

## HOW TO DETERMINE THE AMOTIZED COST OF BANK CREDITS ACCORDING TO THE EFFECTIVE INTEREST RATE METHOD IN THE CONTEXT OF TRANSITION TO IFRS (INTERNATIONAL FINANCIAL REPORTING STANDARDS)

Tatiana ȘEVCIUC

State Agrarian University of Moldova, 44 Mircești Street, MD-2049 Chișinău, Republic of Moldova  
Phone: + 37322432815; E-mail: sevciuctatiana@mail.ru

*Corresponding author:* sevciuctatiana@mail.ru

### *Abstract*

*It is known that licensed banks in the Republic of Moldova are in the period of fulfilling the action plan with a view to implementing the project on transition from the National Accounting Standards to the International Financial Reporting Standards (IFRS). Fair and timely decisions are only possible based on objective and successive information, which explains the need for IFRS. At the same time, a major role in popularization of IFRS is played by the specialized publications. Therefore, this article aims at highlighting genuine financial information, transparency, comparability of accounting data and will increase reliability of financial statements of licensed banks. In conclusion we report that when calculating the effective interest rate, the bank estimates cash flows considering all contractual terms of the credit, but does not take into account future credit losses. The calculation includes all commissions and points paid or received by contractual parties that are an integral part of the effective interest rate, transaction costs and all other premiums and discounts.*

*Key words:* commission, credit, depreciated cost, effective rate, interest

### INTRODUCTION

Transition to the International Financial Reporting Standards should be regarded as a particularly important reform for the country development. As a step in the context of European integration, it primarily targets financial-accounting professionals who should assist the Government to achieve this goal of strategic importance for the Republic of Moldova. In Moldova, IFRS will also be applied by public interest entities which do accounting and prepare financial reports under IFRS. These also include the licensed banks. In this context and in order to ensure implementation of the action plan for the transition to IFRS, the bank recognizes a financial asset in the statement of financial position when, and only when the bank becomes party to contractual provisions of the instrument. When a credit is initially recognized, and the bank uses the settlement date accounting for this credit, the bank assesses it at its fair value plus transaction costs on the trade date. In accordance with the

International Accounting Standard (IAS) 39 "Financial Instruments: Recognition and Measurement" [6], the bank will reflect the following financial instruments at amortized cost: credits, loans and securities held to due date. This is why, the original disbursed credit amount should be reduced by the amount of commission and other related fees, which are included in the amortized cost of the credit. Hence, commissions that are not included in the initial cost of the credit must be included in the income of the management period.

### MATERIALS AND METHODS

In The research has been conducted on the basis of generalization of problems and mismatches arising from the implementation of the action plan for Moldova's transition to IFRS. The Accounting Law no. 113 - XVI from 27 April 2007 [1], Law on the National Bank of Moldova no. 548 - XIII [2], Law on Financial Institutions no. 550 - XIII In [3], provisions of IAS 18 "Revenue" [6], the Regulation on Lending

Activity of Banks operating in RM [5], the Regulation on Classification of Assets and Engagements [4] served as methodological support for investigations. Data provided by the licensed banks JSC "Banca de Economii", CB "Victoria Bank" JSC, CB "Moldova AgroIndBank" JSC served as the basis for empirical research. Preference was given to the monographic study method with elements of analysis, observation, selection, induction and deduction.

## RESULTS AND DISCUSSIONS

In accordance with International Accounting Standard (IAS) 18 [6], commissions which are incorporated in the effective interest rate of a financial instrument are usually interpreted as adjustments to the effective interest rate. The following commissions will be included in the effective interest rate calculation and the amortized cost of the credit: commissions for credit granting, periodic commissions for credit granting from the credit balance (quarterly, yearly, etc. depending on the terms of the contract); credit management commissions, if these are determined as % of the amount owed by client; credit extension commissions; credit restructuring commissions.

Commissions collected and recorded as provided services (postponed and unamortized) and which will not enter into the calculation of the effective interest rate and the amortized cost include: commissions for credit file examination (the bank assesses this income as insignificant); pledge appraisal commissions (bank assesses this income as insignificant); account management commissions (if existing), if these equal to a fixed amount independent of the amount owed by the client; commissions for not using the credit line; credit prepayment commissions; payments related to failure of the debtor's contractual obligations; commissions for cash receiving / repayment of credit, including the use of automated teller machines (in case these conditions are required by the creditor).

If the bank determines that credit is granted at an interest rate significantly different than the market interest rate [5], the credit value to recognition will be equal to the value of future cash flows, discounted using the effective market interest rate. The difference between the fair value of the credit and the contract value is recognized as expense, income, capitalized assets, as appropriate. In accordance with International Accounting Standard (IAS) 39 "Financial Instruments: Recognition and Measurement" [6], amortized cost is calculated using the effective interest method. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to the net carrying amount of the financial asset or liability. Financial assets that are not carried at fair value though profit and loss are subject to an impairment test. If expected life cannot be determined reliably, then the contractual life is used. IAS 39 [6] permits entities to designate, at the time of acquisition or issuance, any financial asset or financial liability to be measured at fair value, with value changes recognised in profit or loss. This option is available even if the financial asset or financial liability would ordinarily, by its nature, be measured at amortised cost – but only if fair value can be reliably measured.

When calculating the effective interest rate, the bank estimates cash flows considering all contractual terms of the credit, but does not take into account future credit losses. The calculation includes all commissions and points paid or received by contractual parties that are an integral part of the effective interest rate, transaction costs and all other premiums and discounts. It is assumed that cash flows and expected life of a group of similar financial instruments can be reliably measured. However, in those rare cases when it is not possible to reliably estimate the cash flows or expected life of a credit (or group of credits), the bank uses contractual cash flows for the full contractual term of the credit (or group of credits). Applying the effective interest method, any honorary, points paid or received by the counterparties, transaction

costs and other premiums or discounts included in the calculation of the effective interest rate over the expected life of the financial instrument, are cushioned.

Effective interest rate is calculated from the first credit installment under contractual cash flows. For credit contracts with a fixed amount and repayment term, the table of credit cash flows will be worked out including:

- loan disbursement by the customer's bank;
- credit repayment by the customer;
- payment of commissions by the client. All commissions entering the credit amortized cost will be included;
- payment of interest.

For credit contracts with indefinite cash flow (lines of credit, revolving credits, overdrafts, credit cards), assumptions will be made based on condition that principal disbursement of the customer's bank will be in the amount of credit contract and principal repayment by the customer to the bank will be made in equal installments with the difference between maximum amounts of customer's debt stipulated in the credit contract.

The effective interest rate must be calculated using the numerical methods of mathematics such as the internal rate of return based on cash flow for each credit contract:

$$\sum_{i=0}^N \frac{FTn}{(1 + RED)^{\frac{Ti}{360}}} = 0,$$

where:

N - the number of cash flows until the full payment of the credit;

FTn - sum of payment *n* in the cash flow;

RED - effective interest rate;

Do - first payment of the cash flow;

Di - date of payment *i* of cash flow;

Ti = (Di-Do) – number of days from the first payment of cash flow till the date of *i* payment.

In order to calculate the effective interest rate, equal periods of 30 days are used. There are 12 periods in the year (360 days in the year, 30 days in month). The first period is considered the end of the first month after the first grant, for calculating the effective interest rate, the first period is considered 30 days.

The last period is considered the end of the credit due month (number of periods for calculating the effective interest rate may not coincide with the number of months of the credit contract action).

Effective interest rate method does not apply to credits with repayment period less than one month (overdrafts, lombardy) or in the case of bank cards - less than two months and for credits without fees for issuing credit loans. If the credit term has become more than a month (or 2 months for bank cards) after extension, the effective interest rate method does not apply.

For calculating the amortized cost of the credit based on expected future cash flows and due date of the credit, the effective interest rate computed at initial recognition (on granting of credit) is applicable.

For floating rate credits, periodic re-estimation of cash flows in order to reflect movements in market interest rates, the effective interest rate is changed.

The initially calculated effective interest rate will remain unchanged throughout the credit period, unless the contractual interest rate changes. When revising the interest rate of floating rate credits, the following will be done:

- the payment chart (cash flow) for subsequent period, which shall include: the amortized cost when the interest rate changes, future cash flows (calculated according to the new rate);
- based on this chart, the effective interest rate will be recalculated;
- the recalculated rate shall be used to calculate future interest income.

Therefore, the amortized cost calculation will be performed for each credit contract that is included in the bank's credit portfolio, excluding credit contracts paid from the allowance for credit losses, which will not be included in the balance sheet at 01.01.2013, for credit contracts less than or equal to 1 month (2 months for credit cards) and for credit contracts for which no commission is charged for issuance of credit and for which the nominal rate is received by the bank as the effective rate of interest.

Recognition of commissions as adjustment to the amortized cost of a financial instrument means that revenues and costs are not directly recognized in profit and loss account on receipt/registration. These are postponed and included in the amortized cost using the effective interest method and, therefore, amortized through the profit and loss account over the life of the instrument. They are part of the interest income.

## CONCLUSIONS

When calculating the effective interest rate, the bank estimates the cash flows considering all contractual terms of the credit, but does not take into account future credit losses.

Effective interest rate method does not apply to credits with repayment period of less than one month and for credits with no commissions for issuing credit. If the credit term has become more than one month (or 2 months for bank cards) by extension, the effective interest rate method does not apply.

Amortized cost calculation will be performed for each credit contract that is included in the bank's credit portfolio, excluding credit contracts paid from the allowance for credit losses.

For calculating the amortized cost of the credit based on expected future flows and the due date of the credit, the effective interest rate computed at initial recognition (the granting of credit) is applicable.

Applying the effective interest method, any honorary, points paid or received by the counterparties, transaction costs and other premiums or discounts included in the calculation of the effective interest rate over the expected life of the financial instrument, are cushioned.

## ACKNOWLEDGMENTS

This research was worked out with the support of the Methodology Department representatives within the licensed banks JSC "Banca de Economii", CB "Victoria Bank" JSC, CB "Moldova AgroInd Bank " JSC.

## REFERENCES

- [1] Accounting Law no. 113 – XVI from 27 April 2007. In: Official Monitor of Republic of Moldova, no. 90-93/399 from 29.06.2007 (with subsequent amendments).
- [2] Law on the National Bank of Moldova no. 548 – XIII. In: Official Monitor of Republic of Moldova, 2005, no.56-57/624 (with subsequent amendments).
- [3] Law on Financial Institutions no. 550 – XIII from 21 July 1995. In: Official Monitor of Republic of Moldova, 2011, no.78-81/199.
- [4] Regulation on the Classification of Assets and Engagements. In: Official Monitor of Republic of Moldova, no.216 - 221 from 09.12.2011, art. 2007.
- [5] Regulation on Lending Activity of Banks operating in RM. In: Official Monitor of Republic of Moldova, 1998, no.8, art.24.
- [6] International Financial Reporting Standards. In: Official Monitor of Republic of Moldova, 2008, 736 p. ISBN 978-9975-78-704-8.