

MARKET NOTICE

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Relates to: Equity Market
 Equity Derivatives
 Commodity Derivatives
 Interest Rate and Currency Derivatives
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SUBJECT: BOND PRICING FORMULA: TREATMENT OF BONDS WITH A BROKEN STUB

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Dear JSE Stakeholder

The JSE makes use of the BESA bond pricing formula in order to perform the yield to price conversion for all vanilla fixed coupon bonds. Market participants have expressed frustration with regards to the manner in which broken stub periods are accounted for in the abovementioned formula, which is particularly problematic for the following set of African Bank Limited bonds issued on 04-April-2016:

- ABK1, ABK2, ABKIO1, ABKIO2, ABKIO4

The aim of this notice is to provide more clarity with regards to the treatment of the stub periods for the abovementioned set of bonds.

The first coupon

The BESA bond pricing formula assumes that the coupon to be paid on a particular coupon payment date is always equal to the annual coupon rate of the particular bond, divided by the coupon payment frequency. For the above set of African Bank Limited bonds, however, the following formula is used to determine the coupon on the **first** coupon payment date (due to the short nature of the first coupon period):

- $Coupon = Coupon\ Rate \times \frac{First\ Coupon\ Payment\ Date - Interest\ Accrual\ Start\ Date}{365}$.

The most recent coupon payment date (LCD) on or before settlement date

LCD is used to determine the number of days accrued interest (for bonds that are not in the ex-coupon period), as well as the fraction of a full coupon period represented by the broken period. LCD is always calculated by only considering the set of annual coupon payment dates, with no consideration given to the issue, or interest accrual start date. LCD can thus represent a date which occurred before the issue date of the bond. However, when determining the number of days' accrued interest, formula 3.6 in the bond pricing formula is changed as follows (for the above set of bonds):

- $$DAYSACC = \begin{cases} \text{Settle Date} - \max(LCD, \text{Interest Accrual Start Date}), & \text{if bond is ex,} \\ \text{Settle Date} - \text{Next Coupon Payment Date}, & \text{if bond is cum.} \end{cases}$$

A similar alteration is **not** applied in the calculation of the broken period (formula 3.10)

The JSE is in the process of updating the BESA bond pricing formula documentation, and it is envisaged that the changes applied for the set of bonds mentioned in this notice will be included in the revised document.

This document should be read alongside the BESA bond pricing formula (please note that references to formulas 3.6 and 3.10 above are found in this link): <https://www.jse.co.za/content/JSEPricingItems/bond-pricing-formula-final.pdf>

For any queries with regards to this notice, please contact irdata@jse.co.za

This Market Notice will be available on the website at <https://www.jse.co.za/redirects/market-notices-and-circulars>