Pursuant to Article 44 paragraph 2 point 3 of the Central Bank of Montenegro Law (OGM 40/10, 46/10, 06/13) and in conjunction with Article 89 of the Banking Law (OGM 17/08, 44/10) and Article 8 of the Law on Consumer Loans (OGM 35/13), the Council of the Central Bank of Montenegro, at its meeting held on 25 October 2013, passed the following

DECISION
on the uniform manner of calculation and reporting of effective interest rate on loans and deposits

Article 1
This Decision shall prescribe uniform manner of calculating and reporting the lending interest rates on loans and deposit effective interest rate on received deposits.

Article 2
The Decision shall be applied by:
1) banks and credit unions, for loans, including consumer loans and received deposits;
2) microcredit financial institutions, for loans, including consumer loans, and
3) other creditors and credit intermediaries, for lending and intermediation services pursuant to the law regulating consumer loans.

Article 3
Terms used in this Law shall have the following meanings:
1) **"creditor"** means bank, credit union, microcredit financial institution, or any person who grants grant consumer loans pursuant to the law regulating consumer loans;
2) **"depository"** means bank and credit union;
3) **"customer"** means person who is a client of a bank, credit union or microcredit financial institution within the meaning of the law regulating banking operations and the person who is a consumer within the meaning of the law regulating consumer loans;
4) **"Compound interest account"** means the interest account where the calculated interest for the first accounting period is added to the initial principal, and in the next accounting period interest is calculated on the initial principal increased by the interest amount from the first period, and in each subsequent interest period, interest is calculated on the remaining principal increased by calculated interest from the previous interest period, i.e. interest is calculated on interest (so-called anatocism).
5) **"Decursive interest calculation"** means calculation whereby interest is calculated and imputed to the principal, i.e. paid at the end of the accounting period. With this method interest is calculated at the end of the period from the initial amount, i.e. from the principal at the beginning of the basic capitalization period.
6) **"Discounting"** means resuming all future inflows and outflows to the current value based on specific loan or deposit agreement.
7) **"Cash collateral"** means loan security instrument in cash deposited with the creditor bank, in the manner defined in the loan agreement;

1

8) **"Loan repayment schedule"** means a scheduled summary of all chronologically presented cash flows and outflows arising from loan agreement with the purpose of informing customers and creditors, i.e. updating the realization of their rights and obligations.

9) **"Deposit payoff schedule"** means a scheduled summary of all chronologically presented cash flows and outflows arising from deposit agreement with the purpose of informing customers and depositories, i.e. updating the realization of their financial rights and obligations.

10) **"Maturity period"** means part of accounting period that remaining from the moment of monitoring specific loan or deposit up to the moment of its final collection or payoff determined in the agreement between customer and creditor/depositor.

Article 4

Effective lending interest rate shall report the expenses paid by a customer to the creditor when granting and during the loan repayment, while the effective lending interest rate shall report the expenses paid by a depository to the creditor realised through payoffs to the client on the basis of received deposit.

Effective interest rate shall report total loan/deposit expenses, expressed as an annual percentage of the total amount of loan/deposit.

Article 5

The uniform manner of calculating and reporting effective interest rate on loans and deposits is based on compound interest account, decursive calculation, and discounting based on calendar number of days of the month and of the year.

Effective interest rate on loans with cash collateral shall be additionally adjusted by a single equivalent of discounted cash flows and outflows based on cash collateral.

Effective interest rate shall be reported on the annual basis, with two decimals, rounding up to the second decimal.

Article 6

Information on interest rates on loans and deposits, published by creditors or depositaries in their premises, as well as in commercials and advertisements through public media, brochures and the like that inform, directly or indirectly, on interest rate or other amount forming a part of the loan or deposit price, must include effective interest rate corresponding to the nominal interest rates.

Effective interest rate shall not be less prominent than other information on loan or deposit and, when published, the term "effective interest rate" must be used, or the abbreviation "EIR" if the term is the repeated.

The information on the effective interest rate shall be disclosed to the customer in writing before accepting the offer or prior to signing the loan or deposit agreement.

Informing the customer on the effective interest rate to consumer loans shall be done using the form for informing on the consumer loan, determined by the specific secondary legislation passed by the Central Bank, pursuant to the law regulating consumer loans.

Informing the on the effective interest rate to deposits and loans that do not belong to the category of consumer loans may be done using the form from paragraph 4 above, or in other appropriate manner.

Article 7
When making a loan or deposit agreement bank, the loan repayment schedule or the deposit payoff schedule shall be compiled containing clearly defined effective interest rate, and one copy shall be delivered to the customer, and one copy will be kept in the creditor's or depository's documentation.

Article 8
Loan or deposit agreement shall contain corresponding provision that shall clearly state that the customer is informed on loan or deposit terms and effective interest rate, and that he/she has been delivered the loan repayment or the deposit payoff schedule.

Article 9
Elements for calculation of the effective interest rate, the manner of calculating and reporting effective interest rate and minimum contents of the loan repayment schedule or the deposit payoff schedule shall be closely regulated in the Methodology for Calculation and Reporting of Effective Interest Rate to Loans and Deposits, which makes an integral part of this decision.

Article 10
The Decision on the Uniform Manner of Calculation and Reporting of Effective Interest Rate on Loans and Deposits (OGRM 48/03, 55/03) shall be repealed with effect from the date of application of this decision.

Article 11
This decision shall enter into force on the eighth day following that of its publication in the Official Gazette of Montenegro, and it shall be applied from 1 February 2014.

THE COUNCIL OF THE CENTRAL BANK OF MONTENEGRO

CHAIRMAN
GOVERNOR

Decision no. 0101- 4014/49-2
Podgorica, 25 October 2013   **Milojica Dakic, m.p.**

Methodology
for calculation and reporting of effective interest rate on loans and deposits

I. Basis for uniform manner of effective interest rate calculation

Basis for uniform manner of loans and deposits effective interest rate calculation consists of compound interest account and decursive interest calculation. Uniform manner of effective interest rate calculation is based on the net present value method.

By applying the effective interest rate, discounted cash inflow equals to the discounted cash outflows referring to loans and received deposit.

Effective interest rate is the interest rate, by which application the discounted series of net cash flows is equal to zero. Effective interest rate on loans which use cash collateral as security instrument is additionally adjusted with single equivalent of the impact of discounted cash inflows and outflows based on cash collateral that is used to secure loan collection. In terms of loan relation, net cash flow on loans in specific period represents a difference between all payments of the customer and all payoffs to the customer over that period. Cash flows include any cash transfers between customer and creditor, and occasionally, third party that is directly related to loan approval, or forms a part of loan terms (e.g. payments of principle, instalment, fee for loan approval, fee for loan servicing, etc.) or qualifies loan approval (fee for processing loan request). Similarly, in deposit relation, net cash flow during a specific period of time represent the difference between any payments to deposit recipient and any payoff to depositors, over that period.

II. Preparation of repayment/payoff schedule

When establishing loan relation, creditor is handing a repayment schedule to the customer, and when establishing deposit relation, the depositor is handing a deposit payoff schedule to the customer, without additional columns for effective interest rate calculation with clearly presented effective interest rate.

Additional columns for effective interest rate calculation show: net cash flow, discounted net cash flow, discounted loan disbursements and discounted cash collateral flows. Creditor, i.e. depositor encloses the repayment/payoff schedule with additional columns for interest rate calculation to its loan, i.e. deposit documentation.

Header of the repayment/payoff schedule (for loan or deposit agreement or for customer information) must include name and address of the creditor, i.e. depositor, and contact information. Repayment/payoff schedule should also include preparation date and a note that the effective interest rate is valid as at repayment/payment schedule preparation date. Repayment/payoff schedule, handed to the customer when signing a loan, i.e. deposit agreement has to include creditor's, i.e. depositor's seal, as well as the signature of responsible person.

Repayment/payoff schedule preparation is based on assumed regular transaction flows (cash flows), which implies accuracy of all parties in execution of all obligations from the agreement. Agreement is considered valid for the period in which it was concluded. For

the purpose of this methodology, it is assumed that the contracting parties are fulfilling their obligations under the agreed terms and within the maturity period. For example, if a loan agreement prescribes higher interest rate in case when the customer doesn't regularly repay the loan, that fact should be disregarded, and repayment/payoff schedule should be developed based on the interest rate prescribed for the regular loan repayments.

For loan or deposit agreements that include clauses on variability of the interest rate as well as fees and commissions that are part of the effective interest rate calculation, the effective interest rate is calculated based on the assumption that the interest rate and other fees during the contracting period will remain fixed in relation to the initial interest rate. Repayment/payoff schedule must include nominal interest rate, with explanatory note stating whether the interest rate is fixed or variable.

Regarding trial calculations of effective interest rate on loans, and for purpose of informing the customer, it is assumed that hypothetical loan from the example is released on the first day of the month, and that the intercapitalised interest is calculated for at least one month.

If the nominal interest rate, fees and commissions, used for the calculation of the effective interest rate, change during the use of the loan or over the depositing period, creditor, i.e. depositor is due to inform customers on the change before its implementation by means of public announcements or other appropriate manner (notice board in bank premises, abstracts, etc.).

Foreign currency loans and deposits are shown in respective currency. Loans and deposits in EUR, with foreign currency clause, are shown in EUR, according to the exchange rate valid on the repayment/payoff schedule preparation date. Exchange rate of the previous conversion must be stated in the repayment/payoff schedule. If more than one benchmark exchange rate is used (e.g. buying exchange rate when granting the loan, and selling exchange rate when repaying the loan), each of the exchange rates used, should be stated in the repayment/payoff schedule, as well as the explanation of the use of specific exchange rates. Exceptionally, if the same reference exchange rate is used for release of the loan and loan repayment, and for the acceptance and payoff of deposits (e.g. average exchange rate of the CBCG), loans and deposits with foreign currency clause can be shown in foreign currency (instead of EUR), as at the day of rearmament/payoff schedule development. Foreign currency loans and deposits with fees and commissions that are determined and paid in EUR, when calculating the effective interest rate, need to be converted in foreign currency based on the mean exchange rate valid on the repayment schedule date.

III. Calculation of effective interest rate on loans by the repayment schedule

Effective interest rate on loans is calculated by using the loan repayment schedule (loan repayment schedule template is provided in the annex of this methodology) and by using the tentative method and linear interpolation, as well as calculator or appropriate computer program (e.g. Excel). Procedure is identical as the procedure for general determination of internal yield rate. Loan repayment schedule (hereinafter: loan repayment) includes the following columns:

1. *Period* – marks the serial number of the period of specific cash flow. zero period is the period of the first cash flow or the agreed date of loan release/disposal, depending what period comes first. Last period is the period of the final cash flow.

2. *Date* – marks the exact date of the cash flow, because the effective interest rate is calculated according to the number of calendar days of the month and 365/366 days of the year. For the loans withdrawn in instalments, customer needs to state planned dates of instalments withdrawals, and their amounts.

3. *Loan* – this column should include loan amount, or part of the loan (instalment) to be paid, on the date of the certain payment, or when the customer expects to withdraw individual instalment or entire loan. Repayment schedule of loans withdrawn in instalments need to state the total loan amount.

4. *Other payoffs* – this column should include other payoffs executed by the creditor and based on internal procedures, except payoff of cash collateral and interest on placed cash collateral.

5. *Annuity* – can be equal or variable. Repayment schedule must specify annuity components.

6. *Instalment* – this column is for the amount of principal repayment, paid from annuity in each period.

7. *Interest* – this column includes the amount of interest on the remaining debt, and intercapitalised interest. Repayment schedule header must specify the nominal interest rate, explaining whether the interest rate is fixed or variable. If the interest rate is variable, this fact is disregarded in calculation and presentation of effective interest rate. In this case, calculation of effective interest rate is done by applying the nominal interest rate which is valid on the calculation date.

8. *Other expenses* – this column is for all other expenses incurred by the customer, and directly related to the loan, including:

   1) for consumer loans:
      - Fees for loan request processing;
      - maintenance fee for the account which clearly notes payment transactions and the used amount of loan, expenses for using payment funds, and for payment transactions the used amount of loan and other expenses referring to payment transactions, except if opening of the account is optional and if account expenses are clearly and separately presented in the loan agreement or other agreement concluded with the consumer.
      - Fees for loan maintenance, loan servicing, and statements;
      - Insurance premium and other expenses referring to loan security instruments, if obtaining that collateral represents a precondition for approving the loan,
      - Other similar fees and commissions directly related to the loan.

   2) for other loans:
      - fee for processing the loan request,
      - fees for granting the loan (payment operations expenses),
      - fee for loan maintenance, loan servicing, and statements,

- fee for undrawn loan amount for framework and other loans,
- Other similar fees and commissions paid to the creditor by the customer.

Calculation of effective interest rate excludes:

1) for consumer loans:
- Fees for public-legal authentication of documents;
- Default interest or any other expenses which may rise from client's acting contrary to terms from the loan agreement;
- Post, telephone and telegraph expenses, and
- Other similar fees and commissions.

2) for other loans:

- Loan security instruments expenses (expenses for real estates value assessment, expenses for booking in the pledge on real estates and movable assets serving as loan security instrument, fees for collecting evidences on real estates' ownership serving as loan security instruments, expenses for guarantees etc.);
- Fees for public-legal documents' authentication;
- Fees for obtaining different certificates, confirmations, licenses and decisions of competent bodies and authorities;
- Default interest or any other expenses which may rise from client's acting contrary to terms from the loan agreement;
- Postage, wire and fax expenses, and
- Other similar fees and commissions.

In terms of consumer loans, if in the moment of publishing of services or informing the customer, pursuant to Article 6 of this Decision, the creditor is not familiar with the amount of insurance policy expenses or about other loan security instruments expenses, which represent mandatory condition when granting the consumer loan, the creditor properly informs the customer that this loan collateral represents a condition for granting the loan and that expenses referring to that collateral are not included in presented amount of the effective interest rate.

In the moment of publishing the services or informing the customer, pursuant to Article 6 of this Decision, the creditor properly informs the customer about the type of expenses referring to the loan, but are not included in the calculation of the effective interest rate, as well as about the amounts of these expenses, if the customer is familiar with them.

9. *Loan balance* – this column states loan balance in a certain period. It is equal to the loan amount decreased by paid-off principal (cumulated instalments).

10. *Cash collateral flows* – this column states any cash flows related to cash collateral – payments and payoff of cash collateral, contingent expenses related to cash collateral and contingent interest on cash collateral, positive when the cash flow is directed from the customer to depositor (payment), and negative when the cash flow is directed from the depositor to the customer (payoff or interest).

11. *Description* – states summary of cash flow during a certain period.

12. *Net cash flow* – represents the sum of instalments (column 7), interest (column 8) and other expenses (column 9) - positive cash flow, decreased by loan amount (column 4) and other payoff (column 5) - negative cash flow during a certain period. All amounts in columns 4 – 10 are reported as positive. Net cash flow can be positive or negative, positive marking net asset inflow to the creditor (payments) and negative marking net asset (payoff).

13. *Discounted net cash flow* – this column includes amounts that are obtained by discounting net cash flows from column 12 with annual interest rate of loan expense (percentage), using the following formula :

$$NNT_k \left(1 + \frac{PGS}{100}\right)^{-\frac{d}{t}}.$$

NNT_k means net cash flow in certain period, while *PGS* in discounted factor means annual rate of loan expenses: *d/t* in exponent is sum of the following components:
- share of number of days starting from zero period to December 31 of the same year, in number of days in year of zero period,
- Number of years between the year of cash flow that is discounted and year of zero period, not counting the two mentioned years,
- share of number of days beginning with date of the period of cash flow that is discounted to December 31 of the previous year, in the number of days in a year of the cash flow that is discounted.

Mathematical formula for calculation of *d/t* may be expressed as follows:

$$\frac{d}{t} = \left[\frac{yyyy(0).12.31. - dat(0)}{t(0)}\right] + \left[yyyy(k) - yyyy(0) - 1\right] + \left[\frac{dat(k) - (yyyy(k) - 1).12.31.}{t(k)}\right]$$

t(0)= 1+yyyy(0).12.31.-yyyy(0).01.01.
t(k)= 1+yyyy(k).12.31.-yyyy(k).01.01.

In this formula, *dat(0)* is date of zero period, *while dat(k)* is the date of the period in which there is the cash flow that is discounted. Excel formulas can be used for calculation (e.g. with the dates in the format given in the formula above). *D/t* represents, in fact, number of years (not necessary the whole number) between the dates of zero period and date in which is shown cash flow, which is discounted, i.e. length of that period expressed in years.

Since *PGS* represents the rate which is yet to be calculated, a process for its calculation is mentioned.

Repayment schedule ends with row *Total*, which is established after the last cash flow in the last period. In that row, in the column *Discounted net cash flow* all discounted net cash flows form individual periods are added. PGS represents an approximate solution with two decimals of the following equation:

$$\Sigma_k \left[NNT_k \left(1 + \frac{PGS}{100} \right)^{-\frac{d}{t}} \right] = 0 \, .$$

A method of attempt or method of linear interpolation may be used for its calculation, by using calculator of appropriate computer program.

Obtained annual rate of loan expenses is not shown in the repayment schedule but is used for the calculation of the effective interest rate using the following formula:

$$EKS = PGS \times \frac{UDIK}{UDIK - UDTSP}$$

The meaning of symbols *UDIK* and *UDTSP* is explained in the points 14 and 15.

14. *Discounted loan payments* – in this column there are discounted values of loan payments referred to in the column 4. When discounting, previously calculated PGS is used and it is discounted according to the zero period by using the following formula:

$$DIK_k = (IK_k) \left(1 + \frac{PGS}{100} \right)^{-\frac{d}{t}} ,$$

whereby, *DIKk* means discounted loan payment in a certain period, *IKk* means loan payment is a certain period, while other symbols have the meaning referred to as in the point 13. Sum of discounted loan payments:

$$UDIK = \sum_k DIK_k \, ,$$

which is used in calculation of the effective interest rate described in point 13, is on the cross section of the row *Total* and column *Discounted loan payments.*

15. *Discounted flows of cash collateral* – this column includes discounted values of cash collateral flows referred to in the column 10. Previously calculated *PGS* is used in discounting and it is discounted according to the zero period using the following formula:

$$DTSP_k = (TSP_k) \left(1 + \frac{PGS}{100} \right)^{-\frac{d}{t}} .$$

whereby, $DTSP_k$ stands for discounted flow of cash collateral in a certain period, *TSPk* cash collateral flow in a certain period, while other symbols have the meaning referred to as in point 13.

Sum of discounted cash collateral flow:

$$UDTSP = \sum_k DTSP_k \, ,$$

which is used in calculation of the effective interest rate described in point 13, is on the cross section of the row *Total* and column *Discounted cash collateral flows*.

Repayment schedule that is distributed to the customer should not encompass supporting columns 12 to 15 and annual interest rate of loan expenses that are used for effective interest rate calculation. Repayment schedule that is attached to the loan documentation includes these supporting columns, as well as PGS. There is no need for filling blank columns. Obtained effective interest rate shall be shown in repayment schedule with two decimals, rounding up to the second decimal and it should not be less noticed than other data.

As a rule, the effective interest rate at least equals to the agreed nominal interest rate. Exceptionally, if the effective interest rate, calculated in line with the provisions of this Decision, is lower than the agreed interest rate or cannot be calculated (e.g. due to relatively high cash collateral amount, serving as loan collateral in relation to the amount of that loan) the creditor is obliged to inform the customer and provide explanation on the reasons why the effective interest rate is lower, i.e. why it does not have economically logical explanation (e.g. when it has negative value or when it cannot be calculated).

Repayment schedule shall include currency of the reported cash amounts.

Repayment schedule is not needed for loans on current account (so called "allowed overdraft") since these loans are repaid from the inflows that arrive first on the customer's account. For the purpose of calculating and reporting effective interest rate that refers to these loans, only nominal interest rate is included in calculation. If creditor is charging different interest rates for different amounts of allowed overdrafts, it is necessary to calculate and report whole scale of imputed effective interest rates, with precise guidance of marginal amount of overdrafts up to which certain effective interest rate is applied. Creditor is also obliged to inform the customer on other possible fees, commissions and similar cash flows related to this type of loan. These rules also apply to all other framework loans such as revolving framework loan on credit cards, etc.

If the dates of the withdrawal of funds cannot be determined in advance for agreed framework credit lines, any withdrawal of funds is considered a special loan, for which repayment schedule with reported effective interest rate is developed. If certain loan is granted in several instalments, fee for signing the agreement, maintaining the account and other fixed fees or those fees that are tied to the total amount of loan, should be divided by individual instalments proportionally by their amount, and than imputed proportional portions of these fees and commissions should be included in effective interest rate calculation on actual maturity date.

There is no need to develop repayment schedule, or to report effective interest rate for acceptance loans, factoring and financial leasing, for loans on credit cards that are distributed and signed on selling places as well as for mandatory operations.

IV. Calculation of effective interest rate on deposits using repayment schedule

Effective interest rate on deposits is calculated using deposit payoff schedule (the form of the deposit payoff schedule is attached to the methodology), applying the method of attempt and linear interpolation using calculator or other appropriate computer software). The process is identical to determination of general internal rate of return. The deposit payoff schedule (hereinafter: payoff schedule) contains the following columns:

1. *Period* – means ordinal number of the period in which certain cash flow is recorded. The zero period is the period of the first cash flow. The last period is the one in which the last cash flow occurs.

2. *Date* – means the correct date of cash flow, since the effective interest rate is calculated according to the calendar number of days in month and 365/366 days in year. For deposits that are paid in/out in instalments (e.g. residential savings, pension savings, rent savings and the like) it would necessary to request from the client to state the projected dates when the payment in/out should occur in instalments, and the amount of expected payments (if these were temporary payments).

3. *Deposit amount* – means the deposit amount i.e. a portion of deposit (instalment amount) that needs to be paid in, on the date when it is certain that the payment will be made, i.e. when the client is expected to pay in the deposit. As regards the deposits paid in instalments, the payoff schedule should contain total amount of deposit and indication that these are expected payments.

4. *Payments on behalf of customer* – this column includes approvals on behalf of customer that are assigned to deposit (e.g. amount of assigned interest rate, state incentive funds, bonuses assigned during the contractual period and the like).

5. *Other payments* – this column includes other payments that the depositor (owner of the funds) executes upon depository's request, based on depository's internal regulation (e.g. account maintenance fee).

6. *Deposit amount for payoff* – this column includes amount of deposit that is paid out as at the date when it is certain that the payoff will be made (e.g. after the expiry of time deposit agreement).

7. *Interest rate amount* – this column includes interest rate amount to be paid in contractual periods.

8. *Payments on deposit* – this column includes clients' indebtedness that is suspended against the deposit (e.g. suspension of the account maintenance fee).

9. *Other payoffs* – this column includes other payoffs that the depository is paying to the depositor per each deposit (e.g. payment of the deposit premium conditioned by fulfilment of certain conditions by depositor, or other similar payoffs). If the depository pays particular deposit premium (bonus), it is obligatory to state the percentage or the flat rate of the premium in the payment schedule.

10.   *Deposit balance* – deposit amount in particular period is written in this column. It is equal to the amount of paid deposit increased by assigned interest rate, i.e. other imputes and than decreased by fees that the bank suspends from that account. For accounting effective interest rate, it is considered that total amount of deposit with assigned interest rate is paid after the expiry of the time deposit agreement.

11.   *Description* – includes summary of cash flow in particular period.

12.   *Net cash flow* – is a sum of paid deposits (column 4) and other payments (column 6) (positive cash flow), decreased by sum of the deposits for payoff (column 7), interest rate amount (column 8) and other payoffs (column 10) (negative cash flow) during a particular period. For the purpose of this Methodology, payments on the behalf of the customer (column 5) and payoffs by deposit (column 9) do not enter into the calculation of the net cash flow. All amounts in columns 4 through 11 are reported by positive sign. Net cash flow may be positive or negative sign, where positive sign marks net inflow of funds in the bank (payments) and negative sign marks net outflow of funds from the bank (payoffs). For the needs of calculation of effective interest rate, it is considered that the depositor after the expiration date of time deposit shall withdraw available deposit with assigned interest and other payments (such as premium).

13.   *Discounted net cash flow* – this column includes amounts generated by discounting net cash flows from column 12 with required effective interest rate using the following formula:

$$NNT_k \left(1 + \frac{PGS}{100}\right)^{-\frac{d}{t}}.$$

NNT_k means net cash flow in particular period, while *PGS* in discounted factor means effective interest rate; *d/t* in the exponent means the sum of the following components:

- part of number of days starting from the zero period to 31 December of the same year in number of days in year of the zero period,
- the number of years between the year that is discounted and the year of the zero period without counting the two mentioned years, and
- Part of number of days from with date of the period of cash flow that is discounted to 31 December of the previous year, in number of days of cash flow that is discounted.

Mathematical formula for calculation of *d/t* may be expressed as follows:

$$\frac{d}{t} = \left[\frac{yyyy(0).12.31. - dat(0)}{t(0)}\right] + \left[yyyy(k) - yyyy(0) - 1\right] + \left[\frac{dat(k) - (yyyy(k) - 1).12.31.}{t(k)}\right]$$

t(0)= 1+yyyy(0).12.31.-yyyy(0).01.01.
t(k)= 1+yyyy(k).12.31.-yyyy(k).01.01.

Dat(0) is the date of the zero period and *dat(k)* is the date of the period of the cash flow that is discounted. Formulas in Excel files may be used for calculation (with the dates in

the format given above). *D/t* represents number of years (not necessarily the whole) between the dates of the zero period and the date of cash flow that is discounted is given, i.e. length of that period is expressed in years.

Since EKS is effective interest rate that needs to be calculated, the text below explains the process of its calculation.

The payoff schedule ends with category *Total*, which is determined after the last cash flow in the last period. All discounted net cash flow from particular periods are summed in that row of the column *Discounted net cash flow*. Effective interest rate is approximate solution of the following equation, rounded up to the second decimal.

$$\sum_k \left[NNT_k \left(1 + \frac{EKS}{100} \right)^{-\frac{d}{t}} \right] = 0.$$

Method of attempt and linear interpolation may be used for the calculation of this equation, using calculator or appropriate computer programme (e.g. Excel). The resulting effective interest rate is reported in Repayment schedule, with two decimals and rounding up to the second decimal and it may not be less visible than other data.

Payoff schedule that is given to the client should not contain supporting columns 12 and 13 that are used for calculation of the effective interest rate. The payoff schedule that is attached to deposit documentation includes these columns. Blank columns need not be filled in.

Repayment schedule includes the currency in which the amounts are reported.

Repayment schedule is not needed for current account or gyro account (so called transaction accounts) and savings and demand deposit; it is enough to note in the deposit agreement that the effective interest rate is equal to nominal interest rate. In this case, only nominal interest rate is included for the purpose of calculating and reporting effective interest rate. If a depository is charging different nominal interest rates for different balances on these accounts, it is necessary to calculate and report the whole scale of assigned effective interest rates, with precise guidance of marginal amount on these accounts up to which individual interest rate is applied. The depository is obliged to inform the client on possible other fees, bonuses and similar cash flows regarding these accounts.

Creditor:
Address:
Phone/Fax

LOAN REPAYMENT SCHEDULE

Currency
Loan amount

Annuity
Nominal interest rate (%)

Fixed/
Variable

Annual
interest rate-
PGS (%)

Effective
interest
rate (%):

Period	Date	Loan	Other payoffs	Annuity	Instalment	Interest	Other expenses	Loan balance	Cash collateral flows	Description	Net cash flow	Discounted net cash flow	Discounted loan payments	Discounted flows of cash collateral
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
…														
…														
…														
…														
…														
Total:														

Note: Effective interest rate is valid as at the date of the repayment schedule's preparation.

Date:_____   Signature and stamp

DEPOSIT REPAYMENT SCHEDULE

Bank:
Address
Phone/Fax:

Currency:
Deposit amount: Nominal interest rate (%)   Fixed/   Premium   Effective
                                                                                                    Variable   (%)   interest
                                                                                                                                                   rate (%):

Period	Date	Deposit amount	Payments on behalf of customer	Other payments	Deposit amount for payoff	Interest rate amount	Payments on deposit	Other payoffs	Deposit balance	Description	Net cash flow	Discounted net cash flow
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
0												
1												
2												
…												
…												
…												
…												
Total:												

Note: Effective interest rate is valid as at the date of the payoff schedule's preparation.

Date:_____   Signature and stamp

15