

Johannesburg Stock Exchange

Post-trade Services

JSE Services Documentation Derivatives Booking Fee Replication

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1 DOCUMENT CONTROL

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1.2 Document Information

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1.3 Revision History

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2017/07/24	2.0	Section 5.3 Discounting Table Section 5.4.1 Strategies Section 5.4.5 Cancelled Price Adjust Section 5.4.6 Market Maker Booking Fees
2018/05/29	3.0	Updated URL for Equity Derivative Trading Fees and Currency Derivative Trading Fees
2018/08/17	4.0	Update Section 4.1 Recalculate booking fees on DEFAULT_TO, TRANSFERRED_TO, TRANSFERRED_SP_TO and ALLOCATED_TO
2018/10/18	5.0	Update Section 3.2 End-of-day closing prices used for booking fee calculation.
2018/10/30	6.0	Updated Section 4.1 included CANCELLED in parent level Booking Fee calculation.
2018/11/21	7.0	Updated section 6.2 Booking Fee Replication Scenarios
2019/04/12	8.0	Update section 3.2 Spot Index closing price used for all Index Derivative Instruments' Booking Fee calculation.
2019/05/24	9.0	Section 5.4.4 – change “originating” to “original”
2019/08/02	10.0	CHANGES FOR Ver.10 & 11 EFFECTIVE FROM 2019/11/16 Added Section 5.4.2 – Deal Management Strategy Discount Section 5.4.4 – Removed ALLOCATED_TO from the list. Added Section 5.4.7 – Market Maker Booking Fees (Equity Derivative market)
2019/10/23	11.0	Removed JSE Pricelist links in section 1.7 - Reference Documents Removed Section 5.4.7 – Market Maker Booking Fees (Equity Derivative market)
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2022/05/23	13.0	The following was added for clarity and is already in production. 5.4.1 Strategies (On Book vs Reported) - Validation on Inverse Calendar Spreads and Roll Trades - Included “Position Reason = TRADE” in Validation on Inverse Calendar Spreads and Roll Trades
2022/06/27	13.0	6 Securities Collateral Fee Value changed from recievedsecuritiesamount to registeredSecuritiesAmount Status = SUCCESS removed from filtering
2023/03/22	14.0	Effective with RTC 1.37 release November 2023 Validation changes to On Screen Strategy trades. 5.4.1 - Validation on Inverse Calendar Spreads and Roll Trades Recalculation on ACCUMULATED_TO for Currency Derivative Market 4.1 Top Level / Parent Deal Position Reasons 5.4.2 - Deal Management Strategy Discounting
2023/08/21	15.0	Effective TBC Change from Underlying closing price to Future closing price for Equity Derivative Booking Fee calculation. 1.6 - Prerequisites 2 - Overview 3.2 - Derived Value and Pricing Methodology

1.4 About this Document

The purpose of this document is to provide JSE Clearing Members with information regarding the booking fee calculation for Derivative Instruments. The document will guide the reader in replicating the JSE Booking Fees for both the Equity and Currency Derivative Market.

The document will provide guidance on:

- Building a deal management structure (tree) based on clearing data received
- Calculating Booking Fees for trades
 - Pricing Methodologies
 - Derived Value
- Deriving the Booking Fees from the parent nodes to the respective children nodes within the structure
- Discounting

1.5 Intended Audience

The information contained in this document is intended for Clearing Members / software developers who are required to replicate the JSE Booking Fees.

1.6 Prerequisites

In order to replicate JSE Booking Fees the following data is required:

- Equity Derivative / Currency Derivative Pricing Methodologies (JSE Website)
- Instruments Reference Data [IDP]
- Client Reference Data [IDP]
- Deals as published by the JSE's post trade system via the EMAPI protocol.
- Closing Prices for Equity Derivative Futures [MIT – Market Data Gateway]
- MIT Trade data

1.7 Reference Documents

<p>The documents in the table below are published on the following websites: JSE Post Trade Documentation JSE Price List</p>	Description
Volume PT01 – Post-trade EMAPI Common.pdf	Describes the semantics and syntax of the messages of the EMAPI protocol.
Volume PT02 – Post-trade EMAPI Clearing.pdf	Describes the semantics and syntax of the clearing or application messages of the EMAPI protocol.
EMAPI TagWire.pdf	Describes the syntax of the TagWire encoding of EMAPI messages body.
EmapTransactionsForMember.xml	XML definition of all EMAPI protocol messages for market participants, i.e. clearing and trading members.
EmapiTransactionsForMember.html	HTML file describing the syntax of all EMAPI protocol messages for market participants i.e. clearing and trading members.
EmapiTransactions.xsd	The XML Schema that EmapTransactionsForMember.xml must conform to.
Booking Fee Replication Scenarios v1.1	Shows deal management scenarios and the respective discounting. (APPENDIX B in this document)
Volume 09D - JSE Reference Data Management (For Derivatives)	Static trading reference data for the new JSE Trading System
Volume 01 – NativeTrading Gateway	Submission and management of Orders to the Trading System
Equity Derivative Market Price List	PDF document listing all related Equity Derivative pricing methodologies as listed on the JSE website.
Currency Derivative Market Price List	PDF document listing all related Currency Derivative pricing methodologies as listed on the JSE website.
Market Maker billing Model	PDF document listing all fees and qualification criteria for Market Makers

Note: Please ensure to use the latest versions of the respective documents from the JSE's website.

1.8 Contact Details

<p>JSE Limited One Exchange Square Gwen Lane, Sandown South Africa Tel: +27 11 520 7000</p> <p>www.jse.co.za</p>	<p>Post Trade and Information Services</p> <p>ITAC Queries Email: CustomerSupport@jse.co.za</p>
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1.9 Definitions, Acronyms and Abbreviations

EMAPI	External Messaging API. EMAPI is the API used to integrate a client application or backend system with the RTC Clearing System.
Client	A client that connects to RTC Servers using the EMAPI protocol.
RTC	Real-time Clearing. The JSE implementation of Cinnober TradeExpress™ clearing system

2 OVERVIEW

This document describes the Booking Fee calculation for trades done on the Currency Derivative and Equity Derivative market. It will explain how Booking Fees are calculated and derived using a Clearing Deal Structure. It will also show how to identify and apply discounts to certain scenarios.

In order to calculate booking fees, the following data is required:

- Trade data [MIT]
- Deal Data [EMAPI]
- Instrument and Client Reference Data [IDP]
- Equity Derivative Future Closing prices [MIT - Market Data Gateway]
- Pricing Methodology [Published on the JSE website]

Note: *Source listed in Square Brackets*

3 BOOKING FEE CALCULATION

3.1 Booking Fee Calculation

Booking Fee calculation starts after the CmBalancing2Event is received from the Clearing System. Please refer to the 'Volume PT02 - Post-Trade EMAPI Clearing' Section 12 for more information regarding the EMAPI events.

Using the deal data available via EMAPI, it is required to find the 'parent' deal entries. These deal lines are the top level / parent level on which the Booking Fees will be calculated. Lower level / child level deal lines' booking fees will be derived from the previously mentioned. (See section 4.1)

3.2 Derived Value and Pricing Methodology

Booking Fee = Derived Value (Quantity) * Methodology

Derived Value is made up of one or more prescribed variables and will be used as part of the Booking Fee calculation.

The Equity Derivative Market uses the following derived value for booking fee calculation.
Spot Notional Traded = Future Instrument Closing Price * Nominal (Contract Size) * Number of Contracts traded.

Note: For Option Instruments, the Underlying Future Closing Price must be used.

For the Currency Derivative Market, the derived value used is the 'number of contracts traded'.

Pricing Methodology consists of the following methodologies for booking fee calculation:

- Fixed
- Percentage
- Sliding Scale
 - Fixed
 - Percentage

Note: The above-mentioned *Derived Value (Quantity)* and *Pricing Methodologies* for all derivatives can be found on the JSE website. Please ensure to use the latest versions of the communicated pricing methodologies for the respective derivative market.

Booking Fees are calculated based on the following information from the deal lines with position reasons listed in section 4.1.

- Instrument Type
 - Reference data linked to the Instrument ID of the trade and deal line
- Trade Type
 - Will indicate an On-Screen vs Reported trade.
- Number of contracts traded (Remaining Quantity)
- Strategy Type
 - Certain strategies will trigger a discount e.g. Inverse Calendar Spreads (*Discussed later in this document*)
- Closing Price
 - Equity Derivative Future closing prices used for calculating the Booking Fee of Equity Derivatives. Note: End-of-day Closing Prices are used for all calculations (for normal and FCO days). Derivative Index Future closing prices used for all index derivative instruments' booking fee calculations.

4 CLEARING DEAL STRUCTURE

This section will describe the way in which deal lines are linked to each other and how to build the Clearing Deal Structure using the respective links. It will also show how to derive the booking fees from the top level / parent deal lines to the linked child deal lines.

4.1 Top Level / Parent Deal Position Reasons

The first step in calculating the booking fees is to identify the top level (parent) deal lines. Booking fees will be calculated on these entries and derived down the deal structure (discussed later in this document).

The following clearing position reasons indicate the top-level deal lines:

ABANDON
CLOSE_OUT
CLOSE_OUT_CA
CANCELLED with tradeType = CT
CANCELLED_PRICE_ADJUST with tradeType = PA
DEFAULT_FROM
DEFAULT_TO
EXERCISE
NEW_POSITION_CA
POS_SUBACCOUNT_MOD_FROM
TRADE
TRANSFERRED_FROM
TRANSFERRED_TO
TRANSFERRED_SP_FROM
TRANSFERRED_SP_TO
ASSIGNED_TO
TRIPARTITE_TO
<i>Booking Fees are recalculated (and not derived) for deal lines with a position reason of ASSIGNED_TO (Equity and Currency derivatives), TRIPARTITE_TO (Equity and Currency derivatives) and ACCUMULATED_TO, ALLOCATED_TO & ALLOCATION_CORRECTION_TO (Currency Derivatives only). Although the deal lines will be linked to a 'parent' line. Further deal management lines originating from the previously mentioned will derive the recalculated booking fee.</i>

Note: See section 3 related to Booking Fee calculation. Also note that deal lines for Transfers and Corporate Action are only calculated in the next day's booking fee calculation.

4.2 Clearing Deal Structure

The Clearing Deal Structure / Tree are the logical linking of all deal lines using the deal lines' respective previous and forward link IDs in addition to the Internal Deal Half ID / RTC Deal ID (Referred to as the 'Trade ID' from hereon).

Please see section APPENDIX - A for the EMAPI fields used in building up the Deal Structure.

The following is a representation of the deal data received via the EMAPI interface. Example below shows an 'Allocate' deal management scenario.

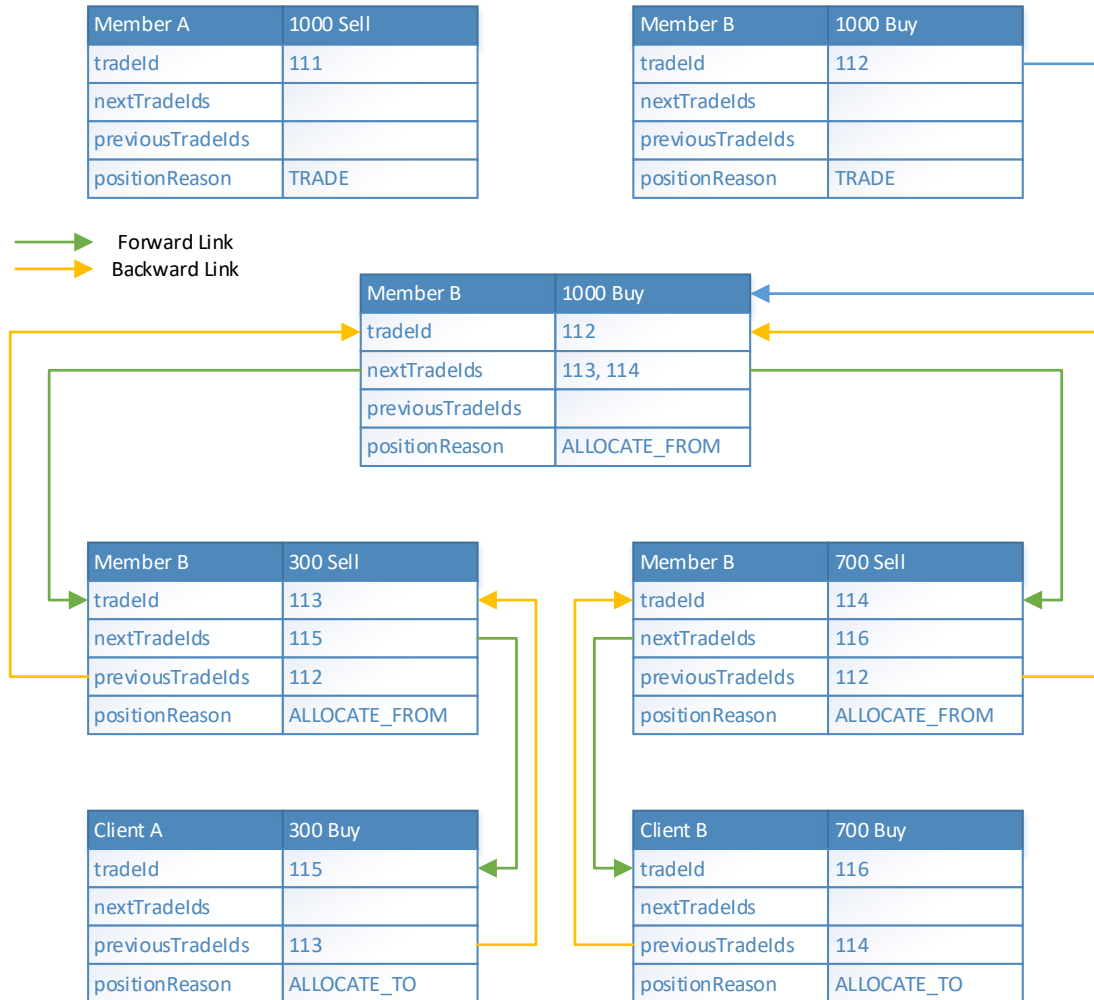
	tradeId	nextTradeIds	previousTradeIds		positionReason	B/S	Qty	Booking Fee
Member A								
	111			Member A	Trade	S	1000	150
	112			Member B	Trade	B	1000	150
Member B								
	112	113,114		Member B	Allocate From	B	1000	150
	113	115	112	Member B	Allocate From	S	300	45
	114	116	112	Member B	Allocate From	S	700	105
	115		113	Client A	Allocate To	B	300	45
Client A	116		114	Client B	Allocate To	B	700	105

Note: The Booking Fees listed in the example above is not a calculated fee and only serves as an example. Also note that after discounting / zero feeing (discussed later in this document) are applied some of the lines will not be charged / reflect on the client's invoice.

In the above example a trade occurs between Member A (1000 Sell) & Member B (1000 Buy). Member B allocates the position to Client A (300) and Client B (700) respectively.

4.2.1 Next and Previous Link ID

The illustration below shows the above-mentioned deal lines as objects, showing both next and previous trade id links in relation to each other. Note that not all deal lines will have a unique trade ID e.g. ID = 112 appears twice in the data, though the lines have different position reasons being 'TRADE' and 'ALLOCATED_FROM'. In this scenario deal line 112 with position reason 'ALLOCATED_FROM' will derive its booking fee value from deal line 112 with position reason = TRADE. Deal lines on which deal management occurs will have a similar pattern.



4.3 Derive Booking Fee

As mentioned earlier in this document, the Booking Fees are calculated on the Top Level / Parent deal lines and derived down the structure for the linked child lines. Using the example shown in section 4.2 we will show how the fee is derived.

Assuming that the Booking Fees calculated for the line with Trade ID 111 and 112 came to a total of R150 respectively (for each line), the booking fees for Trade ID 113,114,115 and 116 will be derived from Trade ID 112's booking fee.

When deriving the Booking Fee, the following formula will assist in deriving the booking fee in proportion to the quantity of the child object.

$$\begin{aligned} & \frac{[\text{Previous linked deal line Booking Fee}] / [\text{Previous linked deal line Quantity}]}{\text{X}} \\ & \quad [\text{Current Line Quantity}] \\ & \quad = \\ & \quad [\text{Current Line Booking Fee}] \end{aligned}$$

Example:

Deal Line 112 [Position Reason: Allocate From] will derive its Booking Fee from Deal Line 112 [Position Reason: Trade] = **R150.00**. (Link on same Trade ID)

Deal Line 113 [Position Reason: Allocate From] derived Booking Fee (based on the above formula) [Fee = **R150.00** / Qty (112) = **1000**] * [Qty (113) = **300**] = **R45.00**

Deal Line 114 [Position Reason: Allocate From] derived Booking Fee (based on the above formula) [Fee = **R150.00** / Qty (112) = **1000**] * [Qty (114) = **700**] = **R105.00**

Deal Line 115 and 116 will derive their booking fee from Deal Line 113 and 114 respectively.

Note: Deal Lines with position reason **Accumulate_From** will have a 'remaining quantity' of 0 (zero). The quantity for these lines must be derived from their direct parent / linked deal line. **Accumulate_To** is the only scenario where the booking fees of the 2 or more parent lines must be added together in order to determine the Booking Fee.

5 DISCOUNTING

In this section we will discuss how to identify the deal line 'type' and how to use this in applying discounting on set lines. Below we will discuss 3 deal line types being Initiating, Equal Opposite and Originating.

All deal lines will be identified as either an Initiating or Equal Opposite line. Discounts set for the previous mentioned types are discounts that will be triggered by the line itself and applied to the booking fee value of this line.

A discount set for an 'originating' line is a discount triggered by a deal line but applied to a different deal line's booking fee.

5.1 Identifying the Initiating & Equal opposite Deal Lines

As mentioned above a deal line will be identified as either an Initiating or Equal Opposite. An Initiating line can exist in the data without an equal opposite. An Equal Opposite cannot exist without an Initiating line.

The following rules will apply to identify the Initiating and Equal Opposite lines:

- The Initiating and Equal Opposite lines have the same position reason
- The Initiating line forward links to the Equal Opposite line(s)
- The Initiating line has the opposite buy / sell side as the Equal Opposite line
- The Equal Opposite line(s) will link back to the Initiating line.

Example:

tradeId	nextTradeIds	previousTradeIds		positionReason	B/S	Qty	Booking Fee
111			Member A	Trade	S	1000	150
112			Member B	Trade	B	1000	150
112	113,114		Member B	Allocate From	B	1000	150
113	115	112	Member B	Allocate From	S	300	45
114	116	112	Member B	Allocate From	S	700	105
115		113	Client A	Allocate To	B	300	45
116		114	Client B	Allocate To	B	700	105

Using the 'Allocate' scenario Line 111 & 112 will be identified as Initiating lines. Line 112, 113 and 114 have the same position reason being 'Allocate From'. Line 112 has forward links to line 113 & 114 and has a 'Buy' indicator compared to 113 & 114 having 'Sell' indicators. According to this, Line 112 is considered the 'Initiating' line and 113 & 114 as the 'Equal Opposite' lines. Deal line 115 & 116 will be identified as 'Initiating' lines.

5.2 Identifying the Originating Deal Line

An 'Originating' deal line is the deal line which is considered the 'first line' or starting point of a deal management scenario. As an example, in the 'Allocate' scenario used in section 4.2,

The following position reasons will indicate an 'Originating' deal line for the deal management scenarios (following the deal line with these position reasons):

- TRADE
- ASSIGNED_TO
- ACCUMULATED_TO
- ALLOCATED_TO
- ALLOCATION_CORRECTION_TO
- POS_SUBACCOUNTMOD_TO
- PRINCIPLE_CORRECTION_TO
- TRADE_SUB_ACCOUNT_MOD_TO
- TRANSFERRED_SP_TO
- TRANSFERRED_TO
- TRIPARTITE_TO

In order to find a deal line's originating deal line, follow the links backwards up the clearing deal structure until the first deal line with one of the above-mentioned position reason are identified.

5.3 Applying Discounting

The list below shows the discount percentage that will apply based on the Position Reason, Asset class (Market) and Deal Line Type. In order to apply the correct discount, the deal line type must be determined in combination with the asset class (market) & position reason of the deal line.

The below example shows discounting as it would be applied for the Allocate deal management scenario

	Position Reason	B/S	DLT		Reason for Discount	Qty	Fee
Member A	Trade	S	I	Full charge		1000	150
Member B	Trade	B	I	100% Discount	Allocate To / Originating - 100% Discount	1000	0
Member B	Allocate From	B	I	100% Discount	Allocate From / Initiating - 100% Discount	1000	0
Member B	Allocate From	S	EO	100% Discount	Allocate From / Equal Opposite - 100% Discount	300	0
Member B	Allocate From	S	EO	100% Discount	Allocate From / Equal Opposite - 100% Discount	700	0
Client A	Allocate To	B	I	Pro Rata charge		300	45
Client B	Allocate To	B	I	Pro Rata charge		700	105

The 'DLT' column shows Deal Line Type. I = Initiating and EO = Equal Opposite. The 'Reason for discount' shows the Position Reason, Triggering deal line type and percentage of discount applied. 'Originating' line marked in orange.

Position Reason	Asset Class	Deal Line Type	Discount/Markup	DISCOUNT
ABANDON	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ACCUMULATED_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ACCUMULATED_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ACCUMULATED_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000

ALLOCATED_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ALLOCATED_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ALLOCATED_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ASSIGN_CANCELLED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_EXPIRED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_INITIATED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_REJECTED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGNED_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ASSIGNED_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGNED_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	50.00000000
CANCELLED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
CANCELLED_BUST	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED_BUST	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
CANCELLED_PRICE_ADJUST	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED_PRICE_ADJUST	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000

CLOSE_OUT	CURRENCY DERIVATIVES	OUT OF THE MONEY	DISCOUNT	100.00000000
CLOSE_OUT	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CLOSE_OUT_CA	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
DEFAULT_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
DEFAULT_TO	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
EXERCISE	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
MIGRATION	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
NEW_POSITION_CA	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
POS_SUBACCOUNT_MOD_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
POS_SUBACCOUNT_MOD_TO	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
TRADE	CURRENCY DERIVATIVES	CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	CURRENCY DERIVATIVES	DELTA OPTION	DISCOUNT	0.00000000
TRADE	CURRENCY DERIVATIVES	INVERSE CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	CURRENCY DERIVATIVES	REPORTED CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	CURRENCY DERIVATIVES	REPORTED DELTA OPTION	DISCOUNT	0.00000000
TRADE	CURRENCY DERIVATIVES	REPORTED SPLITS	DISCOUNT	0.00000000

TRADE	CURRENCY DERIVATIVES	ROLLOVER TRADE	DISCOUNT	50.00000000
TRADE	CURRENCY DERIVATIVES	SPLITS	DISCOUNT	0.00000000
TRADE_SUBACCOUNT_MOD_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
TRADE_SUBACCOUNT_MOD_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRADE_SUBACCOUNT_MOD_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_SP_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_SP_TO	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_TO	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_APPROVED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_CANCELLED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_EXPIRED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_FROM	CURRENCY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
TRIPARTITE_FROM	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_INITIATED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_REJECTED	CURRENCY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_TO	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	50.00000000
ZERO_FEE	CURRENCY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ABANDON	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000

ACCUMULATED_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ACCUMULATED_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ACCUMULATED_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ALLOCATED_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ALLOCATED_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ALLOCATED_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ALLOCATION_CORRECTION_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
ASSIGN_CANCELLED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_EXPIRED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_INITIATED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGN_REJECTED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGNED_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
ASSIGNED_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
ASSIGNED_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	0.00000000
CANCELLED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
CANCELLED_BUST	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED_BUST	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
CANCELLED_PRICE_ADJUST	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
CANCELLED_PRICE_ADJUST	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
CLOSE_OUT	EQUITY DERIVATIVES	OUT OF THE MONEY	DISCOUNT	100.00000000
CLOSE_OUT_CA	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
DEFAULT_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
DEFAULT_TO	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
EXERCISE	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000

MIGRATION	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
NEW_POSITION_CA	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
POS_SUBACCOUNT_MOD_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
POS_SUBACCOUNT_MOD_TO	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
PRINCIPAL_CORRECTION_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
TRADE	EQUITY DERIVATIVES	CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	EQUITY DERIVATIVES	DELTA OPTION	DISCOUNT	0.00000000
TRADE	EQUITY DERIVATIVES	INVERSE CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	EQUITY DERIVATIVES	REPORTED CALENDAR SPREAD	DISCOUNT	50.00000000
TRADE	EQUITY DERIVATIVES	REPORTED DELTA OPTION	DISCOUNT	0.00000000
TRADE	EQUITY DERIVATIVES	REPORTED SPLITS	DISCOUNT	0.00000000
TRADE	EQUITY DERIVATIVES	ROLLOVER TRADE	DISCOUNT	50.00000000
TRADE	EQUITY DERIVATIVES	SPLITS	DISCOUNT	0.00000000
TRADE_SUBACCOUNT_MOD_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000
TRADE_SUBACCOUNT_MOD_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRADE_SUBACCOUNT_MOD_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_SP_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_SP_TO	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRANSFERRED_TO	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_APPROVED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_CANCELLED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_EXPIRED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_FROM	EQUITY DERIVATIVES	EQUAL OPPOSITE POSITION	DISCOUNT	100.00000000

TRIPARTITE_FROM	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_INITIATED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_REJECTED	EQUITY DERIVATIVES	INITIATING POSITION	DISCOUNT	100.00000000
TRIPARTITE_TO	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	0.00000000
ZERO_FEE	EQUITY DERIVATIVES	ORIGINATING POSITION	DISCOUNT	100.00000000

Please see Appendix B - 'Booking Fee Replication Scenarios' which will show the most common deal management scenarios and the respective discounts applied.

5.4 Special Discounting & Booking Fee calculation.

In addition to the above-mentioned discounting (discounts on Position Reason, Asset Class and Deal Line Type) there are discounting scenarios with additional criteria which will be discussed below.

5.4.1 Strategies (On Book vs Reported)

A strategy (e.g. Calendar Spread) is a trade with more than 1 leg. For example, when a Calendar Spread is traded on book, the trading system produces 3 legs (Trade lines) per side (6 Legs for both Buy and Sell side).

- Calendar Spread
 - Near Contract
 - Far Contract

Of the 3 legs mentioned above, only the near and far contracts / legs are sent to the Clearing System and produce two deal lines. A deal line is identified as part of a strategy if the *tradingSystemLinkId* field is populated on the deal line. All deal lines that forms part of the same strategy will have the same value in this field. Validation on the trade legs is done to ensure that the legs have the same instrument (Derivative Instrument Type & Underlying instrument) with different expiry dates. Discounts are only applied once validated to be a valid strategy.

On Book Strategy

When a strategy trade was traded on book, the *tradingSystemLinkId* will be populated with the same value for the legs forming part of the strategy of the one side (buy / sell). In order to identify the 'strategy type' as being for example a Calendar Spread, the *tradingSystemTradeHalfId* must be used to find the trade lines from the trading system. As mentioned earlier an on-book strategy will have an additional line on the trading system which does not reflect in the clearing systems data. Thus one would find the lines from the clearing system corresponding trade lines. From the trade lines data, the *strategyLinkId* must be used to find all lines that forms part of the strategy. The trade line that does not have a corresponding deal line will be the trade line that is used to identify the strategy type. The instrument's type on this line will indicate the strategy. In the calendar spread scenario, the instrument traded will have an instrument type = Calendar Spread.

Reported Strategy

To determine the strategy type on a reported trade, the same logic will apply as mentioned above with the exception that one will not have / find an additional trade line on the trading system data. Reported strategy trade lines' *strategyType* field must be used to determine the strategy type.

Rollover Trades

As with the strategy trades' *tradingSystemLinkId*, Roll trades will link in a similar fashion. In order to identify the two legs forming part of a roll over trade, one will use the *obtradesubtype* field from the trade lines' data. If the *obtradesubtype* = RT the lines form part of a roll over trade.

For all of the above-mentioned scenarios, a 50% discount will be applied to the booking fees of the strategy's legs. When the previously mentioned, discounted lines are deal managed, the discounted booking fee must be derived for the resulting deal lines.

Validation on On Screen Strategy Trades

The legs of an On Screen strategy trade will have multilegreportype = 2. When a line with Position Reason = TRADE, obradesubtype = AT or UT, and multilegreportype = 2 is received, the respective discount must be applied to the line.

Validation on Reported Strategy and Roll Trades

In addition to the above (identifying Reported Strategy & Roll trade) validation is set in place to only apply discounts to Inverse Calendar spreads and Roll Trades once determined to be a valid strategy.

The following validation rules must be met before discounting is applied.

- The strategy Link only links 2 legs.
- Position Reason = TRADE
- Contract Type of the instrument must be the same e.g. Future Expiry / Option Expiry
- Instrument Type of the instrument traded must be in the same group as per the table listed in APPENDIX C – Derivative Instrument Contract Type Grouping for Strategy Discounting Validation
- Underlying Instrument of the instruments traded must be the same e.g. Anglo / ZAUS
 - For the Currency Derivative Market
 - Contract Size Type must be the same e.g. Micro, Mini, Maxi
 - Number of contracts traded on the buy and sell leg must be the same quantity.
 - For the Equity Derivative Market
 - Contract Size Type must be the same e.g. Micro, Mini, Maxi
 - Number of contracts traded on the buy and sell leg must be the same quantity.
- The two legs must have different sides e.g. if the one leg is Sell the other must be Buy
- Contract Expiry date of instrument on the buy and sell leg must be different.

Note: *Please refer to the relevant documentation regarding the trading system and reference data for more information.*

CFD Contract Roll Trade

CFD Contracts cannot be traded on the RT (Roll Trade) trade type. In order to discount CFD contracts traded in a similar fashion as a Roll Trade, the following validation and logic must apply.

Identify deal lines per **Clearing Member, Trading Member, Member Client, Client Account** where the deal lines'

- Position Reason = TRADE
- Instrument Type = CFD
- Trade Sub Type (tradeSubType) = CD
- Contract Type is the same e.g. Future Expiry / Option Expiry

- Contract Size is the same e.g. Micro, Mini, Maxi
- Underlying Instrument Type is the same e.g. Equity
- Underlying Instrument is the same e.g. Anglo
- Number of Contracts Traded / Remaining Quantity is the same
- Pricing Instrument Base Rate JSE Code is the same (Field available on the jse_derivativeinstrument view)

Once matching lines were identified, the list of matches must be processed on ascending Clearing Deal IDs.

Note:

- Only lists with two or more deal lines identified must be processed.
- TRADE lines that were CANCELLED must be excluded from the list.
 - E.g. Where Position Reason = TRADE deal line with Clearing Deal ID = 123 has a matching Position Reason = CANCELLED deal line with Clearing Deal ID = 123

The strategy deal line match for the smallest Clearing Deal ID from the list must have

- Different Side (Buy / Sell)
- Different Contract Expiry Date

Once matched, 50% Discount must be applied to both lines and the two matched lines must be removed from the list. The next deal line with the smallest Clearing Deal ID on the list must be used to search for a match.

This process must continue up until there are one or less deal lines in the list.

When TRADE lines (discounted based on the above) are deal managed, the discounted fee must be derived down the deal structure.

Please see next page for line matching example.

CM	TM	Member Client	Market	Clearing Deal ID	Position Reason	Side (Buy/Sell)	Trade Type	Instrument Type	Pricing Instrument Base Rate JSE Code	Derivative Instrument Alpha Code	Underlying Instrument (Alpha Code)	Instrument Expiry	Remaining Quantity
A	B		EDM	1001	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B		EDM	1001	CANCELLED	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B		EDM	1111	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B		EDM	1112	TRADE	Buy	CD	CFD	RODI	18MAR21 AGL CSH CFD RODI	AGL	2021/03/18	100
A	B		EDM	1113	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B		EDM	1114	TRADE	Buy	CD	CFD	SABOR	18MAR21 AGL CSH CFD SABOR	AGL	2021/03/18	100
A	B		EDM	1115	TRADE	Sell	CD	CFD	SABOR	19MAR20 AGL CSH CFD SABOR	AGL	2020/03/19	150
A	B		EDM	1116	TRADE	Sell	CD	CFD	SABOR	19MAR20 AGL CSH CFD SABOR	AGL	2020/03/19	100
A	B	C	EDM	2001	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B	C	EDM	2001	CANCELLED	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B	C	EDM	2111	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B	C	EDM	2112	TRADE	Buy	CD	CFD	RODI	18MAR21 AGL CSH CFD RODI	AGL	2021/03/18	100
A	B	C	EDM	2113	TRADE	Sell	CD	CFD	RODI	19MAR20 AGL CSH CFD RODI	AGL	2020/03/19	100
A	B	C	EDM	2114	TRADE	Buy	CD	CFD	SABOR	18MAR21 AGL CSH CFD SABOR	AGL	2021/03/18	100
A	B	C	EDM	2115	TRADE	Sell	CD	CFD	SABOR	19MAR20 AGL CSH CFD SABOR	AGL	2020/03/19	150
A	B	C	EDM	2116	TRADE	Sell	CD	CFD	SABOR	19MAR20 AGL CSH CFD SABOR	AGL	2020/03/19	100

Note:

Red lines must not be discounted.

Blue lines indicate matches and 50% discount must be applied to each of the billing line items.

Green lines indicate matches and 50% discount must be applied to each of the billing line items.

5.4.2 Deal Management Strategy Discounting

Strategy Deal Identification:

Identify deal lines per Clearing Member, Trading Member, Member Client, Client Account and Position Reason combination where the deal lines'

- Position Reason is ALLOCATED_TO & ALLOCATION CORRECTION TO, TRIPARTITE_TO, ACCUMULATED_TO or ASSIGNED_TO (Lists should be per position reason)
- Contract Type is the same e.g. Future Expiry / Option Expiry
- For the Currency Derivative Market
 - Contract Size Type must be the same e.g. Micro, Mini, Maxi
 - Number of contracts traded on the buy and sell leg must be the same quantity
- For the Equity Derivative Market
 - Contract Size Type must be the same e.g. Micro, Mini, Maxi
 - Number of contracts traded on the buy and sell leg must be the same quantity
- Instrument Type of the instrument traded must be in the same group as per the table listed in APPENDIX C – Derivative Instrument Contract Type Grouping for Strategy Discounting Validation
- Underlying Instrument Type is the same e.g. Equity / Forex Pair
- Underlying Instrument is the same e.g. Anglo / ZAUS

Once matching lines were identified, the list of matches must be processed on ascending Clearing Deal IDs.

Note:

- *Only lists with two or more deal lines identified must be processed.*
- *Allocated To and Allocation Correction To position reasons must be processed in the same list.*
- *Allocated To and Allocation Correction To position reason list only applicable to the FX Derivative Market*
- *Accumulated To only applicable to the FX Derivative Market*

The match for the smallest Clearing Deal ID from the list must have

- Different Side (Buy / Sell)
- Different Contract Expiry Date

Once matched and discounted, the two matching lines must be removed from the list and the next deal line with the smallest Clearing Deal ID must be used to search for a match.

This process must continue up until there are one or less deal lines in the list.

Example:

Clearing Deal ID	Clearing Member	Trading Member	Member Client	Position Reason	Contract Type	Instrument Type	Underlying Instrument Type	Underlying Instrument	Number of Contracts Traded	Side	Contract Expiry Date
12343	CM_A	TM_A	MC_A	ALLOCATED_TO	Future Expiry	Forex	Forex Pair	ZAUS	500	BUY	SEP_2019
12344	CM_A	TM_A	MC_A	ALLOCATED_TO	Future Expiry	Forex	Forex Pair	ZAUS	500	BUY	DEC_2019
12345	CM_A	TM_A	MC_A	ALLOCATED_TO	Future Expiry	Forex	Forex Pair	ZAUS	500	SELL	JUN_2019
12346	CM_A	TM_A	MC_A	ALLOCATED_TO	Future Expiry	Forex	Forex Pair	ZAUS	500	BUY	SEP_2019
12347	CM_A	TM_A	MC_A	ALLOCATION_CORRECTION_TO	Future Expiry	Forex	Forex Pair	ZAUS	500	SELL	DEC_2019
23454	CM_A	TM_A	MC_A	TRIPARTITE_TO	Future Expiry	Single Stock	Equity	Anglo	500	SELL	JUN_2019
23455	CM_A	TM_A	MC_A	TRIPARTITE_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	SEP_2019
23456	CM_A	TM_A	MC_A	TRIPARTITE_TO	Future Expiry	Single Stock	Equity	Anglo	500	SELL	JUN_2019
23457	CM_A	TM_A	MC_A	TRIPARTITE_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	SEP_2019
23458	CM_A	TM_A	MC_A	TRIPARTITE_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	DEC_2019
34565	CM_A	TM_A		ASSIGNED_TO	Future Expiry	Single Stock	Equity	Anglo	500	SELL	DEC_2019
34566	CM_A	TM_A		ASSIGNED_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	JUN_2019
34567	CM_A	TM_A		ASSIGNED_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	JUN_2019
34568	CM_A	TM_A		ASSIGNED_TO	Future Expiry	Single Stock	Equity	Anglo	500	BUY	SEP_2019
34569	CM_A	TM_A		ASSIGNED_TO	Future Expiry	Single Stock	Equity	Anglo	500	SELL	DEC_2019

Using the example lists above the following clearing deal ids must be matched and discounted as a strategy pair:

Allocated_To / Allocation Correction To (FX Derivative Market Only)

Note: *Allocated To and Allocation Correction To lines must be included in the same list to be considered for discounting. E.g. an Allocated To line can be matched with an Allocation Correction To line and discounted accordingly.*

Clearing Deal ID **12343** and **12345** - 50% Discount for each of the legs

Clearing Deal ID **12344** will not have a match and will not be discounted. (Due to not having a match with different Expiry date)

Clearing Deal ID **12346** and **12347** - 50% Discount for each of the legs

Tripartite_To

Clearing Deal ID **23454** and **23455** - 50% Discount for each of the legs

Clearing Deal ID **23456** and **23457** - 50% Discount for each of the legs

Clearing Deal ID **23458** will not have a match and will not be discounted.

Assigned_To

Clearing Deal ID **34565** and **34566** - 50% Discount for each of the legs

Clearing Deal ID **34567** and **34569** - 50% Discount for each of the legs

Clearing Deal ID **34568** will not have a match and will not be discounted.

5.4.3 Exotic Options

When a deal line is received with a position reason = CLOSE_OUT, the instrument is listed as an Exotic Option and the Closing price of the underlying is 0 (zero), a 100% discount must be applied to the respective line's booking fee.

5.4.4 Exotic Futures, Exotic Options and Option on Exotic Future (Equity Derivative Market only)

When a deal line is received with a position reason = ASSIGNED_TO or TRIPARTITE_TO the line must trigger a 50% discount to be applied to the originating deal line's booking fee of the deal management scenario. Refer to section 5.2 - *Identifying the Originating Deal Line* above. Note that the above-mentioned discounting is only applicable to the Equity Derivative Market.

5.4.5 Zero Fee flag / Deal Line Reference Update

When a deal line is manually zero fee'd on the Clearing System, the data will show 2 lines. The first line will be the deal line related to the original trade. The second line will be a duplicate of the previously mentioned with the addition of the zeroFeeFlag field = TRUE.

When a deal line's reference field is updated on the Clearing System, the data will show 2 lines. The first line will be the deal line related to the original trade. The second line will be a duplicate of the previously mentioned with the addition of the Reference field having the updated value.

In order to not create duplicate charges for the additional lines (as described above) the following logic must be applied.

Note: *The following logic is only applicable to groups that have two or more deal lines*

- Find all deal lines with matching Clearing Deal ID and Position Reason
- Order the above data by Sequence number ascending.
- **IF** the Deal Line with the highest sequence number has ZeroFeeFlag = TRUE THEN Apply 100% discount to all the deal lines in the data set.
- **IF** the Deal Line with the highest sequence number has ZeroFeeFlag = FALSE THEN Apply 100% discount to all the deal lines in the data set with the exception of the Deal Line with the lowest sequence number (e.g. First Deal Line in Data set)

Single Deal Lines with ZeroFeeFlag = TRUE

Where a Deal Line does not have a duplicate line (e.g. *Only one instance of Clearing Deal ID / Position Reason combination*) and has ZeroFeeFlag = TRUE, a 100% Discount must be applied to the respective deal line.

5.4.6 Cancelled Price Adjust

When a 'price adjust' is done on the Trading Engine, RTC will produce 2 x Deal Lines with position reason = CANCELLED and 2 x Deal Lines with position reason = CANCELLED_PRICE_ADJUST (*based on one side of the Trade / Price Adjust scenario. The same deal lines will be received for the other side of the scenario*). On the Deal line with position reason = CANCELLED_PRICE_ADJUST and tradeType = PA the booking fee will be recalculated (as a reported trade) and billed in full, the other CANCELLED_PRICE_ADJUST deal line, linked to the original trade, will have its booking fee derived from the linked trade and 100% discount applied.

5.4.7 Market Maker Booking Fees (Equity Derivative Market)

A new Market Maker incentivised discount is applicable to the provider of a trade executed On Screen and on Index Options and Single Stock Options instruments.

IF the deal line has the following properties:

- Market = Equity Derivative Market
- Trade Sub Type (tradeSubType) = AT
- derivativeinstrumentcontractypename = Single Stock Option **OR** Index Option
- aggressor = False

Apply 100% Discount to the respective deal line's calculated fee.

In addition to the above, when the above position is deal managed, the discounted fee must be derived down the deal structure / tree.

Note: *Where fees are recalculated in the deal management process (e.g. Assign / Tripartite) the recalculated fee will **not have the discount applied** and will be derived down the deal structure / tree from thereon.*

5.4.8 Market Maker Booking Fees (Currency Derivative Market)

Trading Members and Branches marked as Market Makers (hereafter referred to as Market Maker) are billed at an incentivised rate. There are three 'incentivised' rates being standard, qualified and non-qualified, one of which will be billed based on qualification statistics. Qualification for the incentivised is based on the On Book orders for the respective Category A and Category B instruments.

Note: *Please refer to the Market Maker Billing document on the JSE website (Also listed in reference documents) for qualification rules and more information on incentivised instruments. **Market Makers will be listed on the JSE website.***

Category A Instruments

Qualification for Forex Futures, marked as **Category A** instruments, is only determined at month end. Thus one will only be able to determine the correct bill at month end after receiving the qualification outcome.

Qualification for Category A contracts and expiries form a part of the obligation to earn the beneficial pricing. If one of the contracts / expiries qualifications is not met, the member will not receive the beneficial incentivised fees on any of the Category A contracts / expiries.

Category B Instruments

Qualification for Forex Futures marked as **Category B** will be determined on the same day on which the trades occur and the bill calculated and charged accordingly. The invoice will however not be issued on the day.

Qualification for Category B contracts and expiries do not form a part of the obligation to earn the beneficial pricing incentive; however if a provider meets the minimum criteria in one of these expiries, the beneficial pricing will be applied for the respective contracts / expiries traded.

The above qualification and incentivised fees are only applicable to Trades done by the Market Maker. For positions that were deal managed into the Market Makers' position account the standard incentivised fees apply.

Reported Trades on Forex, Option, Anyday and Can-Do instruments will have a standard incentivised rate not determined by qualification.

Market Makers receive 100% discount on deal lines with a position reason of CLOSE_OUT

Note: *The Market Maker's booking fees are calculated (daily), summarized and then published at the end of every month. Market Maker booking fees are not sent to the Clearing System and only invoiced at the end of the month.*

Deal Management

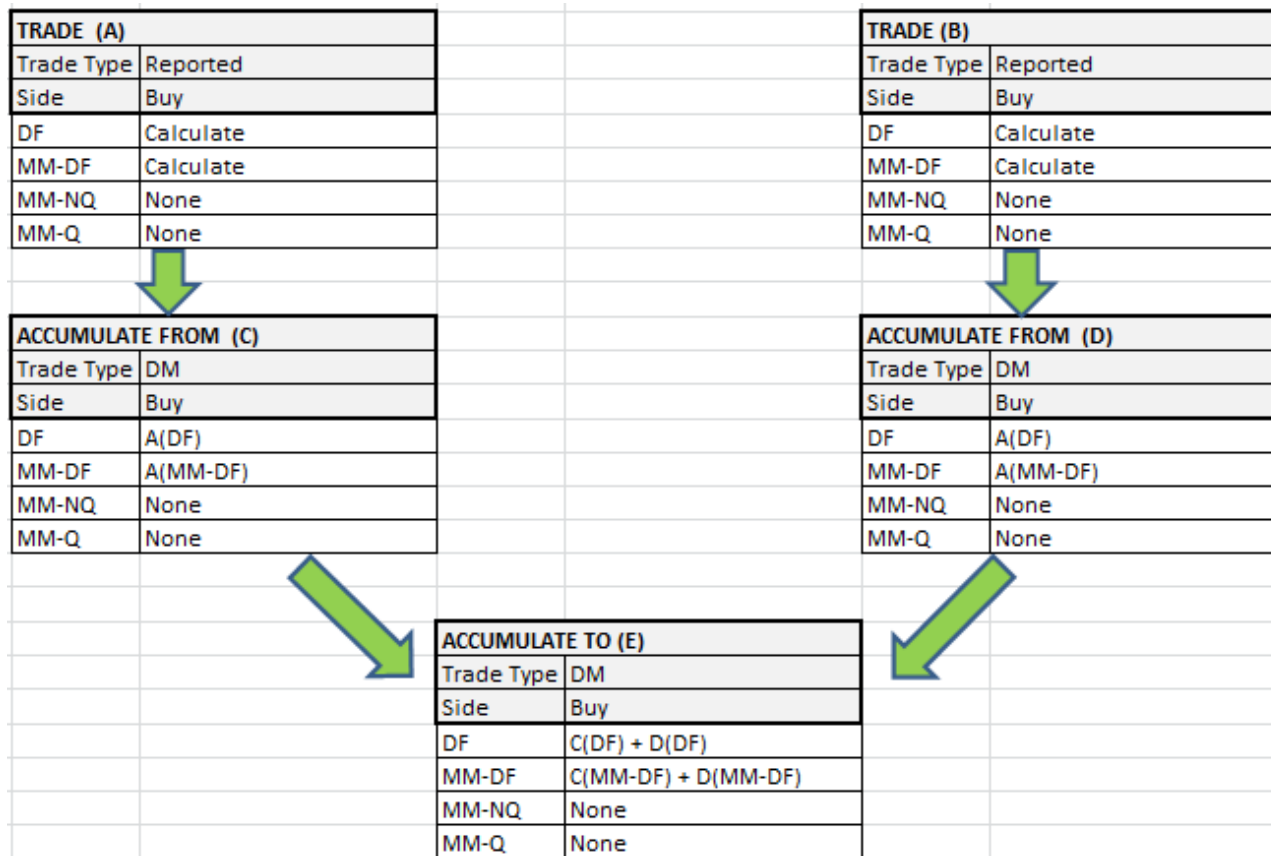
When a Market Maker Accumulates two (or more) trades the qualified and non-qualified fees will remain in place (For Category A / B instruments traded on screen) and be calculated as follows:

The following legend applies to the diagrams that show the Market Maker Booking Fee calculation on Accumulate scenarios.

Booking Fee Calculation Type	Booking Fee Short Name	Rules
Default / Standard Fee	DF	Standard booking Fee calculation (for non-Market Maker)
Market Maker Default / Standard Fee	MM-DF	If Deal Line's Trading Member = Market Maker or Branch = Market Maker, NO Member Client and Reported Trade (Or not linked to MM-Q or MM-NQ)
Market Maker Not-Qualified Fee	MM-NQ	If Deal Line's Trading Member = Market Maker or Branch = Market Maker, NO Member Client and Instrument = Liquid / Illiquid (Based on qualification Category A = Monthly, Category B = Daily)
Market Maker Qualified Fee	MM-Q	If Deal Line's Trading Member = Market Maker or Branch = Market Maker, NO Member Client and Instrument = Liquid / Illiquid (Based on qualification Category A = Monthly, Category B = Daily)

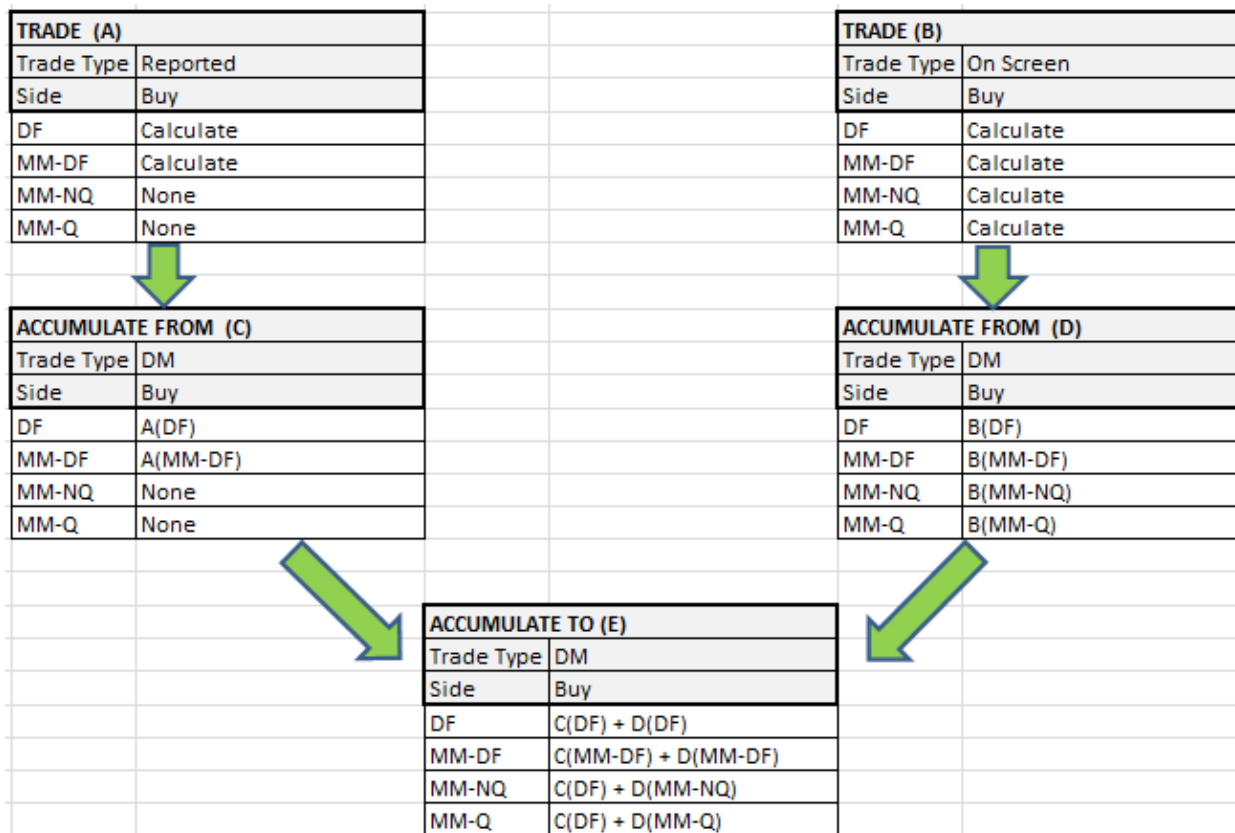
In the diagrams below, each deal line / object is marked with a character (e.g. A,B,C etc.). When a fee line is marked as 'Calculate', it shows that the respective fee is calculated as mentioned earlier in this document and not derived from the previous deal line / object. Should the fee line be marked as <**Character**> (<**Booking Fee Short Name**>) the character shows from which deal line / object the fee was derived and the booking fee short name shows the fee type.

Accumulation of Reported Trades for Category A or B instruments



Note: DF and MM-DF Fee types are calculated in order to correctly derive the correct fee type on deal lines resulting from further deal management. In the above example the MM-DF is applied should no further deal management occur.

Accumulation of On Screen and Reported Trades for Category A or B instruments



Note: Fee types are calculated in order to correctly derive the correct fee type on deal lines resulting from further deal management. In the above example the MM-Q or MM-NQ is applied based on qualification should no further deal management occur. The Accumulate To line's MM-Q fee is derived from the MM-DF fee from C plus the MM-Q fee from D. The same logic applies for the MM-NQ fee.

6 SECURITIES COLLATERAL FEE

With the inclusion of Securities Collateral, an additional Securities Collateral Fee is introduced. The Securities Collateral Fee is calculated on Member Client level, rolled up to Trading Member level and reported to RTC.

Securities Collateral Fee Calculation

Note: Details of the following fields are discussed in the the 'EmapiTransactionsForMember.html' available from the JSE website.

The following fields are used for the calculation:

- DailyAccountSummaryDetailsEvent > **registeredSecuritiesAmount (Last value received per client)**
- Where DailyAccountSummaryDetailsEvent > DailyAccountSummaryDetailsEvent > state = **CLIENT_PAYMENTS** and DailyAccountSummaryDetailsEvent > tag = END_OF_DAY_SETTLEMENT

Fee formula

Securities Collateral Fee = [**registeredSecuritiesAmount** * (basis point value / 10000)] / 365

Note: The calculation is done on each Daily Account Summary Details Event received. All fees calculated are rolled up to a total per Trading Member and reported to RTC.

Example:

- registeredSecuritiesAmount = 3 000 000
- Fee Basis Points value = 17 basis points
- [3 000 000 * (17 / 10000)] / 365
- Securities Collateral Fee = R13.972602

Calculation on Non-Business days (Weekends / Public Holidays)

The fee calculation described above is the calculation of 1 event / line on a single business day. When the current business day is followed by a public holiday or weekend, the fee calculated for the current business day must be multiplied by the amount of non-business days + 1

Example:

Weekend Scenario:

Friday (Business Day) – Fee = R13.972602

Final Fee sent to RTC = R13.972602 * 3 (**Friday** (*Business Day*), **Saturday**, **Sunday** (*Non-business Days*)) = **R41,917806**

Weekend + Public Holiday Scenario:

Friday (Business Day) – Fee = R13.972602

Final Fee sent to RTC = R13.972602 * 4 (**Friday** (*Business Day*), **Saturday**, **Sunday** (*Non-business Days*), **Monday** (Public Holiday)) = **R55.890408**

Day	Date	Registered Securities Amount	Risk Fee Calculation (CBS)	Billing Line Item Due Date	Settlement Date
Thursday	28-Apr-22	1100000000	$(1100000000 / 365) * 17\text{BPS} * 1 \text{ day}$ <i>Risk Fee for 28 Apr</i>	28-Apr-22	29-Apr-22
Friday	29-Apr-22	1200000000	$(1200000000 / 365) * 17\text{BPS} * 4 \text{ days}$ <i>Risk Fee for 29,30 April and 1,2 May</i>	29-Apr-22	03-May-22
Saturday	30-Apr-22		<i>Included in calculation on 29 Apr</i>		
Sunday	01-May-22		<i>Included in calculation on 29 Apr</i>		
Monday (Public holiday)	02-May-22		<i>Included in calculation on 29 Apr</i>		
Tuesday	03-May-22	1300000000	$(1300000000 / 365) * 17\text{BPS} * 1 \text{ days}$ <i>Risk Fee for 3 May</i>	03-May-22	04-May-22

7 APPENDIX

7.1 APPENDIX A – EMAPI fields used for building the Deal Structure and Booking Fee Calculation

The following fields were sourced from the 'EmapiTransactionsForMember.html' available from the JSE website.

Note: The Structure of the message AccountPositionEvent > Trade > RtcTradeExternalData

Message	Message ID	Field no	Field Name
AccountPositionEvent	10032	69	positionReason
		72	trade
		79	clearingMemberId
		82	tradingMember
		83	tradingMemberBranch
		84	clientId
Message	Message ID	Field no	Field Name
Trade	10015	1	tradeId
		10	isBuy
		13	remainingQuantity
		17	activeQuantity
		15	nextTradeIds
		16	previousTradeIds
		23	externalInstrumentId
		14	tradeExternalData
Message	Message ID	Field no	Field Name
RtcTradeExternalData	10085	11	tradingSystemLinkId
		14	tradeType
		15	tradingSystemTradeHalfId
		18	zeroFeeFlag
		23	originalTradingSystemMatchId

7.2 APPENDIX B – Booking Fee replication scenarios

The illustrations below shows different deal management scenarios with the respective discounting applied.

Trade / Allocate		Position Reason	B/S	DLT	Reason for Discount	Qty	Fee
<p>Member A ↓ Member B ↙ Allocate ↘ Client A Client B</p>	Member A	Trade	S	I	Full charge	1000	150
	Member B	Trade	B	I	100% Discount	1000	0
	Member B	Allocate From	B	I	100% Discount	1000	0
	Member B	Allocate From	S	EO	100% Discount	300	0
	Member B	Allocate From	S	EO	100% Discount	700	0
	Client A	Allocate To	B	I	Pro Rata charge	300	45
	Client B	Allocate To	B	I	Pro Rata charge	700	105
Trade / Accumulate		Position Reason	B/S		Reason for Discount	Qty	Fee
<p>Member B Member C ↓ ↓ Member A Member A ↘ Accumulate ↙ Member A</p>	Member A	Trade	B	I	100% Discount	500	0
	Member B	Trade	S	I	Full charge	500	50
	Member A	Trade	B	I	100% Discount	500	0
	Member C	Trade	S	I	Full charge	500	50
	Member A	Accumulate From	B	I	100% Discount	500	0
	Member A	Accumulate From	B	I	100% Discount	500	0
	Member A	Accumulate To	B	I	Full Charge	1000	100

Trade / Accumulate / Allocate		Position Reason	B/S			Qty	Fee			
	Member B	Member C	Member A	Trade	B	I	100% Discount	Accumulate To / Originating - 100% Discount	500	0
	Member A	Member A	Member A	Trade	S	I	Full charge		500	50
			Member A	Trade	B	I	100% Discount	Accumulate To / Originating - 100% Discount	500	0
			Member C	Trade	S	I	Full charge		500	50
			Member A	Accumulate From	B	I	100% Discount	Accumulate From / Initiating - 100% Discount	500	0
			Member A	Accumulate From	B	I	100% Discount	Accumulate From / Initiating - 100% Discount	500	0
			Member A	Accumulate To	B	I	100% Discount	Allocate To / Originating - 100% Discount	1000	0
			Member A	Allocate From	B	I	100% Discount	Allocate From / Initiating - 100% Discount	1000	0
			Member A	Allocate From	S	EO	100% Discount	Allocate From / Equal Opposite - 100% Discount	300	0
			Member A	Allocate From	S	EO	100% Discount	Allocate From / Equal Opposite - 100% Discount	700	0
			Client A	Allocate To	B	I	Pro Rata charge		300	30
			Client B	Allocate To	B	I	Pro Rata charge		700	70

Trade / Assign		Position Reason	B/S			Qty	Fee			
	Member A	Member B	Member A	Trade	B	I	Full charge		1000	100
	Member B	Member B	Member B	Trade	S	I	50% Discount	Assign To / Originating - 50% Discount	1000	50
			Member B	Assign From	S	I	100% Discount	Assign From / initiating - 100% Discount	1000	0
			Member B	Assign From	B	EO	100% Discount	Assign From / Equal Opposite - 100% Discount	1000	0
			Member C	Assign To	S	I	Full charge	*Booking Fee recalculated and derived from here on	1000	100
			Member C							

Note: Assign To / Originating - 50% Discount only applicable to Currency Derivative Market and Equity Derivative Market's - Exotic Instruments . If not the previously mentioned, full charge will apply.

Trade / Assign / Allocate												Qty	Fee
Member A	Trade	Member A	Trade	B	I	Full charge						1000	100
		Member B	Trade	S	I	50% Discount	Assign To / Originating - 50% Discount					1000	50
Member B	Assign	Member B	Assign From	S	I	100% Discount	Assign From / Initiating - 100% Discount					1000	0
		Member B	Assign From	B	EO	100% Discount	Assign From / Equal opposite - 100% Discount					1000	0
		Member C	Assign To	S	I	100% Discount	Allocate To / Originating - 100% Discount					1000	0
Member C	Allocate						*Booking Fee recalculated and derived from here on						
		Member C	Allocate From	S	I	100% Discount	Allocate From / Initiating - 100% Discount					1000	0
		Member C	Allocate From	B	EO	100% Discount	Allocate From / Equal Opposite - 100% Discount					1000	0
		Client A	Allocate To	S	I	Full charge	*Derived from the Assign To (recalculated) value					1000	100

Note: Assign To / Originating - 50% Discount only applicable to Currency Derivative Market and Equity Derivative Market's - Exotic Instruments . If not the previously mentioned, full charge will apply.

Tripartite												Qty	Fee
Member A	Tripartite	Member C	Trade	S	I	Full charge						1000	100
		Member A	Trade	B	I	50% Discount	Tripartite To / Originating - 50% Discount					1000	50
Member B > Client A		Member A	Tripartite From	B	I	100% Discount	Tripartite From / Initiating - 100% Discount					1000	0
		Member A	Tripartite From	S	EO	100% Discount	Tripartite From / Equal Opposite - 100% Discount					1000	0
		Member B > Client A	Tripartite To	B	I	Full charge	*Booking Fee recalculated and derived from here on					1000	100

Note: Tripartite To / Originating - 50% Discount only applicable to Currency Derivative Market and Equity Derivative Market's - Exotic Instruments. If not the previously mentioned, full charge will apply.

7.3 APPENDIX C – Derivative Instrument Type Grouping for Strategy Discounting Validation

The table below shows the grouping of Derivative Instrument Type that are allowed to match with each other in the Strategy Discounting Validation.

Derivative Instrument Type	Group
Forex AnyDay Future	1
Forex Future	1
Forex AnyDay Option	2
Forex Option	2
Index AnyDay Future	3
Index Future	3
Index AnyDay Option	4
Index Option	4
International Equity AnyDay Future	5
International Equity AnyDay Future	5
International Equity Future	5
International Equity Future	5
International Equity Dividend Neutral AnyDay Future	6
International Equity Dividend Neutral Future	6
International Index AnyDay Future	7
International Index Future	7
International Index AnyDay Option	8
International Index Option	8
Quanto Forex AnyDay Future	9
Quanto Forex Future	9
Quanto Forex AnyDay Option	10
Quanto Forex Option	10
Single Stock AnyDay Future	11
Single Stock Future	11
Single Stock AnyDay Option	12

Single Stock Option	12
Single Stock Dividend Neutral AnyDay Future	13
Single Stock Dividend Neutral Future	13