



**CENTRALE BANK VAN CURAÇAO  
EN SINT MAARTEN  
(Central Bank)**

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**Provisions on the Disclosure of  
Pricing Information on  
Consumer Credit  
(Annual Percentage Rate [APR] – Provisions)**

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January 2015 (Revised May 2017)

## 1. Purpose

These Provisions on the Disclosure of Pricing Information on Consumer Credit (hereafter the “APR provisions”) are primarily aimed to serve two objectives. The first aim of the APR provisions is to protect the consumers by providing them with adequate information enabling them to make informed decisions when applying for consumer credit.

The second aim of the APR provisions is to introduce a maximum Annual Percentage Rate.

In addition, these APR provisions also serve to foster transparency in the local financial market and provide for a uniform APR-calculation method.

## 2. Definitions

For the purpose of these provisions the following definitions apply:

**“Advertising”** means any direct or indirect communication transmitted by any medium by means of which a lender promotes a consumer credit product<sup>1</sup>.

**“Annual Percentage Rate”** means the total costs of the consumer credit, expressed as an annual percentage of the total credit amount. It is the effective rate of charge that reflects all the costs of the credit to the consumer over the duration of the credit agreement. The equivalent and meaning for the APR in Dutch<sup>2</sup>, Spanish<sup>3</sup> and Papiamentu<sup>4</sup> are set out in the footnotes to these provisions.

**“Borrowing rate”** means the nominal interest rate expressed as a percentage applied on an annual basis to the amount of credit draw downs. The borrowing rate is used for the calculation of the interest charges related to the credit.

**“Consumer”** means the individual applying for consumer credit.

**“Consumer credit”** comprises credit to be extended to consumers for personal or household purposes.

**“Credit agreement”** means a legally binding contract whereby a lender extends or promises to extend a certain amount of money to a consumer for a certain time period to be repaid by means of installments or otherwise.

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<sup>1</sup> Advertisement with the sole purpose to promote brand awareness of a lender, including mentioning only the type of credit product, but excluding mentioning any other specific characteristics of the product such as its repayment terms and/or amendments of the consumer credit product are not considered “advertising”.

<sup>2</sup> Het jaarlijkse kostenpercentage: de totale kosten van het krediet voor de consument, uitgedrukt in een percentage op jaarbasis van het totale kredietbedrag. Onder de totale kosten van het krediet worden verstaan alle kosten van het krediet (exclusief verzekeringen), ondermeer rentekosten, commissie, belastingen en vergoedingen van welke aard dan ook, die de consument volgens de kredietovereenkomst moet betalen en die de kredietaanbieder bekend zijn.

<sup>3</sup> Tasa anual equivalente: es el costo de crédito al consumidor, expresado como un porcentaje de la cantidad de crédito concedido. El costo total de crédito incluye el interés, comisiones bancarias, los impuestos y cualquier otro tipo de gastos que el consumidor debe pagar relación con el contrato de crédito y que sean conocidos por el prestamista.

<sup>4</sup> Porsentahe di gastu anual : e kosto total di krédito ku e konsumidó mester paga, reflehá den un porsentahe anual di krédito. Un otro number ta ‘porsentahe di gastu ekivalente anual’.

**“Lender”** means an institution, a corporation or natural person listed in one of the divisions or annexes of the credit institutions’ register maintained by the Bank who extends or promises to extend credit in the course of its trade, business or profession.

**“Total cost of the credit to the consumer”** means all the costs (excluding insurance costs) of the credit, including interest charges, commission, fees, taxes and any other directly related costs which the consumer is required to pay (according to the credit agreement) and which are known to the lender.

**“Total amount to be paid by the consumer on consumer credit”** means the sum of total amount of credit and total cost of credit.

**“Periodic credit installment”** means the periodic payment for interest and cost amortization according to the credit agreement.

**“Total credit amount”** means the maximum amount allowed to be extended under a credit agreement.

### 3. Legal basis

These provisions are issued pursuant to article 2, paragraph 2 and article 45, paragraph 2 of the National Ordinance on the Supervision of Banking and Credit Institutions 1994 (N.G. 1994, no 4) and are made part of each individual license or dispensation in conjunction with a letter sent to its holder.

### 4. Applicability

The APR provisions apply as of May 1, 2015 to all locally operating lenders in Curaçao and Sint Maarten.

### 5. Maximum APR

The revised APR provisions will include a maximum APR of 27%<sup>5</sup> which will apply for all new consumer credit<sup>6</sup> as of May 5, 2017 with a transition period of two months, effective as of July 5, 2017.

### 6. Disclosure of pricing information

To accomplish the objectives of the APR provisions, lenders are required to clearly disclose APR related information:

- when advertising;
- when responding to consumers’ inquiries on consumer credit; or
- before extending a consumer credit.

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<sup>5</sup> The Central Bank of Curacao and Sint Maarten (CBCS) will evaluate the maximum APR after three years.

<sup>6</sup> New consumer credit also include existing credit extensions that undergo a rollover, a restructuring, refinancing or any other type of loan modifications once the maximum APR is effective.

## 6.1 Disclosure when advertising

When advertising, lenders must communicate in a clear and concise way, by means of an illustration such as in appendix 2, at least the main characteristic of a credit product. It is required that the borrowing rate along with particulars of any charges be included in the total cost of the consumer credit.

The advertisement must be clear and not containing any misleading, contradictory or inaccurate statements. Footnotes used must be of sufficient size and prominence to be legible. The abbreviation APR may be used if the term “annual percentage rate” is stated in full elsewhere in the advertisement. If the advertisement is based on assumptions, such assumptions must be stated, and if an advertisement states a rate of return it must be the APR.

## 6.2 Disclosure when responding to inquiries and before extending a consumer credit

In order for the consumer to make an informed decision as to whether to conclude a credit agreement, the lender must provide the consumer with all relevant information based on the credit terms and conditions offered.

When responding to inquiries on consumer credit or before extending a consumer credit, the consumer credit-specific information must specify at least the following:

- the type of credit;
- the characteristics of the credit product illustrated in appendix 2 along with an amortization table illustrated in appendix 3;
- the terms of the legal agreement between the consumer and the lender; and
- the conditions governing the application of the borrowing rate.

The lender must not coerce the consumer to obtain a product or service, such as an insurance policy, from a particular provider (entity or person), including the lender or any of its affiliates, as a condition to obtain the consumer credit. Furthermore, products or services related to insurance activities can only be acquired from institutions that are registered in the “Institutional Investors & Insurance Brokers” registry of the CBCS.

Any consumer credit-specific information must be unambiguous, conspicuous and must be provided in writing on a durable medium.

Both the borrowing rate and APR must be clearly mentioned (in the same format) in the loan agreement. Furthermore, the consumer must sign a copy of a table as illustrated in appendix 2 before concluding a consumer credit.

A copy of the signed table as illustrated in appendix 2 and a signed declaration that the consumer accepted the insurance without any restraints must be kept on file.

## 7. The APR and the methods for its calculation

The APR is the annual percentage rate which equates, on an annual basis, the present value of all commitments (credit draw downs, repayments and financial charges), future or existing, agreed upon between the lender and the consumer. The APR must be calculated in accordance with the mathematical formula and the methods set out in appendix 1.

For APR calculation purposes, the total cost of the credit to the consumer must be determined. The calculation of the APR must be based on the assumption that the credit agreement remains valid for the period agreed upon, and that the APR and other charges will remain fixed in relation to the borrowed amount during the duration of the credit agreement.

## 8. Periodic credit installments

The periodic credit installment is a key input for the calculation of the APR and is set out in the predefined formula presented in Appendix 1.

## 9. Recordkeeping

Lenders must keep APR-related records for at least ten (10) years after expiration of the credit agreement. A lender can demonstrate compliance with these APR-provisions by demonstrating that it has:

- established procedures for providing disclosure as set out in paragraph 6;
- followed the procedures; and
- retained disclosures, copies of advertisements and change-in-terms notices and information on borrowing rates and APR's offered.

During its on-site examinations, the Bank will verify the compliance with these APR provisions.

**Centrale Bank van Curaçao en Sint Maarten**  
Willemstad, May 2017

**Jerrald Hasselmeyer LL.M**  
Acting President

## APPENDIX 1

Method to calculate the Annual Percentage Rate<sup>7</sup>

The APR is the annual percentage rate which indicates the total cost of the credit to the consumer over the duration of the credit agreement. The APR can be obtained once the payments and draw downs are known. In order to compare the different cash flows at different times these flows are valued in the present. The present value rule is used to quantify the average costs of the consumer credit over the duration of the credit agreement.

According to paragraph 6, the APR is the annual percentage rate which equates the present value of the draw downs to the present value of the repayments. This equation can be expressed through formula (1), in which 'X' is the APR to be calculated. The left hand side of the equation is the present value of the draw downs on the credit and the right hand side represents the present value of the repayments.

$$\sum_{k=1}^m c_k (1+x)^{-t_k} = \sum_{l=1}^{m'} D_l (1+x)^{-s_l} \quad (1)$$

in which:

- X is the APR,
- m is the number of the last drawdown,
- k is the number of a drawdown, thus  $1 \leq k \leq m$ ,
- $C_k$  is the amount of drawdown k,
- $t_k$  is the interval, expressed in years and fractions of a year, between the date of the first drawdown and the date of each subsequent drawdown, thus  $t_1 = 0$ ,
- $m'$  is the number of the last repayment or payment of charges,
- l is the number of a repayment or payment of charges,
- $D_l$  is the amount of a repayment or payment of charges,
- $s_l$  is the interval, expressed in years and fractions of a year, between the date of the first drawdown and the date of each repayment or payment of charges.

Whenever possible the basic equation which establishes the APR formula is simplified using the formula for a geometric series (i.e., the sum of the numbers in a geometric progression). A geometric series of scale factor s and common ratio c is given as:

$$sc^k + sc^{k+1} + \dots + sc^{k+n} = s \frac{c^k - c^{k+n}c}{1-c} \quad (2)$$

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<sup>7</sup> The methodology for the calculation of the APR is equal to the Consumer Credit Directive of the European Commission (Directive 2008/48 / EC, Directive 2011/90 / EU) and the APR calculation of the Dutch Authority for the Financial Markets (AFM) (Besluit Gedragstoezicht financiële ondernemingen Wft, bijlage A).

This is very convenient in credits payable in equal installments because the sum of the present value of N equal installments of amount A payable at a frequency of f installments per year can be given as:

$$A \frac{1}{(1+X)^{1/f}} + A \frac{1}{(1+X)^{2/f}} + \dots + A \frac{1}{(1+X)^{N/f}} = A \frac{1 - \frac{1}{(1+X)^{N/f}}}{(1+X)^{1/f} - 1} \quad (3)$$

To calculate the APR we must first calculate the annuity (installments)<sup>8</sup> i.e. the periodic credit installments, using formula (4) or the payment function in Microsoft Excel (PMT-function) (5):

$$P = PV \left( \frac{\left(\frac{i}{f}\right)}{1 - \left(1 + \left(\frac{i}{f}\right)\right)^{-n}} \right) \quad (4)$$

in which:

- P is the periodic credit installment,
- PV is the present value or the total amount that a series of future payments is worth now or the principal of the loan,
- i is the annual nominal interest rate,
- f is the frequency of the repayment of the credit which determines the length of the regular periods,
- n is the number of payments for the loan.

Using Microsoft Excel the periodic credit installment (P) can be calculated with the PMT-function, formula (5).

$$P = \text{PMT}(i/f, n, PV, FV, \text{Type}) \quad (5)$$

in which:

- i is the annual nominal interest rate,
- f is the frequency of the repayment of the credit which determines the length of the regular periods,
- n is the number of payments for the loan,
- PV is the present value or the total amount that a series of future payments is worth now or the principal of the loan,
- the future value, FV, is the cash balance after the last payment on the loan (=0),
- Type is whether the payment is made at the beginning or end of a period.

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<sup>8</sup> The annuity or installment, being the monthly equal payment, typically includes a principal and an interest element.

The following examples illustrate the calculations of the periodic credit installments and APR by applying the abovementioned formulas.

Case A: There are only interest charges

Table 1

Consumer	A
Credit amount	NAf. 10,000.00
Borrowing rate	10%
Number of years	3
Number of (monthly) payments	36

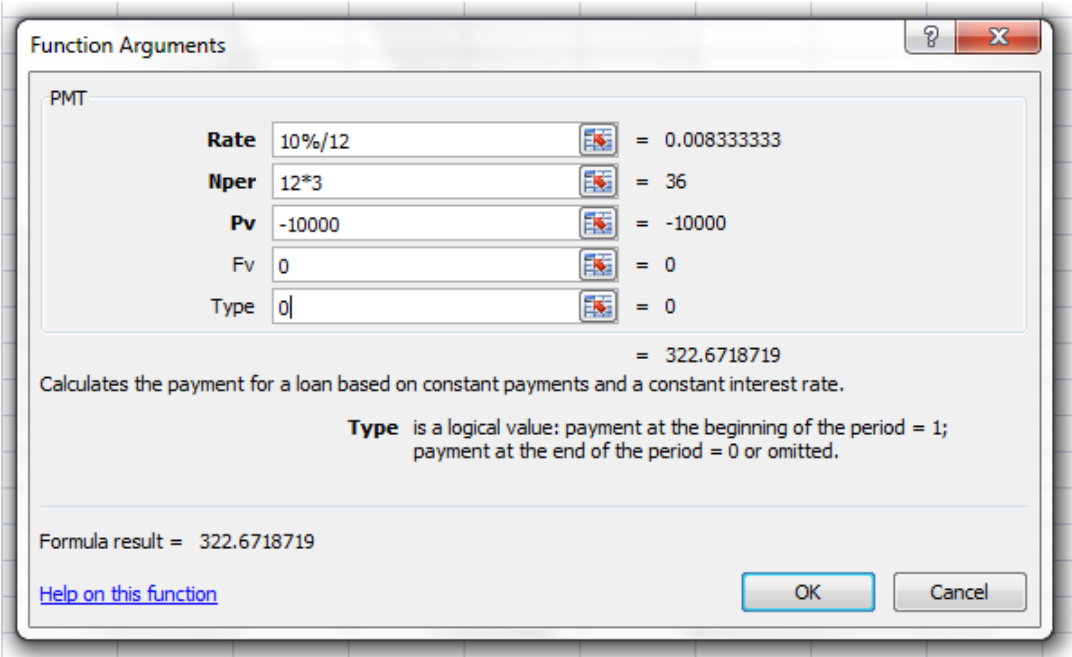
**Monthly annuity payment:**

The monthly annuity payment for consumer A is calculated by using the formula as follows:

$$\text{Annuity} = \frac{10,000}{\left( \frac{1 - \left( 1 + \left( \frac{0.10}{12} \right) \right)^{-36}}{\left( \frac{0.10}{12} \right)} \right)} = 322.67$$

The total amount that will be repaid is NAf. **11,616.12**

The same results will be arrived at when using the Microsoft Excel PMT-function as depicted below:





**APR**

The formula for the APR calculation is as follows:

$$10,000 = 322.67 \frac{1}{(1+X)^{1/12}} + 322.67 \frac{1}{(1+X)^{2/12}} + \dots + 322.67 \frac{1}{(1+X)^{36/12}}$$

The formula can be rearranged as follows:

$$10,000 = 322.67 \frac{1 - \frac{1}{(1+X)^{36/12}}}{(1+X)^{1/12} - 1}$$

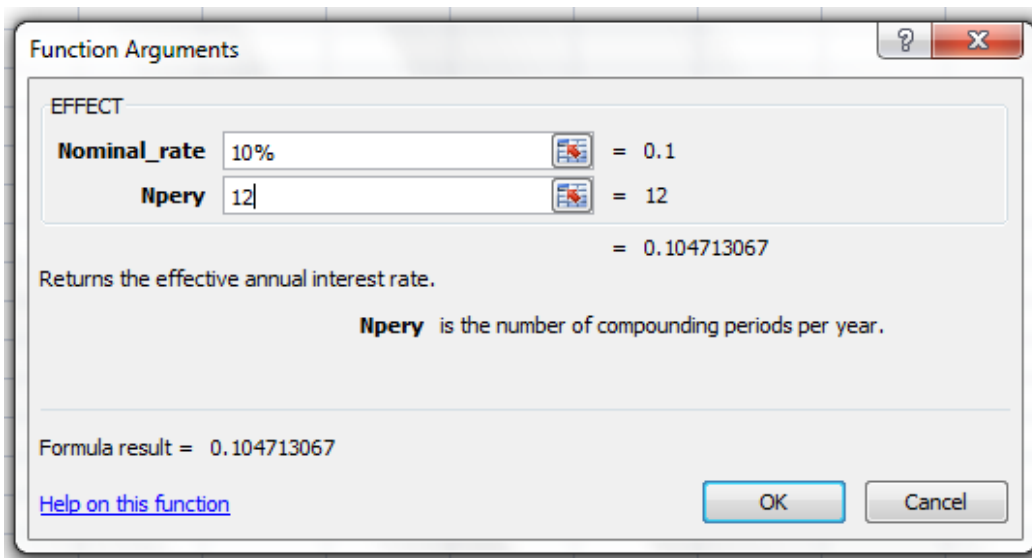
X is equal to **10.47%**

When there are only interest cost and no other charges as in the example above, the following simplified formula can also be applied:

$$X = \left(1 + \frac{i}{n}\right)^n - 1$$

$$\left(1 + \frac{0.10}{12}\right)^{12} - 1 = 10.47\%$$

In this specific case, the annual rate that we are calculating is equal to the effective borrowing rate. The Effect function in Microsoft Excel can also be applied for this specific case, where no additional charges are in place.



Total cost of the credit to the consumer =  $(36 * 322.67) - 10,000 = \text{NAf. } 1,616.12$

Total amount to be paid by the consumer on consumer credit = NAf. 11,616.12

Case B: Other charges in addition to interest charges

Table 2

Consumer	B
Credit amount	NAf. 10,000.00
Borrowing rate	10%
Number of years	3
Number of (monthly) payments	36
Administrative costs (one time)	NAf. 1,700.00

Option 1: Administrative cost (NAf. 1,700) will be financed and amortized according to the repayment schedule

### Monthly annuity payment:

The monthly annuity payment is for consumer B is calculated as follows:

$$\text{Annuity} = \frac{11,700}{\left( \frac{\left( 1 - \left( 1 + \left( \frac{0.10}{12} \right) \right)^{-36} \right)}{\left( \frac{0.10}{12} \right)} \right)} = 377.53$$

The total amount that will be repaid is NAf. **13,590.94**

### APR

The formula for the APR calculation is as follows:

$$10,000 = 377.53 \frac{1}{(1+X)^{1/12}} + 377.53 \frac{1}{(1+X)^{2/12}} + \dots + 377.53 \frac{1}{(1+X)^{36/12}}$$

The formula can be rearranged as follows:

$$10,000 = 377.53 \frac{1 - \frac{1}{(1+X)^{36/12}}}{(1+X)^{1/12} - 1}$$

X is equal to **23.3%**

Total cost of the credit to the consumer =  $(36 * 377.53) - 10,000 = \text{NAf. } 3,591.08$

Total amount to be paid by the consumer on consumer credit = NAf. 13,591.08

Option 2: Administrative cost (NAf. 1,700) not financed and will be paid upfront

**Monthly annuity payment:**

The monthly annuity payment for consumer B is calculated as follows:

$$\text{Annuity} = \frac{10,000}{\left( \frac{1 - \left( 1 + \left( \frac{0.10}{12} \right) \right)^{-36}}{\left( \frac{0.10}{12} \right)} \right)} = 322.67$$

The total amount that will be repaid is NAf. **11,616.12**

**APR**

The formula for the APR calculation is as follows:

$$10,000 = 1700 + 322.67 \frac{1}{(1+X)^{1/12}} + 322.67 \frac{1}{(1+X)^{2/12}} + \dots + 322.67 \frac{1}{(1+X)^{36/12}}$$

The formula can be rearranged as follows:

$$10,000 = 1700 + 322.67 \frac{1 - \frac{1}{(1+X)^{36/12}}}{(1+X)^{1/12} - 1}$$

X is equal to **25.98%**

Total cost of the credit to the consumer =  $(36 * 322.67) + 1700 - 10,000 = \text{NAf. } 3,316.12$

Total amount to be paid by the consumer on consumer credit = NAf. 13,316.12

**APPENDIX 2: table with main characteristics of the credit product**

Example table to be disclosed when advertising, inquiring on, or before extending consumer credit.

<b>DESCRIPTION OF THE MAIN CHARACTERISTICS OF THE CREDIT PRODUCT</b>					
Amount of Consumer credit <sup>1</sup>	Borrowing rate <sup>2</sup>	APR <sup>3</sup>	Installments <sup>4</sup>	Duration <sup>5</sup>	Total amount to be paid by the consumer on consumer credit <sup>6</sup>
Valid until:					

<sup>1</sup> Is the total amount of credit offered

<sup>2</sup> Is the interest rate offered by the credit provider

<sup>3</sup> Is the calculated APR

<sup>4</sup> Is the amount that the consumer has to pay periodically

<sup>5</sup> Is the duration of the credit agreement

<sup>6</sup> Is the sum of total amount of credit and total cost of credit

### APPENDIX 3: amortization table

Period <sup>1</sup>	Drawdowns <sup>2</sup>	Balance				Interest on capital		Other costs		Payments				Cash flows		
		Initial <sup>3</sup>	Outstanding <sup>4</sup> (only capital)	Outstanding <sup>5</sup> (capital plus interest)	Final <sup>6</sup>	Borrowing rate <sup>7</sup> (%)	Interest charges <sup>8</sup>	Not financed <sup>9</sup>	Financed <sup>10</sup>	Repayment of the credit			Costs not financed <sup>14</sup>	Total <sup>15</sup>	Value at each period <sup>16</sup>	Present value <sup>17</sup>
										Capital amortisation <sup>11</sup>	Interest <sup>12</sup>	Total <sup>13</sup>				

<sup>1</sup> The duration of the credit agreement in order to repay the loan

<sup>2</sup> The portion of the loan that has been disbursed upon the request of the borrower

<sup>3</sup> The total principal amount of the loan disbursed to the borrower

<sup>4</sup> The outstanding balance after the principal portion has been deducted

<sup>5</sup> The outstanding balance including the interest charges for that specific period

<sup>6</sup> The outstanding balance including the interest charges for that specific period while subtracting the total periodic installment

<sup>7</sup> The interest rate offered by the credit provider

<sup>8</sup> The payable interest cost calculated on the basis of the outstanding balance for a specific period

<sup>9</sup> Other costs that are not financed and has to be paid upfront

<sup>10</sup> Other cost that are financed and will be amortized according to the repayment schedule

<sup>11</sup> Amortization schedule that only shows the principal portion

<sup>12</sup> The interest which shall be payable by the borrower to the lender on the outstanding balance

<sup>13</sup> The total periodic installment including both the interest and principal portion

<sup>14</sup> Other cost that will be paid according the repayment schedule in addition to the periodic installment

<sup>15</sup> The total of the periodic installments and the other costs

<sup>16</sup> Total (negative) periodic installments that will be used as input for the calculation of the present value

<sup>17</sup> The periodic credit installments discounted to present value by the APR

Below the amortization table of the three examples mentioned in Appendix 1.

## Example 1

Period	Drawdowns	Balance				Interest on capital		Other costs		Payments				Cash flows		
		Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repayment of the credit			Costs not financed	Total	Value at each period	Present value
										Capital amortisation	Interest	Total				
0	10000.00				10000.00								0.00	0.00	10000.00	10000.00
1		10000.00	10000.00	10083.33	9760.66	10.00%	83.33			239.34	83.33	322.67	0.00	322.67	-322.67	-320.00
2		9760.66	9760.66	9842.00	9519.33	10.00%	81.34			241.33	81.34	322.67	0.00	322.67	-322.67	-317.36
3		9519.33	9519.33	9598.66	9275.98	10.00%	79.33			243.34	79.33	322.67	0.00	322.67	-322.67	-314.74
4		9275.98	9275.98	9353.28	9030.61	10.00%	77.30			245.37	77.30	322.67	0.00	322.67	-322.67	-312.14
5		9030.61	9030.61	9105.87	8783.20	10.00%	75.26			247.42	75.26	322.67	0.00	322.67	-322.67	-309.56
6		8783.20	8783.20	8856.39	8533.72	10.00%	73.19			249.48	73.19	322.67	0.00	322.67	-322.67	-307.00
7		8533.72	8533.72	8604.83	8282.16	10.00%	71.11			251.56	71.11	322.67	0.00	322.67	-322.67	-304.46
8		8282.16	8282.16	8351.18	8028.51	10.00%	69.02			253.65	69.02	322.67	0.00	322.67	-322.67	-301.94
9		8028.51	8028.51	8095.41	7772.74	10.00%	66.90			255.77	66.90	322.67	0.00	322.67	-322.67	-299.45
10		7772.74	7772.74	7837.51	7514.84	10.00%	64.77			257.90	64.77	322.67	0.00	322.67	-322.67	-296.97
11		7514.84	7514.84	7577.46	7254.79	10.00%	62.62			260.05	62.62	322.67	0.00	322.67	-322.67	-294.52
12		7254.79	7254.79	7315.25	6992.58	10.00%	60.46			262.22	60.46	322.67	0.00	322.67	-322.67	-292.09
13		6992.58	6992.58	7050.85	6728.17	10.00%	58.27			264.40	58.27	322.67	0.00	322.67	-322.67	-289.67
14		6728.17	6728.17	6784.24	6461.57	10.00%	56.07			266.60	56.07	322.67	0.00	322.67	-322.67	-287.28
15		6461.57	6461.57	6515.42	6192.75	10.00%	53.85			268.83	53.85	322.67	0.00	322.67	-322.67	-284.90
16		6192.75	6192.75	6244.35	5921.68	10.00%	51.61			271.07	51.61	322.67	0.00	322.67	-322.67	-282.55
17		5921.68	5921.68	5971.03	5648.36	10.00%	49.35			273.32	49.35	322.67	0.00	322.67	-322.67	-280.21
18		5648.36	5648.36	5695.43	5372.75	10.00%	47.07			275.60	47.07	322.67	0.00	322.67	-322.67	-277.90
19		5372.75	5372.75	5417.53	5094.85	10.00%	44.77			277.90	44.77	322.67	0.00	322.67	-322.67	-275.60
20		5094.85	5094.85	5137.31	4814.64	10.00%	42.46			280.21	42.46	322.67	0.00	322.67	-322.67	-273.32
21		4814.64	4814.64	4854.76	4532.09	10.00%	40.12			282.55	40.12	322.67	0.00	322.67	-322.67	-271.07
22		4532.09	4532.09	4569.86	4247.19	10.00%	37.77			284.90	37.77	322.67	0.00	322.67	-322.67	-268.83
23		4247.19	4247.19	4282.58	3959.91	10.00%	35.39			287.28	35.39	322.67	0.00	322.67	-322.67	-266.60
24		3959.91	3959.91	3992.91	3670.23	10.00%	33.00			289.67	33.00	322.67	0.00	322.67	-322.67	-264.40
25		3670.23	3670.23	3700.82	3378.15	10.00%	30.59			292.09	30.59	322.67	0.00	322.67	-322.67	-262.22
26		3378.15	3378.15	3406.30	3083.63	10.00%	28.15			294.52	28.15	322.67	0.00	322.67	-322.67	-260.05
27		3083.63	3083.63	3109.32	2786.65	10.00%	25.70			296.97	25.70	322.67	0.00	322.67	-322.67	-257.90
28		2786.65	2786.65	2809.87	2487.20	10.00%	23.22			299.45	23.22	322.67	0.00	322.67	-322.67	-255.77
29		2487.20	2487.20	2507.93	2185.26	10.00%	20.73			301.95	20.73	322.67	0.00	322.67	-322.67	-253.65
30		2185.26	2185.26	2203.47	1880.80	10.00%	18.21			304.46	18.21	322.67	0.00	322.67	-322.67	-251.56
31		1880.80	1880.80	1896.47	1573.80	10.00%	15.67			307.00	15.67	322.67	0.00	322.67	-322.67	-249.48
32		1573.80	1573.80	1586.91	1264.24	10.00%	13.11			309.56	13.11	322.67	0.00	322.67	-322.67	-247.42
33		1264.24	1264.24	1274.78	952.10	10.00%	10.54			312.14	10.54	322.67	0.00	322.67	-322.67	-245.37
34		952.10	952.10	960.04	637.37	10.00%	7.93			314.74	7.93	322.67	0.00	322.67	-322.67	-243.35
35		637.37	637.37	642.68	320.01	10.00%	5.31			317.36	5.31	322.67	0.00	322.67	-322.67	-241.33
36		320.01	320.01	322.67	0.00	10.00%	2.67			320.01	2.67	322.67	0.00	322.67	-322.67	-239.34

Example 2

Period	Drawdowns	Balance				Interest on capital		Other costs		Payments					Cash flows	
		Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repayment of the credit			Costs not financed	Total	Value at each period	Present value
										Capital amortisation	Interest	Total				
0	10000.00				11700.00				1700.00				0.00	0.00	10000.00	10000.00
1		11700.00	11700.00	11797.50	11419.97	10.00%	97.50			280.03	97.50	377.53	0.00	377.53	-377.53	-370.99
2		11419.97	11419.97	11515.14	11137.61	10.00%	95.17			282.36	95.17	377.53	0.00	377.53	-377.53	-364.56
3		11137.61	11137.61	11230.43	10852.90	10.00%	92.81			284.71	92.81	377.53	0.00	377.53	-377.53	-358.25
4		10852.90	10852.90	10943.34	10565.82	10.00%	90.44			287.09	90.44	377.53	0.00	377.53	-377.53	-352.04
5		10565.82	10565.82	10653.86	10276.34	10.00%	88.05			289.48	88.05	377.53	0.00	377.53	-377.53	-345.95
6		10276.34	10276.34	10361.97	9984.45	10.00%	85.64			291.89	85.64	377.53	0.00	377.53	-377.53	-339.95
7		9984.45	9984.45	10067.65	9690.13	10.00%	83.20			294.32	83.20	377.53	0.00	377.53	-377.53	-334.07
8		9690.13	9690.13	9770.88	9393.35	10.00%	80.75			296.78	80.75	377.53	0.00	377.53	-377.53	-328.28
9		9393.35	9393.35	9471.63	9094.10	10.00%	78.28			299.25	78.28	377.53	0.00	377.53	-377.53	-322.59
10		9094.10	9094.10	9169.89	8792.36	10.00%	75.78			301.74	75.78	377.53	0.00	377.53	-377.53	-317.01
11		8792.36	8792.36	8865.63	8488.10	10.00%	73.27			304.26	73.27	377.53	0.00	377.53	-377.53	-311.52
12		8488.10	8488.10	8558.84	8181.31	10.00%	70.73			306.79	70.73	377.53	0.00	377.53	-377.53	-306.12
13		8181.31	8181.31	8249.49	7871.96	10.00%	68.18			309.35	68.18	377.53	0.00	377.53	-377.53	-300.82
14		7871.96	7871.96	7937.56	7560.04	10.00%	65.60			311.93	65.60	377.53	0.00	377.53	-377.53	-295.61
15		7560.04	7560.04	7623.04	7245.51	10.00%	63.00			314.53	63.00	377.53	0.00	377.53	-377.53	-290.49
16		7245.51	7245.51	7305.89	6928.37	10.00%	60.38			317.15	60.38	377.53	0.00	377.53	-377.53	-285.45
17		6928.37	6928.37	6986.10	6608.58	10.00%	57.74			319.79	57.74	377.53	0.00	377.53	-377.53	-280.51
18		6608.58	6608.58	6663.65	6286.12	10.00%	55.07			322.45	55.07	377.53	0.00	377.53	-377.53	-275.65
19		6286.12	6286.12	6338.51	5960.98	10.00%	52.38			325.14	52.38	377.53	0.00	377.53	-377.53	-270.88
20		5960.98	5960.98	6010.65	5633.13	10.00%	49.67			327.85	49.67	377.53	0.00	377.53	-377.53	-266.19
21		5633.13	5633.13	5680.07	5302.54	10.00%	46.94			330.58	46.94	377.53	0.00	377.53	-377.53	-261.57
22		5302.54	5302.54	5346.73	4969.21	10.00%	44.19			333.34	44.19	377.53	0.00	377.53	-377.53	-257.04
23		4969.21	4969.21	5010.62	4633.09	10.00%	41.41			336.12	41.41	377.53	0.00	377.53	-377.53	-252.59
24		4633.09	4633.09	4671.70	4294.17	10.00%	38.61			338.92	38.61	377.53	0.00	377.53	-377.53	-248.22
25		4294.17	4294.17	4329.96	3952.43	10.00%	35.78			341.74	35.78	377.53	0.00	377.53	-377.53	-243.92
26		3952.43	3952.43	3985.37	3607.84	10.00%	32.94			344.59	32.94	377.53	0.00	377.53	-377.53	-239.69
27		3607.84	3607.84	3637.91	3260.38	10.00%	30.07			347.46	30.07	377.53	0.00	377.53	-377.53	-235.54
28		3260.38	3260.38	3287.55	2910.03	10.00%	27.17			350.36	27.17	377.53	0.00	377.53	-377.53	-231.46
29		2910.03	2910.03	2934.28	2556.75	10.00%	24.25			353.28	24.25	377.53	0.00	377.53	-377.53	-227.45
30		2556.75	2556.75	2578.06	2200.53	10.00%	21.31			356.22	21.31	377.53	0.00	377.53	-377.53	-223.51
31		2200.53	2200.53	2218.87	1841.34	10.00%	18.34			359.19	18.34	377.53	0.00	377.53	-377.53	-219.64
32		1841.34	1841.34	1856.69	1479.16	10.00%	15.34			362.18	15.34	377.53	0.00	377.53	-377.53	-215.84
33		1479.16	1479.16	1491.49	1113.96	10.00%	12.33			365.20	12.33	377.53	0.00	377.53	-377.53	-212.10
34		1113.96	1113.96	1123.24	745.72	10.00%	9.28			368.24	9.28	377.53	0.00	377.53	-377.53	-208.42
35		745.72	745.72	751.93	374.41	10.00%	6.21			371.31	6.21	377.53	0.00	377.53	-377.53	-204.81
36		374.41	374.41	377.53	0.00	10.00%	3.12			374.41	3.12	377.53	0.00	377.53	-377.53	-201.27

Example 3

Period	Drawdowns	Balance				Interest on capital		Other costs		Payments				Cash flows		
		Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repayment of the credit			Costs not financed	Total	Value at each period	Present value
										Capital amortisation	Interest	Total				
0	10000.00				10000.00			1700.00					1700.00	1700.00	8300.00	8300.00
1		10000.00	10000.00	10083.33	9760.66	10.00%	83.33			239.34	83.33	322.67	0.00	322.67	-322.67	-316.52
2		9760.66	9760.66	9842.00	9519.33	10.00%	81.34			241.33	81.34	322.67	0.00	322.67	-322.67	-310.49
3		9519.33	9519.33	9598.66	9275.98	10.00%	79.33			243.34	79.33	322.67	0.00	322.67	-322.67	-304.57
4		9275.98	9275.98	9353.28	9030.61	10.00%	77.30			245.37	77.30	322.67	0.00	322.67	-322.67	-298.76
5		9030.61	9030.61	9105.87	8783.20	10.00%	75.26			247.42	75.26	322.67	0.00	322.67	-322.67	-293.07
6		8783.20	8783.20	8856.39	8533.72	10.00%	73.19			249.48	73.19	322.67	0.00	322.67	-322.67	-287.48
7		8533.72	8533.72	8604.83	8282.16	10.00%	71.11			251.56	71.11	322.67	0.00	322.67	-322.67	-282.00
8		8282.16	8282.16	8351.18	8028.51	10.00%	69.02			253.65	69.02	322.67	0.00	322.67	-322.67	-276.63
9		8028.51	8028.51	8095.41	7772.74	10.00%	66.90			255.77	66.90	322.67	0.00	322.67	-322.67	-271.35
10		7772.74	7772.74	7837.51	7514.84	10.00%	64.77			257.90	64.77	322.67	0.00	322.67	-322.67	-266.18
11		7514.84	7514.84	7577.46	7254.79	10.00%	62.62			260.05	62.62	322.67	0.00	322.67	-322.67	-261.11
12		7254.79	7254.79	7315.25	6992.58	10.00%	60.46			262.22	60.46	322.67	0.00	322.67	-322.67	-256.13
13		6992.58	6992.58	7050.85	6728.17	10.00%	58.27			264.40	58.27	322.67	0.00	322.67	-322.67	-251.25
14		6728.17	6728.17	6784.24	6461.57	10.00%	56.07			266.60	56.07	322.67	0.00	322.67	-322.67	-246.46
15		6461.57	6461.57	6515.42	6192.75	10.00%	53.85			268.83	53.85	322.67	0.00	322.67	-322.67	-241.76
16		6192.75	6192.75	6244.35	5921.68	10.00%	51.61			271.07	51.61	322.67	0.00	322.67	-322.67	-237.15
17		5921.68	5921.68	5971.03	5648.36	10.00%	49.35			273.32	49.35	322.67	0.00	322.67	-322.67	-232.63
18		5648.36	5648.36	5695.43	5372.75	10.00%	47.07			275.60	47.07	322.67	0.00	322.67	-322.67	-228.20
19		5372.75	5372.75	5417.53	5094.85	10.00%	44.77			277.90	44.77	322.67	0.00	322.67	-322.67	-223.85
20		5094.85	5094.85	5137.31	4814.64	10.00%	42.46			280.21	42.46	322.67	0.00	322.67	-322.67	-219.58
21		4814.64	4814.64	4854.76	4532.09	10.00%	40.12			282.55	40.12	322.67	0.00	322.67	-322.67	-215.39
22		4532.09	4532.09	4569.86	4247.19	10.00%	37.77			284.90	37.77	322.67	0.00	322.67	-322.67	-211.29
23		4247.19	4247.19	4282.58	3959.91	10.00%	35.39			287.28	35.39	322.67	0.00	322.67	-322.67	-207.26
24		3959.91	3959.91	3992.91	3670.23	10.00%	33.00			289.67	33.00	322.67	0.00	322.67	-322.67	-203.31
25		3670.23	3670.23	3700.82	3378.15	10.00%	30.59			292.09	30.59	322.67	0.00	322.67	-322.67	-199.44
26		3378.15	3378.15	3406.30	3083.63	10.00%	28.15			294.52	28.15	322.67	0.00	322.67	-322.67	-195.63
27		3083.63	3083.63	3109.32	2786.65	10.00%	25.70			296.97	25.70	322.67	0.00	322.67	-322.67	-191.90
28		2786.65	2786.65	2809.87	2487.20	10.00%	23.22			299.45	23.22	322.67	0.00	322.67	-322.67	-188.25
29		2487.20	2487.20	2507.93	2185.26	10.00%	20.73			301.95	20.73	322.67	0.00	322.67	-322.67	-184.66
30		2185.26	2185.26	2203.47	1880.80	10.00%	18.21			304.46	18.21	322.67	0.00	322.67	-322.67	-181.14
31		1880.80	1880.80	1896.47	1573.80	10.00%	15.67			307.00	15.67	322.67	0.00	322.67	-322.67	-177.69
32		1573.80	1573.80	1586.91	1264.24	10.00%	13.11			309.56	13.11	322.67	0.00	322.67	-322.67	-174.30
33		1264.24	1264.24	1274.78	952.10	10.00%	10.54			312.14	10.54	322.67	0.00	322.67	-322.67	-170.98
34		952.10	952.10	960.04	637.37	10.00%	7.93			314.74	7.93	322.67	0.00	322.67	-322.67	-167.72
35		637.37	637.37	642.68	320.01	10.00%	5.31			317.36	5.31	322.67	0.00	322.67	-322.67	-164.52
36		320.01	320.01	322.67	0.00	10.00%	2.67			320.01	2.67	322.67	0.00	322.67	-322.67	-161.38