Central Bank of the Republic of Armenia

Board Resolution 363-N

Adopted December 16, 2008

ON APPROVAL OF REGULATION 8/01 ON "EXPLANATIONS AND EXAMPLES OF THE CALCULATION OF ANNUAL PERCENTAGE RATE OF CHARGE"

By the virtue of the Law of the Republic of Armenia "On consumer credit" article 14 part (4), Law of the Republic of Armenia "On Central Bank of the Republic of Armenia" article 20, the Board of the Central Bank of Armenia ***decides.***

1. To approve regulation 8/01 on "Explanations and examples of the calculation of annual percentage rate of charge" pursuant to Appendix (attached).
2. This resolution shall enter into force on January 24, 2009.

Chairman of the Central Bank of Armenia

A. Javadyan

December 23, 2008
Yerevan

Appendix

Central Bank of the Republic of Armenia
Board Resolution 363-N
Adopted December 23, 2008

REGULATION 8/01

EXPLANATIONS AND EXAMPLES OF THE CALCULATION OF ANNUAL PERCENTAGE RATE OF CHARGE

CHAPTER 1

GENERAL PROVISIONS

1. This regulation defines explanations and examples of the calculation of annual percentage rate of charge that is subject to inclusion in any credit agreement, advertisement, announcement, suggestion, offer or an invitation to make an offer exercised by banks, foreign bank branches, credit organizations and pawnshops operating on the territory of the Republic of Armenia in cases defined by the Law of the Republic of Armenia (hereinafter: Law) "On consumer credit".

CHAPTER 2

DEFINITIONS

2. For the purposes of this regulation following definitions shall apply.

    a. "**Credit repayments** " all payments made by the consumer for obtaining credit and (or) during the operation of crediting: the principal amount of credit and payments included in the total cost of crediting (interest and other payments).

    b. "**Other payments**'' elements included in other payments are defined in point 4 of this regulation.

    c. "**The total cost of crediting**" all interest and other payments, which the consumer is obliged **to pay** (fulfill) for crediting (during the obtaining and the operation of crediting).

    d. "**Annual percentage rate of charge**" the total cost of credit of the consumer expressed by the annual interest and calculated on the basis of the formula defined in point 3 of this regulation.

CHAPTER 3

THE CALCULATION FORMULA FOR THE ANNUAL PERCENTAGE RATE OF CHARGE

EXLANATIONS AND EXAMPLES

3. Banks, branches of foreign banks, credit organizations and pawnshops calculate the annual percentage rate of charge for credits provided or supposed to be provided by them based on the formula for the annual percentage rate of charge given in article 13 of the Law

$$A = \sum_{n=1}^{N} \frac{Kn}{(1+i)^{\frac{Dn}{365}}}$$

Where

3.1 i – is the annual percentage rate of charge, which according to parts 5 and 7 of article 2 of the Law , is the **total cost of crediting** for consumer, expressed by the annual percentage for the credit, and which includes in it all interest and **other payments** that consumer is obliged to pay obtaining credit and during the operation of crediting.

3.2 A – is the initial amount of credit provided to the consumer.

In cases when maximum credit limit is not defined in the crediting contract the maximum credit limit is one million drams.

3.3 n – is the subsequent number of payment (including the payments at the moment of credit obtaining) directed to the repayment of the credit (the principal amount of credit, interest and (or) other payments) by the consumer. Besides payments of principle amount of credit, interest and (or) **other payments** fulfilled in one day are considered to be one payment.

3.4 N – is the subsequent number of the last credit repayment (the principal amount of credit, interest and (or) **other payments**) including the payments at the moment of credit obtaining, after what the consumers' obligations by credit contract are considered to be repaid. Example: The credit is granted for 12 months , on condition of monthly repayment for the principal amount of credit and interest at the same time, and other payments in the moment of credit issuance, therefore N=13, as one payment is fulfilled in the moment of credit issuance and 12 under the credit contract terms.

3.5 Kn – is the amount of subsequent n-th payment (the principal amount of credit, interest and (or) **other payments**) paid by the consumer at the moment of credit obtaining and (or) during the operation of credit.

In case of allowed changes of interest and (or) the amount or size of other payments included in the total cost of consumer crediting by the crediting contract and it is not possible to express the changes by amounts, the annual interest rate must be calculated supposing that the interest and (or) other payments included in the total expenses of consumers crediting will stay stable and will be applied until the end of crediting contract operation.

3.6 Dn- is the number, which shows how many days have passed since the credit obtaining day until the regular n-th repayment day included.

Example: The credit has been granted on September 15th, for the provision of credit in the moment of credit issuance **other payments** are defined, and the first partial repayment will be on the October 15th of the same year. In this case D_1=0, as **other payments** will be paid on the credit obtaining day, D_2=30, as the days from credit issuance date to the subsequent repayment day are 30, and the number of days from D_3 to D_n are being calculated by the same principle.

If it is defined in the crediting contract that the consumer may obtain the amount of credit partly or may choose the moment of obtaining the credit, then the day of credit obtaining is considered the day of concluding the crediting contract.

4 Crediting total expenses and therefore other payments included in the calculation of the annual percentage rate of charge include the following binding payments for crediting (in case of their presence) to be paid by the consumer:

1) the credit registration fee,

2) in case of having overdue payments for the credits obtained formerly a new credit registration fee from the certain creditor

3) crediting documents preparation fee

4) credit service fee

5) pledge processing fee

6) subscription or membership fees for organizations, associations and other groups, if the creditor is the founder or member of that organizations, associations and other groups, and the credit conditions depend on such subscription or membership

Example : the bank announces privileged conditions for credit contract for those individuals, who will become members of the association founded by the bank. Annual membership fee is required . The membership fee(s) payable during the credit period must be included in the calculation of the annual percentage rate of charge.

7) insurance, appraisal and other ancillary services fees, if the use of such services is a precondition for the conclusion of the contract or the obtaining of advertised annual percentage rate of charge and the beneficiary of that services is the creditor or the creditor determines the scope of individuals with whom the consumer may conclude contracts for ancillary services.

Examples :

a. The bank, as a precondition for the conclusion of the crediting contract, requires the pledged property insurance, being the beneficiary of concluded insurance contract ,

b. The bank, as a precondition for the conclusion of the crediting contract, requires the pledged property insurance as well as determines the scope of individuals with whom the consumer may conclude insurance contract,

c. The bank, as a precondition for obtaining advertised annual percentage rate of charge, requires the pledged property insurance, being the beneficiary of concluded insurance contract ,

d. The bank, as a precondition for obtaining advertised annual percentage rate of charge, requires the pledged property insurance, as well as determines the scope of individuals with whom the consumer may conclude insurance contract,

e. The bank, as a precondition for the conclusion of the crediting contract, requires the pledged property insurance, being the beneficiary of concluded insurance contract, as well as determines the scope of individuals with whom the consumer may conclude insurance contract,

f. The bank, as a precondition for obtaining advertised annual percentage rate of charge, requires the pledged property insurance, constituting the beneficiary of concluded insurance contract, as well as determines the scope of individuals with whom the consumer may conclude insurance contract.

8) other fees connected with the crediting which the consumer **is obliged** to pay for obtaining a credit, except the fees not included in the consumers crediting total expenses defined in part 1, article 15 of the Law.

5. The amount of annual percentage rate of charge calculated on the basis of the formula from 3rd point of this regulation must be rounded at least to one hundredth and multiplied by 100 in order to get the percentage value.

6. In cases when the credit repayment schedule or refund terms in the provisions of the contract are not defined, the period for the credit repayment in the calculation of annual percentage rate of charge is considered to be one year. In case, when more than one terms of credit repayments are defined in the crediting contract, the credit repayment deadline is considered to be the earlier term defined in the contract, if anything else is not defined in the crediting contract.

CHAPTER 4

EXAMPLES OF CALCULATION OF ANNUAL PERCENTAGE RATE OF CHARGE

7. **"Simple loans"**

7.1 Suppose that a consumer credit has been provided on the following conditions:

- Provided amount: 500 000 drams
- Nominal annual interest rate : 10%, calculated on the reducing loan balance
- Maturity : 1 year (365 days)
- There are no other fees.

7.2 **Example 1.1 "Simple loan – with equal monthly payments"**: the conditions of provided loan correspond to the point 7.1, and the repayments – **equal monthly payments** (principle amount and the interest together are the same amount during each repayment), therefore N=12.

Based on the above mentioned example conditions, the following loan repayment schedule is derived:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment : Dn	Payable Interest amount	Principle amount repayment	Amount of subsequent payment : Kn
1	30	4167	39791	43958
2	61	3835	40123	43958
3	92	3501	40457	43958
4	120	3164	40794	43958
5	151	2824	41134	43958
6	181	2481	41477	43958
7	212	2135	41823	43958
8	242	1787	42171	43958
9	273	1435	42523	43958
10	304	1081	42877	43958
11	334	724	43234	43958
12	**365**	363	43595	43958
Total		27495	500 000	527495

Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived :

$$500000 = \frac{43958}{(1+i)^{\frac{30}{365}}} + \frac{43958}{(1+i)^{\frac{61}{365}}} + \frac{43958}{(1+i)^{\frac{92}{365}}} + \ldots + \frac{43958}{(1+i)^{\frac{365}{365}}}$$

where

i=0.105067*100=10.51%

7.3 **Example 1.2 : "Simple loan – with non equal monthly payments"** : the conditions of provided loan correspond to the point 7.1, and the repayments (Kn) are not equal (the principle amount is equal, but the interest is not equally divided into months).

In this case we will get the following loan repayment schedule:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment : Dn	Payable Interest amount	Principle amount repayment	Amount of subsequent payment : Kn
1	30	4167	41667	45833
2	61	3819	41667	45486
3	92	3472	41667	45139
4	120	3125	41667	44792
5	151	2778	41667	44444
6	181	2431	41667	44097
7	212	2083	41667	43750
8	242	1736	41667	43403
9	273	1389	41667	43056
10	304	1042	41667	42708
11	334	694	41667	42361
12	**365**	347	41667	42014
Total		27083	500000	527083

Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$500000 = \frac{45833}{(1+i)^{\frac{30}{365}}} + \frac{45486}{(1+i)^{\frac{61}{365}}} + \frac{45139}{(1+i)^{\frac{92}{365}}} + \ldots + \frac{42014}{(1+i)^{\frac{365}{365}}}$$

$$(1+i)^{\frac{92}{365}} \quad (1+i)^{\frac{181}{365}} \quad (1+i)^{\frac{273}{365}} \quad (1+i)^{\frac{365}{365}}$$

where

i=0.105071*100=10.51%

7.4. **Example 1.3 : "Simple loan – with equal quarterly payments"** : the conditions of provided loan correspond to the point 7.1, and the repayments frequency is equal quarterly.

In this case we will get the following loan repayment schedule:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment : Dn	Payable interest amount	Principle amount repayment	Amount of subsequent payment : Kn
1	92	12500	120409	132909
2	181	9490	123419	132909
3	273	6404	126505	132909
4	365	3242	129667	132909
Total		31636	500 000	531636

Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$500000=\frac{132909}{(1+i)^{\frac{92}{365}}}+\frac{132909}{(1+i)^{\frac{181}{365}}}+\frac{132909}{(1+i)^{\frac{273}{365}}}+\ldots+\frac{132909}{(1+i)^{\frac{365}{365}}}$$

Where i=0.103992*100=10.40%

7.5. **Example 1.4: "Simple loan – with non equal quarterly payments"** : the conditions of provided loan correspond to the point 7.1, and the repayments (Kn) are not equal (the principle amount is equal, but the interest is not equally divided into months) and the frequency is quarterly.

In this case loan repayment schedule is the following:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment : Dn	Payable interest amount	Principle amount repayment	Amount of subsequent payment: Kn

1	92	12500	125000	137500
2	181	9375	125000	134375
3	273	6250	125000	131250
4	365	3125	125000	128125
Total		31250	500000	531250

Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$500000 = \frac{137500}{(1+i)^{\frac{92}{365}}} + \frac{134375}{(1+i)^{\frac{181}{365}}} + \frac{131250}{(1+i)^{\frac{273}{365}}} + \ldots + \frac{128125}{(1+i)^{\frac{365}{365}}}$$

Where i=0103992*100=10.40%

7.6. **Example 1.5 : "Simple loan – with one-time interest payment"** : the conditions of provided loan correspond to the point 7.1, and the interest amount is fully paid together with the first repayment payment of the principle amount.

In this case loan repayment schedule is the following:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment : Dn	Payable interest amount	Principle amount repayment	Amount of subsequent payment : Kn
1	30	27083	41667	68750
2	61		41667	41667
3	92		41667	41667
4	120		41667	41667
5	151		41667	41667
6	181		41667	41667
7	212		41667	41667
8	242		41667	41667
9	273		41667	41667

10	304		41667	41667
11	334		41667	41667
12	**365**		41667	41667
Total		27083	500 000	527083

Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived :

$$500000=\frac{68750}{(1+i)^{\frac{30}{365}}}+\frac{41667}{(1+i)^{\frac{61}{365}}}+\frac{41667}{(1+i)^{\frac{92}{365}}}+\ldots+\frac{41667}{(1+i)^{\frac{365}{365}}}$$

Where i=0.108551*100=10.86%

8. Example 2 : "Credit loan with other one-time payments in the moment of obtaining"

8.1 Suppose that a consumer credit has been provided on the following conditions:

- Provided amount : 500 000 drams
- Nominal annual interest rate : 10%, calculated on the reducing loan balance
- Maturity : 1 year (365 days)
- Repayments : yearly equal payments (principle amount and the interest together are the same amount each month),
- Other payments by the consumer during the credit obtaining day

  Documents preparation one-time fee : 5000 drams

  Credit service one-time fee : 1000 drams

8.2 It turns out from the conditions, that N=13, one of which is the payment on the moment of obtaining credit, and the other 12 are payments of principle amount and interest amount.

8.3 **Other payments** (K_1) on the moment of obtaining credit, turns out

K_1 =5000+1000=6000

8.4 Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$500000=\frac{6000}{(1+i)^{\frac{0}{365}}}+\frac{43958}{(1+i)^{\frac{30}{365}}}+\frac{43958}{(1+i)^{\frac{61}{365}}}+\ldots+\frac{43958}{(1+i)^{\frac{365}{365}}}$$

where

$$500000-6000=\frac{43958}{(1+i)^{\frac{30}{365}}}+\frac{43958}{(1+i)^{\frac{61}{365}}}+\ldots+\frac{43958}{(1+i)^{\frac{365}{365}}}$$

and

Where i=0.130490*100=13.05%

9. Example3 : "Credit loan with other variable payments during crediting service "

9.1 Suppose that a credit loan has been obtained for buying an automobile on the following conditions:

- Provided amount : 3 million drams
- Nominal annual interest rate : 10%, calculated on the reducing loan balance
- Maturity : 2 year (730 days)
- Repayments : yearly non equal payments (principle amount and the percents together),
- Other payments by the consumer :

  Automobile assessment one–time fee <u>at the moment of obtaining credit loan</u> **15 000** drams,

  Credit service one-time fee <u>at the moment of obtaining credit loan</u> **3000** drams,

  Documents preparation one-time fee <u>at the moment of obtaining credit loan</u> **5000** drams,

  Credit service fee **1000** drams paid with principle amount and interest rates of credit during monthly repayment (total **24000** drams)

- Annual insurance fee: 2.5 % of the price of automobile, one payment of which (3 000 000 * 0.025=75000 drams) is paid on the credit obtaining day, and the other payment (the value of the automobile taking into account the depreciation 2 700 000 drams * 0.025 = 67500 drams) is paid in the next year : n=14th repayments following 10th day.

Based on the 9.1 point mentioned conditions, the following loan repayment schedule will be derived:

Repayment frequency : n	Days from credit obtaining to the subsequent repayment: Dn	Other payments	Payable interest amount	Principle amount repayment	Amount of subsequent payment: Kn
1	0	**98000**			98000
2	30	1000	25000	125000	151000
3	61	1000	23958	125000	149958
4	92	1000	22917	125000	148917
5	120	1000	21875	125000	147875
6	151	1000	20833	125000	146833
7	181	1000	19792	125000	145792
8	212	1000	18750	125000	144750
9	242	1000	17708	125000	143708
10	273	1000	16667	125000	142667
11	304	1000	15625	125000	141625
12	334	1000	14583	125000	140583
13	**365**	1000	13542	125000	139542
14	395	1000	12500	125000	138500
15	405	**67500**			67500
16	426	1000	11458	125000	137458
17	457	1000	10417	125000	136417
18	485	1000	9375	125000	135375
19	516	1000	8333	125000	134333
20	546	1000	7292	125000	133292
21	577	1000	6250	125000	132250
22	607	1000	5208	125000	131208
23	638	1000	4167	125000	130167
24	669	1000	3125	125000	129125
25	699	1000	2083	125000	128083
26	**730**	1000	1042	125000	127083
Total		189500	312500	500000	3502000

9.3 It turns out from the conditions, that N=26, one of which is the payment on the moment of obtaining credit, one is the insurance fee for the second year, and other 24 are principal amount, interest rate and other payments paid during the credit service, which are scheduled to be paid at once every month.

9.4 Other payments on the moment of obtaining credit (K_1) are

$$K_1=15000+3000+5000+75000=98000$$

9.5 Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$3000000=\frac{98000}{(1+i)^{\frac{0}{365}}}+\frac{151000}{(1+i)^{\frac{30}{365}}}+\frac{149958}{(1+i)^{\frac{61}{365}}}+\frac{148875}{(1+i)^{\frac{92}{365}}}\ldots+\frac{127042}{(1+i)^{\frac{730}{365}}}$$

, where

$$3000000-98000=\frac{151000}{(1+i)^{\frac{30}{365}}}+\frac{149958}{(1+i)^{\frac{61}{365}}}+\frac{148875}{(1+i)^{\frac{92}{365}}}+\ldots+\frac{127042}{(1+i)^{\frac{730}{365}}}$$

and

From where i=0.151899*100=15.19%

10. Example 5 : "Short term credit loan"

10.1 Suppose that a consumer credit for buying furniture has been provided in the following conditions:

- Provided amount : 800 000 drams
- Nominal annual interest rate : 10%, if the consumer is a member of "Furniture Makers Union" founded by the creditor, and 25% if the consumer is not a member of the union.
- Maturity : 9 months (273 days)
- Repayments : with equal quarterly payments (principle amount and the interest together are the same amount for each quarter),
- One-time payments by the consumer during the credit obtaining

  Documents preparation fee : 3000 drams

  Credit service fee : 2000 drams

  "Furniture Makers Union" one-time subscription fee on the moment of obtaining credit:

$20000*\frac{9}{12}=$**15000**

drams, where 9 is the duration of the credit loan

- Borrower is a member of "Furniture Makers Union"

10.2 It turns out from the conditions, that N=4, one payment of which is the payment at the credit obtaining moment, and other 3 are the principle amount and interest rate quarterly payments.

10.3 Other payments on the moment of obtaining credit (K_1) are

$$K_i = 3000+2000+15000=20000$$

10.4. Having all the necessary values and using the formula defined in Law the annual percentage rate of charge can be derived:

$$800000=\frac{20000}{(1+i)^{\frac{0}{365}}}+\frac{280110}{(1+i)^{\frac{92}{365}}}+\frac{280110}{(1+i)^{\frac{181}{365}}}+\frac{280110}{(1+i)^{\frac{273}{365}}}$$

, from where

$$800000-20000=\frac{280110}{(1+i)^{\frac{92}{365}}}+\frac{280110}{(1+i)^{\frac{181}{365}}}+...+\frac{280110}{(1+i)^{\frac{273}{365}}}$$

and

From where i=0.161760*100=16.18%: