Computation of Purchase Interest for Bonds (W5)

This version is superseded. Click here to view the latest guide.

PURPOSE

This document describes the procedure for the computation of purchase interest for Bonds.

WHY IS THIS IMPORTANT?

This allows users to verify the formula and methodology used by CS Lucas to compute the purchase interest for a bond.

FORMULA

The following examples show different types of bond purchase interest methods and how system computes the purchase interest.

Note: Computation of purchase interest is based on the last coupon date till the transaction's value date.

PI-Act/Act



PI-30/360

		Α	В	C	D	E	F	G=D-E (360 Days)	H=F-E (360 Days)	I=C*B/A	J=I/H*G
Bond	Frequency		Coupon	Principal	VDate	Last Coupon Date	Next Coupon Date	Acc Days	Period Days	Period Income	Accrued Income
SCOTISH POWER UK Plc	Semi-Annual	2	8.375%	1,000,000.00	12-Oct-16 Wed	20-Aug-16 Sat	20-Feb-17 Mon	52	180	41,875.00	12,097.22
											12,097.22
SCOTISH POWER UK Plc	Annual	1	8.375%	1,000,000.00	12-Oct-16 Wed	20-Feb-16 Sat	20-Feb-17 Mon	232	360	83,750.00	53,972.22
											53,972.22

PI-30/Act

		Α	В	С	D	E	F	G=D-E (360 Days)	H=F-E	I=C*B/A	J=I/H*G
<u>Bond</u>	Frequency		Coupon	Principal	<u>VDate</u>	Last Coupon Date	Next Coupon Date	Acc Days	Period Days	Period Income	Accrued Income
HDBSP 1.165 04/24/17	Semi Annual	2	1.165%	1,000,000.00	31-Oct-15 Sat	24-Oct-15 Sat	24-Apr-16 Sun	7	183	5,825.00	222.81
											222.81

PI-Act/365

		Α	В	C	D	E	F	G=D-E	H=365	I=C*B	J=I/H*G
Bond	Frequency		Coupon	Principal	VDate	Last Coupon Date	Next Coupon Date	Acc Days	Period Days	Period Income	Accrued Income
CMASP 3.95 08/24/17	Semi Annual	2	3.950%	1,000,000.00	26-Jul-16 Tue	24-Feb-16 Wed	24-Aug-16 Wed	153	365	39,500.00	16,557.53
											16,557.53
CAPITA 3.85 03/15/17	Semi Annual	2	3.850%	1,000,000.00	20-Apr-15 Mon	15-Mar-15 Sun	15-Sep-15 Tue	36	365	38,500.00	3,797.26
											3,797.26
AREIT 5 07/22/13	Semi Annual	2	5.000%	1,000,000.00	22-Oct-12 Mon	22-Jul-12 Sun	22-Jan-13 Tue	92	365	50,000.00	12,602.74
											12,602.74
ARTSP 4.3 11/30/18	Semi Annual	2	4.300%	1,000,000.00	8-Mar-16 Tue	30-Nov-15 Mon	30-May-16 Mon	99	365	43,000.00	11,663.01
											11,663.01

PI-Act/365 (Act)

Case 1 - Start and end in the same year

		Α	В	С	D	E	F	G=D-E	H=365 or 366	I=C*B	J=I/H*G
Bond	Frequency		Coupon	Principal	VDate	Last Coupon Date	Next Coupon Date	Acc Days	Period Days	Period Income	Accrued Income
NWIDE FLOAT 07/07/17 Corp	Quarterly	4	0.78375%	1,000,000.00	1-Sep-15 Tue	17-Jul-15 Fri	19-Oct-15 Mon	46	365	7,837.50	987.74
											987.74
NWIDE FLOAT 07/07/17 Corp	Quarterly	4	0.72313%	1,000,000.00	1-Sep-16 Thu	18-Jul-16 Mon	17-Oct-16 Mon	45	366	7,231.30	889.09
											889.09

Case 2 - Start and end in different years

								G=F-E+1 (1st Yr)	H=365 or		
		Α	В	С	D	E	F	G=D-E (2nd Yr)	366 (Leap year)	I=C*B	J=I/H*G
Bond	Frequency		Coupon	Principal	<u>VDate</u>	Last Coupon Date	Next Coupon Date	Acc Days	Period Days	Period Income	Accrued Income
NWIDE FLOAT 07/07/17 Corp	Quarterly	4	0.77938%	1,000,000.00	12-Jan-16 Tue	19-Oct-15 Mon	31-Dec-15 Thu	74	365	7,793.80	1,580.11
			0.77938%	1,000,000.00	12-Jan-16 Tue	1-Jan-16 Fri	18-Jan-16 Mon	11	366	7,793.80	234.24
											1,814.35
NWIDE FLOAT 07/07/17 Corp	Quarterly	4	0.76025%	1,000,000.00	12-Jan-15 Mon	17-Oct-14	31-Dec-14	76	365	7,602.50	1,582.99
			0.76025%	1,000,000.00	12-Jan-15 Mon	1-Jan-15	19-Jan-15	11	365	7,602.50	229.12
											1,812.10

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If no PI computation method is selected, system computes the purchase interest based on the formula below:

Principal * Coupon% * Currency accrual method

Let's say the coupon schedule is as per below and bond transaction's VDate is 28 Apr 2016.



Last coupon payment date = 23 Jun 2015

Next coupon payment date = 23 Jun 2016

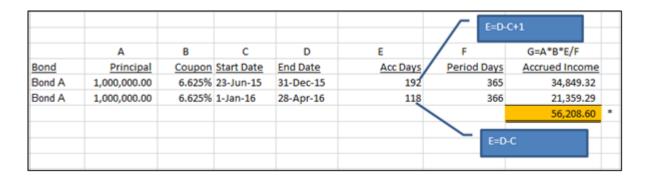
Bond transaction's VDate = 28 Apr 2016

Please see below computation of purchase interest based on different currency accrual methods.

(i) Currency accrual method = Act/365 (fixed)

	Α	В	С	D	E=D-C	F=365	G=A*B*E/F	
Bond	Principal	Coupon	Start Date	End Date	Acc Days	Period Days	Accrued Income	
Bond A	1,000,000.00	6.625%	23-Jun-15	28-Apr-16	310	365	56,267.12	
							56,267.12	٠

(ii) Currency accrual method = Act/365 (Act)



(iii) Currency accrual method = Act/360

	Α	В	С	D	E=D-C	F=360	G=A*B*E/F	
Bond	Principal	Coupon	Start Date	End Date	Acc Days	Period Days	Accrued Income	
Bond A	1,000,000.00	6.625%	23-Jun-15	28-Apr-16	310	360	57,048.61	
							57,048.61	•

(iv) Currency accrual method = 30/360

	Α	В	С	D	E=D-C (360 Days)	F=360	G=A*B*E/F	
Bond	Principal	Coupon	Start Date	End Date	Acc Days	Period Days	Accrued Income	
Bond A	1,000,000.00	6.625%	23-Jun-15	28-Apr-16	305	360	56,128.47	
							56,128.47	*

^{*} The accrued income is rounded to currency decimal places. Currency decimal places is determined at the currency set up. See <u>Set Up Currency</u>.

RELATED INFORMATION

Create and Amend Investment

Set Up Security

CHANGE HISTORY

Date	Ву	Changes
5-Арг-2010	CS	Created.
17-Mar-2016	TS	Reformatted and rewritten.
7-Jun-2016	Douglas	Proofread.
2-May-2017	TS	Rewritten.
9-May-2017	TS	Updated PI computation for blank.
12-Jun-2017	TS	Updated PI computation for Act/365 (Act).
15-Jun-2017	TS	Revised to add accrued income is rounded to currency decimal places.