

Analysis of Chosen Strategies of Asset and Liability Management in Commercial Banks

Angelė Lileikienė

Šiaulių universitetas
Architektų g. 1, LT-78366, Šiauliai

The article presents methods and strategies of asset and liability management in commercial banks as well as their comparative analysis. It is very important for commercial banks to choose such performance strategy that would reduce the credit-, liquidity-, interest-rate-related risk and would balance the risk, profitability, liquidity and security. Recommendations for further improvement of asset and liability management system in functioning commercial banks are provided. This article discusses strategy and methods of asset and liability management in commercial banks, choosing the strategy aimed at reducing the credit risk, liquidity risk and interest rate risk. The aim is to choose the strategy oriented to balancing the returns and stability of commercial bank activities, to prepare recommendations for possible performance improvement in commercial banks. The chosen strategy of the bank asset and liability management allows to achieve banking harmony in the bank's performance, i.e. the balance in combining its striving for maximalisation of the profit at the same time ensuring its liquidity with the least risk. Research works describe three asset and liability management strategies: zero, positive, negative Net interest income strategies in asset and liability management. Whatever strategy commercial bank applies in its performance, it shows that it is able to follow contemporary systemic approach in asset and liability management, having direct impact not only on the bank's performance, but also the profit. The core problem in asset and liability management is the fact that the main asset of commercial bank - credits – not always can be liquid, especially if the country's economy is in deep recession. Upon such conditions, the need for restructuring of some credits arises. This in its turn, leads to the necessity to look for new available sources of fund formation. At the same time it is necessary to stress that this is an opportunity to issue profitable credits: bank is able to issue certain part of credits for long term. But such a step requires the bank to look for new, untraditional sources of financing instead of traditional liquid assets or short-term deposits. As the performed research shows, significant changes in management of asset and liability structure could be observed in sixties and seventies. Having faced rapidly fluctuating interest rate and intense competition in fund formation, the banks started paying more attention to fund formation and monitoring of deposit value and structure, as well as the situation of non-deposit liabilities. Traditional asset and liability management is directly related to assessment of interest rate risk, monitoring and control of bank performance and the policy for stabilisation and increase of net interest income and capital market.

Keywords: *assets and liabilities of commercial banks, strategies of asset and liability management, interest rates, Net interest income (NII).*

Introduction

Banking sector still remains an important index of entrepreneurship and economic development in the country. After Lithuania's accession to the European Union, the Central Bank of Lithuania provides a lot of attention to harmonisation of legislation regulating banking sector, to its compliance to the European Union directives. New regulations for capital sufficiency calculations have been approved allowing for assessing market risk taken by commercial banks and determining the need for additional capital. Also, the Central Bank of Lithuania participated in preparing an amendment of the Act on Commercial banks of the Republic of Lithuania, approved by the Seimas. Commercial banks focus their activities on the aim of profit maximisation at the same time trying to remain liquid and ensuring security. Many foreign (Kiduel, Peterson, Blekuet, Miller, Ban-Huz; Bor, Piatenko, Appel, Kaufman, Eng W) and national (Jasienė, Mačerinskienė, Ivaškevičiūtė, Ruškys, etc.) authors widely analyse the problems of asset and liability management in their research works, however the above authors focus on individual problems of commercial banks performance such as balancing profitability and risk, or portfolio optimization problems. Generalising opinions of the above foreign and national authors the author of the article aims at emphasising that in many cases harmonization of performance in commercial banks while striving to balance profitability, liquidity and security, to large extent depends on chosen strategy of asset and liability management in the bank, taking into account macroeconomic changes and fluctuations in the financial market. Therefore, **the aim** of the article is to analyze asset and liability management strategies and methods upon changing economic conditions. In order to achieve the above objective, the following **tasks** have been formulated in the article:

- To generalise strategies and methods of asset and liability management in commercial banks;
- To determine the strategy to be implemented that would reduce the credit risk, liquidity risk, interest rate risk and would balance risk, profitability, security.

Development of strategy formation in asset and liability management

Researchers have various approaches on formation of asset and liability management strategies. Until the sixties, banks to large extent used to understand formation of funds from borrowed and own funds as taken for granted. By P. Fatchulin (2007), prevailing approach in asset management at that time was that amount and forms of deposits kept in the banks as well as other liabilities that the bank was able to attract, in fact had the major effect on consumption options of the bank customers. *Consumer* as if himself decided the bank's strategy, i.e. the ratio between checking deposits, saving and time deposits that *he* preferred to keep. According to Jasienè (1998), at that time the bank management policy was not related to the volume of assets and liabilities. Banks were able to perform control of deposit attraction only by taking decision regarding *who should by credits be issued in cash and on what terms*. As the forms of deposits, interest rates on deposits and other fund formation operations of non-deposit funds that the banks were able to attract, were strictly regulated, bank managers had limited possibilities of bank funds formation.

By Kiduel, Peterson, Blekuet (2000), such measures applied by the banks in regard of their assets and liabilities had impact only on balancing liquidity and profitability of the bank. Therefore the commercial banks not always analysed assets and liabilities as an integral whole. For long time asset management strategy in banking practice was oriented at ensuring liquidity, only "reasonably" managing credits. Credits were issued for short-term or term equal to seasonal consumption of customers. Thus, the major share of credits issued by banks, used to be "self-liquidating" because they were repaid through full normal cycle of banking processes – from the attraction of funds to the issue of credits. If a need for additional liquid funds arises, the bank was able to satisfy it, keeping sufficient amount of government securities or other liquid assets. Thus, asset management strategy was based on the ability of the bank to cover the major part of liquid assets with bank converted net assets.

The core problem in asset and liability management is the fact that the main asset of commercial bank - credits – not always can be liquid, especially if the country's economy is in deep recession. Upon such conditions, the need for restructuring of some credits arises what, in its turn, leads to the necessity to look for new available sources of fund formation. At the same time it is necessary to stress that this is an opportunity to issue profitable credits: bank is able to issue certain part of credits for a long term. But such a step requires the bank to look for new, untraditional sources of financing instead of traditional liquid assets or short-term deposits. As the performed research shows, significant changes in management of asset and liability structure could be observed in sixties and seventies. Having faced rapidly fluctuating interest rate and intense competition in fund formation, banks started paying more attention to fund formation and monitoring of deposit value and structure, as well as the situation of non-deposit liabilities. As G.Ruškys (2002) maintains, restructuring of the sources of funds

should be started in accordance with strictly formulated tasks:

- To use such sources that *minimize the costs of attracted funds*, what, in its turn, allows the bank to distribute new funds in order to increase profit and capital.
- To choose optimal mix of the deposit volume, liabilities and capital providing for possibility to ensure stability of *funds* in order the bank could have profit-earning assets requiring longer term investments with higher risk.

All the above factors allowed to choose a new strategy for liability management. *The aim of this strategy was* – to perform continuous control of fund formation sources, analogous to asset control. The main control tool was prices, also including interest rate, as well as other conditions offered for depositories and creditors in order to form funds of preferred structure, volume and corresponding expenses.

Having faced increasing demand for credits, bank could simply offer higher *interest rate on deposits or other attracted funds*, than competitors and in such a way to form bigger funds. And commercial banks having oversized funds, but lacking profitable investment directions, were able not to change interest rate on deposits or attracted funds or even to reduce it slightly, thus making more favourable conditions for fund attraction than their competitors. As Lee (2000) maintains, constant growth of risk, fluctuating interest rate had led to formation of the fund management strategy that currently still prevails in banking. It is rather balanced approach towards asset and liability management with the following main tasks: first, to achieve short-term and long-term objectives of the bank, the managers must maximally control the volume, structure, profitability and costs of both assets and liabilities; second, asset management control must be coordinated with liability management control in such a way that asset and liability management would be characterized as a single internal system what would allow for maximal covering of the *Net interest income (NII)* between returns on assets of the bank and incurred costs on attracted funds, third, costs and income are attributed to both sides of the balance – assets and liabilities. Bank's asset and liability management strategy must be focused towards maximization of received income of the bank and minimization of the price for bank services both in asset and liability parts.

Thus the long established opinion that the main income is received by issuing credits and making investments has changed into understanding that a bank sells *entire package of banking services – credits, savings, consultancy, performs fund -, trust -related and other operations*, and their prices must cover the expenses incurred by the bank. Income received as a result of liability management can facilitate achievement of the bank profitability objectives in the same way as income generated from asset management.

Authors Miller, Ban-Huz (2000); Bor, Piatenko (1997), indicate various reasons for formation of the asset and liability strategy. By the above authors, three asset and liability management strategies have been created so far.

Each of them is based on the concept of *Net interest income* between assets and liabilities, i.e. the NII between assets and liabilities with flexible interest, what reflects the commercial banks' *Net interest income* in receiving net income and at the same time comparing it to the interest available in the market. Many researchers (Miller (2000), Appel (1985), Kaufman (1987), Eng (1988)) who analyzed asset and liability management strategies, maintain that upon dynamic changes in banking, when bank performance is directly influenced by such macroeconomic factors as cyclic fluctuations in economy, instability in finance markets, *zero, positive and negative between assets and liabilities strategies* are applied in asset and liability management. *Zero strategy* means zero (NII) between bank income received between fixed and flexible

interest in asset and liability management. The Board of commercial bank, following this strategy tries to equalise comparative weight in total assets of the bank and to compare them with assets with flexible interest. This strategy is understood as follows: let's say that 40% of bank assets correlate to assets with fluctuating interest rate, then 40% of bank liabilities correlate to liabilities with flexible interest rate. By Miller (2000), this strategy allows for minimizing percentual risk, as percentual interest on issued credits usually has tendency to change, it can decrease or increase subject to changes of interest rate on deposits. Therefore it allows for minimizing of return fluctuations through the total planned stage. Bank margin remains constant for certain period that should coincide with activation cycle of the bank.

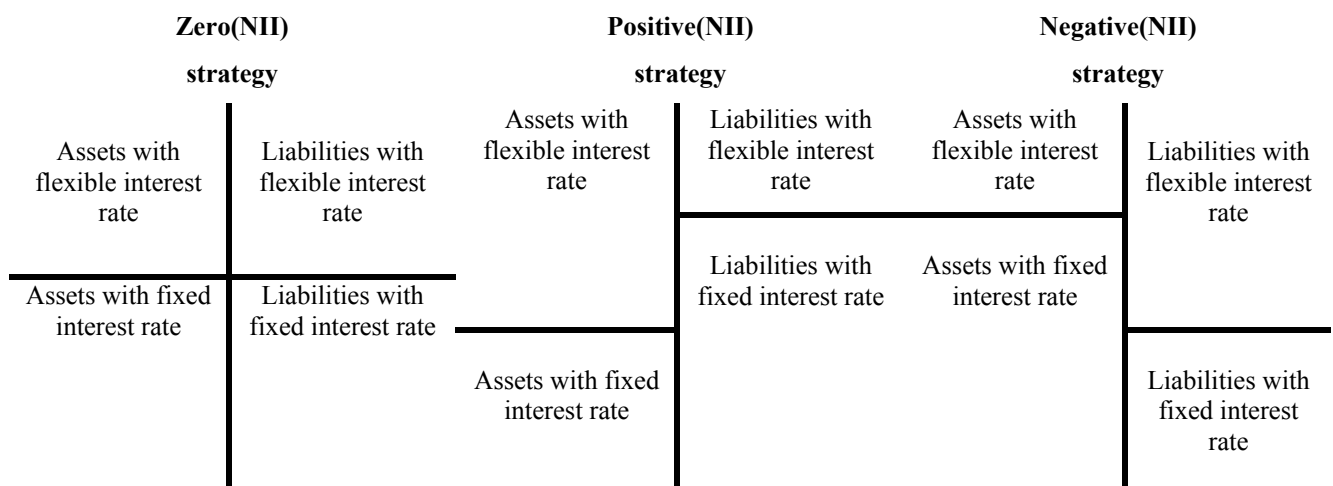


Figure 1. Zero, positive and negative (NII) strategies in asset and liability management

Source: Миллер, Р. Л., Бан-Хуз, Д. 2000. *Современные деньги и банковское дело*. Москва: Инфа., с.218

Banks seeking for maintaining a regular *NII* between received income and paid interest will follow the zero strategy in asset and liability management. Such commercial banks that are ready to accept risk and are waiting for interest rate increase normally will follow positive *NII* strategy, and if interest rate drop is expected, commercial banks would follow negative strategy. Let's see what happens to net return (margin) of commercial bank if interest rate is growing, then the value of capital attracted by commercial bank will increase and commercial banks will issue credits with increased interest. As long as the *NII* of interest rate on issued credits remains constant as compared to interest on deposits for certain period, the profit of commercial bank will also remain unchanged. On the other hand, if the *NII* between assets and liabilities with flexible interest rate is equal to 0, then comparative weight of total assets with fixed interest rate will be equal to bank liabilities with fixed interest rate. Thus, if general interest rate grows, present price of assets with fixed interest rate will drop.

The price of liabilities with fixed interest rate will also decrease. And if the trend for decrease of loan interest and deposit interest remains constant, such changes do not impact the interest rate equilibrium in the financial market.

Positive strategy in asset and liability management. Commercial banks following this strategy pay considerably more attention to comparative weight of the volume of assets with flexible interest rate than to

equilibrium of liabilities with flexible interest rate. As shown in Picture 1, 40% liabilities correlate to assets with flexible interest rate, then only 20% liabilities - to assets with flexible interest. Positive *NII* is understood as situation when the share of income-earning assets with fixed interest rate will be less than the share of liabilities with fixed interest rate in total volume of interest-generating liabilities of the bank. As the result, bank total returns received on the credits will decrease. The costs (interest expenses for deposits) will decrease in the same way. However, because of existing positive *NII* between assets and liabilities the total income of the bank will be subject to changes to larger extent than costs. The bank's profit decreases correspondingly. If along with the drop of interest rate in the market the present value of assets increases, the present value of liabilities with fixed interest rate also increases. Although the bank follows the positive strategy in asset and liability management, net return of the bank decreases. The price of bank's shares drops at once, as only investors understand the market trends.

As performed research works show, this strategy is chosen for asset and liability management in commercial banks at the time of big fluctuations in the economy affecting the situation in financial markets, what in turn, results in rapid fluctuation of interest rates. Usually upon such situation, the income of the bank is received from diversified activities.

Negative strategy. Following this strategy, the share of assets with fluctuating interest rate in total volume of assets is less than the share of liabilities with fluctuating interest rate in total liabilities. Following this strategy, the share of assets with fixed interest rate in total assets will considerably exceed the share of liabilities with fixed interest rate in total liabilities. This strategy is effective when a commercial bank is waiting for changes in interest rates, and if the forecasts are confirmed, the bank's margin increases. Although such situation is not reflected in the balance, the market value of shares of such commercial bank will increase considerably.

Whatever strategy a commercial bank applies in its performance, it shows that the bank is applying contemporary approach to asset and liability management, which directly affects not only liquidity and security of the bank, but also its profitability.

Risk impact on choosing the asset and liability management strategy

Changes in financial market can significantly change profitability of the bank and market value of its capital. Such volatility is expressed through interest rate risk. Interest rate risk – is a probability to incur loss due to interest rate fluctuations that might increase expenses, for bank's liabilities and reduce return on its assets. By Jasiene (1998), fluctuations of the interest rate level affect present value of streams of future payments. Interest rate risk stems from imbalance between reappraisal possibilities of the bank's assets and liabilities. Such imbalance is shown through the bank's net interest income and volatility of market value of the share capital. This risk has effect both on the bank's returns and on the market value of bank assets, liabilities and non-balance financial tools. Although such risk is normal part of banking business, however too high interest rate risk can result in reducing of the bank income and value of capital. Interest rate risk is incurred when there is a gap between asset and liability maturity and price change terms. Basic risk is incurred, when market prices of concluded future transactions on derivative financial instruments only approximately correspond to the market price of urgent transactions. Interest rate risk management is a matter of extreme importance in contemporary activities of commercial banks; the objective of interest rate risk management – to reduce negative effect of interest rate fluctuation on the bank's net return and on the bank's performance.

Interest rate risk is assessed calculating *Net interest income* of various periods, using data of aggregated balance made to certain date. These values are used to assess the extent of change in *Net interest income* subject to changes in interest rate. By Koh (1992), *Net interest income* (NII) is derived as a difference between the amount of interest-rate-sensitive assets (ISA) and the amount of interest-rate-sensitive liabilities (ISL). Thus, $NII = ISA - ISL$, and as the author maintains, interest-rate-sensitive assets and interest-rate-sensitive liabilities are grouped by time intervals. Information obtained from the gap data can be applied to hedge net interest income from interest rate fluctuations (to reduce interest rate risk) or for speculative purposes – to change extent of the gap trying to increase

net interest income. W. Eng (1988) emphasises that in order to reduce fluctuations of net return, banks should use derivative banking financial instruments (financial futures, pre-payments, options, and interest rate exchanges – swaps) in asset and liability management.

On the other hand, as J. Murphy (1995) and later – our national author M. Jasiene (1998) notes, the NII analysis of assets and liabilities with interest rate sensitive to interest rate fluctuations in the market can be made in form of static or dynamic analysis.

Static analysis studies result, when the NII values are considered constant. This analysis includes four stages (Jasiene, 1998):

First, bank specialists determine time limits, when assets and liabilities are sensitive or insensitive to interest rates. Assets or liabilities are interest-rate-sensitive, if their maturity expires, if they are partial payments of loan or deposit principal amount, if interest rate on loan or deposit principal amount is subject to change pursuant to contract, if interest rate on loan or deposit principal amount is flexible – related to certain basic norm or index.

Second, assets and liabilities are grouped in time intervals by their maturity terms or by time until their first potential reappraisal. This share can be reappraised and attributed to interest-sensitive one.

Third, the NII in such case is equal to difference in terms of monetary amounts between interest-rate-sensitive assets and interest-rate-sensitive liabilities for each time interval;

Fourth, the board of the bank uses information on the gap between interest-rate-sensitive assets and interest-rate-sensitive liabilities and interprets it through sensibility analysis.

Dynamic NII analysis takes into account the change in the *Net interest income* value subject to changing interest rate. The NII values of interest-rate-sensitive assets and interest-rate –sensitive liabilities are used to assess the extent of change in net interest income, if the interest rate changes. Sign and value of the NII provide information on interest rate risk. As research works show, upon such situation in the market the commercial banks most often tend to follow *negative strategy* in asset and liability management.

Negative NII shows that a bank has more interest-rate-sensitive liabilities than assets. When interest rates are increasing, bank pay higher interest on reappraised liabilities and earns higher interest on reappraised assets. If at the same time both interest rates are increasing equally, interest expenses are increasing more than interest income as more liabilities are reappraised. Thus, net interest income decreases, and net interest rate also decreases. If during the analysed period the interest rate decreases, more liabilities than assets are reappraised applying lower rate, and interest expenses decrease more than interest income. Net interest income and net interest rate are growing.

In certain cases, when situation in the market is changing, the banks trying to mitigate possible risk and to receive higher net interest income, apply *positive strategy*. Thus, the obtained positive NII shows, that the bank has more interest-rate-sensitive assets than liabilities. When interest rate is growing, interest income increases more than expenses, because more assets are reappraised, then net

interest income grows. Decrease of interest rates has opposite effect. As interest income is decreasing more than interest expenses, net interest income is decreasing.

If the bank's NII is equal to zero, i.e. interest-rate-sensitive assets and liabilities are equal, similar changes in interest rates in this case have no effect on net interest income (figure 2).

Minimizing negative effect of interest rate fluctuation on the bank's interest income, it is not recommended to have *positive strategy*, when interest rates drop is expected, and *negative strategy*, when growth of interest rates is

expected. In order to hedge from interest rates fluctuations, the best option is *zero strategy*. The bigger the NII, the higher is risk for performance of commercial banks.

Dynamic *Net interest income* analysis includes interest sensitivity and imitative simulation, i.e. forecasts changes in net interest income and capital market. When making dynamic analysis, the NII is calculated more precisely, because specific reappraisal characteristics that correspond to certain limitations and possibilities to influence the sensitivity of rates on bank assets and liabilities are taken into account.

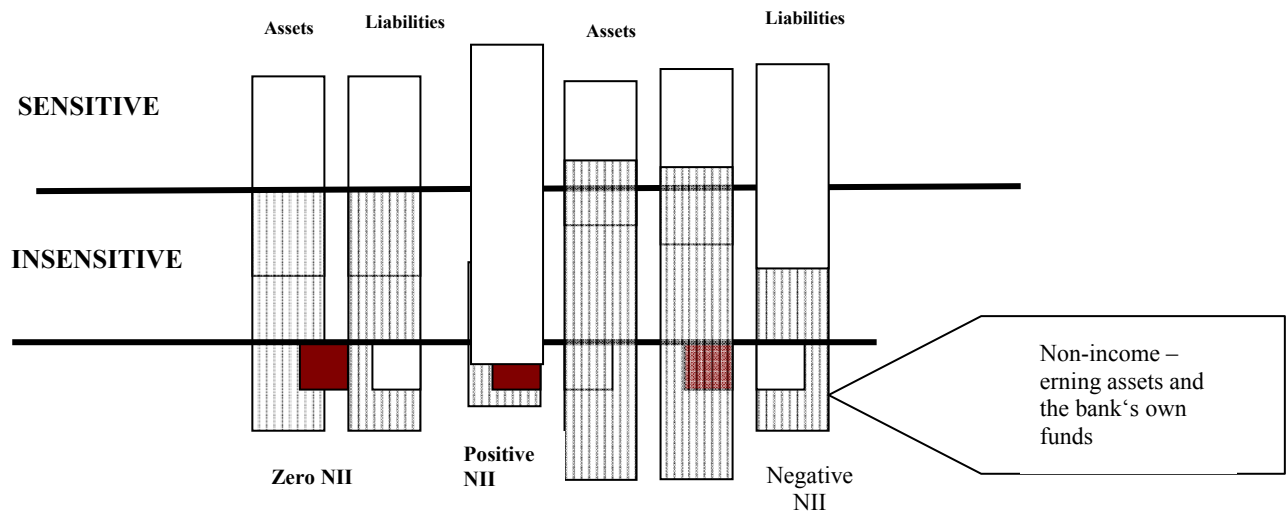


Figure 2. Defining of net interest income with the help of Netto interest income (NII) method

Source: *Банковское дело: стратегическое руководство / руководитель проекта Уильям Гулд; под редакцией Владимира Платонова, Майкла Хиггинса. 1998. Москва: Консалтбанкир, 171р.*

Methods that can be applied by banks to reduce interest rate risk (Mishkin, 1995) are the following: hedging with financial futures and interest rate swap contracts. When using financial futures, the hedging means that bank is engaged into financial futures trading in such a way that depending on fluctuations of interest rates, the profit or loss from actual monetary transaction is at least partly compensated by profit or loss from its future transaction. Risk is reduced as loss or profit usually is less with than without hedging, i.e. if future transaction is not concluded. Interest rate swap means that a bank can exchange fixed-interest-rate in-payments and out-payments in such way reducing fluctuation of net interest income.

Thus, bank managers are responsible for risk and income of the bank. Traditional asset and liability management is directly related to assessment of interest rate risk, monitoring and control of bank performance and the policy for stabilisation and increase of net interest income and capital market.

Principles of balancing profitability, liquidity and security

Performance of commercial bank depends on balancing its striving for profit at the same time ensuring

its liquidity with the least risk. These three main factors essential to successful performance of the bank are to large extent determined by properly chosen asset and liability management strategy. When forming strategy, the commercial bank must especially focus on its loan portfolio. Tarailā (2001) also confirms the above approach maintaining that the strategy of commercial bank must balance three main principles: *profitability, liquidity, security*. By authors Mačerinskienė, Ivaškevičiūtė (2000), it is not possible to achieve all these three principles at the same time; therefore it leads to conflicting situation. In such situation commercial banks must exactly define which one of these principles is to be given priority, because results of the bank performance to large extent depend on such a decision.

Various authors Kiduel, Piterson, Blekuet (2000); Mačerinskienė, Ivaškevičiūtė (2000) maintain that seeking for implementation of three major principles, a commercial bank must adopt contradictory decisions, - on one hand in order to ensure high profitability, the bank must maximize volume of long-term loans (higher interest), on the other hand - to keep required liquidity level, a bank must optimize volume of short-term loans, also to ensure security, a bank must be selective in choosing customers.

As the performed research shows, *Net interest income* directly depends on changes in volume of interest-earning assets and interest-bearing liabilities. On one hand, net interest income can also be influenced by any change in structure of asset and liability portfolio. These changes effect the gap and bank interest rate risk situation. However, to our opinion, no permanent dependence between changes of portfolio structure and net interest income exists. Depending on interest-rate sensitive and interest-rate insensitive volumes of assets and liabilities and fluctuation of their interest rates, the effect is also changing. In many cases, the banks change their portfolio structure seeking for compensation of unpredicted decrease in net interest income rate. Net interest income and net interest income rate have effect on changes in volume of assets and non-interest bearing liabilities. Net interest income at once increases depending on investment rate, if a bank is able to reduce non-interest-earning assets. On the other hand, changes in net interest income of commercial bank occur due to the gap between the volume of interest-rate-sensitive assets and the volume of interest-rate-sensitive liabilities and therefore we maintain that all interest rates are changing to the same extents and to the same direction.

Therefore such decisions in asset and liability management must be taken in order to avoid unacceptable fluctuations of net interest income, capital level or market value of the bank share capital. Subject to these limitations, certain interest rate fluctuation risk can be accepted in order to increase general profit margin of the bank; when implementing one or another asset and liability management strategy it is necessary to assess rising, falling and stable interest rate models, and macroeconomic factors affecting the volume of net interest income.

As the performed research shows, confirming the approach, that choosing of certain strategies in the bank asset and liability management in different periods makes preconditions for achievement of different results. If a bank seeks for *positive strategy* in asset and liability management, then the risk increases, but net interest volume also increases, then the commercial bank is diversifying and expanding its activities, its interest is growing, and the share of interest-insensitive liabilities in the total volume of liabilities is increasing.

If a bank chooses the model of asset and liability management strategy oriented at negative NII, then business cycle is narrowing, interest is decreasing and the share of interest-sensitive liabilities in the total volume of liabilities is increasing, the volume of fixed rate and longer term loans is increasing.

Seeking for hedging against interest rate fluctuations and instability in financial market the best option would be *zero strategy*, because the bigger NII, the higher risk the bank faces.

Conclusions

The chosen strategy of the bank asset and liability management allows for achievement of banking harmony in the bank's performance, i.e. the balance in combining its striving for maximalisation of the profit at the same

time ensuring its liquidity with the least risk. Research works describe three asset and liability management strategies: *zero, positive, negative NII strategies in asset and liability management*. Whatever strategy commercial bank applies in its performance, it shows that it is able to follow contemporary systemic approach in asset and liability management, what has direct impact not only on the bank's performance, but also the profit.

One of the most important ratios allowing for evaluation of the success of assets and liabilities systemic management in commercial banks, is *Net interest income* (NII) calculated as the interest difference between sensitive assets and liabilities. *Net interest income* (NII) shows management strategy chosen by commercial banks, oriented at decreasing the performance risk.

Changes in net interest income in performance of commercial banks occur due to the NII between the volume of interest-rate-sensitive assets and the volume of interest-rate-sensitive liabilities.

The bigger NII of a commercial bank in absolute terms, the bigger change in net interest income during the analysed period.

When choosing the asset and liability management strategy, it is important to choose an optimal balance structure via interest rate cycle, and to keep banking activity *concordance*. If a bank seeks for *positive strategy*, risk increases, but net interest volume also increases, then the commercial bank is expanding its activities, its interest is growing, the share of interest-insensitive liabilities in the total volume of liabilities is increasing.

If a bank chooses the model of asset and liability management strategy oriented at negative (NII), then business cycle is narrowing, interest is decreasing and the share of interest-sensitive liabilities in the total volume of liabilities is increasing, as well as the volume of fixed rate and longer term loans is increasing.

Trying to hedge against interest rate fluctuations and instability in the financial market the best option would be *zero strategy*, because the bigger NII, the higher risk the bank faces.

References

1. Appel, G. *The Movint Average Convergence Divergence Method Advanced*, Scientific Investment System Version. Toronto, Ontario, 1985. 69p.
2. Eng W. *The Technical Analysis of Stock, Options and Futures*. Chicago: Probus Publishing, 1988. 251p.
3. Ivaškevičius, D. *Bankų vadyba*/ D. Ivaškevičius, Sakalas A. Kaunas: Technologija, 1997. 239p.
4. Bierwag, G. *Durations of Nondefault-Free Securities*/ G.O. Bierwag, G.G Kaufman // *Financial Analysts Journal*, 1988, No 4 (July/August 1988), p. 39-46.
5. Bierwag, G. *Durations for Portfolios of Bonds Priced on Different Term Structures*/ G.O. Bierwag, C.J Corrado, G.G. Kaufman// *Journal of Banking and Finance*, 1992, Vol.4, p. 705-714.
6. Jasienė, M. *Palūkanų normos rizikos valdymas*. Vilnius, 1998. 57 p.
7. Mačerinskienė, I. *Banko paskolų portfelio valdymo tyrimo metodologiniai aspektai* / I. Mačerinskienė, Ivaškevičiūtė// *Socialiniai mokslai*. No 5, 45 p.
8. Mishkin, F. *The economics of money, banking, and financial markets*. 4-edition. Copyright, 1995. 157 c.
9. Murphy, J. *Technical Analysis of the Futures Markets*. New York institute of Finance, 1986. 315 c.
10. Li, S. *Inertia and Evaluation Mechanisms in Interorganizational Partner Selection: Syndicate Formation among*/ S. Li, T.J. Rowley// *U.S. Investment Banks*. The Academy of Management Journal, 2002. Vol. 45, No 6, c. 1104-1119.

11. Rūškys, G. Rizikos parametų įvertinimo ypatumai Lietuvos finansų rinkoje// Organizacijų vadyba: sisteminiai tyrimai, 2002. No 3.
12. Бор, З. *Менеджмент банков: организация, стратегия, планирование*/ З. Бор, В. В. Пятенко, Москва: ДИС, 1997. 283 с.
13. Dolan, E. Bankovskoje delo i denezno – kreditnaja politika. SPb: Sankt-Peterburg, 1994. 297 с.
14. Кидуел, Д. *Финансовые институты, рынки и деньги*/ Д. С. Кидуел, Р. Л. Петерсон, П. Блекует. Москва, 2000. 312 с.
15. Райс, Т. *Финансовые инвестиции и риск*/ Т. Райс, Б. Койли. Киев: Торгово-издательское бюро BHV, 1995. 346 с.
16. Рид, Э. *Комерческие банки* / Э. Рид, Р. Коттер, Э. Гилл, Р. Смит.//Пер. англ.– Москва: Прогресс, 1991. 421 с.
17. Роуз, П. *Банковский менеджмент*. Москва: Дело, 1997. 351 с.
18. Севрук, В. *Банковские риски*. Москва: Дело ЛТД. 1994. 241 с.
19. Синки, Д. *Управление финансами коммерческих банках*. Москва: Catallaxy. 1994. 128 с.
20. Samuels, I. *Financial Statement Analysis in Europe*/ I. M. Samuels, R. E. Brayshaw, J. M. Ceaner. London: Chapman and Hall. 1995. 224 с.
21. Sander van Triest. *Customer size and customer profitability in non-contractual relationships* // *Journal of Business & Marketing* 20/3, 2005. 148-155 с.
22. Smith, M. *Customer profitability analysis: an activity – based costing approach*/ M. Smith, S. Dikolli// *Managerial Auditing Journal*, 1995. Vol. 10, No, 7, 3-7 с..
23. Strumickas, M. *Bankų vidinio vertinimo metodikos tobulinimo kryptys*/ M. Strumickas, L. Valančienė // *Socialiniai tyrimai*, Šiaulių universiteto leidykla. Šiauliai, 2005, p.120-127.
24. Уоскин, В. *Современный коммерческий банк. Управление и операции*. Москва, 1993. 231 с.
25. Уткин, Э. *Банковский маркетинг*. Москва: Инфра, 1994. 256 с.
26. Jakimkin, B. N. *Finansovjy diling*. M.: ООО IKF Omega-L, 2000. 126 с.
27. Черкасов, В. *Банковские операции: Маркетинг, анализ, пасчѣт*/ В. Е. Черкасов, Л. А. Плотицина. Метаминформ, 1995. 141 с.
28. White, G. *The Analysis and Use of Financial Statements*/ G. I. White, A. C. Sondhi, D. Fried, (3rd. ed) John Wiley & Sons. Inc. 2003. 215 с.

Angelė Lileikienė

Актывų ir пасывų valdymo pasirinktų strategių analizė komerciniuose bankuose

Santrauka

Bankininkystės sektorius ir toliau išlieka svarbiu indikatoriumi vystant verslininkystę ir ekonomikos plėtrą šalyje. Lietuvai įstojus į Europos Sąjungą, Lietuvos Centrinis bankas skiria nemažai dėmesio bankininkystės teisės aktams tobulinti, kad jie atitiktų Europos Sąjungos direktyvas. Patvirtintos naujos kapitalo pakankamumo skaičiavimo taisyklės, kurios leidžia įvertinti komercinių bankų prisiimamą rinkos riziką ir nustato papildomą kapitalo poreikį. Komerciniai bankai savo veiklą grindžia, siekdami maksimizuoti pelną, ir kartu išlikti likvidūs ir būti saugūs. Daugelis užsienio (Kiduel, Peterson, Blekuet(2000), Miller, Ban-Huz ; Bor, Piatenko, Appel (1985) , Kaufman (1988) , Eng W(1988)) ir šalies (Jasienė (1988), Mačerinskienė, Ivaškevičiūtė (2000), Ruškys (2002) ir kiti autoriai plačiai savo darbuose nagrinėja aktyvų ir pasyvų valdymo problemas, tačiau minėti autoriai akcentuoja atskiras komercinių bankų veiklos problemas, kaip pelningumo ir rizikos suderinimą, ar vertybinių popierių portfelio optimizavimo sunkumus. Šio straipsnio autorė, apibendrinama minėtų užsienio ir šalies autorių nuomones, siekia akcentuoti, kad daugeliu atvejų komercinių bankų veiklos harmonizacija, siekiant suderinti pelningumą, likvidumą ir saugumą, labiausiai priklauso nuo pasirinktos banko aktyvų ir pasyvų valdymo strategijos, atsižvelgiant į makroekonominių pokyčių ir finansų rinkos svyravimus. Todėl šio straipsnio tikslas – išnagrinėti aktyvų ir pasyvų valdymo strategijas ir metodus pasikeitusiomis ekonominėmis sąlygomis. Siekiant šio tikslo, straipsnyje formuluojami uždaviniai:

- Apibendrinti teoriniu ir praktiniu aspektu komercinių bankų aktyvų ir pasyvų valdymo strategijas ir metodus;
- Nustatyti, įgyvendinant pasirinktą strategiją, kuri sumažintų kredito, likvidumo, palūkanų normos riziką bei subalansuotą riziką, pelningumą, likvidumą, saugumą.

Užsienio ir šalies mokslininkai įvairiai vertina aktyvų ir pasyvų valdymo strategijų atsiradimą. Iki 60-ojo dešimtmečio, bankai fondų formavimą iš skolintų ir nuosavų lėšų, suprato kaip savaime suprantamą dalyką. P.Fatchulin (2007) teigimu, vyraujanti minėto periodo aktyvų

valdymo nuostata buvo ta, kad bankuose saugomų depozitų kiekis bei formos ir kiti įsipareigojimai, kuriuos bankai galėjo pritraukti, labiausiai veikė banko klientų vartojimo galimybės. Vartotojas lyg pats pasirinkdavo banko veiklos strategiją, tai yra santykį tarp čekinių depozitų, taupomųjų ir terminuotųjų indėlių, kuriuos jis norėdavo saugoti. Jasienės (1998) nuomone, tuometinė bankų valdymo politika nebuvo susieta su aktyvų ir pasyvų apimtimi. Bankai galėdavo vykdyti depozitų pritraukimo kontrolę tik priimdami sprendimą apie tai, kam suteikti ribotą kreditų grynaisiais ir kokiomis sąlygomis. Kadangi depozitų formos, palūkanų lygis už depozitus ir kitas nedepozitines fondų formavimo operacijas, kurias galėdavo pritraukti bankai, griežtai buvo reguliuojama, banko valdytojai turėjo ribotas galimybes formuojant banko lėšas.

Todėl, Kiduel, Peterson, Blekuet (2000) teigimu, tokia aktyvų ir pasyvų valdymo priemonė, kurią vykdavo bankas, siekdavo subalansuoti tik banko likvidumą ir pelningumą. Būtiną pažymėti, kad komerciniai bankai ne visuomet aktyvų ir pasyvų valdymą nagrinėdavo kaip vientisą visumą. Kaip rodo atlikta užsienio ir šalies autorių (Jasienė, Ruškys, Mačerinskienė ir kt.) teorinių šaltinių analizė, kreditai buvo išduodami trumpalaikiai arba išduodami terminui, lygiam klientų sezoniniam vartojimui. Taigi, didžioji dalis kreditų, kuriuos suteikdavo bankai, būdavo likvidūs todėl, kad mokėjimai už juos vykdavo visą normalų bankinės veiklos ciklą – nuo lėšų pritraukimo iki kreditų suteikimo. Jeigu išskildavo papildomas likvidžių lėšų poreikis, tai bankas galėdavo patenkinti tai, saugodamas pakankamai VVP arba kitų greit realizuojančių aktyvų. Aktyvų valdymo strategija rėmėsi tuo, kad didžiąją dalį likvidžių aktyvų bankas dengdavo galimybė konvertuoti grynaisiais aktyvais (6.7).

Aktyvų ir pasyvų valdymo problemos esmė yra ta, kad pagrindinis komercinio banko aktyvas – kreditai – ne visuomet gali būti likvidūs, ypač jei šalies ekonomika apimta gilios krizės. Tokiomis sąlygomis, iškyla būtinybė restruktūrizuoti kai kuriuos kreditus, o tada kyla būtinybė ieškoti naujų fondų formavimo šaltinių, kuriuos galima būtų panaudoti. Kaip rodo atlikta teorinių šaltinių analizė, 6-ajame ir 7-ajame dešimtmėčiuose galima buvo pastebėti žymius aktyvų ir pasyvų struktūros valdymo pokyčius. Susidūrę su greit kintančia palūkanų norma ir intensyvia fondų formavimo konkurencija, bankai pradėjo daugiau skirti dėmesio fondų formavimui ir depozitų vertės ir struktūros monitoringui, taip pat nedepozitinių įsipareigojimų būklei. G. Ruškio (2002) teigimu, formuojant aktyvų ir pasyvų valdymo strategijas, būtina panaudoti tuos šaltinius, kurie *minimizuoja pritrauktų lėšų kaštus*, o tai palieka galimybę paskirstyti naujas lėšas, kad didintų pelną ir kapitalą, taip pat pasirinkti optimalią proporciją tarp depozitų dydžio, skolinių įsipareigojimų ir kapitalo, *suteikiančių galimybę pasiekti fondų stabilumą*, kad bankas galėtų turėti pelningų aktyvų, nukreiptų į investicijas ilgesniam laikui su didesne rizika.

Li (2000) teigimu, nuolatinis rizikos didėjimas, besikeičianti palūkanų norma, sąlygojo valdymo strategijos fondų sukūrimą, kurie ir šiuo metu bankų veikloje yra vyraujantys. Tai gana subalansuotas požiūris į aktyvų ir pasyvų valdymą, kuriam keliami šie pagrindiniai uždaviniai: pirma, kad pasiektų ilgalaikių ir trumpalaikių banko tikslų, vadovai maksimaliai privalo kontroliuoti ir aktyvų, ir pasyvų dydį, struktūrą, pelningumą ir kaštus; antra, aktyvų valdymo kontrolė turi būti sukoordinuota su pasyvų valdymo kontrole tokiu būdu, kad aktyvų ir pasyvų valdymas būtų nusakomas kaip bendra vidinė sistema, ir tai leistų maksimaliai išlyginti skirtumą tarp banko aktyvų pajamų ir daromų pritrauktų lėšų kaštų; trečia, kaštai ir pajamos priskiriamos abiem balanso pusėms – ir aktyvų, ir pasyvų. Banko aktyvų ir pasyvų valdymo strategija turi būti nukreipta ta linkme, kad maksimizuotų gaunamas banko pajamas ir minimizuotų banko paslaugų kainą tiek pasyvuose, tiek ir aktyvuose.

Taigi nusistovėjęs požiūris, kad pagrindinės pajamos gaunamos teikiant kreditus ir darant investicijas, yra pasikeitęs į supratimą, kad bankas parduoda *visą paketą bankinių paslaugų – kreditus, santaupas, konsultacijas, vykdo fondines, trasto ir kitas operacijas*, ir jų kainos turi padengti banko daromas pateikimo išlaidas.

Autoriai Miller, Ban-Huz (2000); Bor, Piatenko (1997) nurodo įvairias priežastis aktyvų ir pasyvų valdymo strategijoms atsirasti. Pasak šių autorių, šiuo metu yra sukurtos trys aktyvų ir pasyvų valdymo strategijos. Kiekviena jų grindžiama aktyvų ir pasyvų teikiamų pajamų skirtumų supratimu; tai yra skirtumas tarp aktyvų ir įsipareigojimų kintančiomis palūkanomis, kas atspindi komercinių bankų palūkanų skirtumą gaunant grynąsias pajamas ir kartu jas palyginant su rinkoje esančiomis palūkanomis. Mokslinėje literatūroje daugelis autorių Miller (2000), Appel G. (1985), Kaufman P.(1987), Eng W. (1988), nagrinėję bankų aktyvų ir pasyvų valdymo strategijas, laikosi nuomonės, kad, esant dinaminiam pokyčiams bankinėje veikloje, kuomet bankų veikla tiesiogiai yra veikiamą tokių makroekonominių veiksnių kaip

ekonomikos cikliniai svyravimai, nuolat besikeičianti padėtis finansų rinkose, aktyvų ir pasyvų valdyme yra taikomos *nulinio, teigiamo ir neigiamo skirtumo tarp aktyvų ir pasyvų GAP, valdymo strategijos*.

Nulinio skirtumo strategija atskleidžia banko pajamų, gaunamų tarp kintamų ir fiksuotų palūkanų aktyvų ir pasyvų valdyme, nulinių skirtumą. Komercinio banko valdyba, laikydama šios strategijos, stengiasi išlyginti lyginamąjį svorį tarp bendrų banko aktyvų ir juos palyginti su aktyvais, turinčiais kintamas palūkanas. Ši strategija suprantama taip: tarkime, 40% banko aktyvų priklauso aktyvams su kintama palūkanų norma, tai 40% bankų pasyvų priskiriama išsipareigojimams su kintama palūkanų norma. Pasak Miller (2000), ši strategija leidžia minimizuoti procentinę riziką, nes procentinės palūkanos suteiktiems kreditams paprastai turi tendenciją keistis, ji gali mažėti arba didėti pagal depozitų palūkanų normos pokyčius. Tai leidžia minimizuoti pajamų pokyčius per visą planavimo etapą. Banko marža pastovi tam tikrą periodą, kuris turėtų sutapti su banko dalykiniu aktyvinimo ciklu. Bankai, siekiantys palaikyti nuolatinį skirtumą tarp gaunamų pajamų ir išmokamų palūkanų, laikysis aktyvų ir pasyvų nulinio skirtumo valdymo strategijos. Komerciniai bankai, kurie pasirengę rizikuoti, ir laukia palūkanų normos pakilimo, paprastai laikysis teigiamo skirtumo strategijos, o jeigu laukiama palūkanų normos kritimas, komerciniai bankai laikysis neigiamo skirtumo strategijos. Išaugus komercinio banko grynosios pajamos (maržai), jeigu palūkanų norma išaugs, tuomet komercinio banko pritraukta kapitalo vertė pakils, taigi komerciniai bankai suteiks kreditus padidėjusiomis palūkanomis. Kol suteiktų kreditų palūkanų normos skirtumas bus pastovus, palyginti su depozitų palūkanomis, tam tikru periodu komercinio banko pelnas taip pat nesikeis. Kita vertus, jeigu skirtumas tarp aktyvų ir išsipareigojimų su kintama palūkanų norma lygi 0, tai ir bendrų aktyvų su fiksuota palūkanų normos lyginamasis svoris bus lygus banko pasyvams, turintiems fiksuotą palūkanų normą. Taigi, jeigu bendras palūkanų normos lygis išaugs, tai aktyvų su fiksuota palūkanų norma einamoji kaina kris. Kaina taip pat kris ir išsipareigojimų su fiksuota palūkanų norma. Jeigu paskolų palūkanų kritimo ir depozitų palūkanų mažėjimo tendencija yra pastovi, tai tokie pokyčiai nepažeidžia palūkanų normos finansų rinkoje pusiausvyros.

Aktyvų ir pasyvų teigiamo skirtumo valdymo strategija. Komerciniai bankai, vadovaudamiesi šia strategija, skiria kur kas daugiau dėmesio lyginamajam svoriui aktyvų su kintama palūkanų norma lygiui nei pusiausvyrai išsipareigojimams su kintama palūkanų norma. Kaip matyti iš 1 paveikslėlio, 40% pasyvų priklauso aktyvams su kintama palūkanų norma, tuomet tik 20% pasyvų, turinčių kintamas palūkanas. Teigiamas skirtumas suprantamas kaip aktyvų su fiksuota palūkanų norma dalis, teikianti pajamų, bus mažesnė negu bendra pasyvų sumos dalis išsipareigojimų su fiksuota palūkanų norma, pagal kuriuos bankas išmoka procentus. Rezultatas – banko bendrosios pajamos, gautos už kreditus, sumažės. Lygiai taip pat sumažės kaštai (išlaidos už depozitus procentams išmokėti). Bet kadangi egzistuoja teigiamas aktyvų ir pasyvų skirtumas, tai bendros banko pajamos labiau kinta nei kaštai. Atitinkamai sumažėja ir banko pelnas. Jeigu, nukritus palūkanų normai rinkoje, aktyvų einamoji vertė su fiksuota palūkanų norma pakyla, taip pat pakyla išsipareigojimų einamoji vertė su fiksuota palūkanų norma.

Nors bankas laikosi aktyvų ir pasyvų teigiamo skirtumo valdymo strategijos, grynoji banko pajamų apimtis sumažėja.

Banko akcijų kaina krenta iš karto, kai tik investuotojai supranta rinkos tendencijas. Kaip rodo atlikti tyrimai, komercinių bankų aktyvų ir pasyvų valdyme ši strategija pasirenkama tuomet, kai dideli ekonomikos svyravimai, veikiantys padėti finansų rinkose, dėl ko greitai keičiasi palūkanų normos. Paprastai, esant tokiai situacijai, banko pajamos gaunamos iš diversifikuotos veiklos.

Neigiamo skirtumo strategija. Laikantis šios strategijos, aktyvų su kintama palūkanų norma bendroje aktyvų dalyje apimtis yra mažesnė nei išsipareigojimų su kintama palūkanų norma bendruose pasyvuose. Vadovaujantis šia strategija, aktyvų dalis su fiksuota palūkanų norma visuose aktyvuose žymiai viršys išsipareigojimų dalį su fiksuota palūkanų norma bendruose pasyvuose. Ši strategija efektyvi tuomet, kai komercinis bankas laukia palūkanų normos kitimo, ir jeigu prognozės pasitvirtina, tai banko marža padidėja. Nors balanse šitokia situacija neatspindi, tačiau tokio komercinio banko akcijų vertė rinkoje žymiai pakils.

Nesvarbu, kurią strategiją bankas taikytų savo veikloje, komercinis bankas parodo, kad laikosi šiuolaikinio aktyvų ir pasyvų valdymo požiūrio, o tai tiesiogiai veikia ne tik banko likvidumą, saugumą, bet ir pelningumą.

Pasirinkta banko aktyvų ir pasyvų valdymo strategija leidžia bankui savo veikloje pasiekti veiklos bankinės harmonijos, tai yra suderinamumo siekiant maksimizuoti pelningumą, išliekant likvidžiu, kartu minimizuojant riziką. Vienas svarbiausių rodiklių, leidžiančių įvertinti komercinių bankų aktyvų ir pasyvų sisteminio valdymo sėkmę, pasirenkant aktyvų ir pasyvų valdymo strategiją, yra grynosios palūkanų pajamos (GAP), kurios apskaičiuojamos kaip jautrių aktyvų ir pasyvų palūkanų skirtumas. Grynosios palūkanų pajamos (GAP), parodo komercinių bankų valdymo pasirinktą strategiją, orientuotą į didesnę pelningumą, gaunamą pajamų forma, į veiklos rizikos sumažinimą ir likvidumo garantavimą.

Grynųjų palūkanų pajamų pokyčiai komercinių bankų veikloje atsiranda dėl to, kad aktyvų, jautrių palūkanų normų pokyčių, apimtis skiriasi nuo pasyvų, jautrių palūkanų normos pokyčių, apimties.

Kuo didesnė komercinio banko GAP absoliučia išraiška apimtis, tuo didesnis grynųjų palūkanų pajamų pokytis per analizuojamą laikotarpį.

Pasirenkant aktyvų ir pasyvų valdymo strategiją, svarbu pasirinkti optimalų balanso struktūros nustatymą per palūkanų normų ciklą, garantuojančią harmoningą bankinę veiklą (*concordance*). Siekiant teigiamų grynųjų palūkanų pajamų, bankui išaugs rizika, tačiau grynųjų palūkanų apimtis taip pat padidės; tuomet komercinio banko veikla plečiasi, palūkanos kyla, o pasyvų dalyje didėja išsipareigojimų apimtis su neįautriomis palūkanomis.

Siekiant bankinės veiklos diversifikacijos, bankas gali pasirinkti aktyvų ir pasyvų valdymo strategiją, orientuotą į neigiamą GAP; tuomet palūkanos krenta, o pasyvų dalyje didėja išsipareigojimų dalis su jautriomis palūkanomis, didėja fiksuoto kurso ir ilgesnės trukmės paskolų apimtis.

Nulinio skirtumo strategija pasirenkama siekiant apsidrausti nuo palūkanų normų pokyčių ir nestabilumo finansų rinkoje atveju, nes kuo bankai aktyvų ir pasyvų valdyme siekia didesnių grynųjų palūkanų pajamų (GAP), tuo bankas susiduria su didesne rizika, ypač esant nestabiliui ekonominei situacijai.

Raktažodžiai: *bankų aktyvai, pasyvai, aktyvų ir pasyvų valdymo strategijos, nulinio, teigiamo, neigiamo skirtumo strategijos, grynosios palūkanų pajamos (GAP)*.

The article has been reviewed.

Received in March, 2008; accepted in April, 2008.