#### MDURATION

[Syntax](Syntax.docx):

MDURATION ( settlement , maturity , coupon , yld , frequency [ , [ basis ] ] )

Description: Computes the modified Macauley duration for a security with an assumed par value of $100.

Mathematical Formula:



Arguments:

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| settlement | number | The security's settlement date. |
| maturity | number | The security's maturity date. |
| coupon | number | The security's annual coupon rate. |
| yld | number | The security's annual yield. |
| frequency | number | the number of coupon payments per year. (For annual payments, frequency is 1; for semiannual payments, frequency is 2; for quarterly payments, frequency is 4.) frequency is truncated to an integer. |
| basis | number | The truncated integer type of day count basis to use, as follows:

|  |  |
| --- | --- |
| Value | Day Count Basis |
| 0 or omitted | US (NASD) 30/360 |
| 1 | Actual/actual |
| 2 | Actual/360 |
| 3 | Actual/365 |
| 4 | European 30/360 |

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Time information in the date arguments is ignored.

Return Type and Value: number – The modified Macauley duration for a security with an assumed par value of $100.

However, if

* settlement or maturity is out of range for the current date base value, #NUM! is returned.
* settlement ≥ maturity, #NUM! [is](is.docx) returned.
* coupon or yld < 0, #NUM! is returned.
* frequency is any number other than 1, 2, or 4, #NUM! is returned.
* basis < 0 or basis > 4, #NUM! is returned.

[Example:

MDURATION(DATE(2008,1,1),DATE(2016,1,1),0.08,0.09,2,1) results in 5.7357

end example]