Formation of the System of Internal Factors of Investment Attractiveness of the Bank as an Object of M&A

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Abstract – In the article investment attractiveness of the Bank as a selection of objective-bank criterion in mergers or acquisitions is considered. The groups of internal environment factors of formation of investment attractiveness are defined and consequence of each of the groups is grounded. It is suggested to supplement internal factors indicators with the geographic coverage of the banking services market.

Key words – investment, investment attractiveness of the bank, mergers and acquisitions (M&A), internal environment.

I. Introduction

The number of mergers and acquisitions is growing worldwide, but it often happens that they do not give the desired effect and create additional value for the initiators of transactions requiring lengthy and costly legal and financial negotiations. In our opinion, efficiency of integration processes is determined by such factors as the degree of validity of a merger or acquisition object choice, identification of opportunities for achieving synergistic effect from the merger, determining the appropriate transaction price and the quality of the integration process. Each of them at some point in the integration lifecycle plays a key role in ensuring the M&A performance. The choice of the agreement object is the first stage of M&A process and a mistake can negate all subsequent actions. We believe that the choice of the Bank-target M&A should be based on an analysis of its investment attractiveness, i.e. the degree of conformity to the purposes of a particular investor.

The unresolved part of the problem is the analysis of investment attractiveness of the Bank in terms of its usage in selection of an M&A object. It is this specificity causes a set of factors that affect it, because their availability and importance may vary depending on the purposes of a particular investor (Bank-client). That is why the aim of this study is to determine the internal environment of formation of investment attractiveness of the Bank in mergers or acquisitions and the substantiation of its factors.

II. Methods

Under the investment attractiveness of the Bank we will understand the «economic category, the content of which depends mainly on the financial status of a particular credit institution, as well as on a variety of internal and external factors» [1]. Narrowing the concept, one can describe an investment attractiveness of the Bank as the level of satisfaction of demands and interests of the investor to a particular Bank, which can be determined or estimated by the relevant indicators, including integrated assessment.

The attractiveness of the Bank to M&A is determined by a complex of various factors, the availability and the importance of which can vary depending on the objectives of the Bank-buyer. Factors of investment appeal are considered in the context of two groups: internal and external.

The majority of scientists in assessing the investment attractiveness of the Bank are focused on the characteristics of the internal environment of its formation. So, for such an investor as the Bank in M&A transactions, the main priority in consideration of the attractiveness of the Bank-goal is its financial status and effectiveness. As in mergers and acquisitions, the Bank acts as strategic investor, it is also interested in the possibility to expand presence in the market.

Formation of a system of indicators for evaluation of investment attractiveness of the Bank in mergers or acquisitions should be considered taking into account the following regulations:

−since the banking system of Ukraine is characterized by heterogeneity of banks size, the system of indicators should be developed on the basis of relative indicators, and the problem of dimension will be solved by means of this;

−for evaluating investment attractiveness as dataware it is considered to be appropriate to use the Bank reporting that contains publicly available in printed or electronic media, because at the stage of the object of the agreement selection the investor (buyer) has no access to restricted information.

On the basis of the conducted studies and taking into account the above-mentioned regulations, in our opinion, it is necessary to attach to the investment attractiveness internal factors the following groups of indicators:

−capital adequacy indicators;

−indicators of business activity;

−indicators of assets liquidity;

−performance indicators;

−indicators of the geographic coverage of the banking services market.

Let us consider each of the groups of internal environment factors of investment attractiveness of the Bank formation.

To assess capital adequacy economic capital requirements of the Bank are usually used, they are represented by four indicators set by the National Bank of Ukraine:

−the minimum regulatory capital ($H1$);

−regulatory capital adequacy ratio ($H2$);

−ratio of regulatory capital to total assets ($H3$);

−ratio of regulatory capital to liabilities ($H3$-1) [2].

The minimum regulatory capital ($H1$) regulates the absolute value of the capital base, so will not be included in the system of indicators for the investment attractiveness of the Bank assessment.

Regulatory capital adequacy ratio (*H2*) is defined as the ratio of regulatory capital to total assets graded by credit risk groups:

$$H2 = \frac{regulatory\ capital}{assets\ graded\ by\ credit\ risk} \cdot 100\% \qquad (1)$$

Standard of adequacy ratio regulatory capital corresponds to the international standards of capital adequacy defined by the Basel agreement. Therefore, the implementation of this requirement for Ukrainian banks, means compliance with international standards for capital adequacy in accordance with Basel agreement. The normative value of indicator *H2* should not be less than 10%.

The ratio of regulatory capital to total assets (*H3*) reflects the amount of regulatory capital required for the Bank active operations implementation Eg. (2). The normative value of standard *H3* should not be less than 9%.

$$H3 = \frac{regulatory\ capital}{total\ assets} \cdot 100\% \qquad (2)$$

The standard of regulatory capital to liabilities ratio *(H3-1)* determines the adequacy of the Bank's own funds for performance of obligations to depositors and creditors Eg. (3). The normative value of standard *H3-1* should be no less than 10% [2].

$$H3-1 = \frac{regulatory\ capital}{total\ liabilities} \cdot 100\% \qquad (3)$$

When investing, purchasing shares of the Bank or the merger or acquisition, having defined the ratio between capital and other real accounts consider it is essential to consider a number of specific factors, in which investors are interested:

−capital security ratio;
−stock capitalization ratio of profit;
−capital multiplier.

Capital security ratio shows to what extent the Bank takes into account the inflation processes, and what part of its assets is disposed in real estate, values and equipment Eg. (4). This indicator can also be used as an indirect indicator of the seriousness of the Bank − banks, designed for short-term activities usually do not invest in their development [3]. Approximate value of this index must be not less than 25%.

$$capital\ security\ ratio = \frac{fixed\ assets}{equity} \cdot 100\% \qquad (4)$$

The coefficient of stock capitalization of earnings shows the ratio of equity of the Bank to assets, which were made by founders Eg. (5). In addition to efficiency of activity it characterizes its independence from individual founders and the possibility of compensation of current losses at the expense of own funds. If the Bank's own funds mostly formed at the expense of the share capital, any decision on the use of own funds for implementation of the tasks the Bank should be made by the shareholders of the Bank.

$$\begin{array}{c} stock\ capitalisation \\ ratio\ of\ profit \end{array} = \frac{equity}{share\ capital} \cdot 100\% \qquad (5)$$

An important indicator, which characterizes the Bank's equity is the capital multiplier. It reflects the financial policy in the field of financing: the choice of sources of Bank resources (liabilities and share capital). The higher the numerical value of the multiplier of capital, the more significant is the potential risk of loss.

$$capital\ multiplier = \frac{total\ assets}{share\ capital} \cdot 100\% \qquad (6)$$

For the average Bank multiplier of capital is 15%, and for a large Bank or a financial center – 20-25% [4]. This is quite high compared to foreign banks, but as the Ukrainian banks operate in high-risk conditions, they can be considered justified.

Alongside with the capital adequacy, business activity of the Bank plays really important role in the investment attractiveness of the Bank analysis. As long as it is suggested to use financial statements (reporting) of the bank as an information support in analysis of investment attractiveness, for these statements are in the public domain, the decision was made to follow these factors:

−activity rate of attraction of borrowed and attracted funds;
−activity rate of attraction of term deposits;
−share of individual deposits in the liabilities;
−level coefficient of credit-investment portfolio assets.

Activity rate of attraction of borrowed and attracted funds characterizes the activity of the Bank in terms of raising funds on the financial market.

$$\begin{array}{c} actity\ rate\ of \\ attraction\ of \\ borrowed\ and \\ attracted\ funds \end{array} = \frac{borrowed\ funds}{liabilities} \cdot 100\% \qquad (7)$$

Optimal value is 80-85 %. Too high value of this rate indicates the growth of the activity of the Bank on attracting resources as well as of banking activities risks increase and decrease of the Bank stability.

Activity rate of attraction of term deposits − indicates the share of term deposits in general liabilities of the Bank:

$$\begin{array}{c} actity\ rate\ of \\ attraction\ of \\ term\ deposits \end{array} = \frac{term\ deposits}{liabilities} \cdot 100\% \qquad (8)$$

Increase of the share of term deposits in the total liabilities indicates a growing stability of the resource base and fosters Bank's liquidity. The optimal value of the coefficient is in the range 10-30 %. At a value of 10% cost minimization is achieved, while 30% is risk stability minimization.

The share of individual deposits in the liabilities characterizes the orientation of the Bank in market of raising funds. This index is the indicator of trust of population to banking system in general and to individual Bank in particular.

$$\begin{array}{c} share\ of \\ individual \\ deposits\ in\ the \\ liabilities \end{array} = \frac{individual\ deposits}{liabilities} \cdot 100\% \qquad (9)$$

The potential investor is interested in this indicator as in a factor of influence on the efficiency of the Bank [5]. We can assume that for the investor it is important that the share of citizens ' deposits in the Bank's liabilities was not lower than the average for the banking system. However, it is a fact that the status of the savings bank (not less than 50% of liabilities are deposits of physical persons) is not always favorable for the Bank, as it threatens stricter requirements of the regulator.

It is known that the nature of investment activities affect the profitability and liquidity of the commercial Bank. Increase in the share of credit investments in total assets suggests that the commercial Bank is trying to increase the return on assets, neglecting their liquidity [6]. To determine the nature of investment activities of the banks coefficient of credit-investment portfolio assets is usually used Eg. (10).

If the coefficient exceeds 75%, the nature of the activities of the Bank can be called risky. At the same time a value less than 65% of the credit-investment activity of the Bank is characterized as passive.

$$\begin{matrix} coefficien\,t\ of \\ credit- \\ investment \\ portfolio\ assets \end{matrix} = \frac{\begin{matrix} credit-investment \\ portfolio\ assets \end{matrix}}{total\ assets}\cdot 100\% \quad (10)$$

A group of liquidity indicators will be considered next. With the purpose of control over the liquidity of banks the NBU establishes such liquidity ratios as: instant liquidity ratio (*H4*), current liquidity ratio (*H5*) and short-term liquidity ratio (*H6*) [2, 7]. Alongside with this, international experience shows that in the developed countries of the world strict regime of regulating liquidity is not practically applied. There an individual approach to particular Bank prevails, depending on its type, financial status, network of business relations and state control comes to nothing more than the general requirements. For the analysis of investment attractiveness of the Bank it is appropriate to consider additional liquidity indicators:

−the overall liquidity of the Bank's liabilities;
−ratio liquidity of correlation of loans and deposits.

The overall liquidity of the Bank's liabilities – characterizes the maximum possibility of Bank liabilities repayment by all its assets Eg. (11). The optimal value is not less than 100 %, that is all obligations of the Bank must be fully covered by the current assets (including low liquidity) [6].

$$\begin{matrix} overall \\ liquidity\ of \\ the\ bank's \\ liabilitie\,s \end{matrix} = \frac{total\ assets}{total\ liabilitie\,s}\cdot 100\% \quad (11)$$

Ratio liquidity ratio of granted credits and of deposits attracted characterizes the Bank's ability to attract deposits for support of credit operations, the estimated value 70–80% Eg. (12) [8, 9]. In this case, the loans are provided with sufficient volume of attracted deposits and the Bank is not in danger of unbalanced liquidity. Unbalanced liquidity may occur in case when a Bank at the market of loan capital, is not able to find resources for refinancing of loans, the periods of payments on

which have not yet occurred. Failure to fulfill liabilities obligations may lead to the bankruptcy of the Bank.

$$\begin{matrix} ratio \\ liquidity\ of \\ correlation\ of \\ loans\ and\ deposits \end{matrix} = \frac{granted\ credits}{\begin{matrix} attracted \\ deposits \end{matrix}}\cdot 100\% \quad (12)$$

The Bank's efficiency is expressed in the level of its profitability and reflects the positive cumulative result of the work of the Bank in all areas of its financial and commercial activities. To assess the efficiency of the Bank's we offer to use the following indicators:

−return on assets (*ROA*);
−return on equity (*ROE*);
−net interest margin (*NIM*).

Return on assets is defined as a ratio of net profit to total assets of the Bank, i.e. to resources which are managed Eg. (13). This indicator reflects the internal policies of the Bank, the professionalism of the managers who maintain an optimal structure of assets and liabilities in terms of revenues and expenses. Therefore, in international practice, many experts believe this figure to be the best indicator for evaluating the performance of managers of the Bank. It is believed that the Bank effectively uses available resources in the case when the metric value is not less than 1% [9].

$$ROA = \frac{net\ profit}{total\ assets}\cdot 100\% \quad (13)$$

Return on equity characterizes efficiency of capital use and is calculated as the ratio of net profit to equity capital Eg. (14). This ratio shows how much is the net profit per 1 UAH of the Bank's capital and characterizes the economic return of capital. In the world practice, the profitability of own capital is the main indicator of efficiency of the Bank activity. The Bank operates efficiently in case when the metric value is not less than 15% [4].

$$ROE = \frac{net\ profit}{share\ capital}\cdot 100\% \quad (14)$$

Net interest margin – characterizes the profitability of primary activity of the Bank, and is used to determine the level of efficiency of assets usage depending on the value of attracted resources Eg. (15). Approximate value of the index is 4,5%. Reduction of the interest margin below the specified level signals about the threat of bankruptcy.

$$NIM = \left(\frac{interest\ income}{total\ assets} - \frac{interest\ expence}{total\ assets}\right)\cdot 100\% \quad (15)$$

Factors of internal environment of formation of investment attractiveness of the Bank for mergers or acquisitions is suggested to supplement with the indicators of the geographic coverage of the market.

One of the main motives for mergers and acquisitions of banking institutions is the desire to expand the market and presence zone, so when choosing a Bank-goal the number of regions into which investor could potentially expand his activities is of special interest for him (buyer).

Taking into consideration recent trends in the development of the banking system of Ukraine, namely optimization by banks of their own branch network to improve performance, you must consider the potential object of absorption taking into account the number of branches. So, we propose to use the following parameters to the geographic market coverage assessment:

−number of regions of the Bank representation, new for the investor;

−the total number of branches of the Bank.

III. Results

In M&A transactions one of the primary tasks for the Bank-buyer is choice of transaction object. The criterion for the choice of the Bank-goal is offered to consider its investment attractiveness. Analysis of investment attractiveness of the Bank requires the analysis of all factors influencing it from outside (at the level of the state, region, industry) and inside (of the Bank). As long as the factors of internal environment of formation of investment attractiveness of the Bank, play a crucial role, it is proposed to consider them as it is presented in figure 1.

Fig.1 The internal environment factors of formation of investment attractiveness of the bank

Conclusion

The subsequent consideration of the identified factors will contribute to establishing of a level of investment attractiveness of the Bank by choosing the object of mergers or acquisitions. However, one should remember that the effect of the external environment is not less important, as the Bank is the subject of the economy of a particular state and responds to the political and economic situation in the country and region, on the territory of which the organization operates. Taking this into consideration, in further studies, it is it is expedient to consider the environmental factors of formation of investment attractiveness of the Bank and their role in the selection of the object of transactions of M&A.

References

[1] E. A. Galij, "Analiz nadezhnosti i investicionnoj privlekatel'nosti kommercheskogo banka" ["An analysis of reliability and investment attractiveness of the commercial bank"], Ph.D. dissertation, The State University of Aerospace Instrumentation, Saint-Petersburg, 2003. Available: Jekonomicheskaja biblioteka [Economic library], http://economy-lib.com [Accessed 06 Okt. 2013].

[2] Ukraine. National bank of Ukraine, Pro zatverdzhennja instrukcii' pro porjadok reguljuvannja dijal'nosti bankiv v Ukrai'ni [On approval of the Instruction on regulation of banks in Ukraine]. Kiev: National bank of Ukraine; 2001. [Online]. Available: http://zakon4.rada.gov.ua/laws/show/z0841-01 [Accessed 06 Okt. 2013].

[3] A. I. Ginzburg, Prikladnoj jekonomicheskij analiz [Applied Economic Analysis]. Saint-Petersburg: Piter Publ., 2005.

[4] O. D. Vovchak et al., Kredyt i bankivs'ka sprava [Credit and Banking]. Kiev: Znannja Publ., 2008.

[5] M. Savluk, "Dovira naselennja jak chynnyk efektyvnoi' bankivs'koi' dijal'nosti" ["Public confidence as a factor in effective banking"], Visnyk NBU – Bulletin of the National Bank, vol. 127, no. 8, pp. 8-10, 2003.

[6] A. M. Gerasymovych, Koeficijentnyj analiz likvidnosti balansu banku [Coefficient analysis of the bank balance sheet liquidity], Visnyk kredytno-ekonomichnogo fakul'tetu Kyi'vs'kogo nacional'nogo ekonomichnogo universytetu imeni Vadyma Get'mana – Bulletin of the loan and Economics Faculty of Kyiv National Economic University named after Vadym Hetman, vol. 1, no. 1, pp. 17-26, 2011.

[7] Apple. "Glosarij bankivs'koi' terminologii' Nacional'nogo banku Ukrai'ny" ["A glossary of banking terms of the National Bank of Ukraine"], bank.gov.ua. [Online]. Available: http://www.bank.gov.ua/control/uk/publish/article?art_id=123471 [Accessed 06 Okt. 2013].

[8] Ju. S. Serpeninova, "Metodychnyj pidhid do vprovadzhennja monitoryngu likvidnosti banku" ["Methodical approach to the implementation of monitoring liquidity"], Ekonomichnyj prostir – Economic space, vol. 28, no. 1, pp. 224-228, 2009.

[9] T. M. Bolgar, "Suchasnyj finansovyj stan bankivs'koi' systemy Ukrai'ny" ["The current financial condition of the banking system of Ukraine"], Akademichnyj ogljad – Academic Review, vol. 35, no. 2, pp. 86-92, 2011.