THE BANK VALUE ESTIMATION PROBLEM

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Abstract

This article reports to the main issues in evaluating bank costs and identifying factors have influence on. The necessity of bank evaluating may occur at various times, such during its merger or purchase, but also during reorganization or insolence sanitation of a financial institution. In such a case, the correct assessment of the bank value could lead to positive synergy effects; assessment errors might have disastrous social effects through its depositors ‘debt undervaluing.

The article contains analysis of the main models of bank costs, correlated with the needs of this evaluation, and also their reporting during the evaluation of Moldova’s bank costs in the process of selling its shares.

Keywords: evaluation, commercial bank, cost sheet, methods and approaches of valuation.

JEL Classification: G15, G21

Introduction

Global business and finance management is increasingly geared towards an economic category, such as the value of an economic entity (business). Today it is difficult to imagine our business functioning without a full and regular assessment. Valuable thinking and application of modern valuation methods become widespread, as a clear understanding of the value and capabilities of its assessment provides guidance for informed decision making in business and is a prerequisite for success in a modern competitive environment.

Description of the Problem

The current state of the banking system of the Republic of Moldova is characterized by a low capitalization in comparison with the developed countries' banking systems. This issue is particularly important in the context of Moldova's aspirations to join the European Union, which involves fierce competition between Moldovan banks and non-resident credit institutions.

The cost of a commercial bank is now the most important indicator, which allows a more accurate measurement of the effectiveness and efficiency of its operations. The passage of the domestic banking system to the international financial reporting standards, the adoption by the National Bank of Moldova of a set of normative acts regulating the activity of the banks, emphasized the necessity of imposing stricter requirements on the method and procedure of banks' assessment. The crisis and the frequent economic shocks on the financial markets determine the search for different fundamental approaches to assessing the value of banks that are appropriate to the current situation.
However, the methodology and practice of assessing business costs, which are quite active in the Republic of Moldova in recent years, at the moment do not take into account the specificities of banks' activity and require revision in relation to this area of activity.

Methodology and Data Sources

The theoretical and methodological problems of estimating the value of the bank were reflected in the works of such foreign authors as M. Adams, M. Rudolf, N. Antill, Lee, J. Begley, A. Damodaran, T. Copeland, A. Kummel, K. Mercer, S. Pratt, etc. In the works of these authors, the principles and peculiarities of assessing the value of banks are described in sufficient detail and depth. Nonetheless, general approaches are generally presented in foreign literature that must be interpreted specifically to determine the value of banks.

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Exceptions are the work of some German and Anglo-American researchers, which contain detailed methodological approaches to assess the market value of Western commercial banks. Generally, they can be used to assess internal credit institutions, but subject to appropriate changes reflecting the specificities of the Moldovan banking sector.

The purpose of this article, taking into account the specificity of business value assessment in the banking sector, is to present the main steps of a commercial bank evaluation process. The evaluation process is a succession of actions that ensure data collection and analysis, cost calculation and formulation of evaluation results in the report. Assessing the market value of a modern commercial bank is a complex, multi-stage process that ultimately has to solve the main task the assessor is facing - to determine the fair value of the bank at a certain time.

The main function of the financial markets is the efficient and intertemporal allocation of capital, as financial markets tend to imperfections and show deviations from performing this function.

Generally, financial intermediaries, especially banks, owe these inefficiencies to the distribution of capital from those with surplus to those in need, namely reducing transaction costs and, at the same time, effectively selecting those with capital needs in line with their risks, thus solving problems of informational asymmetry.

When defining a bank's business as accepting deposits (short-term) and issuing loans (in the longer term), this is consistent with the definitions in the literature. As such, according to the researchers RH Schmidt, A. Hackethal and M. Tyrell, the bank is one of the oldest financial intermediation institutions and continues to play an important role in the economy for capital allocation - despite discussions about the disintermediation of the sector financial. [1] However, technological advances have had a profound effect on the banking sector and have generated global consolidation of the sector. For example, in Germany, consolidation is also in full swing, but it lags behind. Germany's banking market, according to A. Hackethal, is still very fragmented, often attributed to the three-pillar institutional separation. [2]. However, the strict delimitation of this system in three pillars is under discussion, possibly opening the gates for further consolidation on the largest European banking market.

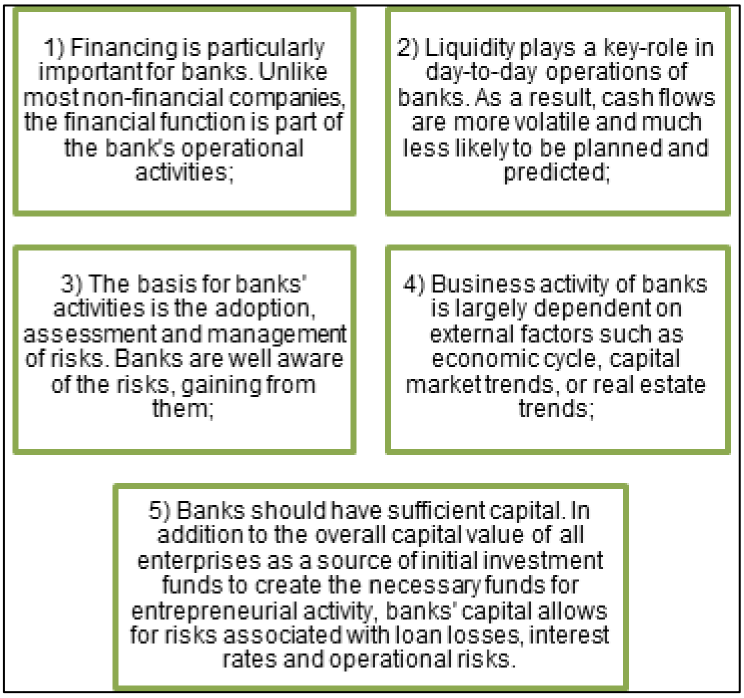
In view of these considerations, the value of banks is clearly a matter of interest, whether it is equity-centered management or in the course of a merger or acquisition.

Although corporate valuation is one of the central issues of corporate finance and has attracted broad coverage in the literature, we argue that a bank's business has peculiarities that deserve separate treatment in addressing the cost of assessing it. Thus, economist A. Damodaran (2002) states that „The basic principles of valuation apply just as much for financial service firms as they do for other firms. There are, however, a few aspects relating to financial service firms that can affect how they are valued” [3].

When analyzing the characteristics of financial institutions, Sviridenko Yu.N. [4] identified five main factors that could significantly influence the choice and construction of the business value model for commercial banks as shown in figure 1.

The characteristics of banking activity that motivate a distinct approach to evaluation can be described in four categories. First, due to its central role in the development of the economy, the banking sector is typically a highly regulated industry covering a wide range of provisions, such as market entry, deposit insurance, credit risk requirements, liquidity regulation [5]. Secondly, banks perform operations on both sides of the balance sheet, actively seeking to achieve profit not only from loans, but also from attracting capital, a long-standing duality that has not been fully understood by economists until the end of the nineteenth century: it is a trader whose business consists in buying money and debt by creating other debts" [6].

Figure 1 - Influencing factors in choosing and building valuation models for commercial banks



Source: adapted by author after MacLeod, H. D.

From a financial point of view, this involves relatively few fixed assets, resulting in a low operating leverage and a relatively high financial effect; compared to wage earnings volatility [7, p. 51–60]. Thirdly, and as a consequence of the previous point, banks are exposed to credit risk, but unlike other economic entities, they are actively seeking this type of risk as part of their business model. Last but not least, the profit and the value of the bank strongly depend on the interest rate risk on the bank's operations.

Combating each of these four points is unequal complexity. The solution to the first problem is simple, as the regulatory framework is usually known and identical for all banks. Regulations need to be considered, but they impose deterministic structural restrictions on an evaluation model. Similarly, the second feature does not raise much trouble. Instead of applying the method of measuring cash flows to all company applicants and reducing them to the weighted average cost of capital, the bank must rely solely on the equity method, treating interest charges as a cost, namely a running cost. Appropriate credit risk measurement of a bank's assets is a more difficult issue. However, its effect on the value of the bank is obvious - a downside risk proportionate to the credit risk of the loan portfolio, leading to the application of credit portfolio management models to take account of its effect on the value of the bank [8, p. 59–117].

Summarizing the opinions of well-known assessors such as R.H. Schmidt, A. Hackethal and M. Tyrell, M. Crouhy, D. Galai, etc., we have identified the characteristics of the bank's assessment compared to non-financial companies and issues evaluation results from these characteristics, presented in table 1.

Many Western economists, T. Copeland, T. Koller, J. Murrin [9], J. f. Sinky [10], etc., considers that the assessment of the bank may be conditionally divided into an external assessment (external evaluation) and an assessment by insiders (internal evaluation). An insider in this case should be understood as a legal or physical trustee of the bank, through which confidential information can be obtained. The main difference between internal and external evaluation is that when assessing the position of an insider, the evaluator has much more information, including confidential information, and therefore such assessment is more competent and more accurate in the outcome final.

Table 1

Problematic issues regarding the value of the commercial bank

Features	Characteristics
Strict regulation and supervision of the activities carried out by government bodies, including the NBM	Supervisory authorities impose certain capital adequacy requirements, taking into account the risk of a particular financial institution, the liquidity of the balance sheet, the solvency. In some cases, regulatory restrictions allow for excess revenues and higher costs. In other cases, the same regulators, by forbidding organizations to enter a business, can limit the excess revenue they are likely to obtain.
Excessive value of intangible assets	The existence of intangible assets that are not reflected in the balance sheet but indirectly can generate revenue. Guarantees, licenses and participation in the Deposit Guarantee Scheme are independent assets having their market value and should therefore be taken into account when assessing the value of a credit institution. when buying a bank as a business, maintaining staff, management, customers, by winning their loyalty are key tasks for new owners.
The low level of equity and the high share of borrowed funds	If for a productive enterprise this quota can range from 25 to 70%, then banks have a share of own funds in assets at the level of 10-15%, and the world's largest banks are working on capital, which is less than 10 % of total assets. Thus, the resource base or market positions have almost the smallest impact on the value of the bank compared to its capital. However, the impact of real capital on the assessment is quite high.
The low degree of operational profit in the bank's capital	From the owner's point of view, the bank's profit - not just current revenues and expenses, but also the difference between the purchase price of the bank and the selling price, which can significantly and substantially higher than the current operating profit over the investment. focuses on maximizing value rather than the result of current financial conditions in emerging markets more than is justified and leads to the impossibility of accurately assessing the bank on the basis of its accounting value. Often the value of the bank can not be determined by the cash flow analysis, which is distorted in the presence of tax optimization, accounting methods and technical adjustment of the balance
Particularities of accounting	The complexity of the valuation is that all credit institution operations are reflected only on paper. Unlike industrial enterprises, if the availability of tangible property can be checked by inventory, almost any credit institution's transaction is just an accounting record
Increased degree of risk concentration in the bank's balance sheet and significant impact of financial leverage	Banks' risks related to their operations are superimposed on the risks of client operations that attract bank credit as a source of funding
Difficulties in executing and executing a number of transactions	For example, transactions in securities, derivative financial instruments and many other transactions

Results Obtained

The assessment of a bank begins with an understanding of its business model, reflecting its operational activities, revenue sources and cost structure. A bank is "an institution whose current operations consist of granting loans and receiving deposits from individuals," says scientist X. Freixas and C.J. Rochet [11]". As such, the bank wishes to obtain profit on both sides of the balance sheet, which is called bank duality researchers. For the time being, we will be abstaining from taxes, minimum reserves and other sources of income, in addition, we will also neglect the implicit risk of bank customers for the beginning. Then, the bank's profit, π, can be declared in the simplest form as the difference between the return on assets and the cost of the liabilities, excluding general and administrative costs, C [11].

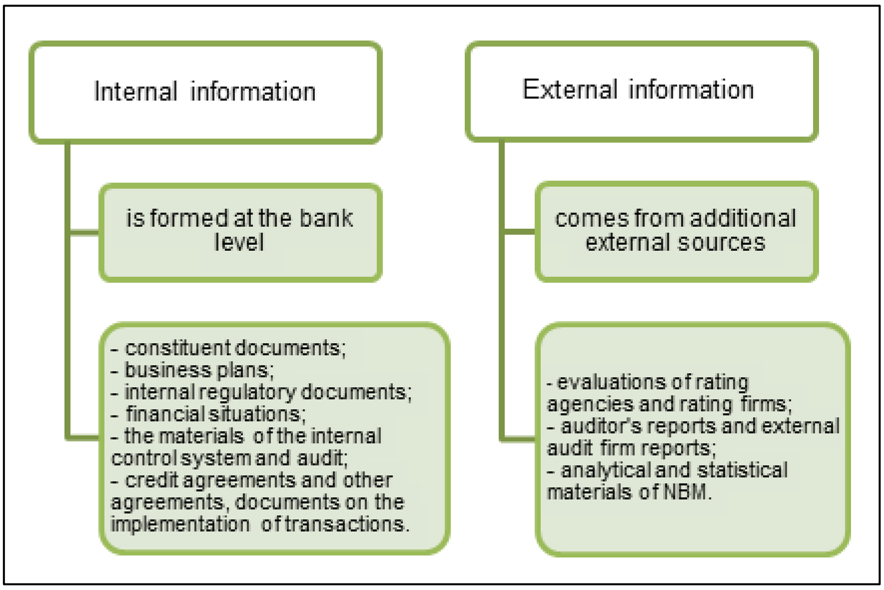
$\pi = rA \times A - rL \times L - C = NII - C$ (1)

Expression $rA \times A - rL \times L$ represents the net interest income of the bank and the equation is thus transformed:

Profit = Net interest income - General and administrative costs (2)

In the opinion of russian scientist K. Reshotkin [12], it is advisable to mention another version of the bank's estimate of value - a mixed one. Such an assessment cannot be entirely attributed either to external or internal estimates. The joint assessment, on the one hand, is carried out by an external evaluation company, which has some methodological bases and experience in the evaluations it carries out, and on the other - it is based on both external public data and certain confidential information of the credit institution. In this case all information available to the evaluator can be divided into two large blocks: internal and external (figure 2).

Figure 2 - The information base for the assessment of a commercial bank



Source: adapted by the author after Reshotkin K.A.

Consistent with the viewpoint of economist K. Reshotkin, we believe that making this type of assessment is particularly important for our country. The client of the joint assessment may be either the credit organization itself in the senior management or its owner in the person of the shareholders and other holders of capital. A mixed assessment can be done to improve the quality of the current and long-term management of the bank's assets and capital; determining the market value of equity for shareholders, and attracting additional funding.

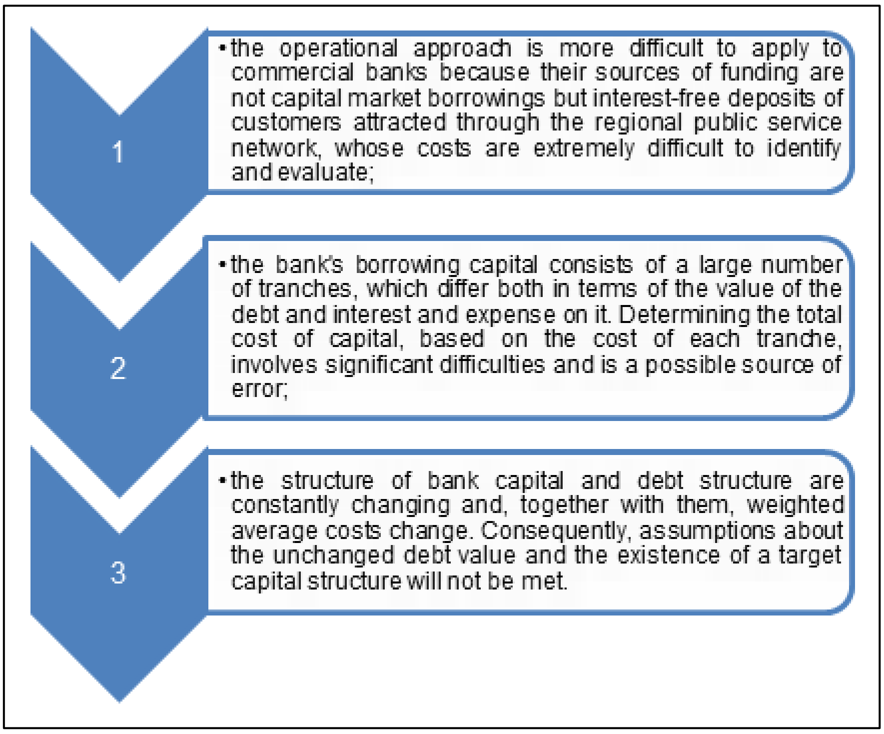
In this context, we can identify the following main issues (difficulties) that have arisen in the process of assessing the value of a commercial bank:

- strict regulatory requirements for the assessment, on the one hand, and the lack of essential elements of the bank's assessment process, on the other;

- the existence of specific characteristics for the commercial bank's assessment of the fact that the modern credit institution is a rather complicated object to be assessed by virtue of the fact that most information is confidential, the strict regulation of activities by regulatory bodies, and the concentration of risk on the balance sheet.

Regarding the particularities of commercial banks, especially with a special financing function, the practical application of models based on the operational approach is difficult. The main issues are described in figure 3.

Figure 3 - Deficiencies in assessing the value of a commercial bank



Source: adapted by the author after Reshotkin K.A.

Under these circumstances, the most acceptable valuation models are the shareholder's updated cash flow model and the residual profit model. Due to the specificity of commercial banks, the construction of these models has several features in terms of cash flow calculation, its forecasting and terminal value calculation. When calculating the updated cash flow for a shareholder and its forecasts, it is necessary to take into account that the standard scheme applied in the valuation of productive enterprises is not applicable to commercial banks. The main difficulties with its use for banks are reduced to the issue of establishing net capital costs (capital expenditures, CapEx) and net working capital (NWC).

For commercial banks, it is more appropriate for the free cash flow for the owner to be calculated as the difference between the adjusted net profit for non-monetary components and the change in the value of assets as well as the debt obligations. When calculating the terminal value for commercial banks, the baseline use of last year's cash flows in the forecast for next year is not fair. Banks' cash flows are volatile, so a certain year cannot reflect their sustainable value. This also applies to residual profits. The problem of choosing an acceptable model for bank management can be reduced to the issue of choosing a model for operational and strategic management. For strategic management, the residual profit model is the most applicable when:

- expected cash flows have a negative value over the entire forecasting period.

- accounting data reflects distorted information on financial performance.

The use of a free cash flow model is preferred when:

- expected cash flows over the forecast period are positive;

- there is certainty in predicting the terminal value;

- the need to use models is conditioned by the need to justify investment decisions.

For operational management purposes, residual profit models should be used as they are better aligned with the internal planning and forecasting process used by banks.

Conclusions

An analysis of the existing methodological basis for assessing the value of the bank allows us to conclude that neither foreign or local economists have yet succeeded in forming a full methodology for assessing the value of a commercial bank. This is due to the specific nature of the banking sector and the dynamic nature of its development. Foreign concepts, mainly reflected in German and British scientists in the UK and the US, are attempts to assess the value of banks using separate approaches and models. Passing banks to International Financial Reporting Standards has forced banks to assess most assets and liabilities in line with the fair value approach. Applying the concept of "fair value" and the reliability of its assessment are quite problematic today, as this form of value does not appear in any of the regulatory documents. This has a significant impact on the conditions and specificities of the banks' assessment and requires special attention to the calculation of the value of individual assets and liabilities of a commercial bank.

Future Directions to Be Approached

In the context of these approaches, it is necessary to identify the advantages and disadvantages of implementing the existing methods of assessing the value of the bank in order to identify the best method that will correlate both the legislative aspect (alignment with the requirements of BASEL III) and the practical aspect, the opportunity to use the best method. Of course, the achievement of these goals is also generated by the preparation of the banking sector, especially of the commercial banks, for just and timely evaluation.

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