2222.22	0	2222.22
Repo Accr Int				
Repo Tenor	8	8	8	8
Repo Amount	997500	997500	997500	997500
CCY Code	USD	USD	USD	USD
FOMaker Id	POL05460	POL05460	POL05460	POL05460
FOMake Date	14-Apr-2015	14-Apr-2015	14-Apr-2015	14-Apr-2015
FOChecker Id	SYSTEM	SYSTEM	SYSTEM	SYSTEM
FOCheck Date	14-Apr-2015	14-Apr-2015	14-Apr-2015	14-Apr-2015

Figure 2-O: Deal Compare

2.1.3.3 On Behalf Of Functionality

The On-Behalf of Functionality gives a user privilege to book a deal on behalf of another Dealer in the system. Once the dealer is selected the default portfolio of the dealer is auto populated in the deal capture screen.

Steps to book a deal On-Behalf:

1. Select the User from the drop down in the left corner of the Deal capture screen or Trader ID field in Adv Repo Deal Capture Screen as shown in the fig. Portfolios related to that dealer get listed.

Intellect - Fixed Income FIS Front Office (Demo Bank 23-May-2014)

Deal ID 5EC1414300268

Dt	Flow	Value Dt	Security	Factor	Counterparty	Amount	Quantity	Ccy	Price	Yield (%)	Disc.Rate
014	BUY	20-May-2014	AU3CB0142255	100	BANK OF ENGLAND	10,000	100	INR	102.0000000	3.0182529	

Principal Amt: 10,200.00 | Accr. Int: 144.93 | Settlement Amt: 10,344.93 | Dealer: SHMT | Broker: Anu[52] | Brokerage: 0.0

Tax Code: | Tax Amount: | Security Ratings: | Subscription: ☐ | Private Placement: ☐ | Open Market Operations: ☐ | When Issued: ☐

Purpose: OTHERS FIS

Branch	Portfolio	Strategy	Quantity	Amount	Short	Remarks
Reserve Bank of	CORE	AFS	100	10,000	<input type="checkbox"/>	

MAKER: test | BANK OF ENGLAND | Status: FO_AUTHORIZED | Ver: 1

Intellect Fixed Income - FO Advance Repo Trade Capture

Branch: SEYLAN BANK DE | Trade ID: | REPO | Trade Date: 28-May-2015

Repo Type	Deal Flow	Account Type	Trader ID	Value Date	Counter Party	Maturity Date	Intr. Rate	Currency	Accrual Method
Lien	REPO		GEET	28-May-2015	DFCC BANK	03-Jun-2015	3.00000000	LKR	ACTUAL/365

Broker: No Broker | Brokerage: Max. Sub: 0 | Delivery Mode: | Reprice Freq: | Benchmark: | Spread: | Ref Rate: | Trade Date: 28-May-2015 | Ev: | Tenor: 6

L1 Settl Amt	L2 Settl Amt	Total Intr Amo...	Tax Code	Tax Amount	Brokerage Amt	Branch	(%)Commission	CommissionA...	Settl. Mode
120,000.00	120,059.18	59.18		0.00					SSI

Copy | Subst

Product	Sec Key	Sec Desc	Maturity Date/Coupon	Amount	Factor	Current Bal	L1 Consider	L1 Price	Margin	Trade Price	Interest Am.	Strategy	Portfolio
T-Bonds	LKB00619G...	01/07/2019	01-Jul-2019	10.6	130,693	1	21,566,049	120,000.00	101	10 91.818181...	59.18	AFS	DBSH

To book a Deal, refer Steps to Book a Deal in section 2.1.3 Deal Actions

2.1.33.3-4 Concurrent Audit

The Concurrent audit shows the Reuters conversation, the Deal ticket and the Counterparty confirmation message in parallel. It highlights the matched and unmatched data in the deal ticket and the Counterparty confirmation message. This screen would be enabled once the deal has been authorized in the front office.

2.1.3.24.1 Steps to view Concurrent Audit

- π View a deal on the Deal Capture Screen using deal reference no or populate it through deal blotter
- π Click on the Tools menu in the deal capture
- π Click on the Concurrent Audit button

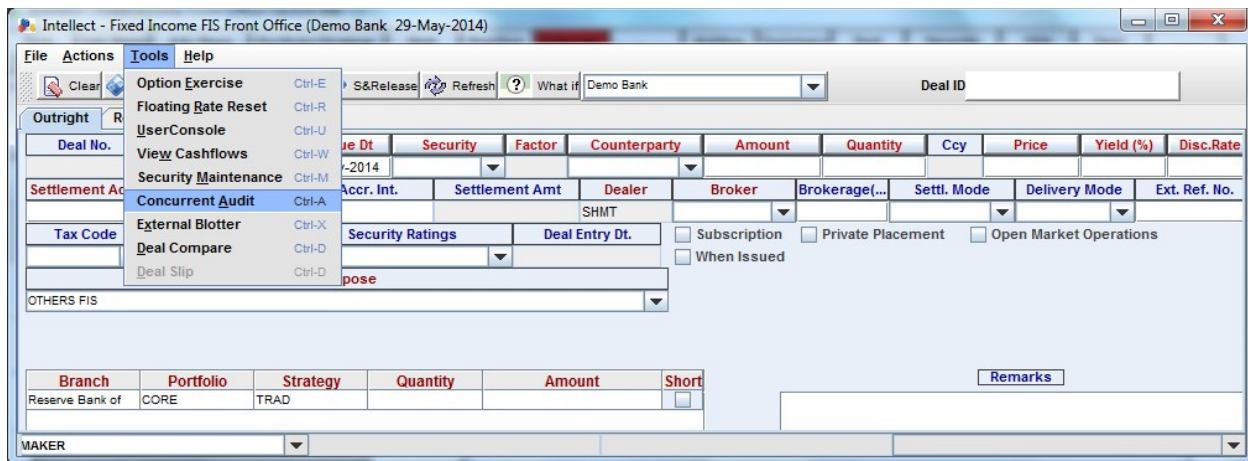


Figure 2-P: To view Concurrent Audit

The following Concurrent Audit screen open up

Concurrent Audit SEC1426100077 Status:

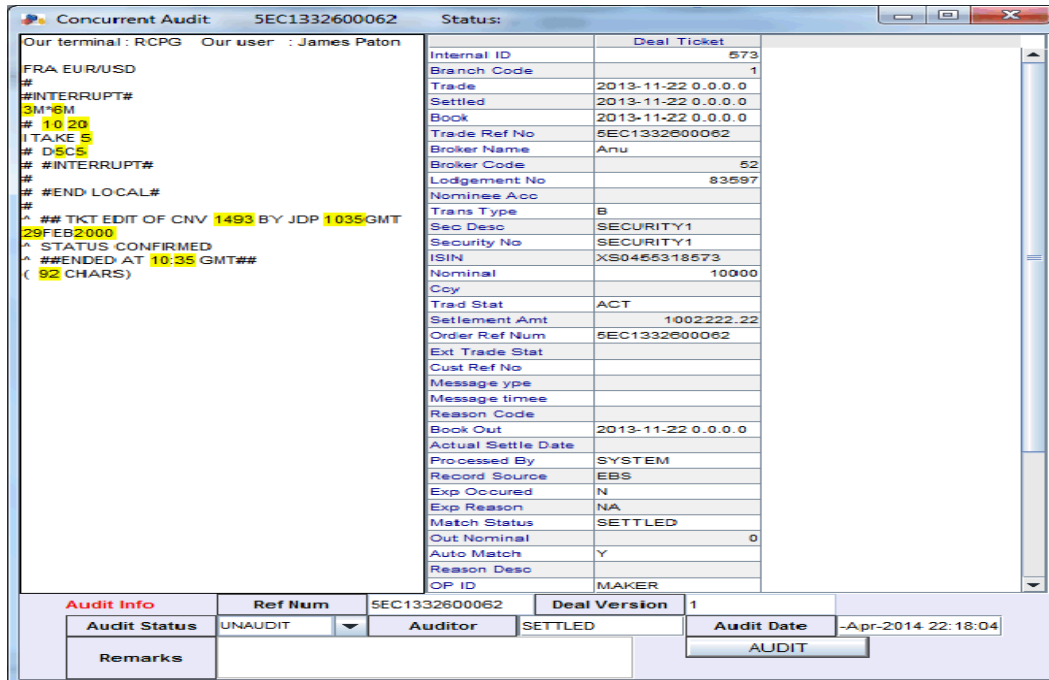
Deal Ticket	
REC_TYPE	
TRADE_STAT	ACT
TRADE_REF_NO	SEC1426100077
Internal ID	3717
Branch Code	1
Trade	18-Sep-2014
Settled	18-Sep-2014
Book	18-Sep-2014
Trade Ref No	SEC1426100077
Broker Name	OTHER
Broker Code	3
Lodgement No	NA
Nominee Acc	
Trans Type	S
Sec Desc	IMF NAB
Security No	IMFNABI3140
ISIN	IMF NAB
Nominal	326000
Ccy	SDR
Trad Stat	ACT
Settlement Amt	32670480.658
Order Ref Num	SEC1426100077
Ext Trade Stat	
Cust Ref No	
Message type	

Rate Scan Info		Rate Scan Status		EXCEPTION	
Yield	489807747	Min Yield	0	Max Yield	0
Price	100	Min Price	0	Max Price	0
From Dt.	114-09-18 11:30:00	To Dt.	14-09-18 00:30:00		

Audit Info		Ref Num	SEC1426100077	Deal Version	1
Audit Status	UNAUDIT	Auditor		Audit Date	
Remarks			AUDIT		

Figure 2-Q: Concurrent Audit Screen for Sample Deal

Below is the Deal ticket and Counterparty confirmation message along with Audit Info shown for particular reference number.



Concurrent Audit		SEC1332600062		Status:	
Our terminal : RCPG Our user : James Paton					
FRA EUR/USD			Internal ID 573		
#			Branch Code 1		
#INTERRUPT#			Trade 2013-11-22 0.0.0.0		
#3M*6M			Settled 2013-11-22 0.0.0.0		
#10 20			Book 2013-11-22 0.0.0.0		
I TAKE S			Trade Ref No SEC1332600062		
# DSCS			Broker Name Anu		
#INTERRUPT#			Broker Code 52		
#END LOCAL#			Lodgement No 83597		
#			Nominee Acc		
^ ## TKT EDIT OF CNV 1493 BY JDP 1035 GMT			Trans Type B		
29 FEB 2000			Sec Desc SECURITY1		
^ STATUS CONFIRMED			Security No SECURITY1		
^ ## ENDED AT 10:35 GMT##			ISIN XS0455318573		
(92 CHARS)			Nominal 10000		
			Ccy		
			Trad Stat ACT		
			Settlement Amt 1002222.22		
			Order Ref Num SEC1332600062		
			Ext Trade Stat		
			Cust Ref No		
			Message type		
			Message time		
			Reason Code		
			Book Out 2013-11-22 0.0.0.0		
			Actual Settle Date		
			Processed By SYSTEM		
			Record Source EBS		
			Exp Occured N		
			Exp Reason NA		
			Match Status SETTLED		
			Out Nominal 0		
			Auto Match Y		
			Reason Desc		
			OP ID MAKER		

Audit Info		Ref Num	SEC1332600062	Deal Version	1
Audit Status	UNAUDIT	Auditor	SETTLED	Audit Date	-Apr-2014 22:18:04
Remarks					

Figure 2-R: Snapshot of the Concurrent Audit status for a sample deal

2.1.3.24.1.2 Audit Info

- π **Audit Status:** The Audit status of the deal is shown. The Audit Status can be selected from the drop down and by clicking on the Audit button the deal can be audited.
- π **Auditor:** The Auditors info is given in this field
- π **Audit Date:** The time and Date of when the Audit has been done is displayed here.

2.1.3.45 Deal Slip

On retrieving / population of deal details on deal capture screen, Deal slip / ticket can be generated by navigating through Tools -> Deal Slip. It would be generated for the selected deal in pdf format.

Figure 2-S: Deal Slip Generation

2.2 Other Deal Entry Screen

2.2.1 Portfolio/ Strategy Transfer

Portfolio/Strategy transfer screen could be used to transfer a security from one portfolio / strategy that it is held under to another .Accounting entry will not be generated while doing transfers from one portfolio/strategy to another. Simultaneous BUY/SELL would happen with a dummy counterparty with deal type as portfolio transfer.

Fields for Portfolio Transfer shown below in the table:

Field	Description
Search Deal Details	User can fetch the securities and see them by using search deal options.
Available Deals	User can select the deals which are available for Portfolio/Strategy transfer .
Trade Date	The date of doing the transfer entry (by default it populates the current business date)
Value Date	The effective date (current business date by default) on which the intended portfolio / strategy transfer takes place
Target Strategy	This is the strategy selected by user to which the transfer should happen.
Target Portfolio	This is the Portfolio selected by User to which the transfer should happen.
Target Yield	This is the yield generated for the selected security-BPS
Target Amount	This is the amount of transfer targeted for the selected security-BPS
Target Quantity	This is the quantity of transfer targeted for the selected security-BPS
Target Price	This is the price at which such a transfer is targeted for the selected security-BPS

3.0 Blotters

It is an excel-like GUI to view the details of deals as per various user defined selection criteria.

3.1 Common features

3.1.1 Blotter Features Overview


Blotter Features include setting of preferences, saving the data as file, export to excel functionality and also print a report. Refer attached Sample Screenshot for a view of Deal blotter -

Deal No.	Status	Type	Flow	Security	Coy	Deal Price	Yield %	Counterparty	Fwd Days	Trade Date	Value
5EC1414901187	FO_AUTHORIZED	OUTRIGHT	BUY	SECDISC	INR	94.588363	9.950000	BARCLAYS BA...	0	29-May-2014	29-Ma
5EC1414901180	FO_AUTHORIZED	OUTRIGHT	BUY	BILL1601	INR	98.000000	1.056550	BIS	0	29-May-2014	29-Ma
5EC1414901178	FO_AUTHORIZED	OUTRIGHT	BUY	SECNEW	INR	98.000000	12.104089	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901140	FO_AUTHORIZED	OUTRIGHT	BUY	2588963	INR	99.000000	3.127070	BIS	57	29-May-2014	25-Jul
5EC1414901124	FO_AUTHORIZED	OUTRIGHT	BUY	SECURITY1	INR	101.000000	8.827514	BIS	0	29-May-2014	29-Ma
5EC1414901123	FO_AUTHORIZED	OUTRIGHT	BUY	FIXED	INR	101.000000	7.749751	INTERNATION...	0	29-May-2014	26-De
5EC1414901122	FO_AUTHORIZED	OUTRIGHT	BUY	FIXED	INR	101.000000	8.627633	BANK OF ENG...	0	29-May-2014	29-Ma
5EC1414901121	BO_MODIFIED	OUTRIGHT	BUY	FIXED	INR	101.000000	8.627633	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901109	BO_MODIFIED	OUTRIGHT	BUY	FIXED	INR	101.000000	8.627633	BANK OF ENG...	0	29-May-2014	29-Ma
5EC1414901108	BO_MODIFIED	OUTRIGHT	BUY	FIXED	INR	100.000000	8.903309	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901100	FO_AUTHORIZED	OUTRIGHT	BUY	BILL1601	INR	101.000000	-0.495000	BANK OF CAN...	0	29-May-2014	01-Ma
5EC1414901098	FO_AUTHORIZED	OUTRIGHT	BUY	BD00856	INR	101.000000	3.134202	BANK OF CAN...	117	29-May-2014	23-Se
5EC1414901089	FO_AUTHORIZED	OUTRIGHT	BUY	2588963	INR	99.000000	3.175957	BIS	63	29-May-2014	31-Jul
5EC1414901086	BO_SENDBACK	OUTRIGHT	BUY	BONDS1	INR	100.000000	10.066020	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901065	FO_AUTHORIZED	OUTRIGHT	BUY	test123	INR	101.000000	8.700490	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901048	FO_AUTHORIZED	OUTRIGHT	BUY	TEST123	INR	101.000000	4.938805	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901045	FO_AUTHORIZED	OUTRIGHT	SELL	TEST123	INR	100.000000	5.515149	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901044	BO_SENDBACK	OUTRIGHT	BUY	TEST123	INR	102.000000	4.368583	BANK OF CAN...	0	29-May-2014	29-Ma
5EC1414901011	FO_AUTHORIZED	OUTRIGHT	BUY	123456789000	CAD	89.378926	12.054504	BIS	0	29-May-2014	29-Ma
5EC1414900997	REVERSAL_AUTH	PORTFOLIO_TR...	BUY	FIXED	INR	99.000000	9.182782	FT DUMMY CU...	0	29-May-2014	29-Ma
5EC1414900996	REVERSAL_AUTH	PORTFOLIO_TR...	SELL	FIXED	INR	99.000000	9.182782	FT DUMMY CU...	0	29-May-2014	29-Ma

Figure 3-A: Deal Blotter Screen

3.1.1.1 User preference

It is to set or define the selection criteria based on which a user wants to view deal related data.

Dealer/User can set preference by clicking on  button in Blotter Screen. The preferences are configurable and it is used to show/display the deals & other valuable information with saved or selected properties like deals booked in past 'n' days or booked in certain BPS etc.

The user preferences screen has different selection criteria like Security, Book, portfolio & Strategy to filter out deals/security. Refer below Screenshot.

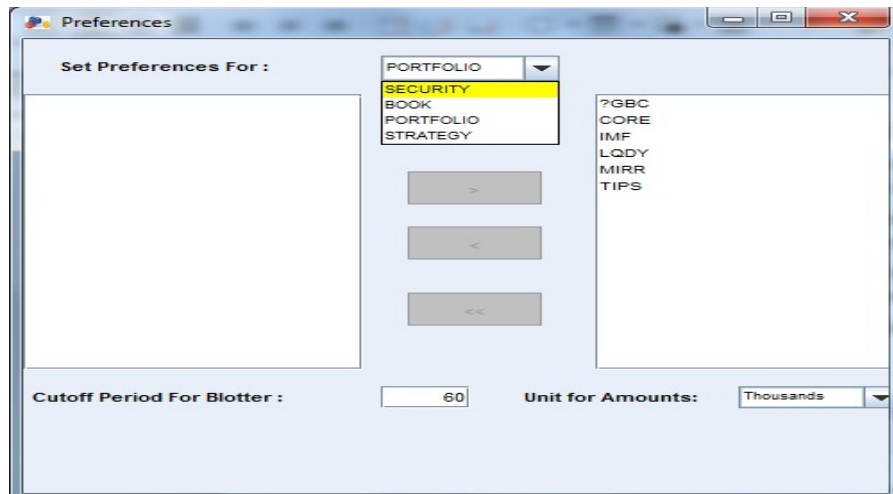


Figure 3-B: User Preference Setting

Different blotters with similar features but for different purposes are -



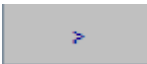

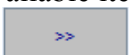

- ▮ Deal Blotter
- ▮ Position Blotter
- ▮ Holding Blotter
- ▮ Summary Blotter
- ▮ FS Blotter

Dealer can set preferences for following criteria for the Deal Blotter so as to filter the deals as per one's need :

- ▮ **Cutoff Period:** System provides user with option to view deals done as of today or for last 'n' days where 'n' is user specified. By default, the deals done during the day are displayed.
- ▮ **Security:** Dealer can choose one or more Securities for which one would like to see the deals done. By default system considers all Securities.
- ▮ **Book:** Dealer can choose booking center for which one would like to see the deals done.
- ▮ **Portfolio:** Dealer can choose one or more Portfolios for which one would like to see the deals done.

- ▮ **Strategy:** Dealer can choose the one or more Strategies for which one would like to see the deals done.
- ▮ **Units for Amounts:** User can choose the denominations in which Amounts in the Blotters need to be displayed eg. Millions, Thousands, absolute etc.

3.1.1.2 Operations in setting User preferences


- 1) Select the values from the available drop down against Security, Book, portfolio & Strategy (one after the other).
- 2) Available items are placed in left panel and the selected item are placed in the right Select an item from available list and Click on  to add it to the 'selected items' list box.
- 3) To remove an item from the 'Selected Items' list box, select the item and click on .
- 4) To select multiple items press and Hold <CTRL> key and click on the available items which need to be selected. Use  and  for selection and de-selections of the items.
- 5) To move all the available items from the left panel to the selected items in right panel, click on . Similarly to de-select all the items from selected list to available list click on .
- 6) Once the required/desired values are selected from available list, user/dealer can save the preferences using **Blotter>>Actions>>Save Preferences**. Refer Below Screenshot.

Deal Blotter - Intellect Fixed Income Front Office

Deal No.	Status	Type	Flow	Security	Ccy	Deal Price	Yield %	Counterparty	Fwd Days	Trade Date	Value D
3KE1534200006	NEW	REPO	BUY	chekbill	BDT	99.837252	0.188300	BOA	0	08-Dec-2015	08-Dec-2
3KE1534200006	NEW	REPO	SELL	chekbill	BDT	100.000447	0.188300	BOA	7	08-Dec-2015	15-Dec-2
3KE1534200005	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.215000	BOA	0	08-Dec-2015	08-Dec-2
3KE1534200005	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.215000	BOA	7	08-Dec-2015	15-Dec-2
3KE1534200004	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.212700	BOA	0	05-Dec-2015	05-Dec-2
3KE1534200004	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.212700	BOA	7	05-Dec-2015	12-Dec-2
3KE1534200003	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.212700	BOA	0	05-Dec-2015	05-Dec-2
3KE1534200003	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.212700	BOA	7	05-Dec-2015	12-Dec-2
3KE1534200002	NEW	REPO	SELL	tbillchk	BDT	99.837252	-0.000600	BOA	0	05-Dec-2015	05-Dec-2
3KE1534200002	NEW	REPO	BUY	tbillchk	BDT	100.000447	-0.000600	BOA	7	05-Dec-2015	12-Dec-2
3KE1533800001	FO_AUTHORIZED	REPO	SELL	bondacor	BDT	101.057787	9.873900	BOA	0	04-Dec-2015	04-Dec-2
3KE1533800001	FO_AUTHORIZED	REPO	BUY	bondacor	BDT	101.266684	9.873900	BOA	7	04-Dec-2015	11-Dec-2
3KE1532300002	BO_AUTHORIZED	REPO	SELL	calacor	BDT	101.025354	8.545000	BOA	0	19-Nov-2015	19-Nov-2
3KE1532300002	BO_AUTHORIZED	REPO	BUY	calacor	BDT	101.219633	8.545000	BOA	7	19-Nov-2015	26-Nov-2
3KE1532200002	BO_AUTHORIZED	REPO	SELL	bondacor	BDT	101.057787	9.634000	BOA	0	18-Nov-2015	18-Nov-2
3KE1532200002	BO_AUTHORIZED	REPO	BUY	bondacor	BDT	101.203523	9.634000	BOA	5	18-Nov-2015	23-Nov-2

Figure 3-C: Save Preference Option

3.1.1.3 Spooling and Printing of Blotter

Blotter output details can be saved by clicking on Save Button . On clicking this button another dialog box opens where the path of the file and its name need to be entered.

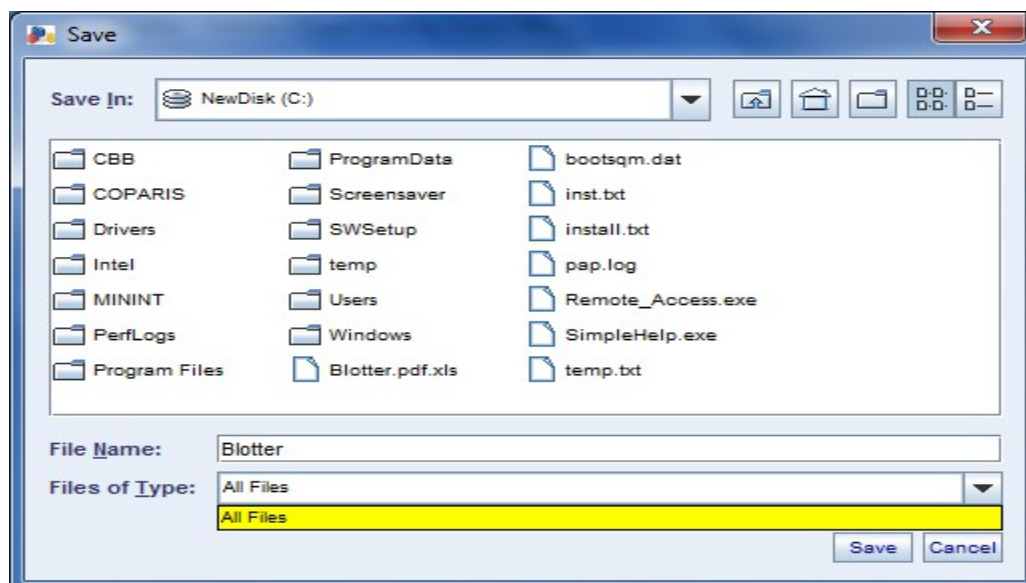



Figure 3-D: Saving Blotter details

Each column details are exported as separate columns into the target excel sheet and saved sheet can be used for any enquiry or MIS Purpose subsequently.

Blotter also provides feature to print the details by clicking on . One can move through the

pages using Previous / Next page' button. 'Page Setup' tab can be used for print related configurations. Refer the below screenshot:

Print Preview

Print... Previous Page Next Page Page Setup Done

Fixed Income Securities System						Report		Demo	
Deal No.	Status	Type	Flow	Security	Ccy	Deal Price	Yield %		
3KE1534200006	NEW	REPO	BUY	cheqbill	BDT	99.837252	0.188300		
3KE1534200006	NEW	REPO	SELL	cheqbill	BDT	100.000447	0.188300		
3KE1534200005	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.215000		
3KE1534200005	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.215000		
3KE1534200004	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.212700		
3KE1534200004	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.212700		
3KE1534200003	NEW	REPO	BUY	tbillchk	BDT	99.837252	0.212700		
3KE1534200003	NEW	REPO	SELL	tbillchk	BDT	100.000447	0.212700		
3KE1534200002	NEW	REPO	SELL	tbillchk	BDT	99.837252	-0.000600		
3KE1534200002	NEW	REPO	BUY	tbillchk	BDT	100.000447	-0.000600		
3KE1533800001	FO_AUTHORIZED	REPO	SELL	bondaccr	BDT	101.057767	9.873900		
3KE1533800001	FO_AUTHORIZED	REPO	BUY	bondaccr	BDT	101.266684	9.873900		
3KE1532300002	BO_AUTHORIZED	REPO	SELL	calcaccr	BDT	101.025354	8.545000		
3KE1532300002	BO_AUTHORIZED	REPO	BUY	calcaccr	BDT	101.219833	8.545000		
3KE1532200002	BO_AUTHORIZED	REPO	SELL	bondaccr	BDT	101.057767	9.634000		
3KE1532200002	BO_AUTHORIZED	REPO	BUY	bondaccr	BDT	101.203523	9.634000		


Wed, Jul 8, 2015 Page 1 02:40:09 PM IST

Page 1 of 4

Figure 3-E: Printing of Blotter

3.1.1.4 Help

Help file opens the important information regarding blotter operations. It can be invoked by

clicking on , i.e. the help button icon, a document which provides the details and operational activities about the blotters gets opened.

Refer to the below screenshot.

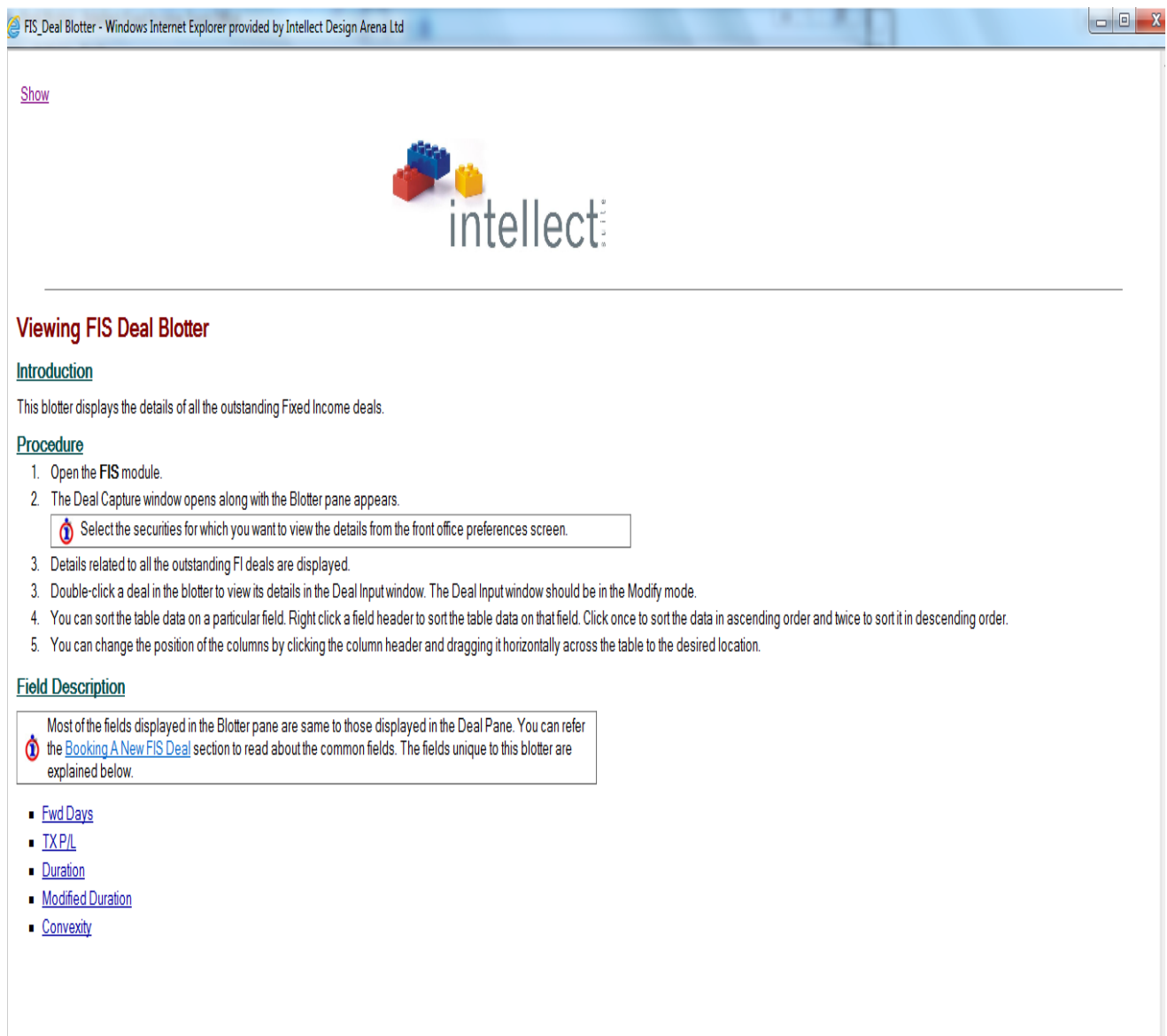



Figure 3-F: Blotter Help Screen

3.1.1.5 Refresh

Dealer can manually refresh the blotter by clicking on  refresh button icon. Most of the Blotters refreshed on real time basis.

3.1.1.6 Exit

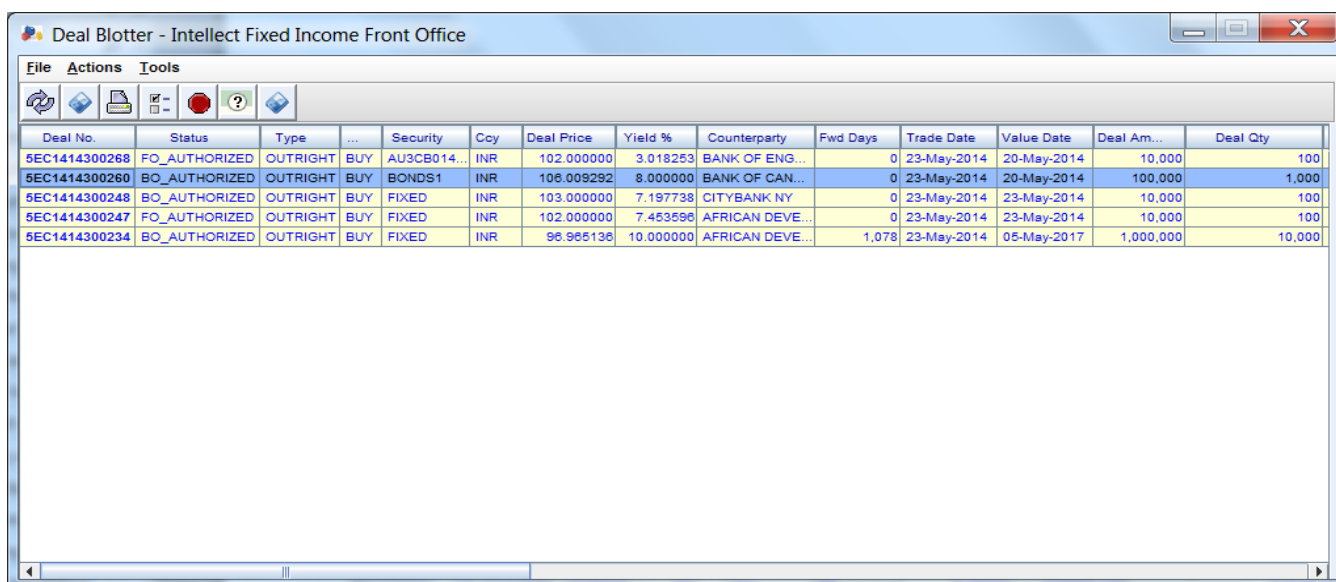
Dealer can close or exit from the blotter screens by clicking on  exit button. Apart from the above features, the dealer has additional configurability as to the view of it as follows -

- ▮ Setting the order in which the columns are to be shown (just by selecting a column and dragging it to right or left as needed)
- ▮ Sort the Blotter on any column by clicking on the column heading)

3.2 Deal Blotter

Deal blotter displays the list of all the deals done today or for a selected time period based on the user preferences. Blotter displays all the important attributes of the Deal in Front Office.

Deal blotter is updated as soon as a deal is saved. All the fields captured in deal capture are displayed in the blotter. In case of Repo and Reverse Repo deal, the two legs of the deal are populated separately with the same Deal No. By double clicking a particular deal, a deal can be fetched from Deal Blotter onto the Deal Capture Screen for any further action.



Deal No.	Status	Type	...	Security	Ccy	Deal Price	Yield %	Counterparty	Fwd Days	Trade Date	Value Date	Deal Am...	Deal Qty
5EC1414300268	FO_AUTHORIZED	OUTRIGHT	BUY	AU3CB014...	INR	102.000000	3.018253	BANK OF ENG...	0	23-May-2014	20-May-2014	10,000	100
5EC1414300260	BO_AUTHORIZED	OUTRIGHT	BUY	BONDS1	INR	106.009292	8.000000	BANK OF CAN...	0	23-May-2014	20-May-2014	100,000	1,000
5EC1414300248	BO_AUTHORIZED	OUTRIGHT	BUY	FIXED	INR	103.000000	7.197738	CITYBANK NY	0	23-May-2014	23-May-2014	10,000	100
5EC1414300247	FO_AUTHORIZED	OUTRIGHT	BUY	FIXED	INR	102.000000	7.453596	AFRICAN DEVE...	0	23-May-2014	23-May-2014	10,000	100
5EC1414300234	BO_AUTHORIZED	OUTRIGHT	BUY	FIXED	INR	96.965136	10.000000	AFRICAN DEVE...	1,078	23-May-2014	05-May-2017	1,000,000	10,000

Figure 3-G: Deal Blotter

Most of the Field labels are self-explanatory. One can refer to the following field descriptions for the not so common ones –

Fields	Description
Status	Shows the Status of the Deal(s) like FONEW / FOMOD etc.
Type	Shows Deal type(Outright/Repo/Internal)
Flow	Shows whether it is Buy or Sell Deal.
Forward Days	Difference in the current date and the Value date of the Forward deal. For outright deal and already settled deals the value is zero. ?????
Accrued Int.	The accrued interest to be paid to or received from counter party.-
TDS	Tax deducted at source, if applicable, on accrued interest.
Dealer	Shows the dealer id of the user who has entered the deal;
Settlement	It Shows the Settlement Amount for the deal.
xMTMPL	MTM P&L at deal level.
Yield%	Yield in terms of %
Prod Name	It Shows the Product Name under which a deal is booked
Source	It shows whether the deal has directly from any external source or manually captured into the system.
External Source Ref No	This field displays the reference number if sent by External System

3.3 Advance Repo Blotter

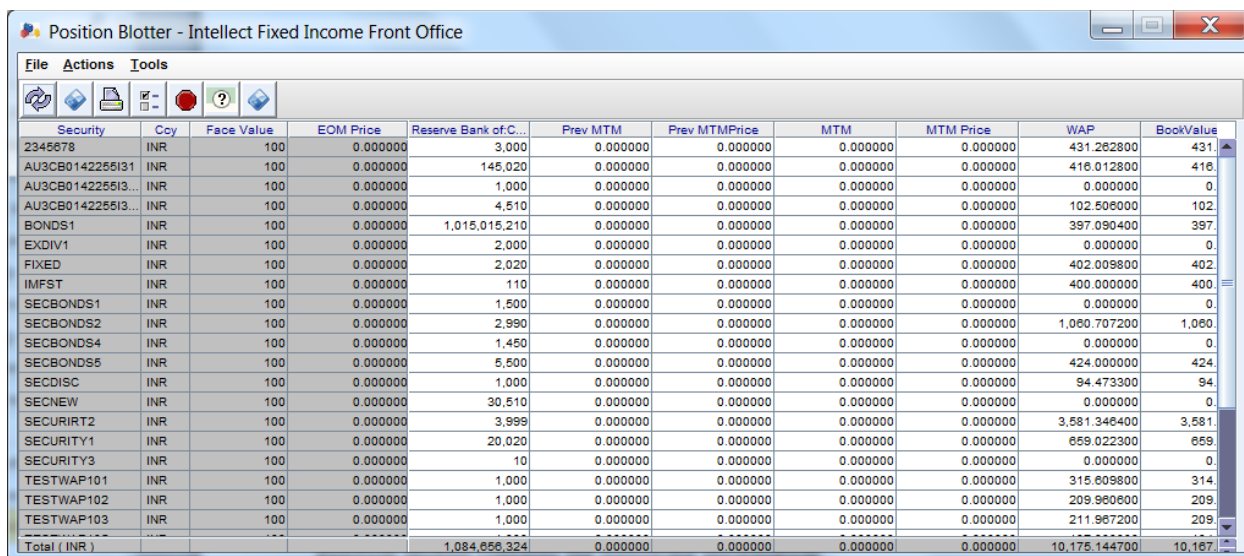
Advance Repo Blotter is updated as a deal is booked in the system. The fields captured in deal capture are displayed in the blotter.

Trade	Trade ID	Piece No.	Trade Action	TRADE DATE	AMOUNT	CURRENCY	STATUS	SALES ID	TRADER ID	TRANS	AS OF DATE	SETTLE	CTR PARTY	CTR PARTY NAME	FIRM
	3EC1401700212	1	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700210	1	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700208	1	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700197	2	FO_AUTHO...	18-Jan-2014	1,050 BDT	SENT		FARK	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700197	1	FO_AUTHO...	18-Jan-2014	1,200 BDT	SENT		FARK	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700189	2	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700189	1	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700186	2	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700186	1	FO_AUTHO...	17-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700180	2	FO_AUTHO...	17-Jan-2014	1,050 BDT	SENT		FARU	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700180	1	FO_AUTHO...	17-Jan-2014	1,100 BDT	SENT		FARU	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700178	1	FO_AUTHO...	17-Jan-2014	1,200 BDT	SENT		FARU	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700175	2	FO_AUTHO...	17-Jan-2014	500 BDT	SENT		SHYM	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700175	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014			83623	BKB	LQDY
	3EC1401700171	1	FO_AUTHO...	17-Jan-2014	1,150 BDT	SENT		FARU	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700169	1	FO_AUTHO...	17-Jan-2014	1,100 BDT	SENT		FARU	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700167	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		FARU	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700163	3	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83604	BANGLADESH BA...	MIRR
	3EC1401700163	2	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014			83604	BANGLADESH BA...	MIRR
	3EC1401700163	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83604	BANGLADESH BA...	MIRR
	3EC1401700125	2	FO_AUTHO...	17-Jan-2014	1,200 BDT	SENT		FARU	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700125	1	FO_AUTHO...	17-Jan-2014	1,800 BDT	SENT		FARU	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700120	3	CORRECTED	17-Jan-2014	1,000 BDT	HELD		SHYM	REPO	17-Jan-2014			83623	BKB	MIRR
	3EC1401700120	2	CORRECTED	17-Jan-2014	1,000 BDT	HELD		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700120	1	CORRECTED	17-Jan-2014	1,000 BDT	HELD		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700116	2	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83604	BANGLADESH BA...	MIRR
	3EC1401700116	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83604	BANGLADESH BA...	MIRR
	3EC1401700101	3	FO_AUTHO...	18-Jan-2014	1,000 BDT	SENT		SHYM	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700101	2	FO_AUTHO...	18-Jan-2014	1,000 BDT	SENT		SHYM	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700101	1	FO_AUTHO...	18-Jan-2014	1,000 BDT	SENT		SHYM	REVERS...	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700098	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REVERS...	17-Jan-2014			83623	BKB	MIRR
	3EC1401700094	2	FO_AUTHO...	18-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014			83604	BANGLADESH BA...	LQDY
	3EC1401700094	1	FO_AUTHO...	18-Jan-2014	100 BDT	SENT		DGD1	REPO	17-Jan-2014	17-Jan-2014 00:0...		83604	BANGLADESH BA...	LQDY
	3EC1401700090	2	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700090	1	FO_AUTHO...	17-Jan-2014	1,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700087	2	FO_AUTHO...	17-Jan-2014	1,450 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700087	1	FO_AUTHO...	17-Jan-2014	1,200 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700085	1	FO_AUTHO...	17-Jan-2014	10,000 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR
	3EC1401700083	1	FO_AUTHO...	17-Jan-2014	1,550 BDT	SENT		SHYM	REPO	17-Jan-2014	17-Jan-2014 00:0...		83623	BKB	MIRR

Figure3-H: Advance Repo Blotter

3.4 Position Blotter

Position Blotter is updated online. Net Positions are displayed in a matrix for various security positions in various BPS. Also aggregate positions are displayed security-wise and BPS wise. P&L is also calculated security-BPS wise online with respect to MTM prices. There's flexibility to change the MTM prices and see its impact on profitability.



Security	Ccy	Face Value	EOM Price	Reserve Bank of C...	Prev MTM	Prev MTMPrice	MTM	MTM Price	WAP	BookValue
2345678	INR	100	0.000000	3,000	0.000000	0.000000	0.000000	0.000000	431.262800	431.
AU3CB0142255131	INR	100	0.000000	145,020	0.000000	0.000000	0.000000	0.000000	416.012800	416.
AU3CB014225513...	INR	100	0.000000	1,000	0.000000	0.000000	0.000000	0.000000	0.000000	0.
AU3CB014225513...	INR	100	0.000000	4,510	0.000000	0.000000	0.000000	0.000000	102.506000	102.
BONDS1	INR	100	0.000000	1,015,015,210	0.000000	0.000000	0.000000	0.000000	397.090400	397.
EXDIV1	INR	100	0.000000	2,000	0.000000	0.000000	0.000000	0.000000	0.000000	0.
FIXED	INR	100	0.000000	2,020	0.000000	0.000000	0.000000	0.000000	402.009800	402.
IMFST	INR	100	0.000000	110	0.000000	0.000000	0.000000	0.000000	400.000000	400.
SECBONDS1	INR	100	0.000000	1,500	0.000000	0.000000	0.000000	0.000000	0.000000	0.
SECBONDS2	INR	100	0.000000	2,990	0.000000	0.000000	0.000000	0.000000	1,060.707200	1,060.
SECBONDS4	INR	100	0.000000	1,450	0.000000	0.000000	0.000000	0.000000	0.000000	0.
SECBONDS5	INR	100	0.000000	5,500	0.000000	0.000000	0.000000	0.000000	424.000000	424.
SECDISC	INR	100	0.000000	1,000	0.000000	0.000000	0.000000	0.000000	94.473300	94.
SECNEW	INR	100	0.000000	30,510	0.000000	0.000000	0.000000	0.000000	0.000000	0.
SECURIRT2	INR	100	0.000000	3,999	0.000000	0.000000	0.000000	0.000000	3,581.346400	3,581.
SECURITY1	INR	100	0.000000	20,020	0.000000	0.000000	0.000000	0.000000	659.022300	659.
SECURITY3	INR	100	0.000000	10	0.000000	0.000000	0.000000	0.000000	0.000000	0.
TESTWAP101	INR	100	0.000000	1,000	0.000000	0.000000	0.000000	0.000000	315.609800	314.
TESTWAP102	INR	100	0.000000	1,000	0.000000	0.000000	0.000000	0.000000	209.960600	209.
TESTWAP103	INR	100	0.000000	1,000	0.000000	0.000000	0.000000	0.000000	211.967200	209.
Total (INR)				1,084,656,324	0.000000	0.000000	0.000000	0.000000	10,175,144700	10,167.

Figure 3-I: Position Blotter

The amounts are displayed by default in security currency.

The total position amounts across the securities are summed up after converting the positions from Security currency to Book Currency for all deals booked in system except Repo / Reverse Repo deal with Repo type as Lien.

The blotters get refreshed automatically for a system configured time interval OR on clicking the “Refresh” button. When a new Deal is entered by any dealer, the position blotter of all the dealers is refreshed with new positions, i.e. a Deal Blotter refresh would trigger Position Blotter refresh.

Below are the fields defined for the position blotter in below table:

Field	Description
Security Face Value	It Shows the face value of the Security.
EOM Price	The End of Month price of the Security as of previous month. If Securities is issued in the current month, the earliest rate in the current month is considered.
Net Position	Net Position BPS-wise. Each BPS combination is displayed as a column to show BPS-wise position in a security
Total	Total position in a security. This position is irrespective of allocation / BPS. The total gives amount of available securities.
Previous MTM Yield/Price	This is the Yield/Price when the revaluation was done last.

MTM Yield/Price	This is the Yield/Price based on the latest revaluation or MTM.
Revaluation P/L	Revaluation under each BPS is calculated as Position Qty * (MTM price – EOM price) [considering that last revaluation has happened as on previous month end]
Total P/L	Total Revaluation P/L i.e. Total Security Position Qty * (MTM price – EOM price)
Total MTM P&L	Sum of a security MTM P&L across displayed strategies

3.5 Holding Blotter

Holding Blotter is updated when the deal is settled through Back Office. This blotter can be seen security-BPS wise. A deal has to be authorized and settled in the back office for the security to reflect in the holding.

[illegible]

Figure 3-J: Holding Blotter

Fields for Holding Blotter shown below in table:

Fields	Description
Security	It shows the security short name
Holding	Net holding (Face value) for each security BPS combination. Net position = Sum(Buy holdings) – Sum(Sell holdings)
Book Value	Book Value for each Security BPS combination is shown. Book Value is Sum(COH of Buy Deal * Holding Qty of Buy)
Total Holding	Total Holding at each Security-wise irrespective of the BPS is displayed

3.6 Summary Blotter

Summary Blotter displays overall P&L information. The blotter gets refreshed automatically for a system configured time interval or user specified interval OR on clicking the “Refresh” button. User can print the positions as displayed on screen. Summary will be displayed only for the BPS selected by the dealer. All the amounts displayed in the Summary Blotter would be in Book Currency.

[illegible]

Figure 3-K: Summary Blotter

Fields for Summary Blotter shown in below table:

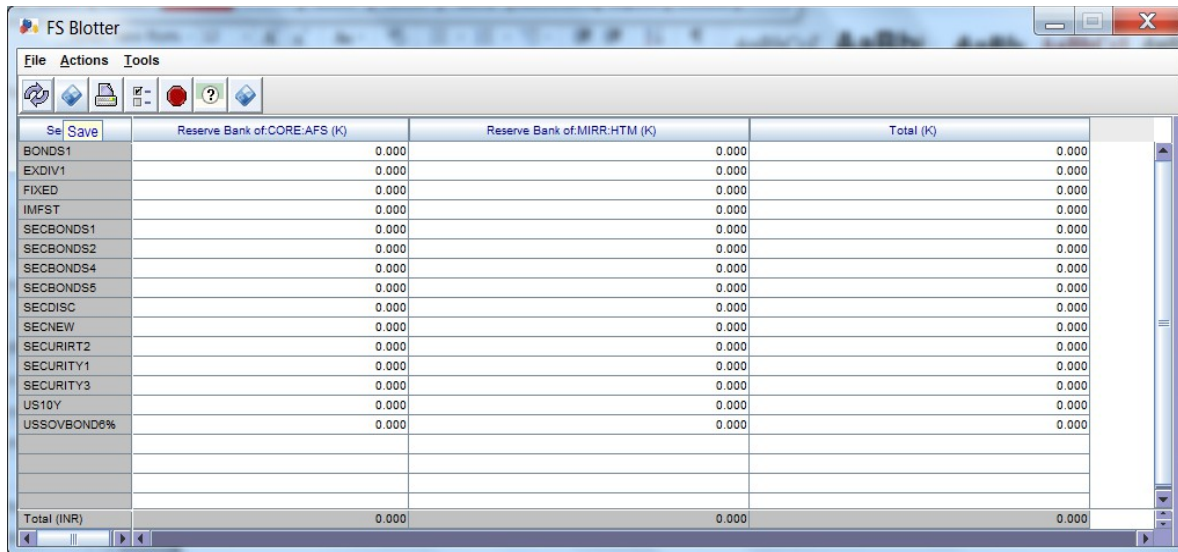
Fields	Description
BPS	Shows the Book, Portfolio, Strategy selected by the user
Transaction P&L	Total Transaction P&L for the BPS in Book currency
MTM P&L	Total MTM P&L for the BPS for the month in Book currency
Total P&L	Total P&L = MTM P&L + Transaction P&L – Brokerage paid
Yesterday's P&L	Total P& L value in reporting currency for previous business date
FS	Total FS for each BPS
Yesterday's FS	Total FS for each BPS as on previous business date
Delta () FS	Delta () FS = Current FS – Yesterday's FS

3.7 FS Blotter

Factor of Sensitivity Blotter displays the effect of 1 basis point increase in the Market yield on positions. Thus

$FS = \text{Net Position} * (\text{Market price} - \text{price computed with 1 bps increase in yield})$

FS Blotter displays the Factor Sensitivity for each Security – BPS position-wise. FS displayed in the blotter is updated online as the deals are done. As Net position changes the FS is re-calculated and displayed.



Se	Save	Reserve Bank of CORE AFS (K)	Reserve Bank of MIRR-STM (K)	Total (K)
BONDS1		0.000	0.000	0.000
EXDIV1		0.000	0.000	0.000
FIXED		0.000	0.000	0.000
IMFST		0.000	0.000	0.000
SEC BONDS1		0.000	0.000	0.000
SEC BONDS2		0.000	0.000	0.000
SEC BONDS4		0.000	0.000	0.000
SEC BONDS5		0.000	0.000	0.000
SEC DISC		0.000	0.000	0.000
SEC NEW		0.000	0.000	0.000
SECURIT2		0.000	0.000	0.000
SECURITY1		0.000	0.000	0.000
SECURITY3		0.000	0.000	0.000
US10Y		0.000	0.000	0.000
USSOV BOND0%		0.000	0.000	0.000
Total (INR)		0.000	0.000	0.000

Figure 3-L: FS Blotter

Fields for FS Blotter are shown in below table:

Fields	Description
BPS	Each BPS combination is displayed as a column to show BPS-wise FS in a security
FS	FS value for each security BPS combination. FS is computed w.r.t. MTM price in the position blotter
Total	Total FS of position in a security

3.8 Deal Query

The Deal Query window is used to perform a search on all the deals in the Fixed Income module. This is a very powerful feature that can provide many of the MIS functionality. There is also an operator AND/OR which can be used effectively to locate any deal in the system. The first three fields namely branch, dealer id and portfolio by default has the operator AND attached to them. Some of such criteria are part of dropdowns offering multiple selection of values while some are direct inputs by user.

After selecting the criteria the dealer can click on the 'Enquire' button and then all the deals matching the selected criteria are displayed. A searched deal can be opened directly in the input screen by double clicking on the deal in the result section. The result can be printed as well as saved in excel format.

[Deal Type Field can be used to filter Outright/Repo/Reverses Repo trades separately.](#)

Figure 3-M: Deal Query Screen

4.0 Key Maintenances

4.1 Security Master Section

To a book a deal, we have to ensure that the required security is maintained in the system. Following is the procedure to create a security master unless it is flowing through interface from market data source.

Figure 4-A: Fixed Income Launch Bar

The Security maintenance option can be launched from the Front office launch bar or from the Tools option in the Deal capture screen as shown below.

Figure 4-B: Security Maintenance from Tool Options

4.1.1 Security Tab

This screen is used to create / modify / Delete a security in the system. It consists of various tabs to capture different security attributes.

The screenshot shows the 'Security Maintenance' window with the 'Security' tab selected. The 'SECURITY CODE' field in the menu bar is highlighted with a red circle. The form contains several sections: 'Product Type' (dropdown), 'Currency' (dropdown, set to INR), 'Face Value', 'IP Date', 'Issue Date', 'Maturity Date', 'Description', 'Issuer Code', 'Issuer Name', 'Issuer Domicile', 'ISIN', 'Category' (dropdown, set to NO), 'Precision' (dropdown, set to 4), 'Issue Size', 'Ex-Dividend' (dropdown, set to NO), 'Cut-Off Days', 'On Settlement Date', 'Ex-Dividend Date', 'Coupon Details' (Coupon, Coupon Frequency, Compounding Frequency, Coupon Rate, Odd Coupon Type, Last Coupon Date), 'Interest Basis' (dropdown), 'BenchMark Code', 'Reprice Frequency', 'Next ResetDate', 'Spread%', 'Rate Floor%', 'Rate Ceiling%', 'Trading Details' (Yield Type, Yield Method, Yield Quotation, Quote Method, Quote Type), 'Trading Allowed' (dropdown, set to YES), 'Buy Back Allowed' (dropdown), 'Repo Allowed' (dropdown, set to NO), 'Short Sell Allowed' (dropdown), 'Settlement Days', 'Internal Deal Allowed' (dropdown), 'Rate Reasonability Type' (dropdown, set to NONE), 'RRC Min', 'RRC Max', 'Coupon Holiday Logic' (dropdown, set to Nxt Work), 'Maturity Holiday Logic' (dropdown, set to Prev Work), 'C/HolidayAdj' (dropdown, set to FIXED), and a 'GENERATE CASH FLOWS' button.

Figure 4-C: Security Tab Screen

The fields which are mandatory are listed in one table and optional or conditional mandatory fields are listed in a separate table.

Mandatory Fields for Security Master Data Input are shown below:

Field	Description
Security Code	This is the unique security code to be given for a security. To view the security details maintained earlier, user has to enter the security name and then press Enter.
Product Type	This is the product type linked to a particular security. The products displayed here would be the products maintained as FIS Products. User has to select one appropriately.
Currency	The currency in which the security is issued
Face Value	The face value of the security, This is the redemption value of a security on maturity.
IP Date	It is the date on which the first interest payment for a security will be made.
Maturity Date	The date on which the security will get matured i.e. the end date of the security.
Description	A brief description about the security can be entered
Issuer Code	The Code created for Government or Corporate who is issuing the security
Category	It describes under which Category security falls.
ISIN	This is an unique International securities Identification Number issued by National Numbering Agency in any particular country where the security is issued
Issue Size	Issue size is given here and is used during Deal Capture to validate the Issue Size limit
Coupon	Provides type of coupons or how to decide the interest rate of the security i.e., either fixed or floating. This is not applicable for T-Bills
Coupon Frequency	The frequency for which Interest cash flows will get generated. Not applicable for T-Bills
Coupon Rate	The interest rate by which cash flows get generated, not applicable for T-bills
Last Coupon Date	The date on which last coupon will be paid out, by default the system will put the maturity date as last coupon date
Interest Basis	Day Count Basis. For More Information refer to the Section 5.Glossary
Yield Type	User can select the yield type from the drop down (like YTM→ Yield to Maturity/YTC→Yield to Call/YTP→Yield to Put) in order to derive the yield for a given deal price;
Yield Method	User can select the yield method from the drop down (XIRR/MM) in order to

	derive the yield for a given deal price;
Quote Type	<p>The type of the quotes available are</p> <ul style="list-style-type: none"> ▮ Percent: The price of the security is in percentage basis, It is computed considering 100 as unit paid-up value. ▮ Absolute: The price of the security is on actual basis, It is computed wrt the unit paid-up value maintained in Security Master Maintenance
Trading Allowed	User can select the value from drop down, which denotes whether the security is allowed for trading or not
Rate Reasonability type	User can select the value from drop down whether, it can be absolute or percentage value of the bands maintained
Coupon Holiday logic	The type of logic from the dropdown list maintained in deriving the Coupon Cash flow date if the original cash flow date falls on a Holiday.
Maturity Holiday Logic	As explained above it is the logic from the dropdown list maintained in deriving the Maturity Cash flow date if the original maturity falls on a Holiday
Generate Cash flows	User needs to generate the cash flows by clicking on this button.

Conditional mandatory fields shown below:

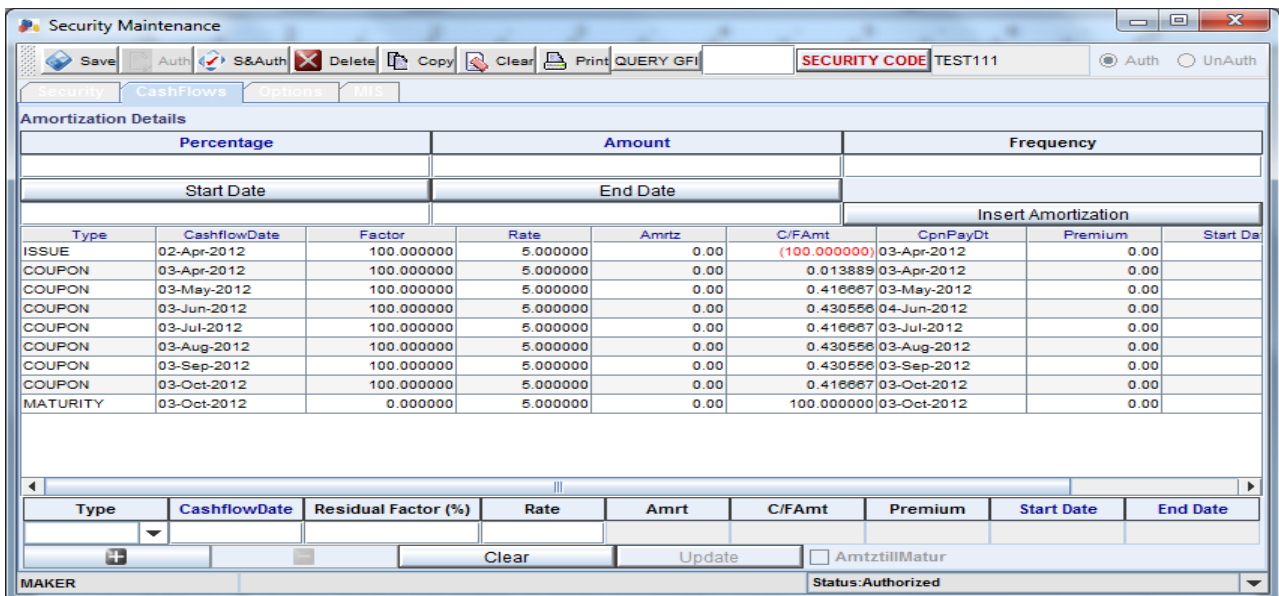
Fields	Description
Issue Date	The date on which the security is available for trading i.e. the start date of the security.
Issuer Name	The corresponding Issuer Name for the issuer code will be displayed
Precision	It describes the targeted decimal point up to which calculation related to security cash flows should occur.
Ex-Dividend	Indicates whether the security trades Ex-Dividend(Ex-coupon) or Cum-Dividend(Cum-coupon)
Cut Off Days	Securities can be treated as equities in some market. So for those securities cut off days are defined, So Investors try to Buy it to get the dividend amount. Generally its defined 2 to 3 days before coupon payment for the security.
Odd Coupon Type	<p>The type of coupon required to calculate the cash flows, which is based on issue date and maturity date, when the first/last coupon date is not in sync with the actual coupon frequency.</p> <p>First Small Coupon: If the first coupon payment date doesn't fall in the complete cycle of the coupon frequency then we call it as a First Small Coupon. Here the coupon amount is paid on a pro rate basis for the</p>

	<p>respective number of days (lesser than a normal coupon period)</p> <p>Last Small Coupon: If the last coupon payment date doesn't fall in the complete cycle of the coupon frequency then we call it as a last Small Coupon. Here the coupon amount is paid on a pro rate basis for the respective number of days (lesser than a normal coupon period)</p> <p>Eg : Issue date = 11-Sep-2013, First IP date = 30-Sep-2013 and coupon frequency = 6 months, Maturity Date = 25-Aug-2014</p> <p>The Coupon paid on 30-Sep-2013 is called as First Small Coupon The Coupon paid on 25-Aug-2014(3rd Coupon Payment date) is called as Last Small Coupon</p>
BenchMark Code	<p>The Benchmark by which the rate will get decided in case of repricing cash flows for a floating rate instrument.</p> <p>These are user-defined codes some of which can be as follows :</p> <p>CASH LIBOR MIBOR</p>
Reprice Frequency	The frequency at which the repricing will happen 1M, 2Y etc. (Applicable for floating rate securities)
Spread(%)	This is applicable for floating rate Securities. It is the spread(+/-) above the Benchmark.
Rate Floor(%)	This is applicable for floating rate Securities to set limit on minimum coupon rate.
Rate Ceiling(%)	This is applicable for floating rate Securities to set limit on Maximum coupon rate
Quote Method	<p>User can select the method from the drop down</p> <ul style="list-style-type: none"> ▮ Clean Price – Price which is computed exclusive of accrued interest ▮ Dirty Price - Price which is computed inclusive of accrued interest
Buy Back Allowed	Whether Security can be bought back by the issuer.
Repo Allowed	User can select the value from drop down, which denotes whether the security can be allowed for repo/reverse repo trading.
Short Sell Allowed	User can select the value from drop down, which denotes whether the securities are allowed for short sell or not
Settlement Days	User can enter the days in which the settlement for a given security will take place
Internal Deal Allowed	YES or NO will allow / disallow an internal deal involving a particular security.

RRC Min	It is the minimum % deviation allowed from the Market yield. The deviation is both positive and negative
RRC Max	It is the maximum % deviation allowed from the Market yield. The deviation is both positive and negative
C/F Holiday Adj	In case some Adjustment need to pass, how to decide the rate of adjustment. <ul style="list-style-type: none"> ▮ Fixed ▮ Floating

4.1.2 Cash flows Generation Tab

Based on security details entered into the security tab, user can generate the cash flows by clicking on the Generate Cash Flows button available in the first tab (Security). This tab additionally captures the details of an amortizing bond by accepting details such as frequency and amounts (absolute or percentage) of the partial principal redemption. Following is the snap shot of the cash flows generated



Type	CashflowDate	Factor	Rate	Amrtz	C/FAmt	CpnPayDt	Premium	Start Date
ISSUE	02-Apr-2012	100.000000	5.000000	0.00	(100.000000)	03-Apr-2012	0.00	
COUPON	03-Apr-2012	100.000000	5.000000	0.00	0.013889	03-Apr-2012	0.00	
COUPON	03-May-2012	100.000000	5.000000	0.00	0.416667	03-May-2012	0.00	
COUPON	03-Jun-2012	100.000000	5.000000	0.00	0.430556	04-Jun-2012	0.00	
COUPON	03-Jul-2012	100.000000	5.000000	0.00	0.416667	03-Jul-2012	0.00	
COUPON	03-Aug-2012	100.000000	5.000000	0.00	0.430556	03-Aug-2012	0.00	
COUPON	03-Sep-2012	100.000000	5.000000	0.00	0.430556	03-Sep-2012	0.00	
COUPON	03-Oct-2012	100.000000	5.000000	0.00	0.416667	03-Oct-2012	0.00	
MATURITY	03-Oct-2012	0.000000	5.000000	0.00	100.000000	03-Oct-2012	0.00	

Figure 4-D: Cash flows Tab

Fields for cash flow generation tab shown below in table:

Amortization Fields	Description
Percentage	It indicates the percentage of the security price to be considered for Amortization. On entering any number (less than 100) in this field, its proportionate value is taken into consideration for amortizing
Amount	The amount entered in this field is considered for amortization
Frequency	It indicates the frequency of amortization
Start Date	It is the date from which the amortization should start. This date should be greater than issue date

End Date	It is the date on which the amortization should end. This date should be less than the maturity date
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4.1.3 MIS Tab

MIS Tab is used to capture the related information details regarding the security such as step up , rating, guarantor and some more. The field details can be entered by user/dealer, but it's not mandatory while creating security.

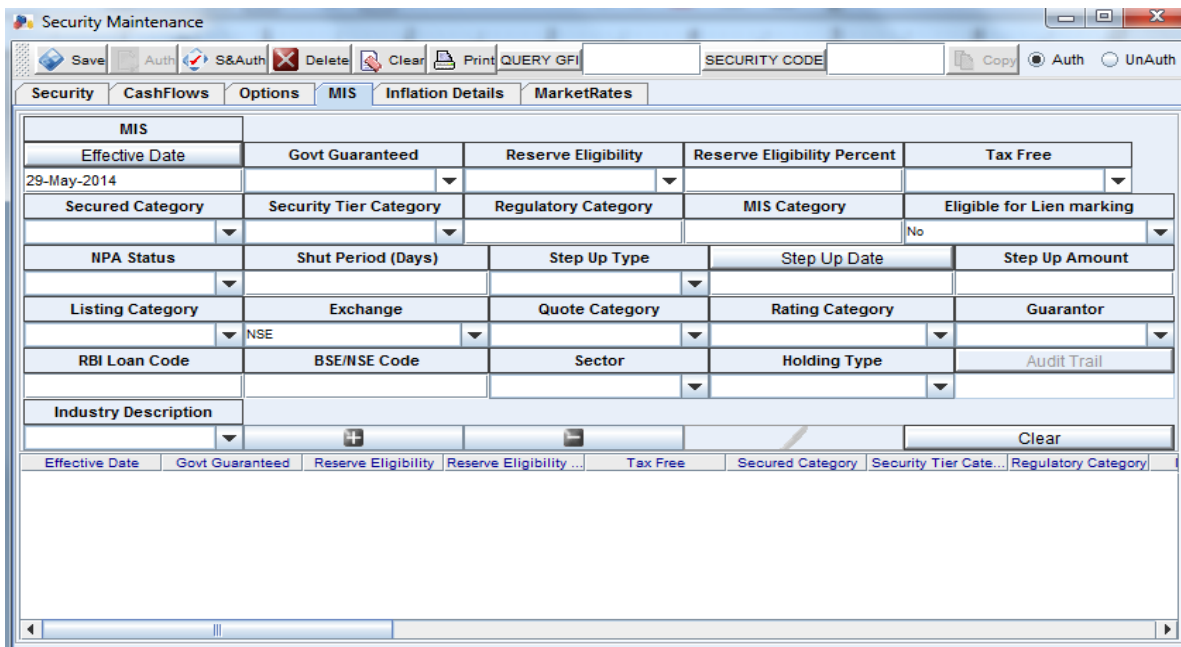


Figure 4-E: MIS Details Tab

Fields for MIS Details tab shown below:

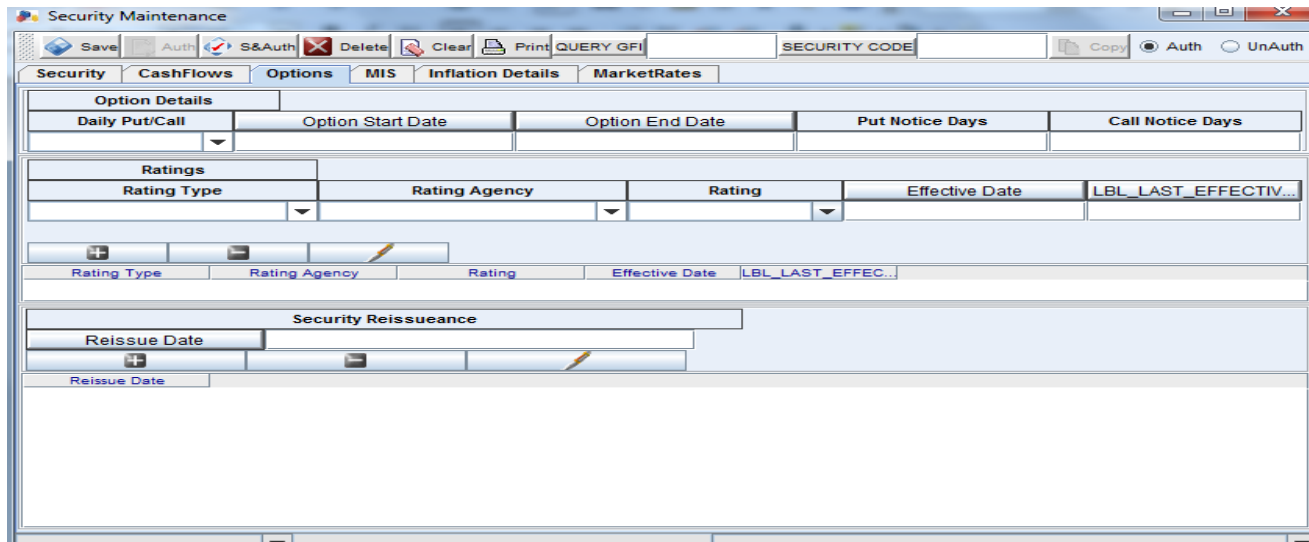
Field	Description
Industry Description	User can select the valid industry type for a security from the drop down list.
Effective Date	Multiple entries can be made effective from particular dates
Govt Guaranteed	User can Define whether selected security is government guaranteed or not from the drop down list by selecting Yes/No.

Reserve Eligibility	YES / NO – can be appropriately selected
Tax Free	User can define whether selected security is Tax free or not by selecting Yes/No from the drop down list.
Secured Category	User can define security whether secured or not secured by selecting values from the drop down list.
Secured Tier Category	User can select the category of the secured security from the drop down list.
Eligible for Lien Marking	User can select whether security is eligible for lien marking or not by selecting the values from the drop down list.
NPA Status	User can select the NPA status of the security from the drop down list.
Exchange Code	User can applicable Exchange code for the security.
Holding Type	User can define holding type of the security from the available drop down list.
Rating Category	User can define applicable rating category from the list.
Guarantor	Guarantor for mentioned security can be defined, if applicable.
Sector	User can select sector value from the drop down list.

4.1.4 Options Tab

This is to capture the available embedded option to a bond. Additionally, it also captures effective date-wise rating details. Re-issuance details also can be mentioned through this tab, as applicable.

Following is the snapshot of the options tab in security maintenance



The screenshot shows the 'Security Maintenance' window with the 'Options' tab selected. The window has a menu bar with 'Save', 'Auth', 'S&Auth', 'Delete', 'Clear', 'Print', 'QUERY GFI', and 'SECURITY CODE'. Below the menu bar are tabs for 'Security', 'CashFlows', 'Options', 'MIS', 'Inflation Details', and 'MarketRates'. The 'Options' tab is active, showing sections for 'Option Details', 'Ratings', and 'Security Reissuance'. The 'Option Details' section includes fields for 'Daily Put/Call', 'Option Start Date', 'Option End Date', 'Put Notice Days', and 'Call Notice Days'. The 'Ratings' section includes fields for 'Rating Type', 'Rating Agency', 'Rating', 'Effective Date', and 'LBL_LAST_EFFECTIV...'. The 'Security Reissuance' section includes a 'Reissue Date' field. The window also has a status bar at the bottom.

Figure 4-F: Options Tab

Fields for Options Details tab described below:

Field	Description
Daily Put Call	While creating Security, user can select Yes/No values for selecting Daily put call option details
Option Start Date	Date at which the option becomes effective.
Option End Date	Date at which the option ends.
Put Notice Days	Number of days notice required for the security holder to exercise put option.
Call Notice Days	Number of days notice required for the Issuer of the security to exercise call option.
Rating Types	User can select the rating type from the drop down list (External / Internal)
Rating Agency	The corresponding Rating Agency, if rating type is external, related to the rating type can be selected from the drop down (static data)
Rating	Applicable rating can be selected from the drop down (static data).
Effective Date	User can enter the date from which a rating becomes effective

4.1.5 Inflation Details Tab

Inflation Linked Bonds(ILB) details can be entered from this maintenance screen where dealer can define the fields like indexation type, redemption value along with index code and indexation lag.

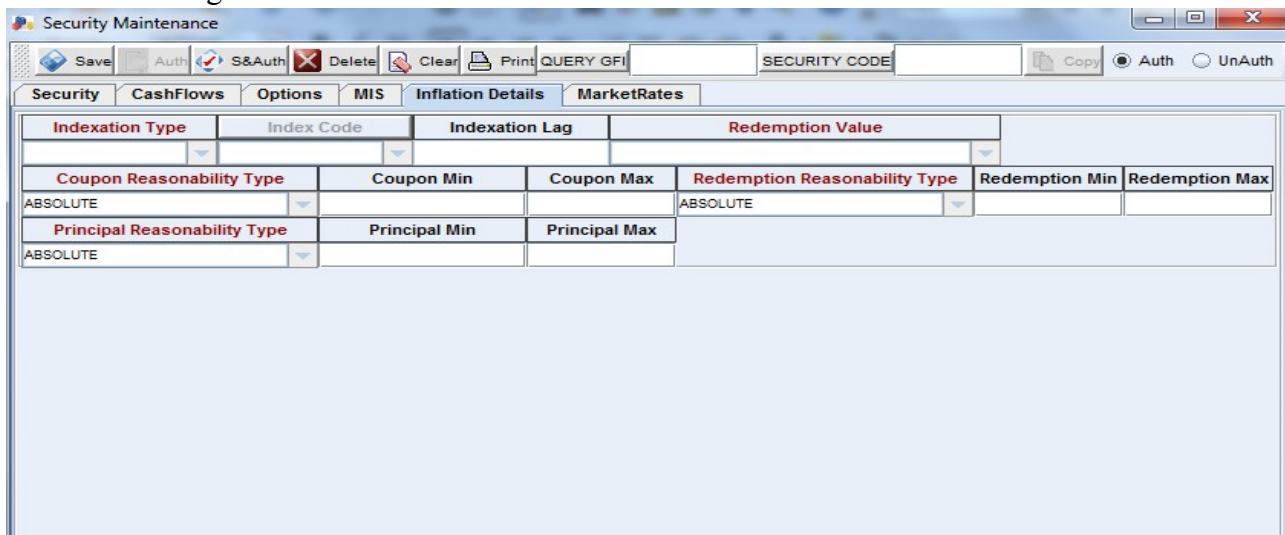


Figure 4-G: Indexation Details Tab

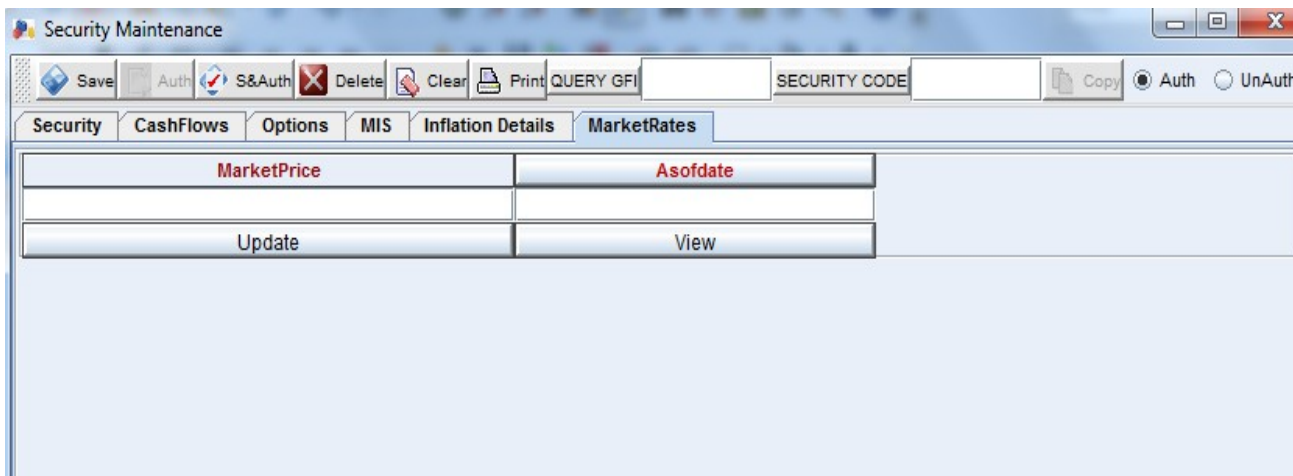
Mandatory Fields for Indexation details described below:

Field	Description
Indexation Type	User can select the indexation type like on Principal, Coupon or Both(principal+ Coupon)
Redemption Value	This field shows the redemption value of the selected security such as at Par, High and Low Values.
Coupon Reasonability Type	User Can Define the type of Coupon whether it is Absolute or Percentage.
Redemption Reasonability Type	User Can Define the type of Redemption whether it is Absolute or Percentage.
Principal Reasonability Type	Dealer Can Define the type of Principal whether it is Absolute or Percentage.

Alongside, the Min & Max limits for all the three (Coupon / Principal / Redemption) can also be defined if a security is so designed.

4.1.6 Market Rates Tab

Market Rates Tab feature provides an option to the users to update the price of the security depending on prevailing market price as for a specific date. Based on details entered by the user, price of the security will get updated. Following is the snap shot of the Market Rates Tab



The screenshot shows a software window titled "Security Maintenance". At the top, there is a toolbar with buttons for Save, Auth, S&Auth, Delete, Clear, Print, and a QUERY GFI field. To the right of these is a SECURITY CODE field and a Copy button. Below the toolbar is a tabbed interface with tabs for Security, CashFlows, Options, MIS, Inflation Details, and MarketRates. The MarketRates tab is currently selected. Inside this tab, there is a table with two columns: MarketPrice and Asofdate. The table has three rows: the first row is for data entry, the second row is for data entry, and the third row contains "Update" and "View" buttons respectively.

Figure 4-H: Market Rates Tab

Fields for market rate tab described in below table:

Field	Description
Market Price	User can manually update the Market price for the Selected security as on a given date(As of Date), based on market price input, related calculation will happen in the system for mark-to-market process.
As of Date	User can define the date from which a rate is applicable for the selected security until a new rate is entered as on a future date .
Update	To update the Market Rate.
View	Once the Market Price of the Security is Updated, User Can retrieve the security market price by clicking on View Button for a given date in As Of Date Field.

5.0 References/Glossary

5.1 Interest Basis

A convention to determine the number of days between tow dates and number of days in a year to calculate accrued interest on bonds and other rate dependent securities.

Following are the list of interest basis which are supported in the system

- ▮ Actual/360
- ▮ Actual/364
- ▮ 30/360
- ▮ 30/365
- ▮ Actual/365
- ▮ Actual/Actual
- ▮ Actual/nActual
- ▮ 30E/360

¶ 30E/365

- ¶ **Actual/360:** In this method, each month is treated equally and year is assumed to be 360 days.
- ¶ **Actual/364:** In this method also, each month is treated equally and year is assumed to be for 364 days.
- ¶ **30/360:** Number of days calculated as $Y(2) - Y(1) \times 360 + M(2) - M(1) \times 30 + D(2) - D(1)$

Where Y, M and D denote Year, Month and Days respectively. Number of days in a month taken as 30 and year is assumed to be of 360 days.

- ¶ **30/365 :** Number of days are calculated exactly the same way as 30/360 basis explained above while year is assumed to be of 365 days.

- ¶ **Actual/360 :** In this method, actual number of days between two given dates will be taken

and year is assumed to be of 360 days.

- ¶ **Actual/365 :** In this method, actual number of days between two given dates will be taken

and year is assumed to be of 365 days.

- ¶ **Actual/Actual :** In this method, actual number elapsed between the two days are divided by the actual number of days in a year. For Example for leap year the denominator would be 366

- ¶ **Actual/nActual :** This is similar to Actual/Actual, only difference being, the rate is first derived based on the coupon frequency and then the actual days for a coupon period and the no. of basis days become the same making the coupon amount uniform across such coupon periods irrespective of actual no. of days

falling in any period. For example, as per Actual/Actual, the coupon for a half year having 182 days shall be different from the other half year having 183 days in it. Whereas under Actual/nActual, both the coupons for such periods having 182 & 183 days respectively would be same.

- ¶ **30E/360 :** In this method, the number of elapsed days is calculated on the basis of a year of 360 days with 12 30-day months, subject to the following rules:
 - ¶ If either the first date or last date of the payment period falls on the 31st of a month, that date will be changed to the 30th.
 - ¶ If the last day of the payment period falls on the last day of February, the month of February will not be extended to a 30-day month. Rather, the actual number of days in February will be used.

The day count factor is calculated as the number of elapsed days divided by 360.

- ¶ **30E/365 :** This method is similar to 30E/360 method with a slight change in denominator value. Instead of 360, basis of year is assumed to be 365 days.

5.2 Repo Type

While Booking the deal, user has the option to mark the relevant repo type for a repo deal.. Following are the list of repo types which are supported in the system

Market Repo's
 Lien Marked Repo's
 BSB and SSB Repo's
 ILF(intra day liquidity) support Repo's

- ¶ **Market Repo:** Market repo's are simple repo's known as repurchase agreement or sale and repurchase agreement in which the securities are sold together with an agreement to buy back the securities at a later date. The difference between repurchase price and original sale price is income/expenses for the deal.
- ¶ **Lien Marked Repo's:**

Securities(Quantities of securities) are marked as LIEN, those marked Securities are not available for SELL or doing further repo until the original repo deal matures and settlement takes place.

Securities which are pledged in LIEN Deals, continue to be part of the holding for the counter party who pledges those..

Since holdings are not affected, the accrued interest would not be part of the Repo settlement amount for a Repo deal under Lien.

Thus, the underlying treatment in the system would be that the ownership will not change and Coupons are received normally for the securities marked under lien.

¶ **BSB and SBB Repo's:**

BSB and SBB known as **BuySellBack** and **SellBuyBack** repo deals. There is no accruals associated with BSB and SBB type of repo deals. The REPO deal capture has to behave as if two outright deals are getting feed in the REPO screen. Also there will be no repo interest and profit/loss for the deal.

On selection of SBB or BSB, the field “Leg2 Price” in the repo deal capture screen will get enabled.

1. User will be able to modify the Leg2 Price and enter a new value.
2. User will not be allowed to enter the REPO Rate. This field will be calculated internally by the system.

¶ **Intraday liquidity facility (ILF):**

During the normal day to day operations of a bank whenever it falls short of money or has liquidity constraints then, it borrows money from the Central bank of the respective country. It does so by pledging some securities and keeping the ILF line open.

Haircut is applied on the amount of securities pledged to arrive at the actual lending amount. The hair cut is decided by the Central Bank by taking various factors into consideration.

The tenor of the ILF deal is defaulted to the maturity date of the security. Interest rate charged for ILF deals is 0.

If the user marks the security as ILF then it can not be used in any further deals until the reverse deal occurs or the deal matures

5.3 Coupon/Maturity Holiday Logic

While creating securities, to derive the next Coupon Cash flow date or maturity date in case original cash flow/maturity date falls on a Holiday.

Following are the holiday logic supported in the system

- ⌈ Next Working Day
- ⌈ Previous Working Day

- ⌈ Next Working in Same Month
- ⌈ Previous Working in Same Month

6.0 Computations

6.1 Formulas Used for Repo calculations

1) Repo Amount: $\text{Repo Amount} = \text{Deal Quantity} * (\text{FACEVALUE OF SECURITY} - \text{MARGIN})$.

2) Repo Quantity: $\text{Repo Quantity} = \text{REPO AMOUNT} / \text{FACE VALUE OF SECURITY}$

3) If Security is quoted as DIRTY, then in order to calculate other values related to deal, clean price should be calculated first.

Since $\text{DIRTY PRICE} = \text{CLEAN PRICE} + \text{ACCRUALS}$. So Accruals should be subtracted from dirty price to attain clean price for the security.

$\text{Clean Price} = \text{Dirty Price} - [\text{per day accrual} * (\text{L1 Value Date} - \text{Last Coupon Date})]$

$\text{PerDay Accrual} = (\text{Security FaceValue} * \text{Rate of Interest} * 1 * \text{Interest Method})$

$\text{L1 Accrued Interest} = \text{DealQuantity} * \text{PerDayAccrual} * (\text{L1 Value Date} - \text{Last Coupon Date})$

and clean price can also be calculated by using L1 Accrued Interest.

$\text{Clean Price} = \text{Leg1Price} - (\text{L1Accrued Interest} / \text{Deal Quantity})$

4) Leg 1 Consideration: $\text{Leg1 Consideration} = \frac{\text{Repo Quantity} * \text{Clean Price} * \text{Leg1 Price} * \text{Quantity}}{(100\% + \text{Margin \%})}$

5) Settlement Amount Leg1 = Leg1 Consideration + L1 Accrued Interest.

6) Repo Interest Amount is calculated based on your Settlement Amount Leg1.

$\text{Repo Interest} = [\text{Settlement Amount Leg1} * \text{Rate of Interest} * \text{TenorDays}] / \text{Year Days}$

* Year Days can be either 365 or 364.

7) Settlement Amount Leg2 = Settlement Amount leg1 + Repo Interest.

8) L2 Accrued Interest = $\text{Deal Quantity} * \text{PerDayAccrual} * (\text{L2 Value Date} - \text{Last Coupon Date})$

Where L2 Value Date = L1 value Date + tenor days.

9) L2 Consideration = Settlement Amount Leg2 – L2 Accrued Interest.

10) Leg 2 Price = Settlement Amount L2/Repo Quantity

11) Leg 2 Clean Price (if security is quoted as dirty):

Leg 2 Clean Price = L2 consideration/Repo Quantity
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