

# **Johannesburg Stock Exchange**

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## **New Equity Market Trading and Information Solution**

### **JSE Guidance Note**

### **Volume C – Closing Price Publication, Closing Price Cross Session and new Time in Force (TIF) on order of CPX.**

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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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## 1.4 References

Volume 00 – Trading and Information Overview

Volume 01 – Native Trading Gateway

Volume 02 – FIX Trading Gateway

## 1.5 Contact Details

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## 2 OVERVIEW

There is a need from market participants to be able to trade in the central order book at the official closing price once the closing price has been determined.

In order to accommodate this request, the JSE will introduce the following:

1. A new Time in Force (TIF) of CPX . This is a new order condition used to direct orders to the CPX session;
2. Two new trading sessions - Closing Price Publication (CPP) and Closing Price Cross (CPX).

The CPX session will initially be enabled only for segment ZA01 as a pilot phase whilst the CPP session will apply to all segments.

This document should be read in conjunction with Volume 00 – Trading and Information Overview, Volume 01 – Native Trading Gateway and Volume 02 – FIX Trading Gateway.

## 4 TRADING SESSIONS FOR THE JSE EQUITY MARKET

The table below depicts the trading sessions, times and functionality allowed during the various trading sessions for the different types of days defined in the trading calendar.

### NORMAL DAY

	START OF TRADING	OPENING AUCTION CALL	CONTINUOUS TRADING	CONTINUOUS TRADING 1	INTRADAY AUCTION CALL	CONTINUOUS TRADING 2	CLOSING AUCTION CALL	CLOSING PRICE PUBLICATION	CLOSING PRICE CROSS	POST CLOSE	TRADE REPORTING
ZA01	07:00 - 08:30	08:30 - 09:00	09:00 - 16:50				16:50 - 17:00	17:00 - 17:05	17:05 - 17:10	17:10 - 18:15	08:00 - 18:15
ZA02	07:00 - 08:30	08:30 - 09:00	09:00 - 16:50				16:50 - 17:00	17:00 - 17:01	17:01 - 18:15		
ZA06	07:00 - 08:30	08:30 - 09:00	09:00 - 16:50				16:50 - 17:00	17:00 - 17:01	17:01 - 18:15		
ZA12	07:00 - 08:30	08:30 - 09:00	09:00 - 17:00				17:00 - 17:10	17:10 - 17:11	17:11 - 18:15		
ZA03	07:00 - 08:30	08:30 - 09:00					09:00 - 12:00	12:00 - 12:15	12:15 - 16:50	16:50 - 17:00	
ZA11											
ZA04	07:00 - 08:30	08:30 - 09:10	09:10 - 16:49					16:49 - 16:50		16:50 - 18:15	
<b>Functionality allowed</b>	View open/expired orders; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Closing price publication; order deletion; manage Off Book trades	Order entry/amendment (except price)/deletion; manage Off Book trades	Order deletion; GTT orders are expired; manage Off Book trades	Manage Off Book trades

## EARLY CLOSE DAY

	START OF TRADING	OPENING AUCTION CALL	CONTINUOUS TRADING	CONTINUOUS TRADING 1	INTRADAY AUCTION CALL	CONTINUOUS TRADING 2	CLOSING AUCTION CALL	CLOSING PRICE PUBLICATION	CLOSING PRICE CROSS	POST CLOSE	TRADE REPORTING
ZA01	07:00 - 08:30	08:30 - 09:00	09:00 - 11:50				11:50 - 12:00	12:00 - 12:05	12:05 - 12:10	12:10 - 13:00	08:00 - 13:00
ZA02	07:00 - 08:30	08:30 - 09:00	09:00 - 11:50				11:50 - 12:00	12:00 - 12:01	12:01 - 13:00		
ZA06	07:00 - 08:30	08:30 - 09:00	09:00 - 11:50				11:50 - 12:00	12:00 - 12:01	12:01 - 13:00		
ZA12	07:00 - 08:30	08:30 - 09:00	09:00 - 12:00				12:00 - 12:10	12:10 - 12:11	12:11 - 13:00		
ZA03 ZA11	07:00 - 08:30	08:30 - 09:00		09:00 - 11:00	11:00 - 11:15	11:15 - 11:50	11:50 - 12:00	12:00 - 12:01		12:00 - 13:00	
ZA04	07:00 - 08:30	08:30 - 09:10	09:10 - 11:49					11:49 - 11:50		11:50 - 13:00	
<b>Functionality allowed</b>	View open/expired orders; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Closing price publication; order deletion; manage Off Book trades	Order entry/amendment (except price)/deletion; manage Off Book trades	Order deletion; GTT orders are expired; manage Off Book trades	Manage Off Book trades

## FUTURES CLOSE OUT DAY

Schedule for instruments that will participate in the FCO Auction Call Session:

	START OF TRADING	OPENING AUCTION CALL	CONTINUOUS TRADING	CONTINUOUS TRADING 1	FCO AUCTION CALL	CONTINUOUS TRADING 2	CLOSING AUCTION CALL	CLOSING PRICE PUBLICATION	CLOSING PRICE CROSS	POST CLOSE	TRADE REPORTING
ZA01	07:00 - 08:30	08:30 - 09:00		09:00 - 12:00	12:00 - 12:15	12:15 - 16:50	16:50 - 17:00	17:00 - 17:05	17:05 - 17:10	17:10 - 18:15	08:00 - 18:15
ZA02								17:00 - 17:01		17:01 - 18:15	
ZA03											
ZA06											
<b>Functionality allowed</b>	View open/expired orders; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Closing price publication; order deletion; manage Off Book trades	Order entry/amendment (except price)/deletion; manage Off Book trades	Order deletion; GTT orders are expired; manage Off Book trades	Manage Off Book trades

Schedule for instruments that will not participate in the FCO Auction Call Session:

	START OF TRADING	OPENING AUCTION CALL	CONTINUOUS TRADING	CONTINUOUS TRADING 1	INTRADAY AUCTION CALL	CONTINUOUS TRADING 2	CLOSING AUCTION CALL	CLOSING PRICE PUBLICATION	CLOSING PRICE CROSS	POST CLOSE	TRADE REPORTING
ZA02	07:00 - 08:30	08:30 - 09:00	09:00 - 16:50				16:50 - 17:00	17:00 - 17:01		17:01 - 18:15	08:00 - 18:15
ZA06										17:01 - 18:15	
ZA03	07:00 - 08:30	08:30 - 09:00		09:00 - 12:00	12:00 - 12:15	12:15 - 16:50	16:50 - 17:00	17:00 - 17:01		17:01 - 18:15	
ZA11										16:50 - 18:15	
ZA04	07:00 - 08:30	08:30 - 09:10	09:10 - 16:49					16:49 - 16:50		16:50 - 18:15	
ZA12	07:00 - 08:30	08:30 - 09:00	09:00 - 17:00				17:00 - 17:10	17:10 - 17:11		17:11 - 18:15	
<b>Functionality allowed</b>	View open/expired orders; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Order entry/amendment/deletion; automatic matching; manage Off Book trades	Order entry/amendment/deletion; manage Off Book trades	Closing price publication; order deletion; manage Off Book trades	Order entry/amendment (except price)/order deletion; manage Off Book trades	Order deletion; GTT orders are expired; manage Off Book trades	Manage Off Book trades

## 5 CLOSING PRICE PUBLICATION (CPP) SESSION

This session facilitates the publication of closing prices. It follows the completion of the Closing Auction Call session or Continuous Trading session, depending on the segment. The duration of this session is five minutes for ZA01 and one minute for all other trading segments as currently they will not have the CPX session enabled. The duration of five minutes for the CPP session allows participants to confirm with their clients whether or not they would want their eligible orders to participate in the subsequent CPX session.

Although the CPP session is normally scheduled to Start between 16:50 and 17:10, depending on the segment, it should be noted that if there are any auction extensions (Price Monitoring or Market Order) to the Closing Auction Call session, the start of the CPP session will only take place after the extension(s) and auction uncrossing is completed.

For example, if an instrument has two Price Monitoring Extensions (PME) and one Market Order Extension (MOE), then the CPP session will only start at 17:13:30 (including the random uncrossing time of 30 seconds). The table below depicts the auction uncrossing times and whether there are extensions to the closing auction or not.

CLOSING AUCTION CALL SESSION										
Extension	Duration (min)	Random Uncrossing (sec)	Extension	Duration (min)	Random Uncrossing (sec)	Extension	Duration (min)	Random Uncrossing (sec)	Auction Uncrossing Time	
PME	5	30	PME	5	30	MOE	2	30	17:13:30	
PME	5	30								17:05:30
MOE	2	30								17:02:30
PME	5	30	MOE	2	30				17:08:00	
NO EXTENSION		30								17:00:30

### 5.1 Closing price values

It should be noted that the Published Closing Price for ZA01 may contain decimals if the calculation is based on Volume Weighted Average Price (VWAP). Under these circumstances, certain restrictions will apply to order management during the CPX session. These are mentioned in section 8. No order entry/amendment is allowed during the CPP session, only order cancellations.

## 6 CLOSING PRICE CROSS (CPX) SESSION

The CPX session facilitates the submission and continuous matching of eligible orders at the Published Closing Price. This session allows users to trade in the central order book at the Published Closing Price. This session will, where applicable, commence following the Closing Price Publication (CPP) Session. If a closing price does not exist for instruments within a segment where the CPX session is enabled, the CPX session will not take place. The duration of this session, applicable to ZA01 only, is five minutes.

## 7 NEW TME IN FORCE (TIF) – CPX

The purpose of TIF is to direct orders to the appropriate trading session within the current day. Orders with the TIF CPX can be entered during the day (in the periods that allow for the management of orders) prior to the start of the CPX trading session. These orders are placed in a parked queue until the CPX session starts.

## 8 MANAGEMENT OF ORDERS

### 8.1 New Orders

- New orders with TIF GFA, GFX, OPG and ATC submitted during the CPX session will be rejected.
- New orders with TIF CPX, IOC, FOK, DAY, GTT, GTC and GTD will be accepted.
- New Stop/Stop Limit Orders submitted during the CPX session, will be rejected.
- New Hidden Limit Orders submitted during the CPX session, will be rejected.
- Amendments to Hidden Limit Orders submitted during the CPX session, will be rejected.
- If the new order is a Market Order with a valid TIF type, it will be eligible to participate in the CPX session.
- If the new order is a Limit Order with a valid TIF type and with a limit price equal to the Published Closing Price, it will be eligible to participate in the CPX session, unless the Published Closing Price contains a decimal value then the Limit Orders will be rejected as the price of a new Limit Order must exactly match the Published Closing Price, including decimals.
- If the Published Closing Price contain **decimal values**, no new Limit Orders can be submitted as the JSE uses tick sizes of one cent. Only **Market Orders** will be accepted.
- If the new order is a Limit Order with a valid TIF type with a limit price different from the Published Closing Price, it will be rejected by the system.
- During the CPX session, new Market Orders will be accepted onto the order book. If the Market Order has a TIF of CPX and is not fully or partially matched, the remainder of the order is converted to a Limit Order at the Published Closing Price.
- Market Orders with a valid TIF other than CPX entered during the CPX session will immediately match and the remaining quantity will be expired. If no execution can take place, the full quantity is expired.

#### 8.1.1 Order Expiry

- The unexecuted quantity of Market Orders that were converted to a Limit Orders, will expire at the end of the session.
- Unexecuted orders with TIF CPX that participated in the CPX session will expire at the end of the session, unless they are GTD or GTC orders.
- Unexecuted orders with TIF GTT or Day that participated in the CPX session, expire upon reaching the expiry time (GTT) or at Market end (DAY).

#### 8.1.2 Order Amendments

- Once the CPX session has begun, no price amendments will be accepted for either CPX or non CPX orders.
- **If the Published Closing Price does not contain decimal values** order amendments, other than price, will be accepted for both CPX and non-CPX orders that are eligible to participate in the CPX session.
- **If the Published Closing Price contains decimals**, no amendments will be accepted. The order will have to be cancelled and a new **Market Order** will have to be submitted. No new **Limit Orders** will be accepted as the Published Closing Price contains decimals and the JSE tick size is currently set to one cent.

- Any orders participating in the CPX session can be cancelled during this session.

## 8.2 Existing Orders

At the start of the CPX session, parked orders with that are injected into the order book will be processed as follows:

- Limit and Market Orders with Day, CPX, GTT, GTC and GTD TIFs having a price equal to the Published Closing Price, which were entered prior to the start of the CPX session, will be injected into the order book without any change to the price.
- Limit Orders with Day, GTT, GTC and GTD TIFs having a price better than the Published Closing Price, which were entered prior to the start of the CPX session, will execute at the Published Closing Price.
- Limit Orders with the TIF of CPX with better prices than the Published Closing Price are re-priced to equal the Published Closing Price before being injected.
- Limit Orders with the TIF of CPX with worse prices than the Published Closing Price will be expired on entry.
- Market Orders with TIF CPX will execute against contra orders in the book. The unexecuted quantity will be converted to a Limit Order and remain on the order book until the end of the CPX session, unless filled.
- All CPX orders, including the CPX Market Orders, get lower priority than the existing orders sitting in the main container that are eligible to participate in the CPX session.
- Stop/Stop Limit Orders will not get elected to the CPX session.
- The filtering algorithm, normally applied to hidden Limit Orders during the Continuous trading session, is not run during the CPX session. This means that Hidden Limit Orders will only execute if the MES constraint can be fully satisfied by a single new order or injected contra order in the book.

The table below depicts the first four scenarios detailed above:

EXAMPLE	SIDE	ORDER TYPE	TIF	ORDER PRICE	CLOSING PRICE	INSTRUMENT	ACTION
1	B & S	MO, LO	CPX, DAY, GTT, GTC, GTD	1600	1600	ABC	Order injected into the order book, executes at 1600
2	B	LO	DAY, GTT, GTC, GTD	1700	1600	ABC	Order injected into the order book, executes at 1600
3	S	LO	DAY, GTT, GTC, GTD	1599	1600	ABC	Order injected into the order book, executes at 1600
4	B	LO	CPX	1700	1600	ABC	Order re-priced to 1600 and injected to the order book
5	S	LO	CPX	1599	1600	ABC	Order re-priced to 1600 and injected to the order book
6	B	LO	GTC, GTD	1599	1600	ABC	Will not participate in the CPX session
7	S	LO	GTC, GTD	1700	1600	ABC	Will not participate in the CPX session
8	B	LO	CPX	1599	1600	ABC	Order expired on entry
9	S	LO	CPX	1700	1600	ABC	Order expired on entry
6	B	LO	DAY, GTT	1599	1600	ABC	Order expired at expiry time (GTT) or market end (DAY)
7	S	LO	DAY, GTT	1700	1600	ABC	Order expired at expiry time (GTT) or market end (DAY)

It is

**important that clients, who do not wish to participate in the CPX session, delete their eligible orders as mentioned above, prior to the start of the CPX session.**

#### **8.2.1 Order Expiry**

- At the end of the CPX session, if there are unexecuted GTC and GTD orders on the order book, these could enter the order book on the next trading day if the expiry has not been reached

#### **8.2.2 Order Amendments**

- Any orders participating in the CPX session can be cancelled during the session.

## **9 STATISTICS**

The following statistics will be updated and published during the CPP and CPX sessions:

- Best bid
- Best offer
- VWAP (On Book)
- VWAP (On and Off Book)
- Number of Trades (On Book)
- Number of Trades (Off Book)
- Volume of Trades (On Book)
- Volume of Trades (Off Book)
- Turnover (On Book)
- Turnover (Off Book)