FACTA UNIVERSITATIS
Series: **Economics and Organization** Vol. 10, N° 2, 2013, pp. 129 - 145

Review paper

THE ANALYSIS OF KEY FINANCIAL PERFORMANCES OF BANKS

UDC 657.375:336.71

Tadija Đukić, Bojana Novićević

Faculty of Economics, University of Niš, Serbia

Abstract. *Financial reporting is the activity that provides relevant information for making important business decisions. The role of financial reporting in banks is of crucial importance for the efficiency of banks' operations. Data needed for adequate financial reporting are found in basic financial statements. In recent years, there has been a growing need for calculating performance indicators using the information from balance sheets, income statements and cash flow statements. In that regard, the paper will focus on four types of financial performance indicators: solvency and liquidity indicators, quality of earnings indicator, capital expenditure indicator and cash flow return indicator.*

Key Words: *financial reporting, banks, financial performances of banks.*

INTRODUCTION

The process of reaching important business decisions in banks requires a solid information basis which is provided by financial accounting. The reason for that lies in the fact that complex business activities of banks are presented in financial statements standing for the product of accounting information system. This system collects, classifies, records and aggregates business operations that are performed in banks. The quality of financial statements affects the interest of investors.

Apart from being financial institutions, banks operate in the way all other enterprises do. Namely, banks trade in goods and services. However, they differ from other enterprises in that their goods are reflected in money as a specific instrument that is not owned by banks. Banking services are related to keeping and disposing of other people's money. Seen as enterprises, banks generate profit by disposing of other people's money. Contrary to commercial enterprises which make decisions on their own and use their own assets for

Received April 25, 2013 / Accepted June 16, 2013
Corresponding author: Tadija Đukić
Faculty of Economics, Trg Kralja Aleksandra 11, 18000 Niš, Serbia
Tel: +381 18 528 690 • E-mail: tadija.djukic@eknfak.ni.ac.rs

reaching the business goals, banks aim at reaching their goals, protecting the shareholders' interests and maximizing profit by using other people's money while at the same time being under constant control of regulatory institutions and the state. With the purpose of making their operations efficient, banks must have adequate information on who needs the money as well as on who has the extra money and is ready give it to the bank to keep it.

In that regard, the first part of the paper will deal with financial reporting as the basis of general-purpose accounting information. The following part will point to the specific process of preparing banks' financial statements. The final part of the paper will focus on analyzing four types of banks' financial performance indicators using the data from the balance sheet, the income statement and the cash flow statement. Four types of indicators that will be analyzed in this paper are: solvency and liquidity indicators, quality of earnings indicator, capital expenditure indicator and cash flow return indicator.

1. Financial Reporting – The Basis of General-Purpose Accounting Information

Financial reporting is the financial accounting activity that provides solid information basis for making investment, loan and other economic decisions. In that regard, financial reporting is the process of preparing and providing quantitative information about an enterprise to the users, i.e. decision makers[1]. With the purpose of fair presentation of financial position, profitability and cash flows, IAS/IFRS offer the possibility of choosing among alternative accounting procedures, evaluations and policies in the process of preparing financial statements. Preparing financial statements is the sole responsibility of enterprise managers. Apart from having accounting expertise, they are expected to accept professional and ethical standards of financial reporting so that they could be able to respond to the requirements of the users of information found in financial statements. In that regard, The Financial Accounting Standards Board (FASB) defined the following set of goals of financial reporting[2]:

- Provision of information that will be useful to investors and creditors in the process of making rational decisions,
- Provision of information that will be useful to investors and creditors in the process of assessing the amount, timing and certainty of cash flows,
- Provision of information on the economic resources of an enterprise and the claims to those resources,
- Provision of information on the business performances of an enterprise during one year,
- Provision of information on the ways in which an enterprise generates and uses cash,
- Provision of information on the way in which the management of an enterprise discharges its managerial responsibility to owners, and
- Provision of explanations and interpretations that will be useful for better understanding of financial information.

[1] Roger Hermanson, James Don Edwards and Michael W. Maher, Accounting Principles, Fifth Edition, Illinois, 1992, prema dr Radosav Stevanović, Savremeno finansijsko izveštavanje: suština, okruženje i okvir, Zbornik radova sa XXVIII simpozijuma, Zlatibor 1997. god, str. 25.

[2] Stefanović R., Finansijsko izveštavanje u našoj zemlji, Knjigovodstvo, Beograd, 6-7/1974, prema dr Jovan Krstić, Instrumenti finansijsko-računovodstvenog izveštavanja (pristup ex post i ex ante), Ekonomski fakultet, 2002. str.18.

With the purpose of meeting the defined goals, it is necessary to construct the entire financial infrastructure based on the following five "golden principles" established by the International Monetary Fund and the World Bank[3]:

- transparency,
- solid financial system,
- involvement of the private sector,
- well-planned capital flow liberalization
- international market modernization.

Prepared in accordance with the above-mentioned "golden principles", financial reports stand for the primary tool that the managers use in the process of communicating with the users of financial information. The contemporary business environment is characterized by the growing number of people interested in information presented in financial statements. Users of financial statements can be classified into internal and external users. Management bodies and decision makers in an enterprise belong to the group of internal users of financial statements. External users are the primary users of information presented in financial statements. External users can be classified into[4]: external users with direct financial interests – present and prospective investors and creditors, and external users with indirect financial interests – tax administration, regulatory agencies, clients and economic planners. With the purpose of providing a solid and reliable basis for the process of decision making, financial statements must meet some qualitative criteria. Framework for the Preparation and Presentation of Financial Statements suggests four main characteristics of financial statements: understandability, relevance, reliability and comparability.

Understandability of financial statements refers to the feature of financial information that makes them understandable by the users who possess a certain level of knowledge of business and economic activities and accounting. However, insistence on understandability of financial statements must not jeopardize their relevance due to the fact that relevant information must be presented regardless of their complexity.

Relevant information is the one that affects economic decisions of the users of financial statements by helping them evaluate past, present or future events or confirming or correcting their past evaluations[5]. What is more, information presented in financial statements must be materially significant. Omission or misstatement of materially significant financial information could have far-reaching negative effects on economic decisions of the users of that information. In that regard, relevance, as a qualitative characteristic of financial statements, includes: predictability, feedback and timeliness[6]. Predictability of financial information enables users to increase the probability of concrete outcome of past and present events, whereas feedback enables confirmation or correction of earlier ex-

[3] Novićević, B., Uticaj globalizacije na finansijsko izveštavanje, Zbornik radova sa XXXV Simpozijuma Saveza računovodja i revizora Srbije, Zlatibor 2004., str. 7-19.

[4] Stevanović, R., Savremeno finansijsko izveštavanje: suština, okruženje i okvir, Zbornik radova sa XXVIII simpotijuma, Zlatibor 1997., str. 26.

[5] Aleksić, B., Kvalitet finansijskog izveštavanja prema međunarodnoj profesionalnoj regulativi, Zbornik radova sa XXXV simpozijuma, Zlatibor 2004., str. 172.

[6] Novićević, B., Antić, Lj., Upravljačko računovodstvo, Ekonomski fakultet Niš, Niš 2009.

pectations. Timeliness refers to the disclosure of information before they lose the possibility of affecting decisions.

Information is reliable if it does not contain material errors and bias and if the users can see it as the one faithfully representing – in terms of valid description – that which it either purports to represent or could reasonably be expected to represent[7]. Reliable information represents transactions and economic events in accordance with their economic substance. Reliability includes the following components: confirmability, representativeness and neutrality. Confirmability involves the application of appropriate measurement with the purpose of presenting information in accordance with what they are supposed to represent[8]. Balance between the measurement and the event that it is supposed to represent refers to the representativeness of information, whereas neutrality refers to unbiased evaluation of facts related to the presented information.

The last qualitative characteristic of financial reports is comparability. Comparability enables users to analyze information and events through time. Uniform and consistent application of accounting policies forms the basis of comparability of financial statements.

2. FINANCIAL STATEMENTS OF BANKS AS THE INFORMATION BASIS FOR ANALYZING KEY FINANCIAL PERFORMANCES

The role of accounting in the banking system is very important. It is reflected in the provision of information needed in the process of making adequate business decisions. As in the case of commercial enterprises, sources of information needed in the process of making business decisions in banks are found in basic financial statements: balance sheets, income statements, cash flow statements, statements of changes in equity and notes to the financial statements. What is more, specific banking operations require some specific statements, such as the statement of maturity match of receivables and liabilities. Some specific statements are prepared on a daily basis to provide their users (managers, creditors, depositors, shareholders, government bodies) with the possibility of assessing the bank's solvency. With respect to the scope of this paper, the authors decided to provide detailed analysis of the following statements: balance sheet, income statement and cash flow statement.

Bank's **balance sheet** (statement of financial position) is a two-sided overview of bank's asset and liability accounts on a specific date. Assets include bank's investments, while the liabilities include bank sources of funding. In that regard, balance sheet liabilities point to the formation of bank funds, whereas assets point to their use. Specific banking operations make banks' balance sheets different from balance sheets of production and trading enterprises with respect to asset structure, liabilities and capital. The reason for this lies in the fact that banks obtain funds by borrowing from financially surplus entities and use them for obtaining different types of assets (loans, securities, equipment etc.). Banks cover their borrowing costs and generate profit from return on effects and

[7] Kaplan, Finansijsko izveštavanje, prevod – ACCA, zvanični priručnik za profesionalnu kvalifikaciji, 2006., str. 17.

[8] Jovan Krstić, Instrumenti finansijsko-računovodstvenog izveštavanja (pristup ex post i ex ante), Ekonomski fakultet, 2002., str. 18.

loans. Since all assets have their sources, it is logical that bank's balance sheet assets and liabilities must always be balanced. Bank is a business enterprise that sells certain types of products. Therefore, basic balance sheet equation, Assets = Liabilities + Share capital, is relevant for banks as well. In a bank's balance sheet, asset positions are grouped following the principle of decreasing liquidity, whereas liability positions follow the principle of decreasing maturity[9]. Seen from the aspect of maturity, structure of a bank's balance sheet points to the ability of the bank's management to match due receivables and due liabilities. In that regard, bank's balance sheet provides a solid basis for assessing the bank's liquidity.

An important place in bank's balance sheet assets is given to different types of investments. These elements of bank's balance sheet assets are:

- Cash and cash equivalents,
- Securities and stakes
- Loans and advances to other banks and deposits with other banks
- Loans and advances to customers, and
- Other assets.

Loans and advances to customers and investments in securities (effects) are dominant in the asset structure.

Cash refers to the funds that are immediately available and are used to meet bank's liquidity needs. These include funds that are found in the bank vault, funds kept in other banks' accounts, cash in the process of billing and bank reserves (primary reserves). These cash proceeds stand for the first level of protection in relation to the withdrawal of deposits and the first source of funding which the bank relies on when the client submits the loan approval request[10]. Banks are obliged to keep one portion of funds in the Central Bank's account. These funds stand for required reserves. Required reserves can be applied to the total deposit, part of the deposit or categories arising from other liabilities, such as borrowing and funds obtained by issuing securities[11]. Decision on the level of this rate and the basis for calculating required reserves is made by the Central Bank.

Securities that can be rediscounted (refinanced) in the Central Bank and securities traded stand for the special element of bank's assets. This classification of securities is based on the management's intended use of securities. They stand for the so-called secondary reserves. The amount of money by which these effects are entered into the balance sheet is determined according to fair value as set by the requirements of IAS/IFRS.

With the purpose of easier evaluation and understanding of the relationship that a bank has with other banks and the money market, balance sheet assets point separately to advances and loans to other banks and deposits with other banks. The level of this element of bank's assets points to the interdependence of banks on one hand and their dependence on the money market, on the other hand.

Loans and advances to customers are the most important elements of bank's assets. They cover about three quarters of total bank's assets. This situation is quite logical if it is taken into consideration that loans and advances stand for the main source of banks' income. Loans that banks grant to customers stand for the form of claims that are, therefore,

[9] Vunjak, N., Kovačević, Lj. (2006) Bankarstvo – bankarski menadžment, Ekonomski fakultet Subotica, str. 301.
[10] Rose, P. (2003) Bankarski menadžment i finansijske usluge Finansiizveš, Mate, Zagreb, str. 109.
[11] www.nbs.rs, Novembar 2012

less liquid than the above-mentioned elements of assets. This is because the nature of claims is such that they cannot be converted into cash prior to maturity. What is more, they are also characterized by high probability of default. Banks record loans and advances granted at the current market interest rate at the nominal value of the outstanding principal. If the bank approves loans at an interest rate that differs from the market interest rate, it is required to disclose it in notes to the balance sheet.

The rest of bank's assets include property, plant and equipment, as well as intangible assets, investment property etc. According to the current regulations, items within this position are recorded at cost, less allowance for amortization and possible depreciation.

Balance sheet liabilities show total bank liabilities and equity. Bank's liabilities represent amounts payable on the basis of previous business events resulting from the acquisition of economic benefits whose settlement requires cash outflow[12]. Bank's liabilities mostly consist of various types of deposits from other banks and money markets. In addition, liabilities include liabilities arising from borrowings, liabilities arising from bills and other securities, provisions and other liabilities. Positions of bank liabilities are recorded mostly at par value with respect to the level of their maturity.

Capital is the final element of bank liabilities. It is formed by issuing and selling of shares and the retention or accumulation of income and establishing reserves from profit. This capital is often referred to in literature as primary capital[13]. It refers to the value of net assets, obtained as the difference between total assets and liabilities. It represents the lower limit below which the value of bank assets cannot go and gives a guarantee to depositors over the bank's insolvency. Capital obtained by issuing and selling of shares is called the core capital. Its value in the liabilities is determined by the number of shares sold multiplied by their nominal value.

Bank's **income statement** provides an overview of income and expense, as forms of intermediate results, over a specified period of time, bordered with two successive balance sheets. Positions of regular income and expense are shown in a specific way with the purpose of pointing to their significance. Therefore, interest income and interest expense are presented in the first place, followed by fee and commission income and expense and net fee and commission income and expense. Net income and expense from exchange rate differences are given a special place in the income statement. These are followed by income from dividend and stake, other operating income and net income and expense arising from loan write-off and provision. Income statement shows operating expenses and groups them into "salaries, wages and other personal expenses", "amortization expenses" and "operating and other expenses". Income and expense arising from revaluation of assets and liabilities are presented at the end of the income statement.

It is significant that the income statement also points to "net income/expense from sale of securities at fair value through income statement", "net income/expense from sale of securities available for sale" and "net income/expense from sale of securities held to maturity".

Securities (financial assets or financial liabilities) at fair value through income statement are, in accordance with paragraph 9 of the International Accounting Standard 39,

[12] Beke-Trivunac, J. (2004) Bankarsko računovodstvo, Fakultet za trgovinu i bankarstvo „Janićije i Danica Karić", Beograd, str. 20.

[13] Ćirović, M. (2007) Bankarstvo, Naučno društvo Srbije, Beograd, str. 82.

Financial Instruments: Recognition and Measurement, those securities held for trading that meet the following requirements:

- They are acquired or incurred principally for the purpose of sale or repurchase in the near future;
- At initial recognition, they are part of the portfolio of financial instruments that are managed together and used for short-term profit;
- They stand for the derivative (excluding the derivative representing marked and effective hedging instrument).

Initial evaluation of these securities is performed at fair value without the inclusion of transaction costs. Fair value is the amount for which an asset can be exchanged, or a liability settled, between informed and willing parties in an indirect transaction. Subsequent evaluation is also performed at fair value without any deduction for the costs of the prospective sale.

Securities (investments) held to maturity are non-derivative financial assets with fixed or determinable payments and fixed maturity that the bank intends or can hold to maturity, except for those that the bank designates as being presented "at fair value through income statement" upon initial recognition as well as those designated as available for sale or meeting the definition of loans and receivables. Initial evaluation of these securities is performed at fair value with the inclusion of transaction costs, whereas the subsequent evaluation is done at amortized cost using the effective interest method.

Securities (financial assets) available for sale are non-derivative financial assets that are designated as available for sale, but do not meet the criteria for becoming loans and receivables. In addition, they cannot be grouped into previous two groups of securities. Initial evaluation of these securities is performed at fair value with the inclusion of transaction costs, whereas the subsequent evaluation is carried out at fair value without deducting costs of eventual disposal or at cost for those securities that are not quoted on an active market, i.e. whose fair value cannot be determined.

Cash flow statement is primarily created to display the relevant information about cash inflows and cash outflows within a business system over a period of time[14]. In case of banks, this statement provides information on the ways in which banks generate and use cash and cash equivalents and gives a clearer picture of the efficiency of banking operations, as opposed to the income statement that points to the difference between income and expense. Besides, cash inflow and cash outflow are not directly affected by the accounting policies. Cash flow statement shows cash flows arising from:

- operating activities,
- investing activities, and
- financing activities.

Different nature of banking activities leads to a more complex structure of cash inflows and outflows arising from operating activities in banks than is the case with commercial enterprises. This is because cash flows arising from operating activities include interest receipts and fee receipts, as well as cash inflows arising from acquired deposits

[14] Đukić, T. (2005) Bilans tokova gotovine kao instrument upravljanja likvidnošću predizeća – doctoral dissertation, p. 45.

and loans. Cash outflows arising from interest payment and fee payment, as well as from returned deposit and approved loans are recorded within cash outflow arising from operating activities.

Cash flows from investing activities arise from transactions intended for the realization of future earnings and cash inflow[15]. These include cash inflows and outflows from investing in long-term securities, the sale of share, intangible assets and investment property. In order to classify an activity as an investing activity, that activity must show the acquisition and deprivation of fixed assets and other investments not included in cash equivalents[16].

Cash inflows and outflows arising from increase in capital, subordinated liabilities, borrowings, securities and the sale of treasury shares represent cash flows from financing activities. All these activities result in the change of the size of capital and bank loans.

3. KEY FINANCIAL PERFORMANCES OF COMMERCIAL BANKS

Contemporary business environment imposed the need for monitoring the efficiency of banking operations, not only on the basis of balance sheets and income statements, but also on the basis of the information arising from cash flow statements. The relevance of cash flows for the analysis of bank's performances is fully justified given that the bank's ability to generate cash is a direct indicator of its success. Financial performances, which are based on business flows as well as on cash flows, are often classified into the following four groups[17]:

- Solvency and liquidity performance, dealing with cash interest coverage, current liability coverage and cash dividend coverage,
- Quality of earnings performances, dealing with the ratio of cash inflow from operating activities and sale revenue as well as with the ratio of cash inflow and earnings,
- Capital expenditure performances that link different types of cash flows, and
- Cash flow return performances that point to the cash flow per share, cash flow return on total assets, liabilities and equity capital.

The efficiency of banking operations will be shown by determining the above-mentioned groups of performances on the basis of the data presented in the balance sheet, the income statement and the cash flow statement. Data obtained from one domestic bank will be used for the purposes of practical illustration of ratio indicators. This bank is one of the 33 banks currently operating on the Serbian market and occupies the third place on the list of banks with the best offer of services and the best relationships with clients. On the basis of the power of capital, this bank received the award for being the best bank in Serbia and Montenegro in 2003. Its financial statements for 2011 contain relevant information presented in Tables 1, 2 and 3.

---

[15] Đukić, T., op.cit., p. 54.
[16] IAS 7, item 6.
[17] Đukić, T., op.cit., p. 176.

Table 1 Bank's balance sheet on 31 December 2011 (in 000 of dinars)

Item number	Position	Current year (2011)
	Assets	
1.	Cash and cash equivalents	7,764,116
2.	Revocable deposits and loans	36,357,134
3.	Receivables with respect to interest, fees, sale, change in fair value of derivatives and other receivables	1,824,482
4.	Loans and advances	66,618,638
5.	Securities (excluding treasury shares)	11,737,596
6.	Interests (stakes)	55,229
7.	Other investments	5,799,853
8.	Intangible assets	48,462
9	Fixed assets and investment property	9,044,658
10.	Non-current assets held for sale and assets related to discontinued operations	
11.	Deferred tax assets	
12.	Other assets	3,943,371
13.	Loss over capital	
	Total assets	**143,193,539**
	Liabilities	
14.	Transaction deposits	5,341,330
15.	Other deposits	84,567,546
16.	Loans received	2,124,288
17.	Liabilities with respect to securities	
18.	Liabilities with respect to interest, fees and change in fair value of derivatives	80,252
19.	Provisions	499,584
20.	Tax liabilities	18,479
21.	Liabilities with respect to profit	149,917
22.	Liabilities with respect to assets held for sale and assets related to discontinued operations	
23.	Deferred tax liabilities	9,131
24.	Other liabilities	3,872,710
	Total liabilities	96,363,237
	Capital	
25.	Capital	26,210,091
26.	Reserves from profit	17,639,522
27.	Revaluation reserves	10,029
28.	Unrealized losses with respect to securities available for sale	3,016
29.	Profit	2,973,676
30.	Loss to the level of capital	
	Total capital	**46,830,302**
	Total liabilities	**143,193,539**

Table 2 Bank's income statement for 2011 (in 000 of dinars)

Item number	**Position**	**Current year (2011)**
	Operating income and expenses	
1.	Interest income	12,655,144
2.	Interest expense	6,303,786
3.	Net interest income	6,351,358
4.	Net interest expense	
5.	Fee and commission income	1,046,990
6.	Fee and commission expense	114,030
7.	Net fee and commission income	932,960
8.	Net fee and commission expense	
9.	Net income from sale of securities at fair value through income statement	18,548
10.	Net income from sale of securities available for sale	
11.	Net income from sale of securities held to maturity	
12.	Net income from exchange rate differences	255,573
13.	Net expense from exchange rate differences	
14.	Income from dividend and stake	9,887
15.	Other operating income	370,038
16.	Net income from loan write-off and provision	
17.	Net expense from loan write-off and provision	2,628,713
18.	Salaries, wages and other personal expenses	616,391
19.	Amortization expenses	190,416
20.	Operating and other expenses	1,661,498
21.	Net income from revaluation of assets and liabilities	4,804,321
22.	Net expense from revaluation of assets and liabilities	3,825,010
	Operating income (before tax)	**3,309,511**
	Operating expense (before tax)	
23.	Income tax	334,096
24.	Income from creating deferred tax assets and reducing deferred tax liabilities	
25.	Expense from reducing deferred tax assets and creating deferred tax liabilities	1,739
	Income	**2,973,676**
	Expense	
	Earnings per share (in dinars)	329
	Basic earnings per share (in dinars)	329
	Diluted earnings per share (in dinars)	

Table 3 Bank's cash flow statement for 2011 (in 000 of dinars)

Item number	Position	Current year (2011)
	Cash flows from operating activities	
	Cash flows from operating activities	**13,050,168**
1.	Interest receipts	11,759,855
2.	Fee receipts	1,016,902
3.	Cash inflows from other operating activities	276,404
4.	Cash inflows from dividends and profit	7
	Cash used in operating activities	**7,630,641**
5.	Interest payments	5,148,062
6.	Fee payments	113,202
7.	Payment of gross wages, salaries and other personal expenses	629,909
8.	Taxes, contributions and other duties paid	388,837
9.	Cash outflows from other operating activities	1,350,631
	Net cash inflow from operating activities before increase or decrease in loans and deposits	5,419,527
	Net cash outflow from operating activities before increase or decrease in loans and deposits	
10	Decrease in loans and increase in deposits	6,991,570
11.	Increase in loans and increase in deposits	3,424,482
12.	Income taxes paid	605,776
13.	Dividends paid	902,154
	Net cash inflow from operating activities	**7,478,685**
	Net cash outflow from operating activities	
	Cash flows from investing activities	
	Cash inflows from investing activities	**103,611**
14.	Cash inflows from the sale of investment property	103,611
	Cash outflows from investing activities	**5,839,125**
15.	Cash outflows from investing in long-term securities	5,683,322
16.	Cash outflows from the purchase of intangible assets and fixed assets	153,487
17.	Cash outflows from the purchase of investment property	2,316
	Net cash inflow from investing activities	
	Net cash outflow from investing activities	**5,735,514**
	Cash flows from financing activities	
	Cash inflows from investing activities	
	Cash outflows from investing activities	**23,125**
18.	Net cash outflow from loans	23,125
	Net cash inflow from financing activities	
	Net cash outflow from financing activities	**23,125**
	Total net cash inflow	**20,145,349**
	Total net cash outflow	**18,425,303**
	Net cash increase	**1,720,046**
	Net cash decrease	

a) Solvency and liquidity indicators

For the purposes of evaluating the bank's solvency and liquidity, the authors of this paper chose the following performance indicators: current cash debt coverage ratio, cash debt coverage ratio, cash interest coverage ratio and cash dividends coverage ratio.

Current cash debt coverage ratio points to a bank's ability to pay current debts. Higher level of this ratio points to the fact that the bank will have fewer problems with servicing its liabilities. Current cash debt coverage ratio represents the ratio of net cash flow from operating activities and average current liabilities. The amount of current liabilities was found in Notes to the financial statements showing the liability maturity structure. Current liabilities for 2010 equal 55,783,526 dinars, whereas current liabilities for 2011 equal 27,757,778 dinars. If these data are put in an equation, the following result is obtained:

$$\text{Current cash debt coverage ratio} = \frac{7{,}478{,}685}{(55{,}783{,}526 + 27{,}757{,}778)*0.5} = 0.179$$

Analysts believe that if the amount of this ratio is greater than 40%, the bank should not be having problems with liquidity. Since the current cash debt coverage ratio is less than 40% in case of this bank, it can be concluded that the bank experienced problems with liquidity.

Bank's ability to cover its liabilities from cash flow arising from operating activities is shown by cash debt coverage ratio. This ratio is obtained as the ratio of net cash flow from operating activities and bank's total liabilities. It amounts to:

$$\text{Cash debt coverage ratio} = \frac{7{,}478{,}685}{96{,}363{,}237} = 0.078$$

The amount of this ratio equaling 20% is deemed more desirable. If the amount of this ratio is lower than 20%, it means that a bank has less flexibility and that it may experience some business problems in the future. However, if the amount of this ratio is higher than 20%, it is considered that a bank can cover its liabilities by the cash flow arising from operating activities. Since the cash debt coverage ratio was well below 20% in case of this bank, it can be said that in 2011 it had less flexibility, and that it may have some problems with solvency in the future.

Cash interest coverage ratio is used for determining a bank's ability to make interest payments and shows how many times the cash outflows for interest payments were covered by cash flows from operating activities[18]. This ratio is obtained when the net cash flow from operating activities plus the interest paid and taxes paid is divided by the interest paid for long-term and current liabilities. Cash interest coverage ratio in case of this bank is:

$$\text{Cash interest coverage ratio}^{19} = \frac{7{,}478{,}685 + 5{,}148{,}062 + 388{,}837}{5{,}148{,}062} = 2.528$$

[18] Đukić, T. (2005) Bilans tokova gotovine kao instrument upravljanja likvidnošću preduzeća – doctoral dissertation, p. 179.
[19] The amounts of interests and taxes paid were found in the Cash flow statement.

It is believed that an adequate amount of this ratio should be greater than 1. When the amount of this ratio is less than 1, the problems with the payment of due liabilities for interest and the need to obtain funds from external sources appear. In this case, each dinar intended for payment of liabilities for interest was covered by 2.528 dinars of net cash inflow from operating activities, indicating that the bank did not have any problems with the servicing of liabilities for interest.

An important indicator of the solvency and liquidity performance of a bank is the cash dividend coverage ratio. This factor is particularly important for existing and potential shareholders because they use it for evaluating the profitability of their investments. The process of obtaining this ratio uses net cash flow from operating activities as the numerator and paid dividends as the denominator. Cash dividend coverage ratio amounts to:

$$\text{Cash dividend coverage ratio}^{20} = \frac{7{,}478{,}685}{902{,}154} = 8.289$$

In order to be attractive for investment, a bank must have the amount of this ratio greater than 1. Since the cash dividend coverage ratio was far greater than 1 in case of this bank, it can be concluded that the bank was attractive to investors interested in increasing their capital.

b) Quality performance indicators

This group of performance indicators includes the quality of revenues ratio and the quality of earnings ratio. Since a bank stands for an enterprise that sells its products, determining these ratios is quite reasonable. These ratios show the ratio of cash inflow from operating activities and the revenue from sales or earnings of a bank.

Quality of revenues ratio shows to what extent the sales revenue was realized in the form of cash inflow. This indicator is derived from the ratio of cash inflows from sales and sales revenue. Cash inflow from sales equals 12,773,757 dinars. It consists of cash inflow arising from interest and equaling 11,756,855 and cash inflow from fees equaling 1,016,902 dinars. Sales revenue amounts to 13,702,134 dinars. Based on these data, this ratio amounts to:

$$\text{Quality of revenues ratio} = \frac{12{,}773{,}757}{13{,}702{,}134} = 0.932$$

The amount of this ratio largely depends on bank's credit policies and the dynamics of return on investment. Judging by the amount of the quality of revenues ratio, it can be said that the quality of revenues in case of this bank was at a high level since it is believed that its value should equal 1.

The difference between the operating profit for the given period and the net cash flow from operating activities is obtained with the help of the quality of earnings ratio. It is determined as the ratio of operating profit and cash flow from operating activities. In this case, it amounts to:

[20] Dividends paid by banks are recorded in the Cash flow statement and their amount for 2011 equals 902,154 dinars.

$$\text{Quality of earnings ratio} = \frac{3{,}309{,}511}{7{,}478{,}685} = 0.442$$

The more the amount of this ratio reaches 1, the less the difference between the calculated and collected revenues. The quality of earnings ratio equaling 0.442 in case of this bank indicates that it did not have an effective debt collection policy.

c) Capital expenditure indicators

For evaluating the possibility of obtaining capital assets, financing and investing, the following indicators will be used: the bank's ability to meet its needs for capital expenditure, the ratio of investment and total outflow, the ratio of investing activities on one hand and operating and financial activities, on the other hand, and the ratio of investing and financing activities.

Bank's ability to meet its needs for capital expenditure by using primarily the cash flow from operating activities is shown by capital expenditure ratio. This ratio is obtained as the ratio of net cash flow from operating activities and capital expenditure. Capital expenditure ratio can also be obtained when the net cash flow from operating activities less dividends paid is divided by capital expenditure. The authors of this paper used the second-mentioned way of determining this ratio.[21]

$$\text{Capital expenditure ratio} = \frac{7{,}478{,}685 - 902{,}154}{5{,}839{,}125} = 1.126$$

Based on the obtained data, it can be concluded that the bank provided enough money for capital expenditure. This is because the preferred value of this ratio equals one.

The ratio of investment outflows and total outflows results in an index pointing to a bank's willingness to invest in technological progress and new equipment. Calculating this index is very important especially in a dynamic and turbulent environment that is characterized by pronounced competition. Index of investment outflows in relation to total outflows is obtained by dividing investment outflows by total cash outflows. Net cash outflow from investing activities in 2011 amounts to 5,839,125 dinars, whereas total cash outflow in this bank amounts to 18,425,303 dinars. In this case, the index amounts to:

$$\begin{array}{r}\text{Index of investment outflows} \\ \text{in relation to total outflows}\end{array} = \frac{5{,}839{,}125}{18{,}425{,}303} = 0.317$$

Therefore, this bank directs 30% of the total outflow to investing activities, which can be considered a relatively good indicator.

With the purpose of managing bank's cash flows in an adequate way, managers also need information on the amount of cash flows from operating activities and financing activities used for investment. These data can be obtained on the basis of the ratio of net cash flow from investing activities and net cash flow from operating and financing activities. After obtaining the needed data from the bank's cash flow statement, the following amount was reached:

[21] Data on capital expenditure are obtained from the Cash flows statement within the cash flows from investing activities.

$$\text{Ratio of net cash flows from investing activities and net cash flows from operating and financial activities} = \frac{5{,}735{,}514}{7{,}478{,}685 + 231{,}125} = 0.744$$

The values of this indicator point to the fact that the bank spends approximately 80% of cash flows from operating and financial activities on investing activities.

Ratio of cash flows from investing activities and financing activities provides an answer to the following question – to what extent is the bank dependent on external sources of funding while performing investing activities? In this case, this indicator amounts to:

$$\text{Ratio of investing and financing activities} = \frac{5{,}735{,}514}{231{,}125} = 24.815$$

The value of this indicator points to the fact that this bank is quite dependent on external sources of funding.

d) Cash flow return indicators

Cash flow per share is one of the most important indicators for internal and external users of financial statements. It is obtained by dividing the cash flow from operating activities by dividends paid to priority shareholders with the average number of ordinary shares[22]. In case of this bank, cash flow per ordinary share amounts to:

$$\text{Cash flow per ordinary share}^{23} = \frac{7{,}478{,}685}{10{,}027{,}456} = 0.745$$

For each ordinary share, this bank generates and collects 0.745 dinars, which can be considered satisfactory.

The ability of bank's total assets to generate sufficient cash is obtained by calculating cash return on assets. This ratio is obtained by dividing cash flow from operating activities increased by the amount of interest and taxes by the total assets of the bank. It indicates the percentage of funds generated in the form of cash. In this case, cash return on assets ratio amounts to:

$$\text{Cash return on assets} = \frac{7{,}478{,}685 + 5{,}148{,}062 + 388{,}837}{143{,}193{,}539} = 0.090$$

Therefore, it can be said that this bank generates 9% of the total assets in the form of cash.

The ratio of net cash flow from operating activities and shareholders equity results in the indicator pointing to a bank's ability to return invested equity capital in the form of net cash flow from operating activities. In this case, this indicator amounts to:

$$\text{Cash return on shareholders equity} = \frac{7{,}478{,}685}{26{,}210{,}091} = 0.285$$

This bank returns 28.5% of invested capital in the form of cash flow from operating activities.

[22] The average number of shares for this bank was obtained from Notes to the financial statements.
[23] In the analyzed period, the bank did not have dividends paid on priority shares.

CONCLUSION

Rapid and dynamic changes of all participants in economic activities resulted in the appearance of weaknesses within the traditional financial reporting model. Neglecting the non-financial and operational information and values and focus on past events are some of the shortcomings of the traditional financial reporting system. Namely, non-financial information provide important data for understanding the relationship among current business events, financial statements and the factors that lead to long-term appreciation. Furthermore, slow adaptation to changes in the turbulent environment does not allow the provision of relevant and reliable information that are necessary for making adequate business decisions in the contemporary business environment. Improved system of financial reporting will enable institutional and individual investors to make relevant decisions on the purchase and sale of securities and to assess the risk of return on investment.

Banks, as well as other enterprises, are obliged to follow the bookkeeping procedures and keep accounting records for the purpose of making adequate economic decisions. Sources of information relevant for decision making processes are found in basic financial statements: balance sheet, income statement and cash flow statement. Balance sheet is a two-sided overview of the account assets and liabilities and points to the formation of bank funds and their use. Balance assets group positions on the principle of decreasing liquidity, while liabilities are positioned on the basis of the principle of decreasing maturity. Bank's income statement displays positions of income and expense in a specific way in order to highlight their significance. Cash flow statement shows the relevant information about bank's cash inflows and outflows. It provides insight into how a bank creates and uses cash and cash equivalents.

Monitoring the financial performance of banks based on data from the cash flow statements has gained importance lately. In this sense, the paper focused on the analysis of solvency and liquidity indicators, quality of earnings indicator, capital expenditure indicator and cash flow return indicator. Each of these indicators provides relevant information about bank's performance during the given period. Making important business decisions on the basis of these indicators will greatly facilitate the process of bank management and enable objective measurement of the efficiency of its operations.

REFERENCES

1. Aleksić, B. (2004) Kvalitet finansijskog izveštavanja prema međunarodnoj profesionalnoj regulativi, Zbornik radova sa XXXV simpozijuma, Zlatibor
2. Beke-Trivunac, J. (2004) Bankarsko računovodstvo, Fakultet za trgovinu i bankarstvo „Janićije i Danica Karić“, Beograd
3. Ćirović, M. (2007) Bankarstvo, Naučno društvo Srbije, Beograd
4. Jovan Krstić (2002) Instrumenti finansijsko-računovodstvenog izveštavanja (pristup ex post i ex ante), Ekonomski fakultet
5. Đukić, T. (2005) Bilans tokova gotovine kao instrument upravljanja likvidnošću predizeća – doctoral dissertation, p. 45.
6. Jovan Krstić (2002) Instrumenti finansijsko-računovodstvenog izveštavanja (pristup ex post i ex ante), Ekonomski fakultet
7. Kaplan (2006) Finansijsko izveštavanje, prevod – ACCA, zvanični priručnik za profesionalnu kvalifikaciji
8. Novićević, B. (2004) Uticaj globalizacije na finansijsko izveštavanje, Zbornik radova sa XXXV Simpozijuma Saveza računovodja i revizora Srbije, Zlatibor

9. Novićević, B., Antić, Lj. (2009) Upravljačko računovodstvo, Ekonomski fakultet Niš, Niš
10. Roger Hermanson, James Don Edwards and Michael W. Maher (1992) Accounting Principles, Fifth Edition, Illinois, prema dr Radosav Stevanović, Savremeno finansijsko izveštavanje: suština, okruženje i okvir, Zbornik radova sa XXVIII simpozijuma, Zlatibor 1997. god.
11. Rose, P. (2003) Bankarski menadžment i finansijske usluge Finansiizveš, Mate, Zagreb
12. Stevanović, R. (1997) Savremeno finansijsko izveštavanje: suština, okruženje i okvir, Zbornik radova sa XXVIII simpotijuma, Zlatibor
13. Vunjak, N., Kovačević, Lj. (2006) Bankarstvo – bankarski menadžment, Ekonomski fakultet Subotica
14. www.nbs.rs, Novembar 2012.

ANALIZA KLJUČNIH FINANSIJSKIH PERFORMANSI BANKE

Tadija Đukić, Bojana Novićević

Finansijsko izveštavanje predstavlja aktivnost kojom se obezbeđuju relevantne informacije za donošenje važnih poslovnih odluka. Uloga finansijskog izveštavanje u bankama je od presudnog značaja za uspešnost poslovanja jedne banke. Neophodne podatke za adekvatno finansijsko izveštavanje nalazimo u osnovnim finanasijskim izveštajima. Poslednjih godina raste potreba za izračunavanjem pokazatelja performansi koji koriste informacije ne samo iz bilansa stanja i bilansa uspeha, već i izveštaja o novčanim tokovima. U tom smislu, u radu se koriste četiri vrste pokazatelja finansijskih performansi: pokazatelji solventnosti i likvidnosti, pokazatelj kvaliteta dobitka, pokazatelj kapitalnih izdataka i pokazatelj povraćaja novčanog toka.

Ključne reči: *finansijsko izveštavanje, banke, finansijske performanse banaka*