"Registered"
by the Ministry of Justice
of the Republic of Armenia
29 December 2008
State registration No 05008408

BOARD OF THE CENTRAL BANK

OF THE REPUBLIC OF ARMENIA

16 December 2008 N 363-N

D E C I S I O N

ON APPROVING REGULATION 8/01 "EXPLANATIONS AND EXAMPLES FOR CALCULATION OF THE ACTUAL ANNUAL INTEREST RATE"

Taking as a basis part 4 of Article 14 of the Law of the Republic of Armenia "On consumer crediting" and guided by Article 20 of the Law of the Republic of Armenia "On the Central Bank of the Republic of Armenia", the Board of the Central Bank of the Republic of Armenia ***decides***:

1. To approve Regulation 8/01 "Explanations and examples for calculation of the actual annual interest rate", pursuant to the Annex (attached).
2. This Decision shall enter into force on 24 January 2009.

Governor of the Central Bank
of the Republic of Armenia

A. Javadyan

23 December 2008
city of Yerevan

nnex
To Decision of the Board
of the Central Bank
of the Republic of Armenia
No 363-N of 16 December 2008

(heading edited by No 2-N of 17 January 2020)

REGULATION 8/01

EXPLANATIONS AND EXAMPLES FOR CALCULATION OF THE ACTUAL ANNUAL INTEREST RATE

CHAPTER 1

GENERAL PROVISIONS

1. This Regulation shall define explanations and examples for calculation of the actual annual interest rate to be included in the crediting contract, advertisement, announcement, proposal, offer or invitation to make an offer by banks, branches of foreign banks, credit organisations and pawnshops operating in the territory of the Republic of Armenia in the cases prescribed by the Law of the Republic of Armenia “On consumer crediting” (hereinafter referred to as "the Law") and the Law of the Republic of Armenia “On home mortgage crediting”.

2. This Regulation shall not extend to the loans provided by banks, the cards issued for which may provide an opportunity to enjoy "luxury" privileges that are not financial operations (for example, providing compensation in case of loss of luggage and flight delay, medical compensation, purchase insurance (loss, damage of purchased goods, etc.), luggage insurance, concierge service, car towing service, pass card service (Priority Pass), access to business lounges (Lounge Key), airport escort (SpeedPass service), visa assistance, skip-the-line service, etc.). Provision of goods in the field of retail sales and services in the field of service not listed in this point (for example, discounts offered, bonuses, cashback when paying by card, etc.) shall not be considered as "luxury" privileges provided for by this point.

CHAPTER 2

CONCEPTS

3. The main concepts used in this Regulation shall be the following:

(1) **"Credit repayments"** — all payments made by the consumer for crediting when receiving the credit and/or during the effect thereof — the principal amount of the credit and fees included in the total cost of crediting (interest amounts and **other payments**).

(2) **“Other payments”** — elements included in other payments defined by point 5 of this Regulation.

(3) **“Total cost of crediting”** — all interest amounts and other payments that the consumer is obliged to pay (make) for crediting (when receiving the credit and during the effect thereof);

(4) **“Actual annual interest rate”** — the total cost of consumer’s crediting expressed in annual interest rate of the provided credit and calculated based on the formula indicated in Article 4 of this Regulation.

(5) **“Creditor”** — in accordance with the meaning prescribed by the Law of the Republic of Armenia "On consumer crediting".

(6) **"Credit"** — in accordance with the meaning prescribed by the Law of the Republic of Armenia "On consumer crediting".

The main concepts used in this regulation are:

CHAPTER 3
FORMULA FOR CALCULATION OF THE ACTUAL ANNUAL INTEREST RATE EXPLANATIONS AND EXAMPLES

4. Banks, branches of foreign banks, credit organisations and pawnshops shall calculate the actual annual interest rate for credits provided or to be provided thereby, based on the formula for calculating the actual annual interest rate provided by Article 13 of the Law:

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

where:

i — is the actual annual interest rate which, pursuant to parts 5 and 7 Article 2 of the Law, is the **total cost** of consumer's crediting, expressed by the annual interest for the credit provided, and which includes all interests and **other payments** that the consumer is obliged to pay when receiving the credit and during the whole period of effect thereof.

A — is the initial amount of credit provided to the consumer.

Where the credit contract does not set a maximum credit limit, the maximum limit of the provided credit shall be one million drams.

n — is the reference number of the credit repayment (credit principal amount, interest amounts and/or **other payment** amounts) by the consumer (including the payment made at the moment of receiving the credit). Moreover, making the payments of the credit principal amount, interest amounts and/or **other payments** within one day shall be considered as one payment.

N — is the number of the last credit repayment (credit principal amount, interest amounts and/or **other payment** amounts) (including the payment made at the moment of receiving the credit), after which the obligations assumed by the consumer under the credit contract shall be considered as repaid. For example: the credit has been provided for 12 months, on condition of concurrent monthly payments of the principal amounts and interest amounts of the credit and **other payments** envisaged at the moment of providing the credit; therefore, N=13, as one payment is made at the moment of providing the credit and 12 more payments — according to the conditions of the credit contract.

Kn — is the amount of the n^{th} payment (principal amount, interest amounts and/or **other payment** amounts) made by the consumer until the moment of receiving the credit, at the moment of receiving the credit and/or during the effect thereof.

In case the credit contract allows for changes in the amount or size of interests and/or **other fees** included in the total cost of consumer's crediting and the changes thereto may not be expressed in monetary terms, the actual annual interest rate must be calculated assuming that the interests and/or other fees included in the total cost of

consumer's crediting will remain stable and will be applied until the end of the effect of the crediting contract.

Dn — is the number that shows how many days have passed from the day of receiving the credit until the subsequent n day of repayment of the credit amount, inclusive. For example, the credit was provided on September 15, other payments are envisaged for the provision of the credit at the moment of receiving the credit, and the first partial repayment of the credit will take place on October 15 of the same year. In this case, D_1=0, as other payments will be made on the day of receiving the credit, D_2=30, as the number of days from the provision of the credit to the subsequent repayment is 30, and the number of the days from D_3 to D_n is calculated according to the same principle.

Where the crediting contract provides that the consumer may receive the credit amount in portions or may choose the time of receiving the credit amount, the day of concluding the crediting contract shall be considered as the day of receiving the credit.

5. Other fees included in the calculation of the total cost of crediting and, therefore, the actual annual interest rate shall include the following mandatory fees (if any) paid by the consumer for crediting:

1) credit extension fee;

(2) in case of having overdue repayments of a previously received credit, the fee for extending a new credit from the given creditor;

(3) fee for preparation of crediting documents;

(4) credit servicing fee;

(5) fee for pledging;

6) fees for membership or subscription to organisations, unions and other groups, if the creditor is the founder or participant of those organisations, unions or other groups, and the credit terms depend on such subscription or membership:

For example: the bank announces privileged conditions for concluding a credit contract for persons that will become members of the union founded thereby. An annual membership fee shall be required for membership. The amount of the membership fee(s) to be paid by the consumer during the credit term must be included in the calculation of the actual annual interest rate;

7) fees for insurance, valuation and other supporting services, if the use of such supporting services is a pre-condition for concluding a crediting contract or receiving the advertised annual interest rate, and the creditor is the beneficiary of those services, or the creditor establishes the scope of persons with whom the consumer has the right to conclude a contract on provision of supporting services;

Examples:

a. The bank, as a pre-condition for concluding the crediting contract, requires insurance of the pledged property, being the beneficiary of the insurance contract to be concluded;

b. The bank, as a pre-condition for concluding the crediting contract, requires insurance of the pledged property, as well defines the scope of persons with whom the consumer has the right to conclude an insurance contract;

c. The bank, as a pre-condition for receiving the advertised actual annual interest rate, requires insurance of the pledged property, being the beneficiary of the insurance contract to be concluded;

d. The bank, as a pre-condition for receiving the advertised actual annual interest rate, requires insurance of the pledged property, also defines the scope of persons with whom the consumer has the right to conclude an insurance contract;

e. The bank, as a pre-condition for concluding the crediting contract, requires insurance of the pledged property, being the beneficiary of the insurance contract to be concluded, as well defines the scope of persons with whom the consumer has the right to conclude an insurance contract;

f. The bank, as a pre-condition for receiving the advertised actual annual interest rate, requires insurance of the pledged property, being the beneficiary of the insurance contract to be concluded, as well defines the scope of persons with whom the consumer has the right to conclude an insurance contract;

8) All types of fees associated with a payment card when the consumer has no reasonable alternative in receiving the credit:

For example, a bank provides the credit only through a new payment card provided thereby, in which case the consumer has no reasonable alternative — an opportunity to transfer to another valid payment card belonging thereto. Moreover, the payment card shall be considered as valid, if it has been provided to the consumer before submitting the application for crediting, and transactions (deposits, credits) were carried out by the consumer with the payment card before submitting the application for crediting;

9) The commission charged for credit withdrawal, assuming that the consumer will withdraw the credit in full from the ATM of the creditor, if he or she has no reasonable alternative to use the credit amount (e.g. in person receipt from the cash register of the bank). Moreover, if mandatory replenishments are envisaged during the use of the credit, commissions for current cash withdrawals made after the mandatory replenishments shall not be included in the calculation of the actual annual interest rate;

10) other fees related to crediting, which the consumer is **obliged** to pay for crediting, except for the fees not included in the total cost of consumer's crediting prescribed by part 1 of Article 15 of the Law.

6. The size of the actual annual interest rate calculated by the formula indicated in point 4 of this Regulation must be rounded at least to one hundredth and multiplied by 100 in order to get the percentage value.

7. In case a credit repayment schedule is not defined by the crediting contract or repayment terms are not defined by the provisions of the crediting contract, the credit repayment period in the calculation of the actual annual interest rate shall be considered to be one year. In case the crediting contract defines more than one credit repayment period, the credit repayment period shall be considered to be the earlier period defined in the contract, unless otherwise provided for by the crediting contract.

CHAPTER 4

EXAMPLES FOR THE CALCULATION OF THE ACTUAL ANNUAL INTEREST RATE

7. **"Simple loans":**

7.1. Let's assume a consumer loan is provided under the following conditions:

● Amount provided: 500,000 AMD

- Nominal annual interest rate:10% - calculated on a decreasing loan balance
- Maturity: 1year (365 days)
- There are no other payments.

7.2. **Example 1.1: "Simple loan – with monthly equal payments":** the terms of the loan provided comply with clause 7.1, and the repayments are equal monthly repayments (the principal and the interest together are the same amount at each repayment), therefore, N=12.

Based on the conditions of the above example, we shall get the following schedule of loan repayments:

Repayment frequency: n	Number of days from receiving the credit to the subsequent repayment: Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount: 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 quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

i=0.105067*100=10.51%

7.3. **Example: 1.2: "Simple loan – With monthly non-equal repayment"** The terms of the loan provided comply with point 7.1, and the repayments (Kn) are not equal (the

principal amount is equal, but the interest is unevenly distributed over the months). In this case, we shall get the following loan repayment schedule:

Repayment frequency — n`	Number of days from receiving the credit to the subsequent repayment — Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount — 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 quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

i=0.105071*100=10.51%

7.4. **Example 1.3: “Simple loan — Equal quarterly repayments”:** The terms of the loan provided comply with point 7.1, and the loan repayment frequency **is quarterly**, **with equal repayments**.

In this case, we shall get the following loan repayment schedule:

Repayment frequency — n	Number of days from receiving the credit to the subsequent repayment — Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount — 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 quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

i=0.103992*100=10.40%

7.5. **Example 1.4: “Simple loan — Non-equal quarterly repayments”:** The terms of the loan provided comply with point 7.1, and the loan repayments (Kn) are non-equal, (the principal amount is equal, but the interest is unevenly distributed by months) and the repayment frequency is quarterly.

In this case, we shall get the following loan repayment schedule:

Repayment frequency — n	Number of days from receiving the credit to the subsequent repayment — Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount — 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 quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

i=0103992*100=10.40%

7.6. **Example: 1.5: “Simple loan – Lump-sum payment of the interest amount”:** The terms of the loan provided comply with point 7.1, and the interest amount is paid in full with the first payment of the principal amount for loan repayment.

In this case, we shall get the following loan repayment schedule:

Repayment frequency — n	Number of days from receiving the credit to the subsequent repayment — Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount — 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 quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

i=0.108551*100=10.86%

8. Example 2. “Loan with other lump-sum payments at the moment of receiving the loan”

8.1. Let's assume a consumer loan was provided with the following terms:

- Amount granted: 500,000 AMD
- Nominal interest rate: 10%: calculated on a decreasing loan balance
- Maturity: 1 year (365 days)

- Repayment: **equal monthly repayments** (the principal amount and the interests together are the same amount each month)
- **Other payments** made **(on the day of receiving the loan by the** consumer**)**
  - ➢ Lump-sum fee for preparation of documents — AMD 5 000
  - ➢ Lump-sum fee for loan servicing — AMD 1 000.

8.2. It follows from the conditions, that N=13, of which one payment is the payment at the time of receiving the credit and the other 12 are the payments of principal and interest.

8.3. **Other payments** at the moment of receiving the credit (K_1) it turns out:

K_1 =5000+1000=6000

8.4. Having all the necessary quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

Where:

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

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Where:

i=0.130490*100=13.05%

9. Example 3. “Loan during loan servicing with other variable payments”

9.1. Let's assume a loan was obtained to purchase a car and under the following conditions:

- Amount granted: AMD 3 000 000
- Nominal interest rate: 10%, calculated on decreasing loan balance
- Maturity: 2 years (730 days)
- Repayment: equal monthly repayments (the principal amount and the interests together are the same amount each month)
- **Other payments** made by the consumer:
  - ➢ Lump-sum car appraisal fee at the time of loan receipt: AMD **15,000**,
  - ➢ Lump-sum loan servicing fee at the time of loan receipt: AMD **3000,**
  - ➢ Lump-sum fee for preparation of documents at the time of loan receipt -**AMD 5 000,**
  - ➢ Along with the monthly repayments of the loan principal and interest, a loan service fee of **1,000** AMD (total **24,000** AMD)
- Annual insurance fee in the amount of 2.5% of the value of the vehicle, of which one payment (3,000,000 * 0.025 = AMD 75,000) is made on the day of receiving the loan, and

the other payment (the value taking into account the depreciation amount of the vehicle:(2 700 000 AMD * 0.025= AMD 67500) is made next year, on the 10th day following the n=14th repayment.

9.2. Based on the conditions specified in point 9.1, we shall have the following loan repayment schedule:

Repayment frequency — n	Number of days from receiving the credit to the subsequent repayment — Dn	Interest amounts repaid	Repayments of the principal amount	Subsequent total repayment amount — Kn	Repayment frequency — n
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 follows from the conditions that N=26, of which one payment is the payment at the moment of receiving the credit, one is the insurance premium for the second year, and the remaining 24 are the payment of the principal amount, interests and other payments made during the loan servicing, which are scheduled to be made simultaneously every month.

9.4. Other payments made at the moment of receiving the credit (K1) turn out to be:

K_1=15000+3000+5000+75000=98000

9.5. Having all the necessary quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

, where:

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

and

Where:

i=0.151899*100=15.19%

10. Example 5. “Short-term loan”

10.1. Let's assume that a consumer loan was obtained for the purchase of furniture under the following terms:

- Amount granted: AMD 800 000
- Nominal interest rate:10%, if the consumer is a member of the "Union of Furniture Makers" founded by the creditor, and 25%, if the consumer is not a member of that union
- Maturity: 9 months (273 days)
- Repayment: equal quarterly repayments (the principal amount and the interests together are the same amount each month
- Lump-sum fee by the consumer at the moment of receiving the loan:
  - Fee for preparation of documents: **AMD 3 000,**
  - Loan servicing fee: AMD **2000**
  - Lump-sum fee for membership of the "Union of Furniture Makers" at the moment of getting the loan

$$20000*\frac{9}{12}=\mathbf{15000}$$ AMD, where 9 is the loan duration.

- The borrower is a member of the "Furniture Makers Union".

10.2. It follows from the conditions that N=4, of which one payment is the payment at the moment of receiving the credit and the other 3 are the monthly payments of the principal amount and interest.

10.3. **Other payments** made at the moment of receiving the credit (K1) turn out to be:

K_1 = 3000+2000+15000=20000

10.4. Having all the necessary quantities and using the Law formula, it is possible to get the annual effective interest rate:

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

, where:

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

and

Where:

i=0.161760*100=16.18%: