

**IMPORTANT:** This doc is for Integral internal audiences only.

This internal guide walks you through setting up and configuring forward currencies so that you can price and trade streaming outright prices with your counterparties.

See [Changes to this document](#) on page 18 for the latest updates.

**NOTE:** Forward currencies are supported only as the term currency of a currency pair.

1 Motivation	2
2 Important points	2
3 <INTERNAL>Properties summary	2
4 Configuration process	3
4.1 <INTERNAL>Define property for standard forward streaming tenors	3
4.2 Define forward currencies	3
4.3 Define forward currency pairs in quote convention	4
4.4 <INTERNAL>Define property to enable streaming outright for the broker/provider org	4
4.5 Org details: activate trade channel	5
4.6 Assign counterparty currency pairs	5
4.7 Price provisioning: activate allowed channel	5
4.8 Price making: add forward currency pairs to direct currency pair configurations	6
4.9 Liquidity rules: activate forward currency pair	6
4.10 OCX Trader client: <INTERNAL>property and </INTERNAL>permission group	7
4.11 <INTERNAL>Trade channels	8
5 Streaming outright using Spot+MDS	8
5.1 Configuration	9
5.2 Workflows	9
6 <INTERNAL>Demo bank adaptor setup in UAT	11
7 FIX	12
7.1 FIX examples	12
8 OCX and FXI7 UI	13
8.1 Taking prices	13
8.2 Placing orders (FXI7 only)	14
9 STP	15
10 Monitor	15
11 Analytics	16
12 Channels for streaming outright and NDFs	17
13 Changes to this document	18

## 1 Motivation

Customers can access streaming outright rates without needing to continually renew RFS subscriptions. Streaming outright rates are offered by competitive systems offer in certain regions and they are considered a key feature.

## 2 Important points

Trading channels supported:

- Seamlessly integrated into the OCX and FXI7 trading UIs ([OCX and FXI7 UI](#) on page 13).
- Available to white-label brokers.
- Available to customers for FIX API trading.

Features:

- Streaming currency pairs and tenor configured by customer.
- Separate price-making spreads and customer spread capability.
- Seamless integration with other FX Inside modules like credit, STP, and reporting.

Trading UI:

- Traders can monitor multiple streaming forward / NDF currency pairs and tenors.
- Click to trade.
- RFS still available.

Credit and post-trade processes: All credit, post-trade, and end-of-day processes are maintained and enforced in the parent currency, including:

- Credit
- Positions
- STP ([STP](#) on page 15)
- Monitor ([Monitor](#) on page 15)
- Analytics ([Analytics](#) on page 16)
- TOD/TOM cutoff timings

MDS upload: Users can upload market data sets using the forward currency pairs.

---

**IMPORTANT:** Only spot spread values specified in terms of forward currency pairs in the market data set are used. Forward spread values are not needed.

---

## 3 <INTERNAL> Properties summary

These are all the properties that must be defined:

- `Idc.Forward.Currency.Supported.Tenors`: <INTERNAL>Define property for standard forward streaming tenors on page 3
  - Default tenor values: TOD,TOM,1D,1W,1M,3M,6M,1Y,1IMM,2IMM,3IMM,4IMM
- `Idc.Streaming.NonSpot.Enabled.orgID`: <INTERNAL>Define property to enable streaming outright for the broker/provider org on page 4

- Demo Bank adaptor setup in UAT: `Idc.Adaptor.DemoBank.Multicast.Serializer.Version=40`: [<INTERNAL>Demo bank adaptor setup in UAT](#) on page 11
- OCX Trader client property: `IDC.IS.ClientPermission.OCXASOT=ASOT`: [OCX Trader client: <INTERNAL>property and </INTERNAL>permission group](#) on page 7
- Trade channel: [<INTERNAL>Trade channels](#) on page 8

</INTERNAL>

## 4 Configuration process

1. [<INTERNAL>Define property for standard forward streaming tenors](#) on page 3
2. [Define forward currencies](#) on page 3
3. [Define forward currency pairs in quote convention](#) on page 4
4. [<INTERNAL>Define property to enable streaming outright for the broker/provider org](#) on page 4
5. [Org details: activate trade channel](#) on page 5
6. [Assign counterparty currency pairs](#) on page 5
7. [Price provisioning: activate allowed channel](#) on page 5
8. [Price making: add forward currency pairs to direct currency pair configurations](#) on page 6
9. [Streaming outright using Spot+MDS](#) on page 8
10. [Liquidity rules: activate forward currency pair](#) on page 6
11. [OCX Trader client: <INTERNAL>property and </INTERNAL>permission group](#) on page 7

### 4.1 <INTERNAL>Define property for standard forward streaming tenors


The following global property defines the tenors for which forward currencies are eligible.

The list of tenors in this property are used in the **Tenor** drop-down list of the **Forward Currency Details** panel when you define the forward currency:

`Idc.Forward.Currency.Supported.Tenors=TOD,TOM,1W,1M,2M,3M,6M,1Y,1IMM,2IMM,3IMM,4IMM,5IMM`

</INTERNAL>

### 4.2 Define forward currencies

The **Forward Currency Details** panel has been added to the MAIN user's Currency Creation - Data Entry screen (**Market Data > Currency >  Add** button).

- ISO Code: We've adopted the convention *parentCcy\_tenor* (for example, USD\_1M, JPY\_TOD).
- Instrument Type: Forward. Swap is for a future release.
- [<INTERNAL>Tenor](#): List of tenors defined by property `Idc.Forward.Currency.Supported.Tenors`. [</INTERNAL>](#)
- Parent Instrument: Used for definition of the forward currency pair and credit and post-trade (positions, STP, Analytics, etc.)

Forward Currency Details	
Instrument Type	Forward ▼
Tenor	3M ▼
Parent Instrument	USD ▼

### 4.3 Define forward currency pairs in quote convention

Add a currency pair with the forward currency to the quote convention in the Currency Pair Creation - Data Entry screen (**Market Data > Quote Convention > quote convention ID > + Add button in Currency Pairs panel**).





**NOTE:** Select the **Forward** checkbox and click **Search** to filter for forward currency pairs in the list.

- Base Currency: Choose the parent instrument of the forward currency pair.
- Name: We've adopted the convention *baseCcy/fwdCcy* (for example, EUR/USD\_1M, USD/JPY\_TOD).
- Define the following:
  - Spot Precision: define forward currency pair precision for all in rate. E.g. 7 for EUR/USD\_1M
  - Display Points Offset: control display on the client as per the forward currency pair convention
  - Fwd Points Precision
  - Pips Factor

[Quote Convention List >](#)

**Currency Pair Creation - Data Entry**

**Finish** **Cancel**

Main Details			
Base Currency	USD ▼	Term Currency	NGN ▼
Name	USD/EUR_1M		
Base Quote Factor	1.0	Term Quote Factor	1.0
Cross	None ▼	Settlement Calendar	Use Default <input checked="" type="checkbox"/>
Deliverable	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Fixing Calendar	Spot Lag <input type="text"/>	Settlement Override	Spot Lag <input type="text"/>
Holiday Calendars		Holiday Calendars	
			
No Lag Holiday Calendar		No Lag Holiday Calendar	
			
		Allow adding inverse currency pair?	Yes <input checked="" type="radio"/> No <input type="radio"/>
Spot Precision	4	Inverse Spot Precision	4
Display Points Offset	2	Inverse Display Points Offset	2
Fwd Points Precision	2	Inverse Fwd Points Precision	2
Pips Factor	10000	Inverse Pips Factor	10000

### 4.4 <INTERNAL> Define property to enable streaming outright for the broker/provider org

The following property controls access to streaming outright for an organization:

`Idc.Streaming.NonSpot.Enabled.orgID=true/false` (default)

&lt;/INTERNAL&gt;

## 4.5 Org details: activate trade channel

Select in the **ESP Outright** checkbox to activate the streaming outright trade channel for the org in the **Trade Channels** panel of the **Organization Detail Edit** screen (**Organization > Organization > org ID > Details**).

<INTERNAL> This checkbox does not appear if `Idc.Streaming.NonSpot.Enabled.orgID=false` or is undefined. </INTERNAL>

**NOTE:** If the feature is enabled for a broker org, the broker's customers are enabled by default.

Trade Channels	
Trade Channel	<input checked="" type="checkbox"/> ESP Spot <input checked="" type="checkbox"/> ESP Outright <input type="checkbox"/> ESP Swap <input checked="" type="checkbox"/> RFS Spot <input checked="" type="checkbox"/> RFS Outright <input checked="" type="checkbox"/> RFS Swap <input checked="" type="checkbox"/> RFS NDF <input checked="" type="checkbox"/> RFS FSR <input checked="" type="checkbox"/> RFS SSP <input checked="" type="checkbox"/> NDF Swap

## 4.6 Assign counterparty currency pairs

Add the forward currency pair to the list of currencies, either as default currency pairs or for individual counterparties.

- Default currency pairs: **Default Currency Pairs** panel of the Currency Pairs List screen (**Organization > Organization > org ID > Currency Pairs > Advanced Settings**).
- Counterparty currency pairs: **Counterparty** panel of the Currency Pairs List screen (**Organization > Organization > org ID > Currency Pairs > cpty ID > Advanced Settings**).

Forward currency pairs do not appear in these screens until you have activated the trade channel <INTERNAL> and defined the property `Idc.Streaming.NonSpot.Enabled.orgID=true` </INTERNAL>.

## 4.7 Price provisioning: activate allowed channel

Select the **ESP Outright** checkbox in the **Allowed Channels** section of the **Existing Rules** panel of the Price Provisioning Rule Edit screen (**Organization > Organization > org ID > Price Provisioning > cpty ID**).

The forward currency pair appears in the price provisioning list.

**IMPORTANT:** Only the values in the **Spot Spread** are used for forward currency pairs. Any values in the **Forward Spread** column are ignored.

Existing Rules	
Trading Limit Rule	<input checked="" type="radio"/> Use base stream trading limits <input type="radio"/> Use customer-specific trading limits <input type="checkbox"/> Increase trading limit if customer specific trading limit is higher than base trading limit
Spreading Rule	<input type="checkbox"/> Allow Spread Improvement <input type="text" value="50.0%"/> Give-back Percentage <input type="checkbox"/> Utilize in Order Matching
Spreading Sequence	<input checked="" type="radio"/> Pre-Trade Spreading <input type="radio"/> Post-Trade Spreading
Dynamic Price Control	<input type="checkbox"/> Enable Dynamic Price Control (DPC) Start DPC if new direction starts and directional trading amount > <input type="text" value="1,000"/> End DPC if direction reverses or no trading occurs after <input type="text" value="10"/> seconds
Allowed Channels	<input checked="" type="checkbox"/> ESP Spot <input checked="" type="checkbox"/> ESP Outright <input type="checkbox"/> ESP Swap <input checked="" type="checkbox"/> RFS Spot <input checked="" type="checkbox"/> RFS Outright <input checked="" type="checkbox"/> RFS Swap <input checked="" type="checkbox"/> RFS NDF <input type="checkbox"/> RFS FSR <input type="checkbox"/> RFS SSP <input checked="" type="checkbox"/> NDF Swap
Price Provision Spread Upload   Choose File   No file chosen   File Type: CSV (*.csv)   Import	

## 4.8 Price making: add forward currency pairs to direct currency pair configurations

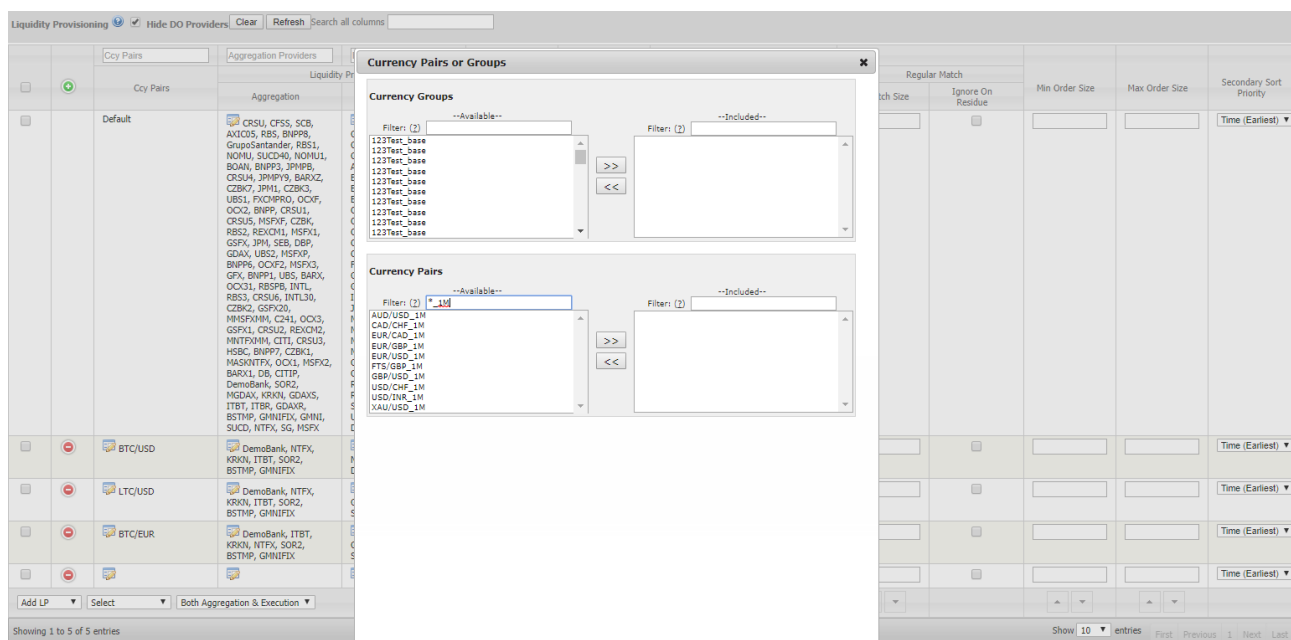
Select the forward currency pairs in the **Included Customer Currency Pairs** section of the **Currency Pair Group** panel of the Price Making Configuration screen (**Organization > Organization > org ID > Price Making > Streams > stream ID > ccy pair config ID**).

Forward currency pair becomes active on Price Making streams.

**NOTE:** Forward currency pairs are only available for Direct currency streams. They do not apply to Synthetic streams.

## 4.9 Liquidity rules: activate forward currency pair

Add the forward currency pairs to aggregation and execution in liquidity rules in the **Liquidity Provisioning** panel of the Liquidity Rules screen (**Organization > Organization > org ID > Liquidity Rules**).



## 4.10 OCX Trader client: **<INTERNAL>**property and **</INTERNAL>**permission group

You need to make sure the following **<INTERNAL>**client property and **</INTERNAL>**related permission entities are defined.

### **<INTERNAL>**Client property

Use the Config Portal to define the following property:

- Name: IDC.IS.ClientPermission.OCXASOT
- Value: ASOT
- Scope: Global
- Group: Global
- Server: GlobalVS
- Namespace: MAIN

### **</INTERNAL>**

### Permission group

Use Admin to create the following entities:

- Permission (**Security > Permission**):
  - ID: OCXASOT
  - Name: OCXASOT
- User Role (**Security > User Role**):
  - ID: OCXASOTRole
  - Name: OCXASOTRole
  - User Permissions: OCXASOT

- Permission Group (**Security > Permission Groups**):
  - ID: OCXStreamingOutrightTrading
  - Name: **OCXT** Streaming Outright Trading
  - Type: MARKETMAKER
  - Expose To: <blank>
  - User Roles: OCXASOTRole

### Permission group per org group

You need to add the new permission group to the org so that the permission can be assigned to the org's users:

1. Navigate to the Permission Groups Per Organization Group screen (**Security > Permission Groups Per Organization Group**).
2. Click the org's ID.
3. Click the MARKETMAKER DirectFX Role.
4. Find the new permission group in the **Available** list of Allocated Permission Groups and move it to the **Included** list.
5. Click **Save**.

## 4.11 <INTERNAL>Trade channels

Define the following trade channel properties for streaming outrights:

```
Idc.TradeChannel.OCX/DT/BD/OR=OCX,DT,ESP,BD(Board),OCX Desktop Board Streaming Outrights
Idc.TradeChannel.OCX/DT/BD/NDF=OCX,DT,ESP,BD(Board),OCX Desktop Board NDF
Idc.TradeChannel.OCX/DT/BD/OR/FA=OCX,DT,ESP,BD(Board),OCX Desktop Board Outright Full Amount
Idc.TradeChannel.OCX/DT/BD/NDF/FA=OCX,DT,ESP,BD(Board),OCX Desktop Board NDF Full Amount
Idc.TradeChannel.OCX/DT/BD/LMT/OR/QO=OCX,DT,Order,LMT(QuickOrder),OCX Desktop Board Limit Outright Quick Order
Idc.TradeChannel.OCX/DT/BD/LMT/NDF/QO=OCX,DT,Order,LMT(QuickOrder),OCX Desktop Board Limit NDF Quick Order
Idc.TradeChannel.REACT/ESP/FXB/LMT/NDF/QO=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board Limit NDF Quick Order
Idc.TradeChannel.REACT/ESP/FXB/LMT/OR/QO=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board Limit Outright Quick Order
Idc.TradeChannel.REACT/ESP/FXB/NDF=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board NDF
Idc.TradeChannel.REACT/ESP/FXB/NDF/FA=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board NDF Full Amount
Idc.TradeChannel.REACT/ESP/FXB/OR=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board Outright
Idc.TradeChannel.REACT/ESP/FXB/OR/FA=REACT,FXI,ESP,FXB(FXBoard),FXI React ESP FX Board Outright Full Amount
Idc.TradeChannel.REACT/ESP/FXFB=REACT,FXI,ESP,FXFB(FXFullBook),FXI React ESP FX Full Book
Idc.TradeChannel.REACT/ESP/FXL=REACT,FXI,ESP,FXL(FXLadder),FXI React ESP FX Ladder
Idc.TradeChannel.REACT/ESP/FXL/FA=REACT,FXI,ESP,FXL(FXLadder),FXI HTML ESP FX Ladder Full Amount
Idc.TradeChannel.REACT/OP/OR=REACT,FXI,OP,TWAP,STREAMING OR
```

<INTERNAL>

## 5 Streaming outrights using Spot+MDS

Banks have their own forward curve and can provide streaming rate services to their customers rather than just over RFS.



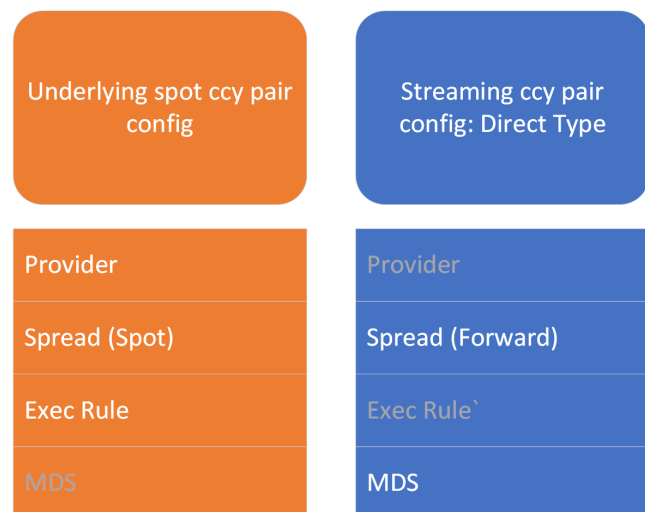
## 5.1 Configuration

Select the **Use Market Data Set for Streaming Outright points** checkbox in the **Price Making and Execution** panel of the Price Making Configuration screen (**Organization > Organization > org ID > Price Making > Streams > stream ID > ccy pair config ID**). If a new configuration is defined for streaming outright currency pairs, this is the only setting needed along with the Market Data set parameter.

The screenshot shows the 'Price Making and Execution' configuration panel. The 'Use Market Data Set for Streaming Outright points' checkbox is checked and highlighted with a red arrow. Other settings include 'Market Data Set' set to 'FISStaticFXMDS', 'Vehicle Currency' set to 'USD', and 'Price Priority' set to 'Time'.

## 5.2 Workflows

### Direct currency pair streams



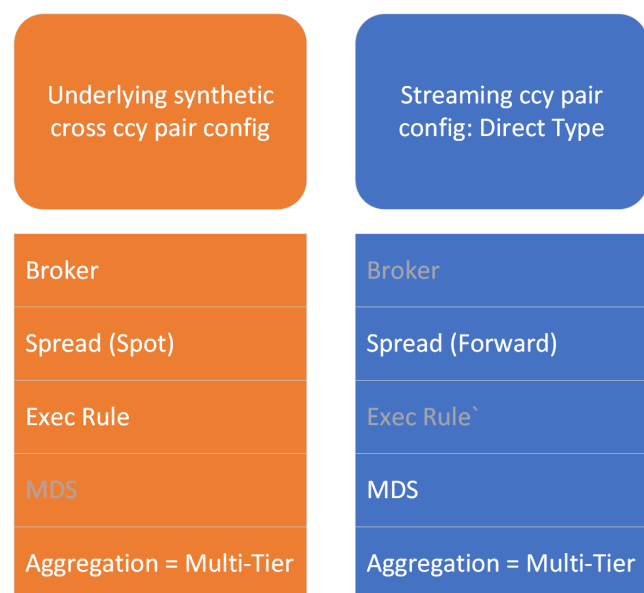
**Figure 1** Streaming Outright: Direct Underlying Spot Currency Pair

For pricing streaming outright for direct underlying spot currency pairs:

- Define a direct configuration (say SOR-ILS) for the streaming outright pair and select the **Use Market Data Set for Streaming Outright points** checkbox.

- Liquidity:
  - The underlying spot pair sources liquidity from its own configuration. The liquidity providers on the streaming outright configuration are not used. The underlying spot pair and streaming outright pair can be in the same configuration.
  - The forward points are sourced from the MDS set on the streaming outright configuration SOR-ILS.
- Spreads:
  - Spot spreads are applied from the underlying spot configuration. Forward spreads are also applied from the underlying configuration's tenor-based spreads section.
- Execution Rules: The streaming outright execution rule is just a passthrough. Cover/no-cover determination is done based on the underlying spot pair configuration.
- Pricing: Force publish is set by default true as publishing is not triggered by LP quote changes.

### Synthetic cross currency pair streams



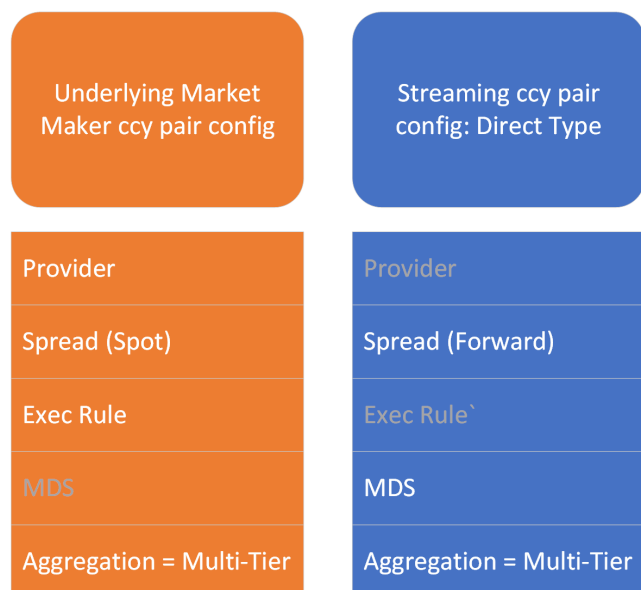
**Figure 2** Streaming Outright: Synthetic Underlying Spot Currency Pair

**IMPORTANT:** Aggregation type on the streaming outright configuration needs to be Multi-Tier else only the top tier will be published.

For pricing streaming outright for synthetic cross currency pairs:

- Define a direct configuration for the streaming outright currency pair say EUR/ILS\_TOD.
- The underlying synthetic cross configuration is used for pricing EUR/ILS.
- Forward points are taken from the MDS attached to the streaming outright currency's direct configuration.
- Broker provider is applied from the underlying synthetic cross configuration.
- Forward spreads are applied from the underlying synthetic cross configuration (implementation pending).
- Execution rules: The streaming outright execution rule works just like an execution on the synthetic currency pair with lookup for Primary and Secondary executions. Execution rule on the streaming outright configuration currency pair is applied.

### Market Maker streams



**Figure 3** Streaming Outright: Market Maker Underlying Spot Currency Pair

**IMPORTANT:** Aggregation type on the streaming outright configuration needs to be Multi-Tier else only the top tier will be published.

For pricing streaming outright for Market Maker currency pairs:

- Define a direct configuration for the streaming outright currency pair say USD/ILS\_TOD.
- The underlying market maker configuration is used for pricing USD/ILS.
- Forward points are taken from the MDS attached to the streaming outright currency's direct configuration.
- Forward spreads are applied from the underlying MM configuration (implementation pending).
- Liquidity providers are applied from the underlying market maker configuration.
- Execution rules: The execution rules in the underlying MM currency pair config.

## Excel pricing

Streaming outright using Spot+MDS can be priced with Excel for direct currency pairs. Click the **Source From Excel (Multi-Price Tiers)** radio button in the **Price Making and Execution** panel (implementation pending).

## 6 <INTERNAL> Demo bank adaptor setup in UAT

- Need to upgrade demo bank adaptor
- Property for streaming forward, this is defined for the provider/adaptor  
`Idc.Adaptor.DemoBank.Multicast.Serializer.Version=40`, if this is not defined then we don't get rates on OA
- Adaptor configuration:
  - Forward points for streaming outright need to be defined in:  
`file /integral/app/uadap-fix-sim1/properties/StreamingFwdGen.csv`
  - Format is:  
`BC=EUR,TC=USD,Tenor=1M,BFP=0.0,OF=0.0`  
`BC=EUR,TC=USD,Tenor=1W,BFP=0.0000052,OF=0.0000063`

BC=EUR,TC=USD,Tenor=2M,BFP=0.0000002,OFP=0.0000003  
 BC=EUR,TC=USD,Tenor=SN,BFP=0.0000006,OFP=0.0000007

</INTERNAL>

## 7 FIX

Forward currencies in FIX are handled in terms of the parent currency with tenor information contained in pre-existing MaturityDate (#541) or SettlDate (#64) fields. For example, an Execution Report message for an outright trade in EUR/USD\_1M is sent as a trade in EUR/USD with the tenor information set in additional fields.

The only change in the FIX API for forward currencies is to the Market Data Request (#35=V):

- Tenor information included in NoRelatedSym (#146) with SettlDate (#64) field
- NDFs include tenor information with SecurityID (#48)

### 7.1 FIX examples

#### Market data request

8=FIX.4.4|9=200|35=V|34=24|49=quote.CSDK1.user1|50=CSDK1LE1|52=20200505-15:47:48|  
 56=client.fxgrid.integral.com|128=SOR1|63=F|64=1W|262=1588693663786|263=1|264=0|  
 265=0|146=1|55=USD/INR|460=4|167=FOR|267=2|269=0|269=1|10=034

#### Quote received

8=FIX.4.4|9=512|35=W|34=5|49=client.fxgrid.integral.com|52=20200505-15:47:50.337|  
 56=quote.SJORG.user1|57=SJORGL1|55=USD/INR|64=20200514|262=1588693663786|460=4|  
 541=20200512|268=4|269=0|270=1.1882|1026=1.1882|1027=0|15=USD|271=1000000|276=A|  
 282=SOR1|299=4\_BID|290=0|269=0|270=1.1881|1026=1.1881|1027=0|15=USD|271=2000000|  
 276=A|282=SOR1|299=4\_BID1|290=0|269=1|270=1.1889|1026=1.1889|1027=0|15=USD|  
 271=1000000|276=A|282=SOR1|299=4\_OFFER|290=0|269=1|270=1.189|1026=1.189|1027=0|  
 15=USD|271=2000000|276=A|282=SOR1|299=4\_OFFER1|290=0|10=064

#### New order single

8=FIX.4.4|9=255|35=D|34=633|49=order.CSDK1.user1|50=CSDK1LE1|52=20200505-  
 15:47:50|56=client.fxgrid.integral.com|128=SOR1|11=1588693663786|15=USD|18=B|21=1|  
 38=1000000|40=2|44=1.1889|54=1|55=USD/INR|59=3|60=20200505-15:47:50|63=F|64=1W|  
 167=FOR|460=4|453=1|448=|447=D|452=3|10=118

#### Order: pending new (OrdStatus (#39)=A)

8=FIX.4.4|9=298|35=8|34=4|49=client.fxgrid.integral.com|52=20200505-15:47:50.732|  
 56=order.CSDK1.user1|57=CSDK1LE1|115=SOR1|6=0|11=1588693663786|14=0|15=USD|17=NONE|  
 18=B|31=0|32=0|37=NONE|38=1000000|39=A|40=2|44=1.1889|54=1|55=USD/INR|59=3|  
 60=20200505-15:47:50.731|64=1W|150=A|151=1000000|167=FOR|194=0|195=0|460=4|10=211

#### Order: new (OrdStatus (#39)=O)

```
8=FIX.4.4|9=302|35=8|34=5|49=client.fxgrid.integral.com|52=20200505-15:47:50.734|
56=order.CSDK1.user1|57=CSDK1LE1|115=SOR1|6=0|11=1588693663786|14=0|15=USD|17=NONE|
18=B|31=0|32=0|37=40693181|38=1000000|39=0|40=2|44=1.1889|54=1|55=USD/INR|59=3|
60=20200505-15:47:50.734|64=1W|150=0|151=1000000|167=FOR|194=0|195=0|460=4|10=025
```

### Order: filled (OrdStatus (#39)=2)



```
8=FIX.4.4|9=393|35=8|34=6|49=client.fxgrid.integral.com|50=SOR1|52=20200505-15:47:50.783|
56=order.CSDK1.user1|57=CSDK1LE1|115=SOR1|6=1.1889|11=1588693663786|14=1000000|15=USD|
17=FXI65060666|18=B|31=1.1889|32=1000000|37=40693181|38=1000000|39=2|40=2|44=1.1889|54=1|
55=USD/INR|59=3|60=20200505-15:47:50.735|64=20200514|75=20200505|119=1188900|120=INR|
150=F|151=0|167=FOR|194=1.19|195=-0.0011|460=4|541=20200512|10=236
```

## 8 OCX and FXI7 UI

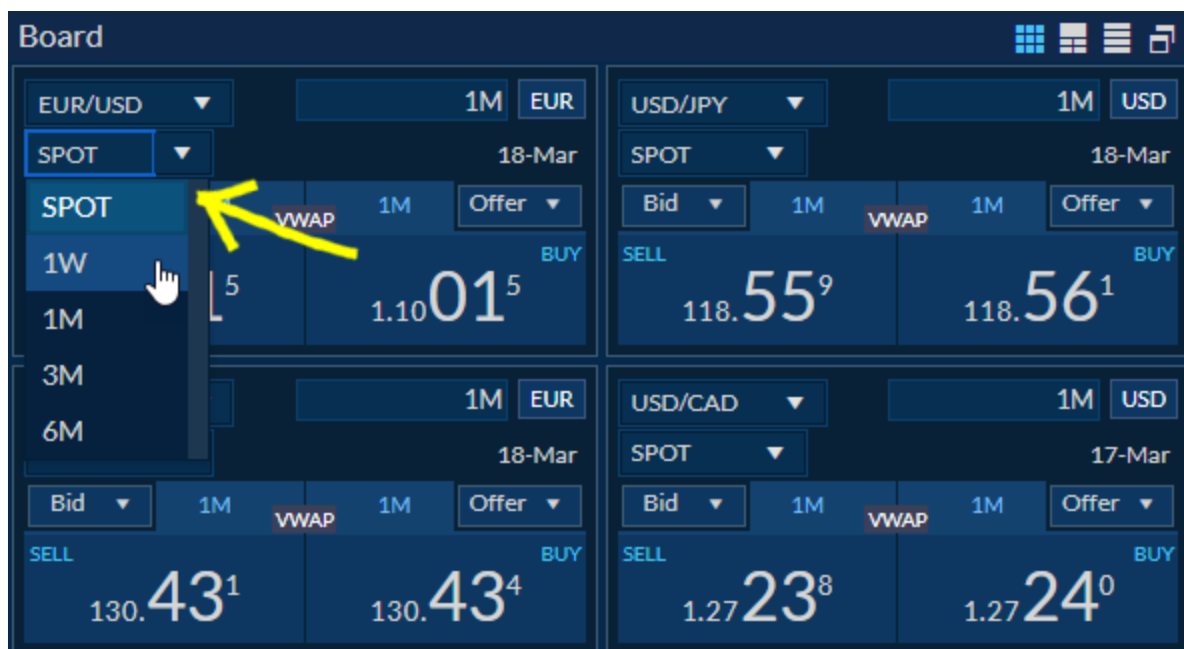
### 8.1 Taking prices

You can trade streaming outright prices and streaming NDFs. The tenor combo box has been added to the currencies in the Board panel so that you can choose different tenors and trade from both streaming spot and outright prices.

When trading NDFs, the tenor combo box is labeled with “NDF” and both the value date and the fixing date are shown.

1. Make sure that you see a  Board panel: Click an **ESP** tab in the trading panel and then click  Board at the top of the panel.
2. Use the panel defaults or change them:
  - Choose a currency pair with the currency combo box.
  - Enter a size.
  - Click the dealt currency button to deal the base or term currency.
  - **Choose a tenor with the tenor combo box.**
3. Click or double-click the price.

The Order Status panel shows your new order.



**Figure 4** Tenor combo box for streaming forward prices



**Figure 5** Label and fixing date for NDF prices

## 8.2 Placing orders (FXI7 only)

You can also request streaming outright prices from the Order Entry panel and submit orders for outright trades.

**NOTE:** Streaming outright order prices are only available for unlinked, limit orders.

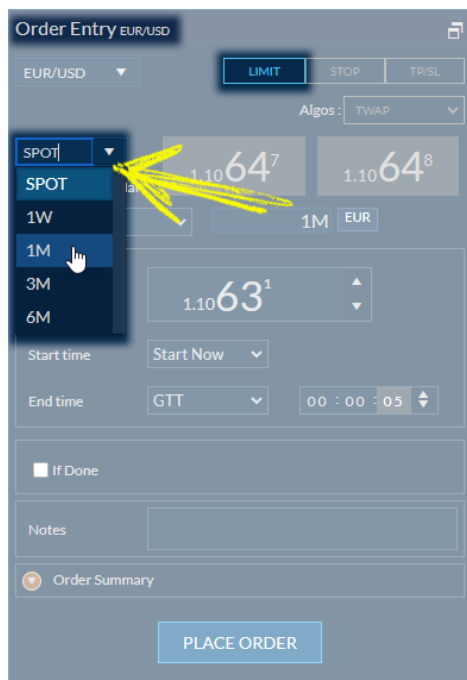
Use the tenor combo box in the Order Entry panel above the value date.

The combo box is only active when you select the **LIMIT** order type.

Streaming outright orders are only available for unlinked orders. If you choose a tenor other than SPOT, the **If Done** checkbox is hidden.

To submit streaming outright orders:

- You must have the “OCXT Streaming Outright Trading” permission to access the drop-down list.
- At least one liquidity provider must stream outright prices to you.



**Figure 6** Combo box for streaming outright orders

## 9 STP

STP messages for streaming outright trades and RFS outright trades are functionally the same. The differences between the two are in undocumented, unsupported fields.

## 10 Monitor

Trading activity for streaming outrights are shown in the same screens and blotters as for ESP activity. Filter by channel to see trades and orders for streaming outrights and NDFs ([Channels for streaming outrights and NDFs](#) on page 17).

Verified		Order ID		Search
Server	Trade Type	Channel	ExtOrderId	Client
bqc2-app3-603.	FXOutright	All	4334	7.0.0.1
bqc2-app3-603.	FXOutright	OCX/DT/BD/OR (23)	8755	7.0.0.1
bqc2-app3-603.	FXOutright	BA/ESP (149)	3291	7.0.0.1
bqc2-app3-603.	FXOutright	BA/ESP/COPY (1)	0432	7.0.0.1
bqc2-app3-603.	FXOutright	BA/ESP/FM (20)	5242	7.0.0.1
bqc2-app3-603.	FXOutright	BA/RFS (26)	549	7.0.0.1
bqc2-app3-603.	FXOutright	DNET/PD (69)	686	7.0.0.1
bqc2-app3-603.	FXOutright	DNET/PP (26)	581	7.0.0.1
bqc2-app3-603.	FXOutright	DNET/RFS/PD (25)	149	7.0.0.1
bqc2-app3-603.	FXOutright	FIX/Order (11)	725	7.0.0.1

Active Orders		Order ID		Search	Reset
Visibility	Time In Force	Expiry	Channel	Instrument Type	Subm
DISPLAY	GTD	3000	All	ht	2019/1
DISPLAY	GTD	3000	OCX/DT/BD/OR (9)	ht	2019/1
DISPLAY	GTD	3000	BA/ESP (3)	ht	2019/1
DISPLAY	GTD	3000	DNET/OB/FM (2)	ht	2019/1
DISPLAY	GTD	3000	DNET/OP (42)	ht	2019/1
DISPLAY	GTD	3000	DNET/OP/FM (1)	ht	2019/1
DISPLAY	GTD	3000	DNET/OP/TWAPPLUS (1)	ht	2019/1
DISPLAY	GTD	3000	DNET/PD (125)	ht	2019/1
DISPLAY	GTD	3000	DNET/PP (409)	ht	2019/1
			DNETD/ESP/PD (66)		

## 11 Analytics

To find streaming outright trades and orders, filter for FX Trade Type = Outright and Channel/Workflow = ESP.



Done Trades							
Status	Order ID	Trade ID	Type	Workflow	Trade Date	Value Date	Fixin
C		FXI8538468015	FXOUTRIGHT	ESP	16-May-2019	17-May-2019	
C		FXI8538468021	FXOUTRIGHT	ESP	16-May-2019	20-Jun-2019	
C		FXI8538468024	FXOUTRIGHT	ESP	16-May-2019	16-May-2019	
C		FXI8538468027	FXOUTRIGHT	ESP	16-May-2019	17-May-2019	
C		FXI8538468033	FXOUTRIGHT	ESP	16-May-2019	20-Jun-2019	
C		FXI8538468036	FXOUTRIGHT	ESP	16-May-2019	16-May-2019	
C		FXI8538468039	FXOUTRIGHT	ESP	16-May-2019	17-May-2019	
C		FXI8538468045	FXOUTRIGHT	ESP	16-May-2019	20-May-2020	
C		FXI8538468048	FXOUTRIGHT	ESP	16-May-2019	20-Jun-2019	
C		FXI8538468051	FXOUTRIGHT	ESP	16-May-2019	20-Jun-2019	

Orders										
Status	Persistent	Order ID	Client	Rate	Fill Rate	FXBenchmark	PI	PI PnL	TradeType	Workflow
Z	N	4482455027	1610	0.783	0.78340000	0.78963			FXOUTRIGHT	ESP
F	N	4482455025	1410	1.189	1.18900000	1.21803			FXOUTRIGHT	ESP
F	N	4482455024	1310	1.188	1.18830000	1.185			FXOUTRIGHT	ESP
F	N	4482455023	1210	11.559	111.56000000	111.557			FXOUTRIGHT	ESP
F	N	4482455021	1010	11.559	111.56000000	111.557			FXOUTRIGHT	ESP
F	N	4482455020	9105	11.555	111.55000000	111.557			FXOUTRIGHT	ESP
F	N	4482455019	8105	1.188	1.18810000	1.21803			FXOUTRIGHT	ESP
F	N	4482455017	6105	1.189	1.18860000	1.21803			FXOUTRIGHT	ESP
F	N	4482455016	5105	1.189	1.18860000	1.21803			FXOUTRIGHT	ESP

## 12 Channels for streaming outright and NDFs

**Table 1** Trade Channels for Streaming Outrights

Channel Code	Client App	Workflow	Analytics/Monitor Display
OCX/DT/BD/LMT/NDF/QO	OCX	Order	OCX Desktop Board Limit NDF Quick Order
OCX/DT/BD/LMT/OR/QO	OCX	Order	OCX Desktop Board Limit Outright Quick Order
OCX/DT/BD/NDF	OCX	ESP	OCX Desktop Board NDF
OCX/DT/BD/NDF/FA	OCX	ESP	OCX Desktop Board NDF Full Amount
OCX/DT/BD/OR	OCX	ESP	OCX Desktop Board Outright
OCX/DT/BD/OR/FA	OCX	ESP	OCX Desktop Board Outright Full Amount
REACT/ESP/FXB/LMT/NDF/QO	FXI	ESP	FXI React Board Limit NDF Quick Order
REACT/ESP/FXB/LMT/OR/QO	FXI	ESP	FXI React Board Limit Outright Quick Order
REACT/ESP/FXB/NDF	FXI	ESP	FXI React Board NDF
REACT/ESP/FXB/NDF/FA	FXI	ESP	FXI React Board NDF Full Amount

**Table 1** Trade Channels for Streaming Outrights (continued)

Channel Code	Client App	Workflow	Analytics/Monitor Display
REACT/ESP/FXB/OR	FXI	ESP	FXI React Board Outright
REACT/ESP/FXB/OR/FA	FXI	ESP	FXI React Board Outright Full Amount
REACT/OP/OR	FXI	STREAMING OR	FXI React Orders Panel Streaming Outright

## 13 Changes to this document

**Table 2** Changes

Version	Changes
7.1.17v1	<ul style="list-style-type: none"> <li>Changes to <a href="#">OCX and FXI7 UI</a> on page 13: <ul style="list-style-type: none"> <li>Updated screenshots</li> <li>Added streaming outright for Orders panel.</li> </ul> </li> <li>New FXI7 (React) channels to <a href="#">Channels for streaming outright and NDFs</a> on page 17.</li> <li>&lt;INTERNAL&gt; Added channels to &lt;INTERNAL&gt; <a href="#">Trade channels</a> on page 8. &lt;/INTERNAL&gt;</li> <li>New section <a href="#">FIX examples</a> on page 12.</li> </ul>
<INTERNAL> 7.1.1v2	<ul style="list-style-type: none"> <li>No content change. Edits to make separate internal and external editions. &lt;/INTERNAL&gt;</li> </ul>
7.1.1v1	<ul style="list-style-type: none"> <li>Changes to <a href="#">Streaming outright using Spot+MDS</a> on page 8: <ul style="list-style-type: none"> <li>Updated description of Configuration.</li> <li>Updated description of spreads for all three workflows.</li> <li>Updated diagrams for all three workflows (swapped spot and forward configurations left to right).</li> <li>Clarified current status of Excel pricing.</li> </ul> </li> </ul>
7.0.24v1	Added <a href="#">Streaming outright using Spot+MDS</a> on page 8.
7.0v1	First distribution.
7.0vE draft	<ul style="list-style-type: none"> <li>Added <a href="#">FIX</a> on page 12.</li> <li>Added <a href="#">Channels for streaming outright and NDFs</a> on page 17.</li> <li>Added NDF text and screenshot to <a href="#">OCX and FXI7 UI</a> on page 13.</li> </ul>