

# INTEGRATED TRADING AND CLEARING (ITAC) DIVIDEND PAYMENT METHODOLOGY

JUNE 2020

## 1. REVISION HISTORY

Version	Description	Date
1.0	Initial draft	21/08/2018
2.0	Update	12/02/2020
<u>3.0</u>	<u>Update</u>	<u>05/06/2020</u>

## 2. INTRODUCTION

The purpose of this document is to describe the methodology applied by the JSE to calculate dividend payments on derivatives for ITaC.

When dividend payments are declared the following information is published:

- Dividend Amount : The amount that will be paid in dividends on a unit of the stock
- Payment Date : The date on which the dividend will be paid on the underlying stock
- Ex-dividend date (ex-date) : The day that the stock starts trading without the value of its next dividend payment.
- Last date to trade (LDT) : The last date on which a trade in the underlying stock will result in the holder of the stock receiving the dividend.

This information is used to determine the dividend payments that affect derivative position holders.

## 3. APPROACH

- Dividend payment factors  $Div_{FV}$  and  $Div_{PV}$  are used for calculations of dividend payments on Dividend Neutral and CFD positions.
- The dividend payment factors are calculated on **ex-date** based on the declared dividend amounts at eod of day on **ex-date**.
- The factors are applied on the net positions as they were on **LDT** ~~before~~**after** any corporate actions have been processed.
- This means that the ~~to determine the~~ dividend payment is calculated on **ex-date** on the ~~on each~~ positions of **LDT**.
- This dividend payment must be included in the end of day settlement instruction created at end of day on **ex-date (LDT+1)**, with settlement date **LDT+2**.

#### 4. CALCULATION STEPS

The following calculations must be done on **ex-date** (i.e. calculation date = **ex-date**)

Let  $Div_{PaymentDate}$  be a dividend amount that has been declared on the underlying equity to be paid on the **payment date**.

- The present value factor,  $Div_{PV}$ , is calculated as follow:  
**Discount term,  $t = (\text{payment date} - \text{ex-date}) / 365$**

Look up the interest rate,  $r$ , for the **Discount term,  $t$** , on the ZAR Swap curve of the current business day (**ex-date's ZAR Swap Curve**). Note that the NACC curve assumes monotone preserving interpolation and flat forward extrapolation.

Calculate the discount factor  $DF$ .

$$DF = e^{-r \cdot t}$$

The present value factor of the dividend,  $Div_{PV}$ , that will be paid on the **payment date**,  $Div_{PaymentDate}$ , is:

$$Div_{PV} = Div_{PaymentDate} \cdot DF$$

This result is rounded to 6 decimals

- The forward value factor,  $Div_{FV}$ , is calculated as follow:

Calculate the forward term,  $t'$ , between **Ex-Date** and **ExpiryDate** of the contract which is the *term to expiry* of the contract:

$$-t' = (\text{expiry date} - \text{ex-date}) / 365$$

Look up the interest rate,  $r'$ , for *term to expiry* on the ZAR Swap curve for the current business day (**ex-date's ZAR Swap Curve**). Note that the NACC curve assumes monotone preserving interpolation and flat forward extrapolation.

Calculate the forward value factor,  $Div_{FV}$ :

$$Div_{FV} = Div_{PV} \cdot e^{r' \cdot t'}$$

This result is rounded to 6 decimals

- The Dividend Payments now become:
  - For CFDs
    - Dividend Payment = position quantity \* contract size \*  $Div_{PV}$

ii. For Dividend Neutrals

- Dividend Payment = position quantity \* contract size \* *Div<sub>FV</sub>*

These are rounded to 2 decimals

- These dividend payments are calculated on ex-date EOD, published in the DAS same day and have settlement date = **ex-date** + 1 business date.

For additional information please contact the Customer Support team on:  
[Customersupport@jse.co.za](mailto:Customersupport@jse.co.za)  
 011 520 7000  
[www.jse.co.za](http://www.jse.co.za)

