Trade Away Fee Database Modification

# Schema Change

| User Story | Table | Column | Data Type | Description/Purpose |
| --- | --- | --- | --- | --- |
| 44295 | MxOm.TradeAwayFeeCondition (a new table to maintain all selector attributes combinations except PortBaseKey.  The natural key is created on the fly in terms of attribute enable/disable configuration.) | ConditionID | int NOT NULL IDENTITY(1,1) | Condition unique identifier.  PK |
| BrokerID | nvarchar (12) NOT NULL DEFAULT(‘’) | FK to dbo.MoxyBrokerRep.BrokerID |
| RepID | nvarchar (12) NOT NULL DEFAULT ‘’ | FK to dbo.MoxyBrokerRep.RepID |
| OmnibusID | smallint NOT NULL DEFAULT 0 | FK to dbo.MoxyOmnibus |
| MxOm. TradeAwayFeeSelectorAssignment (A new table to maintain the inheritance relationship of portfolio level selectors which are created by inherited group selector at the same time with table constraint (PortKey = 0 AND Conflict = 0) OR (PortKey <> 0 AND GroupKey = 0 AND Conflict = 0) OR (PortKey <> 0 AND GroupKey <> 0)) | PortKey | int NOT NULL DEFAULT 0 | PK, FK to dbo.MoxyPortfolio.PortKey |
| GroupKey | int NOT NULL DEFAULT 0 | PK, FK to dbo.MoxyGroup.GroupKey |
| ConditionID | int NOT NULL DEFAULT 0 | PK, FK to MxOm.TradeAwayFeeCondition. ConditionID |
| Conflict | bit NOT NULL DEFAULT 0 | * 0: portfolio’s  selector record inherits the same TradeAwayFee as Group selector record. * 1: portfolio’s selector record use different TradeAwayFee.   To ensure single inheritance, (PortKey, ConditionID) should be unique for Conflict = 0 AND PortKey <> 0 records. |
| MxOm.TradeAwayFeeSelector (A new table to store Trade Away Fee information for each selector) | SelectorID | int NOT NULL IDENTITY(1,1) | Selector unique identifier.  PK. |
| PortBaseKey | int NOT NULL DEFAULT 0 | AK1, FK to MxAcct.PortfolioBase.PortBaseKey.  It is equal to the UNION of PortKey and GroupKey in MxOm.TradeAwayFeeSelectorAssignment |
| ConditionID | int NOT NULL DEFAULT 0 | AK1, FK to MxOm.TradeAwayFeeSelector. ConditionID |
| TradeAwayFee | float NOT NULL DEFAULT 0.0 | Trade Away Fee for the given selector |
| UserDefText | nvarchar(max) NOT NULL DEFAULT '' | User defined text |
| UserDef1 | nvarchar(255) NOT NULL DEFAULT '' | Custom user defined field 1 |
| UserDef2 | nvarchar(255) NOT NULL DEFAULT '' | Custom user defined field 2 |
| UserDef3 | nvarchar(255) NOT NULL DEFAULT '' | Custom user defined field 3 |
| dbo.MoxyAllocation | TradeAwayFee | float NOT NULL DEFAULT 0.0 | Trade Away Fee |
| CommAndFeeLocalCost (change it to include TradeAwayFee) | float, computed column | BillComAmt + TktChrg + SecFee + Taxes + OtherFee + OtherFee2 + OtherFee3 + OtherFee4 + OtherFee5 + OtherFee6 + OtherFee7 + OtherFee8 + OtherFee9 + OtherFee10 + TradeAwayFee |
| MxOm.MoxyAllocation\_Audit | TradeAwayFee | float NOT NULL DEFAULT 0.0 | Trade Away Fee |
| dbo.MoxyOmnibus | ProRateTradeAwayFee | bit NOT NULL DEFAULT 0 | A flag to decide that Trade Away Fee is fixed or prorated for Omnibus trading. |

# Attribute Related

## Add TempTable – MxOmUsk.TAFCalc

File Position: Mxcrsp4Comm.sql Line748: dbo.pMxCommCreatePersistentTempTable

Usage: used to decide trade away fee selector and calculate the trade away fee for each allocation

## Functions and SPs

1. MxOm.\_fTAFWeight() - get the clause of Weight calculation
2. MxOm.mpGenTAFSelector - code-gen index and stored procedures when IsEnabled or Rank are changed in MxOm.SelectorHierarchy WHERE Type = 'TradeAwayFee'
3. MxOm.pUpdateTAFSelectorAttributes - enable/disbale or rank Trade Away Fee selector attributes.
4. MxOm.pGetTAFSelectorAttributes – get trade away fee selector attributes

# Selector Related

## Add TempTable – MxOmUsk.TAFSelector

File Position: Mxcrsp4Comm.sql Line748: dbo.pMxCommCreatePersistentTempTable

Usage: used to temporarily save trade away fee selector update info, it can help check conflict when assign groups trade away fee selector

## Views

Add view - MxOm.vTradeAwayFeeSelectorPortGroupAssignment

It is used to show group selector and portfolio selector mapping relationships.

## Functions and SPs

1. MxOm.pGetTAFSelectorFilterAttributeValues - get attributes value that used in trade away fee selector, it is used in filter trade away fee selector UI
2. MxOm.pGetTAFSelectorAttributesValues - Get attribute all value for trade away fee selector, it is used on Create/Edit selector UI
3. MxOm.pUpdateTAFSelector - Insert/Update Trade Away Fee selector, like pMxCommUpdateSelector. Here is steps.
   1. Parse XML and insert into MxOmUsk.TAFSelector
   2. Check if the inserted records duplicate, if yes, return
   3. If it is new condition, insert MxOm.TradeAwayFeeCondition
   4. If insert group, insert the group members into MxOmUsk.TAFSelector and mark 'I'
   5. If update group, if update PortfolioBase, insert old group members selector and mark 'D' then insert new group members selector and mark 'U'; if update condition/fee, insert group members selectors and mark 'U'
   6. Call MxOm.pTAFSelectorCheckConflicts to check conflict, it would update Result. If result in (8,4), it means the records are OK to save;
   7. Apply changes from staging table, include MxOm.TradeAwayFeeAssignment and MxOm.TradeAwayFeeSelector
      1. Insert MxOm.TradeAwayFeeAssignment with ActionCode = 'I' and GroupKey <> 0
      2. Update MxOm.TradeAwayFeeAssignment - Get selectors with different GroupKey/PortfolioKey/ConditionID, Delete old records and Insert new records
      3. Delete MxOm.TradeAwayFeeAssignment with ActionCode = 'U'
      4. Merge MxOm.TradeAwayFeeSelector when selectorID is matched then update else insert
      5. Delete MxOm.TradeAwayFeeSelector with ActionCode = 'D'
   8. Select Deleted records
   9. Clean MxOm.TradeAwayFeeCondition and MxOmUsk.TAFSelector
4. MxOm.\_pApplychangetoTAFSelector – a internal SP, used to apply changes in MxOmUsk.TAFSelector to MxOm.TradeAwayFeeSelector and MxOm.TradeAwayFeeSelectorAssignment
5. MxOm.\_pTAFSelectorCheckConflicts – a internal SP, used to check records in MxOmUsk.TAFSelector, to get if they conflict with current records in MxOm.TradeAwayFeeSelector, mark records to 2 if exist confliction.
6. MxOm.pTAFSelectorWriteConflictSolution - used to write users selected selectors for conflictions
7. MxOm.pTAFDeleteSelector – used to delete a selector
8. MxOm.pDeleteTAFSelectorinList - When portfolios removed from a group or remove a group's selector, and the group has Trade Away Fee Selector and the portfolio's parent is the group, UI would pop up a dialog to let users select selectors to remain; procedure is called after users check/uncheck portfolio selectors and click save

# Group Sync Related

## New Messages

--After Line 264 on MxSQL/moxycrmg.sql

--Moxy 23.1 Trade Away Fee add 3 messages

EXEC sp\_addmessage 60661, 16,'Success in assigning Trade Away Fee Selector - %s to %s via %s', @replace='replace'

GO

EXEC sp\_addmessage 60662, 16,'Success in deleting Trade Away Fee Selector - %s from %s via %s', @replace='replace'

GO

EXEC sp\_addmessage 60663, 16,'Success in updating Trade Away Fee Selector - %s for %s via %s', @replace='replace'

GO

## Functions and SPs

1. MxOm.pTAFSelector4GroupChange - This SP is called by MxSys.pSetGroupMember when groups have any members change(add/remove members), and the group have trade away fee selector assigned.
2. Modify MxSys.pSetGroupMember – add a logic, if the Group is not used by selector, return; if Group is used by TAFselector, call MxOm.pTAFSelector4GroupChange
3. Modify dbo.pMxGrpSetGroupNameGlobally - when deleting a group, we need to deal with its portfolio member's selector
   1. From UI, show portfolio member's trade away fee selector, let users select items that want to remain;
   2. From Import, delete its related portfolio members selector.

# Calculation

## New SP - MxOm.pCalculateTAF

It is used to calculate trade away fee for records in MxOmUsk.TAFCalc. it Assumes all records have been filled into MxOmUsk.TAFCalc

## Modify SP

1. dbo.\_pMxQAStageComputeCommissionsForAvgFill – it is used to compute commissions
   1. add inserting data into MxOmUsk.TAFCalc, call MxOmUsk.pCalculateTAF to calculate trade away fee, then update MxOmUsk.MoxyAllocation
2. \_pMxQAStageMultiCustAllocationsForOrder – it is used to prorate fee for multiple custodians.
   1. Add logic for trade away fee, it should be prorated same as otherfees

## Commit Allocation Related SPs

1. pMxUskSetAllocationByKey – it is used by AV when user clicks “Commit Order”
2. \_pMxInsertAlloc
3. \_pMxUpdateAlloc
4. \_pMxDeleteAlloc – the three SPs are used by Commit Quick Allocations for order, it is used to update dbo.MoxyAllocation.ValueBasis, dbo.MoxyPosistions.AllocValueBasis,…

## UI related SPs

1. pMxUskSelectAllocations – maybe used by AV to show results for “allocate”.
2. SelectAllocations - maybe used by AV to show results for “allocate”.
3. Order View>Allocations Tab
   1. SP - C:\KqiWorkspace\Moxy\_Master\MxSQL\PS\MxPScrsp4subj.sql\dbo. pMxPSPollAllocationRecords to get data, add 3 columns – [Alloc.CommAndFeeMarket], [Alloc.ValueBasisMarket], [Alloc.AllocCostNetMarket]
   2. Seeding Data - C:\KqiWorkspace\Moxy\_Master\MxSQL\PS\MxPScrsd.sql, add 3 records into MxPsFieldMetaData.