



Nasdaq Calypso

FX Lifecycle

Version 18

Revision 1.0

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Approved

1. FX Lifecycle

You may roll over, roll back or terminate an FX trade.

- Rollover trades - your corporate client may not want to deliver on the value date as specified in the contract. You can agree to a new value date to extend the contract for another term. When you rollover the original trade, a new trade is created, which is an FX Swap. For the FX Swap, you can use the current market rate when processing the rollover. You can also use the exchange rate on the original trade as the base for the exchange rate on the forward leg; this is a Historical Rate Rollover (HRR).
- Rollback trades - your corporate client may want to deliver earlier than the value date specified in the contract. You can agree to a new value date to bring back the trade. When you rollback the original trade, a new trade is created, which is an FX Swap. You can use the current market rate or the historical rate.
- The termination process for FX trades rolls back the forward position to the spot date through a roll back (HRB) trade. A spot trade window displays, allowing you to enter a spot trade to cancel out the spot position.

1.1 FX Lifecycle Trade Keywords

The following trade keywords attach to the trades. For these keywords to be displayed in the Deal Station window, you must designate them in the Deal Capture Preferences window which is displayed from the Deal Station Title Bar.

The Rollover or Rollback trade contains the following trade keywords:

- RolledOverTo or RolledBackTo (specifies the trade ID of the FX Swap extension trade)
- NegotiatedCurrency

Trade routing keywords can be copied from the parent trade during a rollover or rollback by entering them in the *keywords2CopyUponRolloverAndRollback* domain. For example, to copy the Trade Region, add *TradeRegion* to the domain. If values such as *TradeRegion* or *TradePlatform* are not added to this domain, trade routing will be based on book attributes.

The FX Swap trade contains the following keywords:

- FXRollOverFarFwdPt (the forward points for the far leg)
- FXRollOverNearFwdPt (the forward points for the near leg)
- OrigTrade (the trade ID of the rollover or rollback trade)
- OrigTradeDt (the trade date of the rollover or rollback trade)
- FXTerminationTradeDate
- FXTerminationDate
- TerminationReason

- TerminationType

When using a Historic Rate Rollover, additionally the following keywords are populated:

- FXHRRFundingIntRate
- FXHRRFundingPtPips
- FXHRRHistoricalRate
- FXHRRFirstRollDt

When terminating a trade, the following keywords are set on the rollback trade:

- FXRolloverFarFwdPt
- FXRollOverNearFwdPt
- FXHRRFundingIntRate
- FXHRRFundingPtPips
- FXHRRHistoricalRate
- FXTerminatePosTo (on the swap trade, trade id of close out trade)
- FXTerminatePosOrigin
- FXTerminatePosFrom
- NegotiatedCurrency
- OrigTrade
- OrigTradeDt
- RatesPrecision
- RolledBackFrom (the initial trade which has been rolled back)

When terminating a trade, the following keywords are set on the initial trade:

- FXPricingEnv
- FXTerminatePosDest (trade id of the closeout trade)
- NegotiatedCurrency
- RatesPrecision
- RolledBackTo (is the rollback trade, the spot position)
- FXTerminationTradeDate
- FXTerminationDate
- TerminationReason
- TerminationType

NOTE: The keywords FXTerminationTradeDate, FXTerminationDate, TerminationReason and TerminationType are updated for FX termination related FX Swap and position offset FX Spot trades when they are being created. When multiple partial termination actions are applied on the same trade, the contents are stacked in these keywords of the original trade and the keywords are propagated to the associated FX Swap trade and the position offset FX Spot trade.

If an undo termination is applied, the related information is removed from the keywords in the original trade and the valid ones are left.

1.2 Workflow Setup

You need the following transitions on the trade workflow:

VERIFIED - ROLLBACK - ROLLED

ROLLED - ROLLOVER - ROLLED

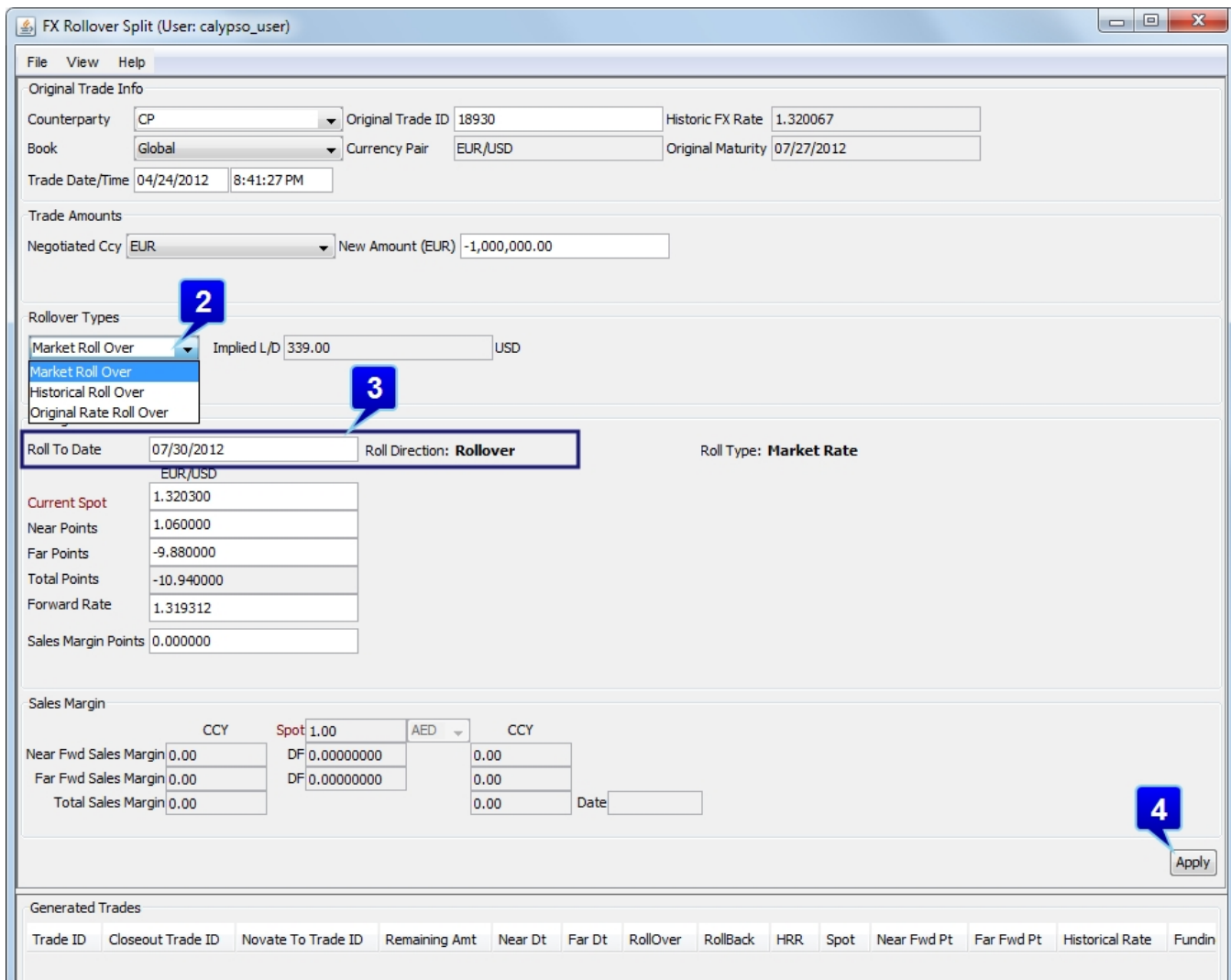
ROLLED - ROLLBACK - ROLLED, Reject rule

Netting

The RollOver netting type can be used to net together the rolled over trade and the new trade.

It should not contain the product type as for FX Forwards, the new trade is FX Swap. Otherwise, the rolled over trade and the new trade will not be netted together.

1.3 Processing Rollovers & Rollbacks



FX Rollover Split (User: calypso_user)

File View Help

Original Trade Info

Counterparty: CP Original Trade ID: 18930 Historic FX Rate: 1.320067

Book: Global Currency Pair: EUR/USD Original Maturity: 07/27/2012

Trade Date/Time: 04/24/2012 8:41:27 PM

Trade Amounts

Negotiated Ccy: EUR New Amount (EUR): -1,000,000.00

Rollover Types

Market Roll Over Implied L/D: 339.00 USD

Market Roll Over

Historical Roll Over

Original Rate Roll Over

Roll To Date: 07/30/2012 Roll Direction: **Rollover** Roll Type: **Market Rate**

EUR/USD

Current Spot: 1.320300

Near Points: 1.060000

Far Points: -9.880000

Total Points: -10.940000

Forward Rate: 1.319312

Sales Margin Points: 0.000000

Sales Margin

CCY: Spot: 1.00 AED: CCY:

Near Fwd Sales Margin: 0.00 DF: 0.00000000 0.00

Far Fwd Sales Margin: 0.00 DF: 0.00000000 0.00

Total Sales Margin: 0.00 0.00 Date:

Apply

Generated Trades

Trade ID	Closeout Trade ID	Novate To Trade ID	Remaining Amt	Near Dt	Far Dt	RollOver	RollBack	HRR	Spot	Near Fwd Pt	Far Fwd Pt	Historical Rate	Fundin
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Follow these steps to extend a trade:

Step 1 - Open the trade that you would like to rollover or rollback. Select **FX > Trade Rollover** from the Deal Station Title Bar.

Step 2 - Select the Rollover Type: Market Roll Over, Historical Roll Over or Original Roll Over.

- Market Roll Over - Use current market rate
- Historical Roll Over - Use the exchange rate on the original trade as the base for the exchange rate on the forward leg
- Original Rate Rollover - Pay just the forward points to rollover the trade

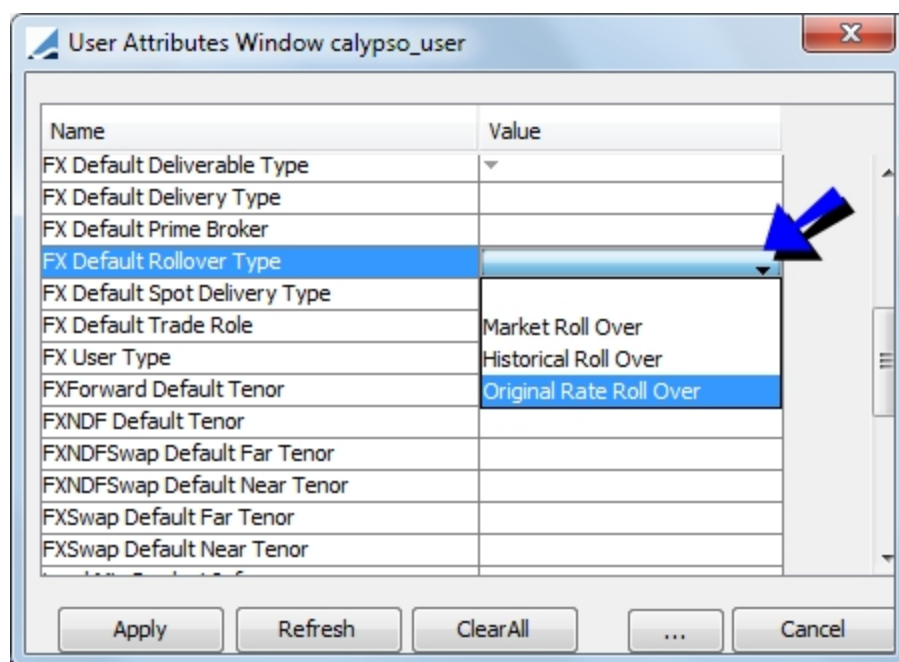
Step 3 - Enter the value date for the new trade in the Roll To Date field. The date entered determines if you are doing a rollback or a rollover.

Step 4 - Modify any fields you wish to and click **Apply**.

[NOTE: The rollover amount in total cannot exceed the outstanding trade amount]

When performing partial rollovers, to prevent rolling over more than the outstanding amount, you can add the “rolled over” status to the domain “tradeRolloveredStatus” – For example ROLLED. Make sure that this corresponds to the status configured in the workflow.

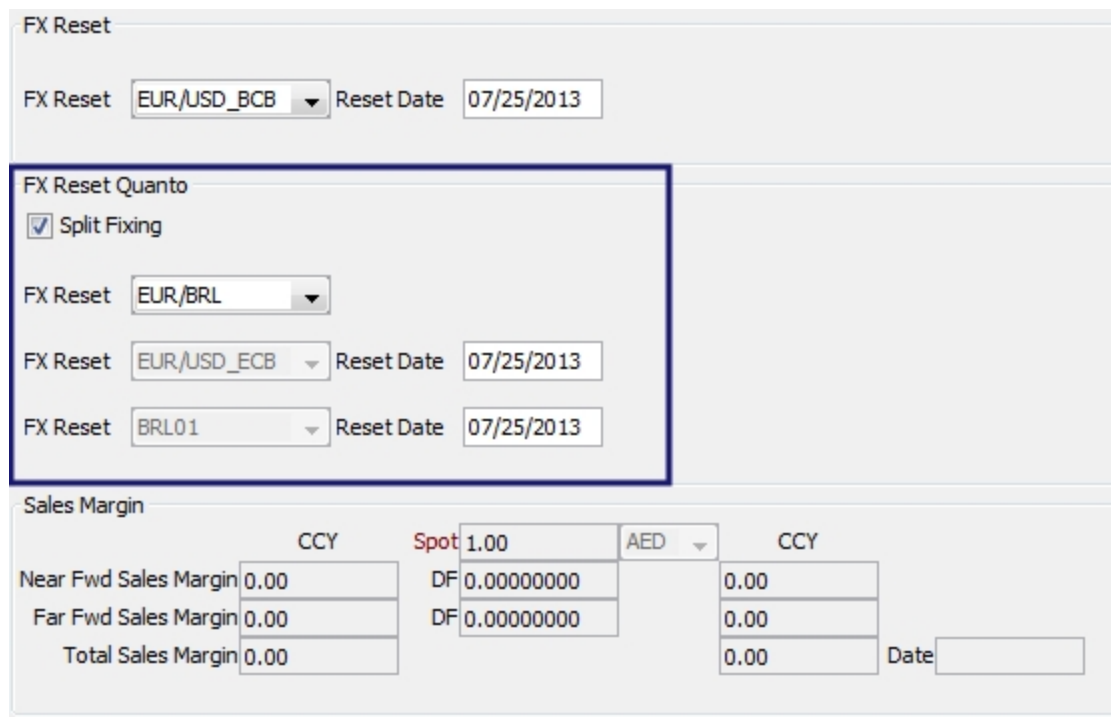
You may set the roll type in the User Defaults window so that the specific roll type is applied to the FX Rollover Split window whenever you open the Deal Station window (**Configuration > User Access Control > User Defaults**).



[NOTE: The Sales Margin Panel uses the Current Spot Rate for margin calculation and displays the Current Spot Rate only irrespective of Rollover or Rollback]

1.3.1 Third Currency Quanto Rollovers & Terminations

When a quanto currency is used for an FXNDF trade, an additional area is available on the Rollover or Termination window allowing you to edit reset information for the quanto currency.



FX Reset

FX Reset: EUR/USD_BCB Reset Date: 07/25/2013

FX Reset Quanto

☒ Split Fixing

FX Reset: EUR/BRL

FX Reset: EUR/USD_ECB Reset Date: 07/25/2013

FX Reset: BRL01 Reset Date: 07/25/2013

Sales Margin

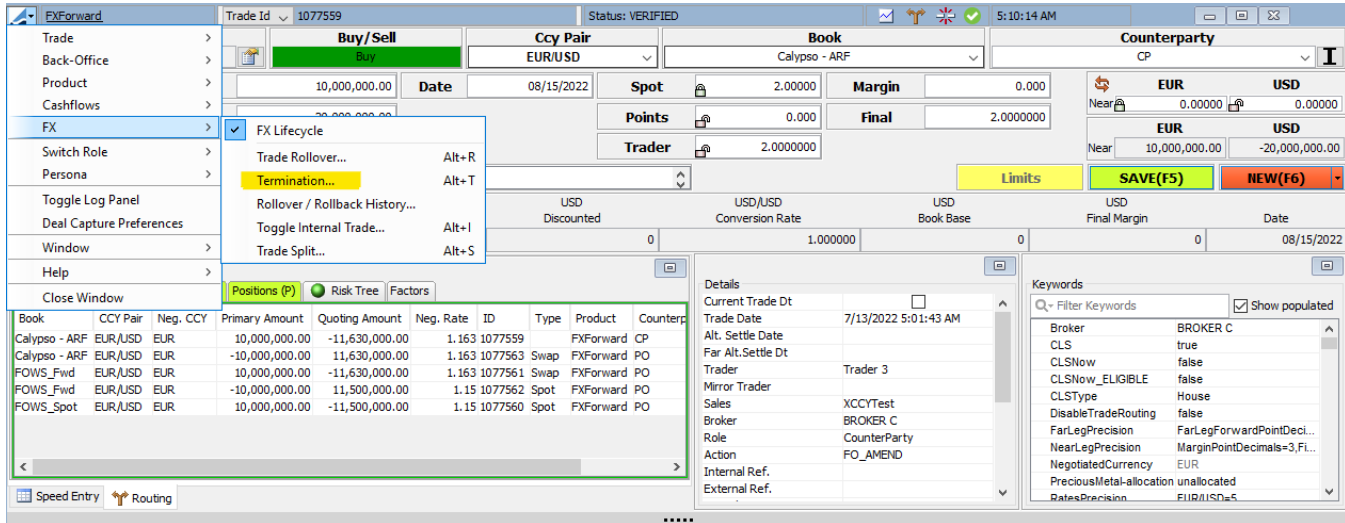
	CCY	Spot	DF	CCY	Date
Near Fwd Sales Margin	0.00	1.00	0.00000000	0.00	
Far Fwd Sales Margin	0.00		0.00000000	0.00	
Total Sales Margin	0.00			0.00	

1.4 Terminating a Trade

An FX transaction may be terminated before the settlement date. The termination process for FX trades rolls back the forward position to the spot date through a roll back (HRB) trade. In order to handle the risk of terminating an FX trade and offsetting the appropriate positions, a spot trade window displays allowing you to enter a spot trade to cancel out the spot position. This is called a Termination - Buyback. There is also another process called Termination - Novation. Counterparty novation is a form of transferring the entire position from one counter party to another counterparty.

Below is an example of how to conduct a termination.

Step 1 - Open the trade that you would like to terminate. Select **FX > Termination** from the Deal Station Title Bar.



The screenshot shows the Nasdaq Calypso FX Lifecycle interface. The 'FX Lifecycle' menu is open, and the 'Termination...' option is selected. The interface displays various fields for trade details, including Trade ID (1077559), Ccy Pair (EUR/USD), Book (Calypso - ARF), and Counterparty (CP). A table at the bottom shows trade details for different products and currencies.

Book	CCY Pair	Neg. CCY	Primary Amount	Quoting Amount	Neg. Rate	ID	Type	Product	Counterparty
Calypso - ARF	EUR/USD	EUR	10,000,000.00	-11,630,000.00	1.163	1077559	Swap	FXForward	CP
Calypso - ARF	EUR/USD	EUR	-10,000,000.00	11,630,000.00	1.163	1077563	Swap	FXForward	PO
FOWS_Fwd	EUR/USD	EUR	10,000,000.00	-11,630,000.00	1.163	1077561	Swap	FXForward	PO
FOWS_Fwd	EUR/USD	EUR	-10,000,000.00	11,500,000.00	1.15	1077562	Spot	FXForward	PO
FOWS_Spot	EUR/USD	EUR	10,000,000.00	-11,500,000.00	1.15	1077560	Spot	FXForward	PO

Step 2 - Select a reason for the Termination:

- Buy Back - completely terminating the FX transaction.
- Novation - transferring entire position from one counterparty to another.

Enter any additional information for the termination and click **Terminate**.

FX Termination

File View Help

Original Trade Info

Counterparty CP Original Trade ID 1077559 Historic FX Rate 1.1630000
Book Calypso - ARF Currency Pair EUR/USD Original Maturity 08/15/2022
Trade Date/Time 07/13/2022 5:46:12 AM

Trade Amounts

Negotiated Ccy EUR New Amount (EUR) -1,000,000.00

Termination

Reason BuyBack

Rollover Types

Historical Roll Over Implied L/D -698.80 USD
Funding Rate(%) 0.50467779 USD Funding Margin 0.00000000 Total Funding Rate 0.50467779

Pricing Info

Termination Date 07/15/2022 Roll Direction: **Rollback** Roll Type: **Historic Rate**
EUR/USD

Current Spot 1.1501000 Customer Near Rate 1.1497985

Near Points 0.0000000 Customer Near Pts 0.0000000
Far Points 122.0120000 Customer Far Pts 122.0149377
Total Points 132.0150000 Customer Total Pts 132.0149377
Forward Rate 1.1623012 Customer Far Rate 1.1630000
Funding Points 0.003 Closeout Amount 301.50 USD
Sales Margin Points 10.0000000

Sales Margin

USD Spot 1.00000 USD
Near Fwd Sales Margin 1,000.00 DF 1.00000000 1,000.00
Far Fwd Sales Margin 0.00 DF 0.00000000 0.00
Total Sales Margin 1,000.00 1,000.00 Date 07/15/2022

Spot Rate Info

☐ Book Spot Trade Simultaneously

Terminate

Generated Trades

Trade ID	Closeout Trade ID	Novate To Trade ID	Remaining Amt	Near Dt	Far Dt	RollOver	RollBack	HRR	Spot	Near Fwd Pt	Far Fwd Pt	Historical Rate	Fundin
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Step 3 - A new Swap trade is created. The far leg of the swap will offset the old forward trade. The near leg of the swap will offset the new Spot trade.

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Book	CCY Pair	Neg. CCY	Primary Amount	Quoting Amount	Neg. Rate	ID	Type	Product	Counterparty	Settle Dt
Calypso - ARF	EUR/USD	EUR	1,000,000.00	-1,149,798.50	1.1497985	1077564	FXSwap	CP	07/15/2022	
Calypso - ARF	EUR/USD	EUR	-1,000,000.00	1,150,798.49	1.15079849377	1077566	Swap	FXForward	PO	
Calypso - ARF	EUR/USD	EUR	1,000,000.00	-1,162,999.99	1.16299999377	1077568	Swap	FXForward	PO	
FOWS_Fwd	EUR/USD	EUR	-1,000,000.00	1,162,999.99	1.16299999377	1077565	Swap	FXForward	PO	
FOWS_Fwd	EUR/USD	EUR	1,000,000.00	-1,150,798.49	1.15079849377	1077567	Swap	FXForward	PO	

A new Spot trade is created. You are prompted to save the new Spot trade in order to offset the near leg of the Swap. Save the Spot trade in order to fully terminate the trade.

The status of the initial trade moves to ROLLED.

Generated Trades																
Trade ID	Closeout Trade ID	Novate To Trade ID	Remaining Amt	Near Dt	Far Dt	RollOver	RollBack	HRR	Spot	Near Fwd Pt	Far Fwd Pt	Historical Rate	Funding Rate	Funding Pt	Margin	Near All In Rate
1077564	1077569	0	1,000,000.00	07/15/2022	08/15/2022	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.15010	0.000	122.012	1.16300	0.50467779	0.00293767	10	1.1497985
1077574	1077583	0	869,728.27	07/15/2022	08/15/2022	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.15010	0.000	122.012	1.16300	-0.37514638	0.14377321	10	1.1497984

1.4.1 Novation - Termination

Novation is a form of transferring the entire position from one counterparty to another counterparty. Similar to a Buy Back Rollback, the full amount of the trade is terminated and the new trade has a new counterparty. When you select Novation as the termination reason, you may then select the new counterparty for the trade.

A new swap trade is generated from the termination and the original trade status moves from VERIFIED to ROLLED. A new spot trade is generated from the FX Termination that is known as the close out trade. The difference with a novation termination is that there is no warning message to save the spot trade. It is automatically saved.

1.4.2 Summary of Trades

Below is an example of how a rolled over trade appears in the Trade Browser.

(User: calypso_user) Trade Browser User: calypso_user[Trade Browser]									
Report Data View Export Market Data Process Utilities Help									
Trade Id	Product Description	Quantity	SettlementAmount	Ccy Pair	TradeStatus	PosDes	RolledBackFrom	RolledBackTo	OrigTrade
1721	FX/EUR/USD	(2,000,000.00)	2,896,800.00	EUR/USD	VERIFIED				
1720	FXSwap/EUR/USD/02/22/2011/03/01/2011	2,000,000.00	(2,890,000.00)	EUR/USD	VERIFIED		1719		1719
1719	FXForward/EUR/USD	2,000,000.00	(2,893,928.00)	EUR/USD	ROLLED_OVER	1721		1720	

1.4.3 FX Rollover Field Descriptions

Original Trade Info

Field	Description
Counterparty	Counterparty for the original trade
Original Trade ID	The trade Id for the original trade
Historic FX Rate	The rate used in the original trade
Book	The book for the original trade
Currency Pair	Currency pair for the original trade
Original Maturity	Settle date for the original trade
Trade Date / Time	Current trade date and time for the newly rolled swap trade

Trade Amounts

Field	Description
Negotiated Ccy	The desired currency of the position to be rolled
New Amount (neg ccy)	Amount of the position, in negotiated currency, which is to be rolled

Rollover Types

Field	Description
Rollover Types	Select the desired rollover type: <ul style="list-style-type: none"> Market Roll Over - use current market rate Historical Roll Over - use the exchange rate on the original trade as the base for the exchange rate on the forward leg

Field	Description
	<ul style="list-style-type: none"> Original Rate Rollover - pay just the forward points to rollover the trade
Implied L/D	The implied loss and gain for the customer if the rollover or rollback position is applied.

Pricing Info

Field	Description
Roll to Date	The date to which the original trade will be rolled. When this date is after the settle date of the original trade, the rollover action is applied. When this date is before the settle date of the original trade, the rollback action is applied.
Roll Direction	This displays either Rollover or Rollback, depending on the Roll to Date.
Roll Type	The calculation method used to roll the trade.
Current Spot	The spot rate generated from the market data when a rollover action is applied
Near Points	The near forward points of the original trade
Far Points	The far forward points generated from the market data
Total Points	Far Points minus Near Points
Forward Rate	Customer Far Rate minus Customer Near Rate
Near/Far Margin Points	The sales margin from the original trade (Note: select View > Dual Sales Margin to view the Far Margin Points.)

Sales Margin

Field	Description
Near Fwd Sales Margin	The sales margin that is applied to the near leg of the newly rolled swap trade
Far Fwd Sales Margin	The sales margin that is applied to the far leg of the newly rolled swap trade
Total Sales Margin	The total sales margin that is applied to the newly rolled swap trade
Date	The date when the sales margin will be applied to the newly rolled swap trade

Spot Rate Info

Book Spot Trade Simultaneously - When selected, the closeout trade will be saved automatically without manual intervention. This checkbox is false by default. It can be set to default to true using the *FX Termination Book Spot Trade Simultaneously* attribute in the User Defaults window.

Results

The following table describes the fields in the Rollover Window for the results. You cannot edit these fields.

Field	Description
Trade ID	Specifies the Trade Id of the extension trade. Double-click to open the trade.
Closeout Trade ID	The trade ID of the trade to close out the position when the novation method is applied for termination action. Double-click to open the trade.
Novate to Trade ID	The trade ID of the novation trade when the novation method is applied for termination action. Double-click to open the trade.
Remaining Amt	The remaining amount of the neg ccy position of the original trade
Near Dt.	Settle date of the near leg of the newly created swap trade
Far Dt	Settle date of the far leg of the newly created swap trade
RollOver	When this box is checked, the trade is a rollover.
RollBack	When this box is checked, the trade is a rollback.
HRR	If this box is checked, the HRR method is applied to the trade.
Spot	The spot rate generated from market data when the trade was rolled.
Near Fwd Pts	Forward points of the near leg of the newly created swap trade.
Far Fwd Pts	Forward points of the far leg of the newly created swap trade.
Historical Rate	The final rate of the original trade
Funding Rate	Interest rate of the negotiating currency that is used to calculate HRR
Funding Pt	These points are calculated by the system. They absorb the gain and loss of the customer when the HRR method is applied.
Margin	The sales margin that is applied for the leg that is rolled in the newly created swap trade
Near All In Rate	The near all in rate in the newly created swap trade
Far All In Rate	Far all in rate in the newly created swat trade
Near Amt	Near leg amount of the negotiated currency in the newly created swap trade.
Near Quote Amt	Near leg amount of the non-negotiated currency in the newly created swap trade
Far Amt	Far leg amount of the negotiated currency in the newly created swap trade
Far Quote Amt	Far leg amount of the non-negotiated currency in the newly created swap trade.

FX Swap Near and Far Leg Rate Calculation

The following tables describe when to add or subtract the funding points to/from the historical rate to get the rate for the far or near leg of the FX Swap in rollover and rollback trades, respectively. This is from the bank's perspective. The original trade is an FX Forward.

Original Trade	RO Trade Near Leg	RO Trade Far Leg	RO Trade Spot Rate	Profit/Loss	Interest	Funding Points
Bank Buy USD Sell JPY	Bank Sell USD Buy JPY	Bank Buy USD Sell JPY	If Spot Rate > Historical Rate	Bank Profit: RECEIVED MORE JPY on RO Far Leg than JPY PAID in original trade. Customer Loss: PAID MORE JPY on RO Far Leg than JPY RECEIVED in original trade.	Customer settles Loss at a later date: PAY interest.	SUBTRACT FUNDING PT Customer Receives JPY on RO Far Leg. Far Rate = Historical Rate - Funding Pt
			If Spot Rate < Historical Rate	Bank Loss: RECEIVED LESS JPY on RO Far Leg than JPY PAID in original trade. Customer Profit: PAID LESS JPY on RO Far Leg than JPY RECEIVED in original trade.	Customer settles Profit at a later date: RECEIVE interest.	ADD FUNDING PT Customer Receives JPY on RO Far Leg. Far Rate = Historical Rate + Funding Pt
Bank Sell USD Buy JPY	Bank Buy USD Sell JPY	Bank Sell USD Buy JPY	If Spot Rate > Historical Rate	Bank Loss: PAID MORE JPY on RO Far Leg than JPY RECEIVED in original trade. Customer Profit: RECEIVED MORE JPY on RO Far Leg than JPY PAID in original trade.	Customer settles Profit at a later date: RECEIVE interest.	SUBTRACT FUNDING PT Customer Pays JPY on RO Far Leg. Far Rate = Historical Rate - Funding Pt
			If Spot Rate < Historical Rate	Bank Profit: PAID LESS JPY on RO Far Leg than JPY RECEIVED in original trade. Customer Loss: RECEIVED LESS JPY on RO Far Leg than JPY PAID in original trade.	Customer settles Loss at a later date: PAY interest.	ADD FUNDING PT Customer Pays JPY on RO Far Leg. Far Rate = Historical Rate + Funding Pt
Bank Buy USD	Bank Buy USD	Bank Sell USD	If Spot Rate >	Bank Profit: RECEIVED MORE JPY on RB Far Leg than JPY PAID in original trade.	Customer settles Loss early: RECEIVE interest.	ADD FUNDING PT Customer

Original Trade	RO Trade Near Leg	RO Trade Far Leg	RO Trade Spot Rate	Profit/Loss	Interest	Funding Points
Sell JPY	Sell JPY	Buy JPY	Historical Rate	Customer Loss: PAID MORE JPY on RB Far Leg than JPY RECEIVED in original trade.		Receives JPY on RB Near Leg. Near Rate = Historical Rate + Funding Pt
			If Spot Rate < Historical Rate	Bank Loss: RECEIVED LESS JPY on RB Far Leg than JPY PAID in original trade. Customer Profit: PAID LESS JPY on RB Far Leg than JPY RECEIVED in original trade.	Customer settles Profit at a later date: RECEIVE interest.	SUBTRACT FUNDING PT Customer Receives JPY on RB Near Leg. Near Leg = Historical Rate - Funding Pt
Bank Sell USD Buy JPY	Bank Sell USD Buy JPY	Bank Buy USD Sell JPY	If Spot Rate > Historical Rate	Bank Loss: PAID MORE JPY on RB Far Leg than JPY RECEIVED in original trade. Customer Profit: RECEIVED MORE JPY on RB Far Leg than JPY PAID in original trade.	Customer settles profit early: PAY interest.	ADD FUNDING PT Customer Pays JPY on RB Near Leg: Near Leg = Historical Rate + Funding Pt
			If Spot Rate < Historical Rate	Bank Profit: PAID LESS JPY on RB Far Leg than JPY RECEIVED on original trade. Customer Loss: RECEIVED LESS JPY on RB Far Leg than JPY PAID on original trade.	Customer settles Loss early: RECEIVE interest.	SUBTRACT FUNDING PT Customer Pays JPY on RB Near Leg: Near Rate = Historical Rate - Funding Pt

1.5 Extending FX Trades

Click the FX tab to bring the panel to the front of the window.

1.5.1 Extension Types

You can process the following types of trade extensions on FX trades:

- **Rollover Trades** — Your corporate client may not want to deliver on the value date as specified in the contract. You can agree to a new value date to extend the contract for another term. Rollover the original trade, creating a new trade, which is an FX Swap.

For the FX Swap, you can use the current market rate when processing the rollover. You can also use the exchange rate on the original trade as the base for the exchange rate on the forward leg; this is a Historical Rate Rollover (HRR).

- **Rollback Trades** — Your corporate client may want to deliver earlier than the value date specified in the contract. You can agree to a new value date to bring back the trade. Rollback the original trade, creating a new trade, which is an FX Swap. You can use the current market rate or the historical rate.

1.5.2 Processing Rollovers

Follow these steps to extend a trade:

1. Check the corresponding box: RollOver or RollBack.
2. If you want to rollover the trade using historical rates (rate captured in the trade), also check HRR.
3. Enter the value date for the new trade in the Roll To Dt field.
4. You can modify any of the fields that appear with a pink background.
5. Verify all information on the trade and click **Apply**.

FX Rollover Trade Keywords

The following trade keywords attach to the trades.

The RollOver or RollBack trade contains the following trade keyword:

- **RolledOverTo** — specifies the Trade Id of the FX Swap extension trade.

The FX Swap trade contains the following trade keywords:

- **FXRollOverFarFwdPt** — specifies the forward points for the far leg.
- **FXRollOverNearFwdPt** — specifies the forward points for the near leg.
- **RolledOverFrom** — specifies the Trade Id of the RollOver or RollBack trade.