



Nasdaq Calypso

External Trades

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Approved

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Document History

Revision	Published	Summary of Changes
1.0	February 2024	First revision for version 18.

External Trades allow modeling and importing trades from an external system for back office purposes. Once the trades are defined and captured, you can import the cashflows using the Data Uploader, and the system allows generating confirmations and transfers.

There is no reset support. There is no Risk or Pricing computation. Valuation can be done using P&L marks.

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1. External Trades

You can configure and capture External Trades using the External Trade window (menu action `trading.TradeExternalTradeWindow`).

External Trades Quick Reference

When you open an External Trade window, the Trade tab is selected by default.

Configuring an External Trade

Prior to capturing external trades, you need to configure the fields that make up a given external trade by defining a context.

Entering Trade Details

- » You can select a template from the Template field to populate the worksheet with default values. Then modify the fields as applicable.
- Or you can enter the trade fields directly. They are described below.
- Note that the Trade Date is entered in the Details panel.
- » Proceed to the other panels as applicable.

Saving a Trade

- » Hit F5 to save the trade, or choose **Trade > Save**.
- You can also hit F3 to save the current trade as a new trade, or choose **Trade > Save As New**.
- A description will appear in the title bar of the trade worksheet, a trade id will be assigned to the trade, and the status of the trade will be modified according to the workflow configuration.


Pricing a Trade

- » You can choose **Pricing Env > Check** to check if all required pricing data are available in the Pricing Environment.
- » Click **Price** to price the trade.
- » Hit F9 to bring up the solver (or choose **Analytics > Solve**).

Trade Lifecycle

You can define trade lifecycle actions from the Actions tab.

1.1 Trade Tab

Trade		Details	Fees	Cashflows	Actions
Cpty	NONE	...	CounterParty	NONE	
Book	Global	...	Status	NONE	ID
			Template	NONE	
General					
SubType	Swap				
ExtendedType	NONE				
Currency	USD				
Product					
Context	External Swap  Edit				
Start Date					
End Date					
<input checked="" type="checkbox"/> Receive Leg					
Notional					
Rate Type					
Rate Formula					
<input checked="" type="checkbox"/> Pay Leg					
Notional					
Rate Type					
Rate Formula					
MarketData Pricer Params Results					
Val Date	03/16/2017	1:02:50 PM	Pricing Env	INTRADAY	
				Price	Close

1.1.1 Configuring External Trades

The Context window allows you to define fields that make up a given external trade. You can create as many types of external trades as you like by defining a Context.

Click **Edit** in the Product area to define a Context.

Context: External Swap
+ Add
✖ Remove
✎ Edit
↑ Up
↓ Down

Name	Type	Description	Mandatory
Start Date	JDatetime	Start Date	<input checked="" type="checkbox"/>
End Date	JDatetime	End Date	<input type="checkbox"/>
<input checked="" type="checkbox"/> Receive Leg	Category	Receive Leg Group	<input type="checkbox"/>
Notional	Amount	Notional	<input checked="" type="checkbox"/>
Rate Type	String	Rate Type	<input checked="" type="checkbox"/>
Rate Formula	String	Rate Formula	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Pay Leg	Category	Pay Leg	<input type="checkbox"/>
Notional	Amount	Notional	<input checked="" type="checkbox"/>
Rate Type	String	Rate Type	<input checked="" type="checkbox"/>
Rate Formula	String	Rate Formula	<input checked="" type="checkbox"/>

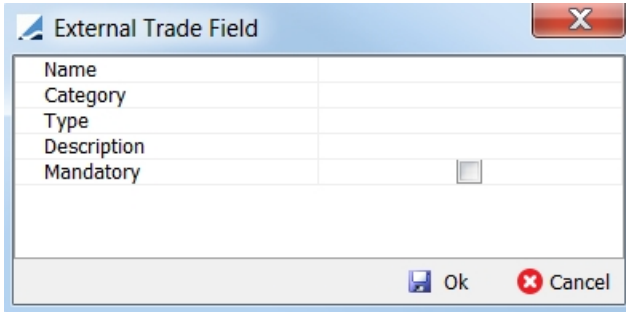
+ New
✎✖ Delete
💾 Save
💾+ Save As New

- » Click **Add** to open the Field Editor window. The fields are described below.
- » Repeat as needed for other fields.
- » Use the Up and Down arrows to move the fields.
- » Click **Save** to save any changes made to this Context.

Field Editor

Click **Add** to open the Field Editor Window and create a new Context Field with the following characteristics:

- Name
- Category
- Type
- Description
- Mandatory Flag



External Trade Field	
Name	
Category	
Type	
Description	
Mandatory	<input type="checkbox"/>

Ok Cancel

- » Enter a Name for the Field, such as "Start Date".
- » Select a Category as needed. Categories allow grouping during trade capture. See below for information on creating a Category.
- » Select a Type for the Field from the drop down list. For an appropriate "Start Date" Field, select "JDate" or "JDateTime".

Domain Value: You can enter the name of the domain that contains the available values.

Image: You can link to an image. The following formats are supported:

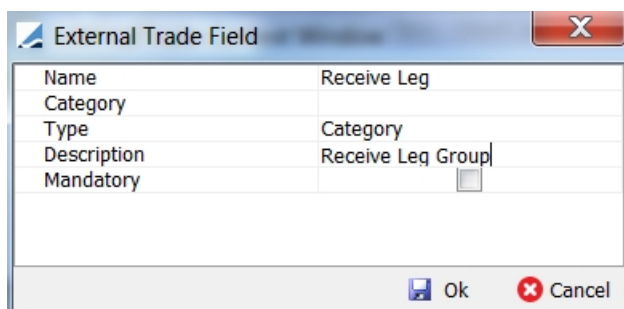
- A URL format, such as <https://www.calypso.com/images/logo.gif>
- A format starting with file:/// such as <file:///C:/Downloads/logo.gif>
- A notation pointing to Calypso resources starting with resource: such as <resource:com/calypso/templates/logo.gif>
- A notation pointing to an image stored in the Database (using the Image Repository window) starting with database: and the name of the file (e.g. <database:signature>).

List: (Multi-valued Field). The data type should be set in the List object type field.

Matrix: Multiple values can be displayed as a matrix. When selected, you should define:

- The number of columns in Number of Object Type
 - The data type of each column
- » Enter a Description of the Field.
 - » Check the box to decide if this should be a Mandatory Field or an optional Field.
 - » Click **Ok** to save the new Context Field, or click **Cancel** to cancel the creation of a new Context Field.

Creating a Category



Name	Receive Leg
Category	
Type	Category
Description	Receive Leg Group
Mandatory	<input type="checkbox"/>

Ok Cancel

To create a Category:

- » Select the "Category" Type.
- » Name the Category.
- » Click **Ok** to save this Category.

You can then add fields to that Category as described above.

Name	Type	Description
Start Date	JDatetime	Start Date
End Date	JDatetime	End Date
<input checked="" type="checkbox"/> Receive Leg	Category	Receive Leg Group
Notional	Amount	Notional
Rate Type	String	Rate Type
Rate Formula	String	Rate Formula

1.1.2 Capturing Trades

Trade Details

Fields	Description
Role/Cpty.	<p>The first two fields of the worksheet identify the trade counterparty.</p> <p>The first field identifies the trade counterparty's role. The default role is specified using Utilities > Set Default Role. However, you can change it as applicable.</p> <p>You can select a legal entity of specified role from the second field provided you have setup favorite counterparties. You can also type in a character to display the favorite counterparties that start with that character. Favorite counterparties are specified using Utilities > Configure Favorite Counterparties.</p> <p>Otherwise, click ... to select a legal entity of specified role from the Legal Entity Chooser. You can also type [Ctrl-F] to invoke the Legal Entity Chooser, or directly enter a Legal Entity short name.</p>
Book	<p>Trading book to which the trade belongs. Defaults to the book selected in the User Defaults. You can modify as applicable.</p> <p>You can select a book provided you have setup favorite books. Favorite books are specified using Utilities > Configure Favorite Books.</p> <p>Otherwise, click ... to select a book.</p>

Fields	Description
	The owner of the book (a processing organization) identifies your side of the trade.
Id Ext Ref Int Ref	<p>Unique identification number of the trade. The trade id is automatically assigned by the system when the trade is saved.</p> <p>You can also display the internal reference of external reference. The default trade reference can be selected in the User Defaults.</p> <p>You can load an existing trade by typing the trade id into this field, and pressing [Enter].</p> <p>The underlying trades are assigned a sub id.</p>
Status	<p>Current status of the trade. The status is automatically assigned by the system based on the workflow configuration.</p> <p>The status will change over the lifetime of the trade according to the workflow configuration and the actions performed on the trade.</p>
Template	<p>You can select a template from the Template field to populate the worksheet with default values. Then modify the fields as applicable.</p> <p>You can select a template provided you have setup favorite templates. Favorite templates are specified using Utilities> Configure Favorite Templates.</p>

General Panel: Trade Characteristics

The Trade characteristics are input through a dedicated panel called "General".

The panel contains three fields:

Fields	Description
SubType	<p>Select a SubType as needed. SubTypes can be defined in the domain "ExternalTrade.subtype".</p> <p>You can set pricers and market data by SubType.</p> <p>By default, the Product Type for External Trades is ExternalTrade. When setting the SubType, the Product Type is set to "ExternalTrade<SubType>". For example, if SubType = Swap, Product Type = ExternalTradeSwap.</p>
ExtendedType	<p>Select an ExtendedType as needed. ExtendedType can be defined in the domain "ExternalTrade.extendedtype".</p> <p>You can set pricers and market data by ExtendedType.</p>
Currency	Select the trade currency.

Product Panel: Product Characteristics

Select a context from the Context field, and enter the fields corresponding to the selected context. The fields depend on what you have configured in the Context window.

You can then save the trade and proceed to the other panels as applicable.

1.2 Capturing Cashflows

You can enter cashflows manually or import cashflows using the Data Uploader.

► Please refer to Calypso Data Uploader documentation for information on importing External Trade cashflows.

ExternalTrade/Power Reverse (64801) - PO is Default Processing Organisation (89434) - Version : 0 Mod User : (calypso_user) [151000/Release_BO]

Trade Back Office ExternalTrade Analytics Pricing Env Market Data View Utilities Help

Trade Details Fees Cashflows Actions

Edit Flows

+ Add - Remove Duplicate

Type	Start Date	End Date	Payment Date	Amount	Currency
PRINCIPAL	07/07/2014	07/07/2014	07/07/2014	1,000,000,000	JPY
PRINCIPAL	07/07/2014	07/07/2014	07/07/2014	-7,490,000	USD
INTEREST	07/07/2013	10/07/2013	10/07/2013	-7,115.5	USD
INTEREST	10/07/2013	01/07/2014	01/07/2014	-7,078.05	USD
INTEREST	01/07/2014	04/07/2014	04/07/2014	-6,872.08	USD
INTEREST	04/07/2014	07/07/2014	07/07/2014	-6,553.75	USD
INTEREST	07/07/2013	07/07/2014	07/07/2014	2,722,881	JPY

Name Value

Type PRINCIPAL

Fixed ☐

Payment Date 07/07/2014

Payment Amount 1,000,000,000

Payment Currency JPY

Start Date 07/07/2014

End Date 07/07/2014

Reset Date

FX Rate 1

FX Reset Date

Option Type None

Floor 0

Cap 0

Notional 1,000,000,000

Notional Currency JPY

Rate 0

Rate Index

Factor 0

Spread 0

Daycount 30/360

Compounded ☐

Generate Flows

Report Data View Export

Trade Id	Flow Product Description	Pay/Rcv	Cash Flow Type	Pmt Begin	Pmt End	Cash Flow Date	Cash Flow Amount	Cash Flow Ccy	Manual Amount	Interest Amt	Cash Flow Notional	Final Rate	Cash Flow Fixed Rate
89434	ExternalTrade/Power Reverse (64801)	Pay	INTEREST	07/07/2013	10/07/2013	10/07/2013	(7,115.50)	USD	<input checked="" type="checkbox"/>	(7,115.50)	7,490,000.00	0.380	
89434	ExternalTrade/Power Reverse (64801)	Pay	INTEREST	10/07/2013	01/07/2014	01/07/2014	(7,078.05)	USD	<input checked="" type="checkbox"/>	(7,078.05)	7,490,000.00	0.378	
89434	ExternalTrade/Power Reverse (64801)	Pay	INTEREST	01/07/2014	04/07/2014	04/07/2014	(6,872.08)	USD	<input checked="" type="checkbox"/>	(6,872.08)	7,490,000.00	0.367	
89434	ExternalTrade/Power Reverse (64801)	Receive	PRINCIPAL	07/07/2014	07/07/2014	07/07/2014	1,000,000,000	JPY					
89434	ExternalTrade/Power Reverse (64801)	Pay	PRINCIPAL	07/07/2014	07/07/2014	07/07/2014	(7,490,000.00)	USD					
89434	ExternalTrade/Power Reverse (64801)	Pay	INTEREST	04/07/2014	07/07/2014	07/07/2014	(6,553.75)	USD	<input checked="" type="checkbox"/>	(6,553.75)	7,490,000.00	0.350	
89434	ExternalTrade/Power Reverse (64801)	Receive	INTEREST	07/07/2013	07/07/2014	07/07/2014	2,722,881	JPY	<input checked="" type="checkbox"/>	2,722,881	1,000,000,000	2.722	

1.2.1 Edit Flows Panel

The Edit Flows panel shows the entered / imported trade flows:

- Type
- Start Date
- End Date
- Payment Date
- Amount
- Currency


When a row is highlighted in the panel, the trade flow details will be displayed in the Input panel on the right.

The rows are sorted by ascending Payment Date and Type (PRINCIPAL, then INTEREST, COMMODITY, DIVIDEND, PRICE_CHANGE).

- » Click **Add** to create a new row with the following values:
 - Type = INTEREST
 - Payment Date = Current Date
 - Payment Currency = Trade Currency
 - Payment Amount = 0
- » Edit these values in the Input panel.
- » You can click **Duplicate** to clone the selected row with the following changes only:
 - Start Date = duplicated Cash Flow End Date if set.
 - End Date = Start + number of Days between duplicated Cash Flow End Date and Start Date if set.
 - Payment Date = duplicated End Date if set; otherwise, duplicated Cash Flow Payment Date.

1.2.2 Input Panel

The Input panel is used to set the values of the trade flows.

- » Select a flow type from the drop down list, which will determine the other values below.
- » Enter in all remaining values. You will be notified if there is a required value that you have not entered.
- » Your changes will automatically update in the Edit Flows panel.
- » Click  to generate the standard Cash Flows based on the input trade flows.

1.3 Defining Actions

You can define the following actions for External Trades:

- Notional Increase
- Rerate
- Reprice
- Termination
- Novation

These actions are for informational purposes only.

Trade	Details	Fees	Cashflows	Actions					
Edit Actions									
+ Add ✖ Remove ↻ Update									
Action	Agreement Date	Effective Date	Action Amount	Currency	Termination Reason	Termination Type	FFCP Option	Transferor	Transferee
Notional Increase	03/09/2017	03/10/2017	1000000.0	USD					
Termination	03/09/2017	03/16/2017	1000.0	USD		Full	<input checked="" type="checkbox"/>		

Name	Value
Action Type	Termination
Agreement Date	03/09/2017
Effective Date	03/16/2017
Amount	1,000
Currency	USD
Termination Reas...	
termination Type	Full
FFCP Option	<input checked="" type="checkbox"/>

1.3.1 Edit Actions Panel

The Edit Actions panel shows all the actions that have been applied to the trade.

- » Click on **Remove** to remove the selected Action from the list.
- » Click on an Action to edit its values in the Input panel on the right.
- » Click on **Update** to update the list to reflect any values you have changed in the Input panel.

1.3.2 Input Panel

Use the Input panel to enter in all details of Actions you wish to create.

- » Select an Action Type from the drop down list, which will determine the other available values below.
- » Enter in all remaining values. You will be notified if there is a required value that you have not entered.
- » Click on **Add** to add this new Action to the list in the Edit Actions panel.

Notional Increase

You can increase the notional amount using the Notional Increase action.

Name	Value
Action Type	Notional Increase
Agreement Date	03/10/2017
Effective Date	03/13/2017
Amount	1,000
Currency	USD

- » Enter the amount of notional in the Amount field.

Rerate

You can change the rate of the trade using the Rerate action.

Name	Value
Action Type	Rerate
Agreement Date	03/10/2017
Effective Date	03/13/2017
Rate	1,000

- » Enter the new rate in the Amount field.

Reprice

You can change the price of the trade using the Reprice action.

Name	Value
Action Type	Reprice
Agreement Date	03/10/2017
Effective Date	03/13/2017
Amount	1,000
Currency	USD

- » Enter the new price in the Amount field.

Termination

You can terminate the trade using the Termination action.

Name	Value
Action Type	Termination
Agreement Date	03/10/2017
Effective Date	03/13/2017
Amount	1,000
Currency	USD
Termination Reason	Canceled
termination Type	Full
FFCP Option	<input checked="" type="checkbox"/>

- » Enter the termination amount, termination reason, select the termination type (full or partial), and select the FFCP option as needed (Full First Calculation Period. Used in the case of partial termination to determine the Xfer Trade Date and Pmt Begin Date on the first cashflow of the new trade).

Novation

You can novate the trade using the Novation action.

Name	Value
Action Type	Novation
Agreement Date	03/10/2017
Effective Date	03/13/2017
Amount	1,000
Currency	USD
Novation Type	Full
Transferor	CANAL BARGE CO
Transferee	CLS BANK

- » Enter the novation amount, and select the novation type (full or partial), the transferor (the party that terminates the trade), and the transferee (the new party).

1.4 Trade Processing

1.4.1 Workflow

Two specific TradeRules can be used for External Trades:

- CheckMandatoryFields: Checks if all Product Properties set as Mandatory have been filled. If not, an Exception is raised.
NB: for manual input, a Trade Validator is implemented preventing the Trades with empty Mandatory Fields to be saved.
- CheckCustomFlows: Checks if Trade Flows have been set on the Trade. If not, an Exception is raised.

Below is a Workflow example:

Orig Status	Action	Result Status	Create Task	Use STP	Rules
VERIFIED	CANCEL	CANCELED	On Failure	FALSE	
PENDING_CF	AUTH_NO_CF	VERIFIED	On Failure	FALSE	
PENDING_CF	AMEND	PENDING	On Failure	FALSE	
PENDING	EXECUTE	PENDING_CF	On Failure	TRUE	
PENDING_CF	CHECK_FLOWS	TO_CHECK	On Failure	TRUE	CheckCustomFlows
NONE	NEW	PENDING	On Failure	FALSE	
TO_CHECK	AUTHORIZE	VERIFIED	On Failure	FALSE	CheckSDI

Orig Status	Action	Result Status	Create Task	Use STP	Rules
VERIFIED	AMEND	PENDING	On Failure	FALSE	
PENDING_CF	SET_FLOWS	PENDING_CF	On Failure	FALSE	
TO_CHECK	AUTHORIZE_STP	VERIFIED	On Failure	TRUE	CheckMandatoryFields, CheckSDI

1.4.2 Messaging

Message Setup

A dedicated Template `external_trade.html` has been created for External Trades and can be used in the Message Setup.

Product Type	ExternalTrade	Language	English
Event Type	VERIFIED_TRADE	Address Type	MAIL
Message Type	CONFIRM	Gateway	PRINTER
Processing Org	ALL	Format Type	HTML
PO Contact Type	Operation	Template	external_trade.html
Receiver	ALL	SD Filter	
Receiver Role	CounterParty	Audit Filter	
Rec Contact Type	Operation		
Grouping		<input type="checkbox"/> Matching	<input type="checkbox"/> Inactive
		<input type="checkbox"/> Do not Send Message	
Config Id	133202	Delete	Save
		Save As New	

Message Keywords

The following specific Message Keywords can be used to build your own Templates:

- "Iterator ExternalTradeField": Display all Trade Properties.
- "REPORT#Context [Context Name].[Field Name]": Display one specific Trade Property.
- "REPORT#Context [Context Name].[Category Name]:[Field Name]": Display one specific Trade Property Category.
- "Iterator ExternalTradeAction": Display all Actions.
- "LatestExternalTradeAction": Display the LATEST Action.

1.4.3 Valuation

External Trades rely on PricerFromDB to retrieve the Pricer Measures imported from external systems.

The usage of PLMarks (pricing parameter USE_MARKS=True) is recommended.

1.4.4 Accounting

The following Accounting Events are supported for External Trades.

Trade Based Events

Accounting Event	Description	Booking Date	Effective Date	Amount
NOM_TD	To book the notional on Trade Date	Entered Date	Trade Date	Notional
NOM_TD_REV	To book the reverse of notional on Start Date	Entered Date	Start Date	Notional
NOM_SD	To book the notional on Start Date	Entered Date	Start Date	Notional
NOM_MAT	To book the notional at maturity	Entered Date	Maturity Date	Notional
NOM_CHG	To book the notional change (Increase + Decrease)	Entered Date	Notional change amount Date (from CF)	Notional change amount.
INTEREST	To book Interest amounts	Entered Date	Payment Date (from CF)	Interest Flow Amount
DIVIDEND	To book Dividend amount	Entered Date	Payment date (from CF)	Dividend Flow amount
COMMODITY	To book Commodity amount	Entered Date	Payment date (from CF)	Commodity Flow amount
PRINCIPAL	To book Principal amount	Entered Date	Payment date (from CF)	Principal Flow amount
PRICE_FIXING	To book Price Change amount	Entered Date	Payment date (from CF)	Price Change Flow amount
FULL_COUPON	To book Coupon amount	Entered Date	Payment date (from CF)	Coupon amount

Transfers Based Events

Accounting Event	Description	Booking Date	Effective Date	Amount
CST	To book actual cash payments	Entered Date	Settle Date	Real settlement amount

Accounting Event	Description	Booking Date	Effective Date	Amount
CST_NET	To book actual cash payments (Netted Transfers with NET Event Property)	Entered Date	Settle Date	Real settlement amount
CST_UNNET	To book actual cash payments (Netted Transfers with UNNET Event Property)	Entered Date	Settle Date	Real settlement amount

Valuation Related Events

Accounting Event	Description	Booking Date	Effective Date	Amount
DAILY_VALUATION	To book daily Pricer Measures	Entered Date	Valuation Date	Pricer measure amounts One Event per PM
MTM_FULL MTM_ PAYLEG MTM_RECLEG	To book NPV-related Pricer Measures	Entered Date	Valuation Date	Pricer measure amounts One Event per PM
ACCRUAL ACCRUAL_PAYLEG ACCRUAL_RECLEG	To book ACCRUAL-related pricer measures	Entered Date	Valuation Date	Pricer measure amounts One Event per PM

1.4.5 Report

All Contexts and Product Properties are available in Reports under Product \ ExternalTrade.

