

Supplementary Information Appendix BC-1 Examples of APR Calculations



APR Calculations

DISCLAIMER: THE PURPOSE OF THIS APPENDIX IS STRICTLY TO PROVIDE AN 'EXAMPLE' OF AN APR CALCULATION AND SHOULD NOT BE CONSIDERED AS A GUIDE ON APR OR FLAT RATE TO BE UTILISED.

Appendix

Worked Examples of APR versus "flat rate".

Amount of Loan or Financing Facility: BD10,000. No documentation fee payable.

Term	Monthly Instalment	Total Payable	APR	Flat Rate
36 months	319.440	11,499.840	9.72%	5%
60 months	208.330	12,499.800	9.55%	5%
84 months	160.710	13,499.640	9.34%	5%
36 months	320.280	11,530.080	9.91%	5.10%
60 months	210.000	12,600.000	9.92%	5.20%
84 months	163.300	13,717.200	9.89%	5.31%



Example of interest and principal components of instalment on a 36-month facility for BD10,000

			Monthly Payment = BD319.40	
			Total Payments = BD11498.40	
			Total Interest =BD1498.40	
	_			Outstanding
Months	Payments	Interest Paid	Principal Paid	Balance of
				Principal
1	319.40	77.50	241.90	9758.10
2	319.40	75.63	243.77	9514.33
3	319.40	73.74	245.66	9268.67
4	319.40	71.83	247.57	9021.10
5	319.40	69.91	249.49	8771.61
6	319.40	67.98	251.42	8520.19
7	319.40	66.03	253.37	8266.82
8	319.40	64.07	255.33	8011.49
9	319.40	62.09	257.31	7754.18
10	319.40	60.09	259.31	7494.87
11	319.40	58.09	261.31	7233.56
12	319.40	56.06	263.34	6970.22
				Outstanding
Months	Payments	Interest Paid	Principal Paid	Balance of
				Principal
13	319.40	54.02	265.38	6704.84
14	319.40	51.96	267.44	6437.40
15	319.40	49.89	269.51	6167.89
16	319.40	47.80	271.60	5896.29
17	319.40	45.70	273.70	5622.59
18	319.40	43.58	275.82	5346.77
19	319.40	41.44	277.96	5068.81
20	319.40	39.28	280.12	4788.69
21	319.40	37.11	282.29	4506.40
22	319.40	34.92	284.48	4221.92
23	319.40	32.72	286.68	3935.24
24	319.40	30.50	288.90	3646.34
				Outstanding
Months	Payments	Interest Paid	Principal Paid	Balance of
				Principal
25	319.40	28.26	291.14	3355.20
26	319.40	26.00	293.40	3061.80
27	319.40	23.73	295.67	2766.13
28	319.40	21.44	297.96	2468.17
29	319.40	19.13	300.27	2167.90
30	319.40	16.80	302.60	1865.30
31	319.40	14.46	304.94	1560.36
32	319.40	12.09	307.31	1253.05
33	319.40	9.71	309.69	943.36
34	319.40	7.31	312.09	631.27
35	319.40	4.89	314.51	316.76
36	319.40	2.64	316.76	Paid



Example APR Calculation

The example below is designed to show how the APR methodology works in practice for a BD10,000 loan payable over 3 years. The instalments are payable monthly. This example shows the effect of a documentation charge of BD30 on the APR when the documentation charge is added to the loan, or paid up front.

A customer borrows BD10,000 on 1^{st} August 2010, to be repaid over 36 months by equal monthly instalments. The first instalment is to be paid on 1^{st} September 2010, and the bank requires an administration fee of BD30 to be paid at signing. Interest is charged monthly on the outstanding balance.

The lender applies a flat interest rate of 5%.

The total amount payable is: BD $30.000 + 36 \times 319.400 = BD11,528.400$

The total cost of credit is BD11,528.400 - BD10,000 = BD1,528.400

The details used in the formula for calculating the APR are as follows:

Loans amount BD10,000 .000 Documentation fee = BD30.000

 1^{st} to 36th instalments BD319.400 at time: $1 \div 12 = 0.08$ ' to $36 \div 12 = 3$

(Note in 0.08' etc the apostrophe means that the final digit is a recurring decimal).

The value of the APR (i) can be calculated from this information (by using a computer spread sheet) to give a result of 0.991 which, multiplied by 100 to produce a percentage and rounded to one decimal place givens an APR of 9.91%.

The effect of the documentation fee is to push up the APR from 9.72% to 9.94%. Since the documentation fee is payable to obtain the loan, it must be added to the interest payable to obtain the total cost of credit.



To express this matter in another way, if the customer could not afford to pay the documentation fee, then the customer would need to borrow BD10,030 and the instalment would have to be increased to BD320.35 per month, thus yielding an increased APR of 9.94%.