

## ASSESSMENT OF BANKING ASSETS ON FINANCIAL RISK MANAGEMENT - ALBANIAN CASE

**ADRIATIK KOTORRI,**

PhD., Lecture at Faculty of Economy, Tirana University

*Email:* adriatik.kotorri@gmail.com

**MIRELA MITI**

PhD., Lecture at Faculty of Economy, Tirana University

*Email:* mirelamiti14@yahoo.com

**INGRIT KONOMI**

Msc., Lecture at Faculty of Economy, Albanian University

*Email:* ingrid.konomi@gmail.com

### **Abstract**

*Recognizing the asset value dynamics volatility of the financial institutions and the importance of its recognition both for financial reporting purposes and risk management effect, this paper aims to provide a practical model for the assets and financial institutions evaluation especially banks.*

*It also aims to present a model to measure the value of banking assets for the purposes of risk management as an opportunity to identify in an early moment the banking risks. The paper develops the bank assets assessment forms and the basis of mathematical modeling of this assessment in general. He identifies also the evaluation factors as for example time to maturity, interest rate market for the assets (YTM), the interest rate agreed, the early repayment of the loan, interest ceilings and floors, off-balance sheet treatment, etc..*

**KEY WORDS:** Value, risk, fair value, economic value, assets.

**JEL Codes:** M41 G21, G33

### **1. Introduction**

During the 80s, the derivative financial instruments took a significant development and were widely used in financial markets, mainly to avoid the interest rate and exchange rate risk. This development prompted the abandonment of the fixed interest rate system and its replacement with the interest rate determined by the money supply, the result of which was the increasing of the interest rate and exchange rate volatility. Moreover, derivatives instruments began to be widely used by credit institutions as an additional source of funds alongside the traditional sources that use these institutions.

The wide using of these instruments by large and middle sized companies coupled with the increasing importance of capital markets as a source of investment and financing, led to significant changes based on traditional practices for drafting financial statements and risk measurement. Recognizing the asset value dynamics volatility of the financial institutions and the importance of its recognition both for financial reporting purposes and risk management effect, this paper aims to provide a practical model for the assets and financial institutions evaluation especially banks. This paper aims to present a model to measure the value of the asset for the risk management purposes as an opportunity to identify in an early moment the banking risks.

### **Assessment Types**

Many of the structures within a company, such as accounting, risk management and planning, have the necessity of the evaluation of some or all assets and liabilities items. Determining the value of an asset or liability is a problem as old as reporting and auditing. There are two basic forms to assess active and passive.

The first is the **depreciated cost** which is calculated as the difference between the historical cost and the accumulated depreciation in years. For assets such as precious metals or ground, no depreciation is calculated, since these kinds of assets preserve the value over time, which makes the amortized cost for these assets to be the same as their historical cost. And the second is the **market value** which is the price which would be sold on the market asset.

The amortized cost power lies in the fact that it is calculated with a simple mathematical formula (historical cost minus depreciation) by not leaving spaces for subjectivity. National and international accounting standards set out detailed rules for the calculating depreciated cost method by minimizing the maximum ambiguous spaces. Besides the amortized cost power lies also to the breadth of its use. Almost any asset can be recorded at amortized cost. But in addition to its powers the amortized cost has its flaws. So for some financial innovations such as derivatives instruments, the definition of amortized cost would not make sense and it would be even

easily manipulated. Another weakness is that the following mathematical calculation may not have much to do with economic reality of the company.

On the other hand, the value of the market has its flaws. A problem is the fact that the market value is calculated based on the price realized in recent transactions. The problem is that there is no guarantee that the price will be the same in the future transactions. The market value works better for the asset, which is traded in a liquid market. For assets traded in less liquid markets, grows the subjectivity in determining the market value because it is necessary to increase its allocation assumptions. Furthermore the subjectivity increases for actives which do not have an active market. Thus, for certain types of real estate, intellectual property, artwork, etc., the market value is a meaningless concept. The only way to find the market value for these assets is to sell them.

## 2. Economic value

The economic value is the value which carries information on the real wealth of an asset which takes account of the revenues flows and risk elements associated with a particular asset. Unlike the fair value used for financial reporting, the economic value is a function of bank management, shareholders and other parties interested in the property of the bank. An economic value is a good measure of the bank's ability to repay its obligations.

For any type of asset, the estimated economic value is realized in three phases:

- a) Modeling of future cash flows generated by the asset.
- b) Determination of the most appropriate model of cash discount.
- c) discount rate modeling which carries information about the level of asset risk.

### Discount Model Fundamentals

All the bank's asset valuation models are based on the concept of discounting future cash flows at the rate of interest modeled. Characteristics of a given model are conditioned by particular financial instruments. The economic value of some instruments is very close to the accounting value.

Generally the factors that affect the economic value of a financial asset are:

1. Time to maturity
2. Market interest rate for the assets (YTM)
3. Interest rate that is agreed
4. Early repayment of the loan
5. Interest caps and floors
6. Off-balance sheet treatment

Economic value changes arising from changing interest rates are associated with these factors. The extent to which these factors affect the economic value depends on the characteristics of financial instruments.

The basic model used for the assessment of any banking asset is:

$$VE = \sum_{t=1}^n \frac{FP_t}{(1+k)^t}$$

where:

VE – Economic value

FP<sub>t</sub> – Cash Flow on t year

n – periods

k – discount

The economic value for the shares of a bank is the difference between the asset's economic value and the economic value of its liabilities.

$$VE_{aks} = VE_a - VE_p$$

where:

- VE<sub>aks</sub> - Stock economic value
- VE<sub>a</sub> - Assetseconomic value
- VE<sub>p</sub> - Liabilitie s economic value

### 3. Regulatory framework for assessment of active and public reports

#### Financial reporting infrastructure

Establish financial reporting infrastructure has experienced a few moments of time.

- With the adoption of the law "On Accounting" in 1993 which was set up under General Accounting Plan for all reporting entities in Albania.
- The adoption in 1998 of the Law "On Banks in the Republic of Albania" which refer Banking Accounting Manual financial reporting methodology for banks.
- Adoption of the law "On Accounting and Financial Statements" in 2004. This paved the way for the creation as an independent institution of the National Accounting Council, which will take care of the preparation of reporting standards.
- Approval in December 2006 the Law "On Banks in the Republic of Albania", which refers to the Law on Accounting and methodologies issued by the Bank as financial reporting standards.

Infrastructure on which to rely companies in general and banks in particular, financial reporting, includes law, its institutions charged by law enforcement and accounting standards prepared by these institutions.

**a) Law.** *On April 29, 2004 was approved Law no. 9228 "Accounting and financial statements."* With the entry into force on 1 January 2006 the law replaced the previous law "On Accounting", 1993. The adoption of the new law was a necessity based on the evolution of the problems of reporting the values of assets and liabilities come from innovations that brought IFRS especially for financial instruments. Also one need solved by the new law has been the adoption of national accounting standards with international financial reporting standards. Under the new standards issued by the International Accounting Standards Board (FASB) and translated into English under the responsibility of the National Accounting Council, with no changes from the original text in English, published by the Minister of Finance and necessarily apply.

Also this law was necessary to establish an appropriate infrastructure in a new field in which the Albanian economy operates. Differences in economic relations were often significant changes compared to the reality of the previous law (1993).

**b) National Accounting Council (NAC)** was established pursuant to Law "On Accounting and Financial Statements." The task of this entity is translation of International Financial Reporting Standards that will help banks and financial institutions, as well as the preparation of National Accounting Standards (NAS). By decision of the regulatory body on 17 May 2006 was proclaimed 14 national accounting standards which were adopted on 15 June 2006 by the Minister of Finance, after which date these standards begin implementation path. In this decision was set 1 January 2008 as the date of their implementation, the start of work on vocational training by their users and publication of these standards. Order excludes banks and financial institutions that will apply IFRS in full.

**c) National Accounting Standards (NAS)** are a set of 14 standards developed by the CCC to entities other than some larger units where entering and banks. These standards represent emerging because of compliance with international financial reporting standards and the introduction of the value of fair value as a method for evaluating a portion of the asset.

**d) International Financial Reporting Standards (IFRS).** The new law requires CCC to translate these standards and to make available to certain categories of institutions that fall and banks. These translated standards have served as a basis for the construction of banks' financial statements since 1 January 2008.

**e) Banking Accounting Manual.** According to the Law "On Banks in the Republic of Albania", 1998, commercial banks should be based on Bank Accounting Manual for the preparation of their financial statements. This manual has been prepared by the Bank in 1998 and consists of four main parts:

- Plan accounts; generally accepted accounting principles; general principles of accounting and accounting documentation;

- Accounting schemes which are described the main principles relating to the bank and a number of examples of the most common banking actions;
- Format of financial statements
- Format of reports to be submitted to the Bank of Albania for supervisory purposes.

## 4. Evaluation practices in second level banks in albania

Recognizing the difficulty of getting information from within the bank, as well as considering the fact that regardless of the level of transparency of some commercial banks in Albania, not all the information can be provided since a part of them are considered confidential and executives indicated reserved in giving them even for research purposes, we have managed to collect enough data to judge on assessment practices that the commercial banks apply.

### Practices Summary

According to the assessment practices observed in commercial banks in Albania, the assets are estimated every month in order to measure the state property of the bank. This measurement is performed in order to find value for financial reporting effects. Regarding getting economic value for risk management purpose there has not been noticed any practical periodic measurements specifically for this purpose. The proximity of the fair value with the economic value for a certain part of the asset, makes bank managers limit their calculation of fair value for that asset category, mainly financial assets.

Currently banks in Albania, as well as most of the banks in countries with a market economy, for a fraction of the asset use the present value of future cash flows to find its value. This method provides a very useful economic value for banking risk management needs but its success depends on the manner of its implementation, and the purpose for which the assessment is carried out. As we will discuss in the following, the application of this approach by the Albanian's banks is subject to its enforcement options and the need to make a choice at a given moment. That's why the model should not be fully applied by distorted the economic value of bank asset and especially commercial loans. The purpose of evaluation is not finding economic value to run the risk of the bank. The assessment is carried out for reporting purposes or to find a value for the sale of the asset in the market (exc: evaluation of treasury bills in the secondary market organized among commercial banks in Albania)

### Asset Assessment Practices at BKT.

Currently there is no economic value to total assets of the bank and there is no special unit which periodically assesses all assets for the purposes of risk management. But for the purpose of reporting under the international standards and to effect loan risk management, asset valuation realized or support contracts (collateral).

Bank prepares information on assets for the purpose of obligatory reporting to the Bank of Albania and the tax authorities and prepares data for internal management purposes. Information to prepare for mandatory reporting presented in conformity with national standards which are currently comply with international financial reporting standards. For reporting to internal management (board of directors) the bank has time to prepare financial statements under IFRS due to foreign shareholders demand since it has provided a form easily comparable information.

Regarding the economic evaluation, as noted above, there is no total economic value to the bank. Special assessments, such as the assessment of collateral are delivered and serve loan portfolio risk management.

## 5. Conclusions and recommendations

Initially it is necessary to definitively distinguish two basic forms of evaluation of assets which have many common points in finding value. Thus, the economic value is the value of internal assets and represents the real property asset carries. While fair value represents the value of the asset in a real or hypothetical trade. In this sense, skewed economic value of "value" and the fair value skewed by price. If at some point the fair value (price) is bigger than the economic value (Face value), then the asset is appreciated in the market and of course the price is more likely to decline. In contrast, whether the fair value is less than the price of asset's economic, Face value is more likely to grow.

It is normal that these Face value are different, but with small differences with each other according to market liquidity. Of course, as more liquid is this market more price Face value approaching and reverse.

- It is to be underlined that both the fair value and economic Face value carry subjectivity. Determination of fair value based on a hypothetical market valuation leave in the judgment of managers. Likewise, setting patterns carry economic value subjectivity as long as based on modeling flows and the interest rate. Both those ways of estimation can be exploited by the managers to give a false image about the

company before shareholders, creditors, tax authorities, etc.. certainly, despite this, both forms offer a good way to assess the bank's asset. So the fair value is an alternative of amortized cost and is closer potential market value of the asset. On the other hand offers a more realistic view of economic Face value of assets of the bank since it is based on internal property asset elements.

- Economic evaluation of the asset is a practice that does not apply to any bank banking system. Only an evaluated asset and the purpose of evaluation is not finding economic value to run the risk of the bank. The new accounting law requires banks to implement international financial reporting standards, which enforce the fair value for a part of the asset. This focus is affected by the similarities between the economic value and the fair value for a part of the asset.
- Almost three surveyed banks apply the same risk management practices. Specifically about the loans those perform direct ratings only when there is information that the borrower can not fulfill its obligations. In this case, banks evaluate and provide for loans losses. or the rest of the loan portfolio is not carried out out any assessment, in addition to the periodic evaluation of the collateral of the borrower and exchange rate.
- Commercial banks in Albania operate in the market for a short period of time, only after 2000 have invested a good part of their portfolio in government instruments. In this portfolio, the majority have taken and continue to have treasury bonds. The short term of these bonds on one side and the stability of the financial system, especially interest rate fluctuations within a range moderate, has caused their price to be almost as economic Face value of these instruments. the secondary market of these instruments is organized in such a way that the price more than the relationship of supply and demand is determined by the calculation based on the interest rate of these instruments in auctions. Of course, interest rate changes in other auctions has caused the change in the price of these instruments.
- Reference by the Bank of Albania to the rules and standards of risk management deriving from Basel I agreement, while other countries in the region are currently being based on the rules and standards that arise from the Basel II market exposes banks, Albanian banking remain behind especially relating to transparency in providing information to the public. In this direction Basel II Agreement is the most advanced and requires increased transparency about the banks risk management methods.

## 6. References

- [1] **Houpt, James V. dhe Embersit, James A.** “A Method for Evaluating Interest Rate Risk in U.S. Commercial Banks.” Federal Reserve Bulletin, August 1991.
- [2] **Wright, David M. and Houpt, James V.** “An Analysis of Commercial Bank Exposure to Interest Rate Risk.” Federal Reserve Bulletin, February 1996, 82(2).
- [3] <http://www.minfin.gov.al>, Resolution No 4292, dated 15.06.2006 "On the declaration of national accounting standards and in implementation of their mandatory"
- [4] <http://www.legislacionishqiptar.gov.al>, Law no.9228, dated 29.4.2004 "On Accounting and Financial Statements,"
- [5] **O. Dhuci, F. Kalem**, "Categorization of asset-based accounting, evaluation and reporting"
- [6] **IMF, World Bank**, June 16, 2006 "Report on the Observance of Standards and Codes (ROSC)"
- [7] **Aboody, D., M. E. Barth, and R. Kasznik**, 1999. “Revaluations of Fixed Assets and Future Firm Performance.” Journal of Accounting and Economics 26, 149–178.
- [8] **Barth, M. E.**, 2004. “Fair Values and Financial Statement Volatility”, in The Market Discipline Across Countries and Industries, Edited by Claudio Borio, William Curt Hunter, George G. Kaufman, and Kostas Tsatsaronis. Cambridge, MA: MIT Press.
- [9] **Allen (F.) and Carletti (E.)** (2008) “Mark-to-market accounting and liquidity pricing”, Journal of Accounting and Economics, 45 (2-3), 358-378
- [10] **Mackintosh (I.)** (2008) “Fair value difficult to define in a changing market”, Financial Times, May 22
- [11] **Barth, M. E., W. H. Beaver, and W. R. Landsman**. 1996. “Value-Relevance of Banks’ Fair Value Disclosures under SFAS 107.” The Accounting Review 71, 513-537.
- [12] **Barth, M.E., W.H. Beaver, and W.R. Landsman**. 2001. “The Relevance of the Value Relevance Literature for Accounting Standard Setting: Another View.” Journal of Accounting and Economics 31, 77-104.
- [13] **Barth, M. E., and G. Clinch**, 1996. “International Differences in Accounting Standards: Evidence from U.K., Australian, and Canadian Firms.” Contemporary Accounting Research (Spring), 135-170.
- [14] **Raiffeisen Albania, Alpha Bank Albania**, The annual report 2008, 2009, 2010 NCB,