# *4. Performances and Risk Exposure of the Banking System in the Republic of Macedonia*

## 4.1. Credit Risk

The most important risk the banks in the Republic of Macedonia face with is the credit risk, due to the fact that the traditional banking function of mediation is dominant in the banks' operations, taking into account the underdevelopment of other financial instruments.

On the other hand, the credit risk involved in the banks' operations is exceedingly high due to the yet insufficiently developed credit policies, procedures and practices, the conditions in the Macedonian economy, as well as the external shocks that disturbed the Macedonian economy.

However, the credit risk has been registering a downward trend over the ten-year period, manifested through the decline in the placements classified in risk categories C, D and E of the total banks' credit portfolio. The trend of improvement of the assets quality and decrease in the credit risk was interrupted, due to the military developments in our neighborhood in 1999. Thus, at the end of 1999, the share of high-risk placements in the banks' credit portfolio was returned to the level at the end of the first quarter of 1997. However, in 2000 the basic banks' assets quality ratios indicated upward trend, which at the end of 2000 approximated to the level before the Kosovo crisis.

The analysis of the assets quality of the Macedonian banks i.e. the structure and the quality of their credit portfolio, conducted on a basis of estimated ratios as of December 31, 2000, are given further in the text (Annex 3).

Dominant segment in the assets of the Macedonian banks, which influences the decisions on their overall operations, is the credit portfolio. Major components of the banks' credit portfolio are the claims based on loans and interests (performing and non-performing), other claims on various basis that involve taking credit risk as well as the off-balance risk exposure. The total banks' credit exposure equals the total amount of all these categories, excluding the non-performing interest.

The total credit exposure of the Macedonian banks amounted to Denar 50,576 million on December 31, 2000 and compared to December 31, 1999 is almost unchanged. If the off-balance credit exposure is not taken into account, the share of the remainder of the credit portfolio in the total gross assets equaled 45% on December 31, 2000 and compared to the end of December 1999, it was lower by 5 percentage points.

The structural analysis of the credit portfolio indicates that the category "performing loans" is the most dominant component, with 54.7% share on December 31, 2000. Compared to the end of December 1999, the structural share of the performing loans in the total credit portfolio was brought down by 2.4 percentage points, followed by the share of non-performing loans –20%, off-balance exposure – 18.5%, other claims – 5% and performing interest – 1.6%.

The quantification of series of ratios for identification of banks' placements, bearing higher level of risk and adversely affects their overall risk profile by having unfavorable influence on the liquidity and solvency position of the banks, is important aspect of the analysis of the credit portfolio performances.

Thus, as of December 31, 2000, the total amount of claims and off-balance sheet items classified in risk categories C, D and E amounted to Denar 17,615 million, accounting for 34.8% of the total credit exposure or 94.2% of the guarantee capital of the banks in the Republic of Macedonia. At the end of 1999 this ratio equaled 41.3%, or by 6.5 percentage points more. The downward trend of the ratio total credit exposure in C, D and E / Guarantee capital is even more significant due to the further capitalization of the Macedonian banks and the inflow of foreign capital in 2000. As of December 31, 2000, this ratio equaled 94.2%, which compared to the end of 1999 (145.3%) it decreased by 51.1 percentage points. Such movements in 2000 contributed to decline in the level of credit risk exposure of the Macedonian banks and its approximation to the level before the Kosovo crisis. It should be underlined that the fall of the level of bad placements in 2000 was achieved in line with the upward trend of the total placements, indicating improvement of the banks' credit procedures and practices. The conclusion remains that the credit risk in the banks in the Republic of Macedonia is high, visible through the high level of claims classified in the risk categories C, D and E, which is an indicator for ineffective allocation of the scarce resources of the Macedonian economy.

Provided that the allocated provision for credit exposure classified in the risk categories C, D and E are taken into consideration in the analysis of the credit portfolio quality and structure, the conclusion would be that the uncovered part of this segment of the banks' risk exposure amounts to Denar 8,152 million, accounting for 16.1% of the total credit portfolio or 43.6% of the guarantee capital of the Macedonian banks, as of December 31, 2000. If we suppose the worst scenario where none of the banking placements classified in risk categories C, D and E can be collected, then 43.6% of the banks' guarantee capital should be used for covering the losses. This indicates that the high level of bad placements of the banks in the Republic of Macedonia is not a significant potential which may adversely influence the stability and soundness of the banking system, primarily due to the high level of capitalization of the banks in the Republic of Macedonia.

The table given below contains certain ratios for the credit portfolio quality of the Macedonian banks since the end of 1999[2]:

Table 9

Ratios for Credit Portfolio Quality

(in %)

| Ratios | 31.12.1995 | 31.12.1996 | 31.12.1997 | 31.12.1998 | 31.12.1999 | 31.12.2000 |
|---|---|---|---|---|---|---|
| % of C, D, E in total credit exposure | 44.4 | 42.8 | 35.6 | 32.9 | 41.3 | 34.8 |
| % of D, E in total credit exposure | 26.8 | 21.7 | 24.0 | 17.27 | 25.1 | 22.70 |
| % of C, D in total credit exposure | 23.7 | 29.8 | 24.5 | 29.8 | 34.4 | 26.18 |
| % of E in total credit exposure | 20.8 | 13.0 | 11.1 | 3.1 | 7.0 | 8.6 |
| % of risk (potential losses/total exposure.) | 30.8 | 25.4 | 23.8 | 17.5 | 22.6 | 21.4 |
| % of C, D, E in guarantee capital | 133.6 | 139.4 | 143.0 | 123.4 | 145.3 | 94.2 |
| % of D, E in guarantee capital | 80.7 | 70.8 | 96.2 | 64.8 | 88.3 | 61.4 |
| % of C, D in guarantee capital | 71.2 | 97.2 | 98.5 | 111.7 | 120.8 | 70.8 |
| % of E in guarantee capital | 62.4 | 42.3 | 44.4 | 11.7 | 24.6 | 23.4 |
| % of net C, D, E in guarantee capital | 48.8 | 65.8 | 60.9 | 70.5 | 74.6 | 43.6 |

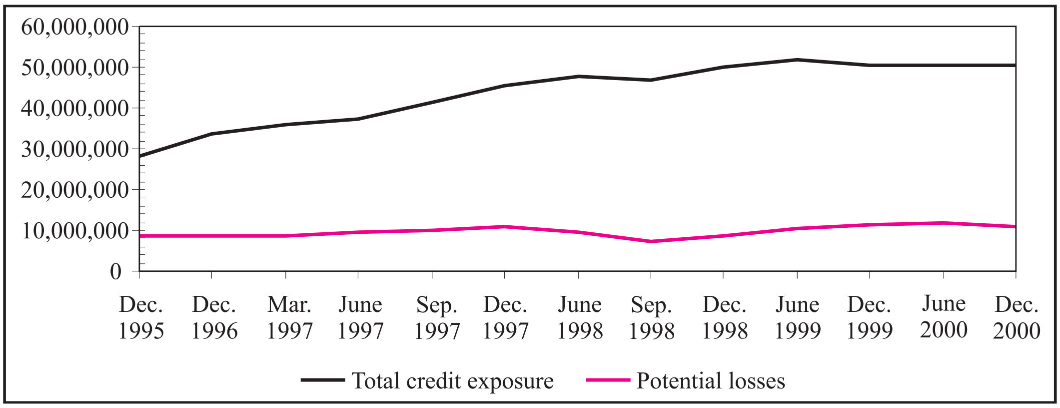
[2] Annex 3 provides precise table of certain ratios for the credit portfolio quality of the Macedonian banks.

The risk degree of the credit portfolio of the Macedonian banks which represents the relation between the estimated potential losses and total credit exposure equaled 21.44% as of December 31, 2000, which corresponds to the risk category C (25%). At the end of December 1999, this ratio equaled 22.6%, while at the end of December 1998, it equaled 17.5%.

The chart given below indicates the movement of the credit exposure and estimated potential losses of banks since the end of 1996.

Chart 9

Movement of the Credit Exposure and Estimated Potential Losses of Banks




The total banks' credit exposure in December 31, 1995 – December 31, 2000 period increased by Denar 22.462 million or by 79.9%. The identified potential losses in the banks' credit portfolio increased by Denar 2,196 million or by 25.4% in the same period, thus reaching Denar 10,842 million at the end of 2000.

The analysis should take into account that the identified potential losses as of December 31, 2000 do not correspond to the allocated provisions for potential losses contained in the aggregated balance of the Macedonian banks. The on-site examinations identified concealed losses, which are not reflected in the banks' balances. Thus, as of December 31, 2000, unallocated provisions for potential losses (including the amount of unrecorded non-performing interest) were identified in 7 banks, in total amount of Denar 313 million.

Analyzing bank-by-bank, the ratio for share of the claims and off-balance sheet items classified in risk category C, D and E ranges from 0% to 87%. In 11 banks, this ratio is above the average – 34.8%, while in the remaining 11 banks this ratio indicates a risk level of the credit portfolio lower than the average estimated at a level of all banks.

The credit portfolio risk level by bank ranges between 1% and 38%. Taking into account the average risk level of the banks' total credit portfolio – 21.44%, it can be concluded that in 9 banks it is above the average level, while in the remaining 13 banks, the average risk level of the credit portfolio is lower than the average estimated at a level of all banks.

### *4.1.1. Off-balance Sheet Activities of the Banks in the Republic of Macedonia*

The off-balance sheet activities of the banks in the Republic of Macedonia are still within the framework of the traditional off-balance sheet banking activities: providing guarantee, opening letters of credit and extending lines of credit. The underdeveloped financial market in the Republic of Macedonia and poor supply of financial instruments and securities result in banks abstinence from engaging in operations with financial derivatives: futures, forwards, swaps and options aimed at minimizing the risks exposure of the banks.

As of December 31, 2000, the total off-balance sheet assets of the Macedonian banks amounts to Denar 13,998 million, and compared to the end of 1999 is almost unchanged.

The share of risk off-balance sheet items in the total off-balance sheet assets equals 84.3%, which compared to the end of 1999 decreased by 2.14 percentage points, while compared to June 30, 1999 it decreased by 4.15 percentage points.

The aforementioned ratio indicates that one significant portion (above 80%) of the total off-balance sheet activities of the banks in the Republic of Macedonia bear certain credit risk and as such they have a potential to be transformed into balance sheet claims.

Structurally observed, the share of uncovered guarantees and letters of credit is the most remarkable, which on December 31, 2000 accounted for 64.7% of the total off-balance sheet assets. Compared to the end of 1999, their share in the structure of the off-balance sheet assets decreased by 1.6 percentage points.

Table 10

Off-Balance Sheet Activities of the Banks

(in thousand Denar)

| | 31.12.2000 | 30.06.2000 | 31.12.1999 | 30.06.1999 | 31.12.1998 | 30.06.1998 | 31.12.1997 | 30.06.1997 |
|---|---|---|---|---|---|---|---|---|
| Covered off-balance sheet items | 1,572,533 | 2,337,709 | 1,898,993 | 1,624,998 | 1,795,349 | 2,366,553 | 1,619,656 | 1,830,271 |
| Performance guarantees | 3,243,852 | 3,297,070 | 2,744,087 | 3,336,963 | 3,005,294 | 3,523,002 | 2,531,450 | 2,132,510 |
| Unused lines of credit | 123,340 | 29,123 | 65,234 | 109,582 | 109,510 | 15,117 | 49,274 | 7,542 |
| Uncovered guarantees, letters of credit and other off-balance sheet items | 9,058,717 | 9,223,533 | 9,299,824 | 8,993,390 | 9,825,680 | 9,065,946 | 8,319,176 | 5,979,092 |
| Total off-balance sheet | 13,998,442 | 14,887,435 | 14,008,138 | 14,064,933 | 14,735,833 | 14,970,618 | 12,519,556 | 9,949,415 |
| Risk assets / total off-balance sheet assets | 88.77% | 84.30% | 86.44% | 88.45% | 87.82% | 84.19% | 87.06% | 81.60% |

## 4.2. Capital Adequacy / Insolvency Risk

The fundament of stable and sound banks is their adequate capitalization from aspect of the possibility for absorbing potential losses in cease of possible materialization of risk exposure. This is particularly important for protection of creditors and depositors in banks and nursing and promoting the public confidence in the banking system. Only stable and sound banking system which the citizens and economic sector have confidence in, can be efficient mediator of the resources of the national economy aimed at its growth and development. Hence, the banks' capital adequacy analysis or the insolvency risk is extremely important segment in the total analysis of the banking system performances.

As of December 31, 2000, the total capital in the banking system of the Republic of Macedonia equals Denar 19,102 million, which is by Denar 4,166 million or by 27.9% more compared to December 31, 1999. The increment in the total capital in 2000 was a result of the on-going process of privatization of the banks in the Republic of Macedonia, as well as the permanent activities for their further capitalization. Therefore, the further capitalization of 9 banks in 2000 should be taken into a consideration in total amount of Denar 3,023 million through the admission and additional investments of foreign investors. Particularly important is the further capitalization of Stopanska Banka a.d. Skopje, Tutunska Banka a.d. Skopje and Kreditna Banka a.d. Skopje, in total amount of Denar 2,271 million.

The upward trend of the total capital in 2000, resulted in increase in the level of capitalization and the capital adequacy ratio of the banking institutions in the Republic of Macedonia. As of December 31, 2000, the level of balance sheet activities coverage with banks' own funds equals 23.3%, which compared to December 31, 1999, is an increase of 2.6 percentage points and 1.4 percentage points compared to June 30, 2000. In both analyzed periods, the growth of the capitalization rate was a result of more intensive growth in own funds compared to the growth in the total balance sheet assets. On annual basis, the own funds and the total balance sheet assets register increase of 27.9% and 13.5%, respectively, while compared to the first half of 2000, the own funds and the total balance sheet assets register increase of 20.4% and 13.1%, respectively.

Apart from this, the relatively high banks' capitalization rate in the Republic of Macedonia, analyzed through this ratio, was due to the current structure of the banks' financial potential caused by the scarce supply of other sources of funds and still inefficient mobilization of available funds, primarily the households' savings deposits.

The table for the level of capitalization of the banks in the Republic of Macedonia, as of December 31, 2000, is given below:

Table 11

Level of Capitalization of the Banks in the Republic of Macedonia, as of December 31, 2000

(in thousand Denar)

| BANK | Net assets | Provisions for potential losses | Gross assets | Owned funds | Guarantee capital | Risk weighted assets | Capitalization rate (net) | Capitalization rate (gross) | Capital adequacy |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 3 | 4 | 5=3+4 | 6 | 7 | 8 | 9=6/3 | 10=6/5 | 11=7/8 |
| 1. Five largest banks | 59,380,223 | 7,470,905 | 66,851,128 | 9,889,622 | 9,665,903 | 35,869,952 | 16.65 | 14.79 | 26.95 |
| 2. Other banks | 22,619,106 | 2,405,475 | 25,024,581 | 9,212,658 | 9,042,584 | 15,066,890 | 40.73 | 36.81 | 60.02 |
| 3. Total | 81,999,329 | 9,876,380 | 91,875,709 | 19,102,280 | 18,708,487 | 50,936,842 | 23.30 | 20.79 | 36.73 |

As of December 31, 2000, the capitalization rate of the five largest banks equaled 16.7% and relative to the average capitalization rate at a level of all banks, it was by 6.6 percentage points lower. Out of them, the capitalization rate of the two largest banks is notable and equals 13.8%, which is by 9.5 percentage points lower relative to the average capitalization rate at a level of all banks and by 2.9 percentage points lower compared to the capitalization rate of the five largest banks. The average capitalization rate of the other banks equals 40.7%, which is by 17.4 percentage points higher compared to the total average.

The differences in the capitalization rate of the banks are due to several reasons. The lower capitalization rate of the five largest banks arises from their developed and large deposit base, as well as the fulfilled minimum required capital which enables them to carry out international payment and credit and guarantee operations. Unlike the five largest banks, the deposit base and the structure of financial potential of the smaller banks are scarce. At the same time, over the years, they have undertaken extensive activities for reaching the minimum required capital.

Same as the capitalization rate, in 2000 the ratio which links the banks' own funds and the total scope of balance and off-balance sheet activities registered upward trend. Thus, at the end of December 2000 compared to December 31, 1999, this ratio registered an increase of 2.6 percentage points, thus amounting to 19.9%.

In accordance with the Basle standards, the capital adequacy ratio is the most relevant indicator for the capitalization rate of the banking institutions. This indicator reflects the banks' capital position taking into account the level of risk exposure. The international standard is minimum 8%, implemented in the regulations of the Republic of Macedonia.

It should be noted that the methodology for estimation of the guarantee capital was amended in 2000, by introducing new capital instruments, such as hybrid capital forms and subordinated deposits. Therefore, full compliance was reached between the structure of guarantee capital and the Basle Capital Accord and the 25 Core Principles for Effective Banking Supervision.

Dynamically observed, over the previous five years the guarantee capital at a level of banking system has been registering on-going upward trend. As of December 31, 2000, the guarantee capital of the banks in the Republic of Macedonia amounted to Denar 18,708 million, which is an increase of Denar 4,304 million or 29.9% compared to December 31, 1999.

The equity capital and the reserves in total amount of Denar 18,815 million are dominant components in the structure of the guarantee capital of the Macedonian banks, followed by the additional capital composed of cumulative preference shares and revaluated reserves in total amount of Denar 700 million and the retained unallocated income in the amount of Denar 20 million. The total deducted items of these component equals Denar 826 million, Denar 310 million of which refers to unallocated provisions for potential losses. The capital investments in other entities on net basis equals Denar 347 million, while the recorded uncovered loss from previous years equals Denar 170 million. As of December 31, 2000, there are no subordinated deposits and hybrid capital forms in the structure of the guarantee capital of any bank.

On December 31, 2000 compared to December 31, 1999, the risk-weighted assets of the Macedonian banks were by Denar 699 million more, thus reaching Denar 50,937 million. The chart of the structure of this category in December 31, 1997 and December 31, 2000 period is given on next page.

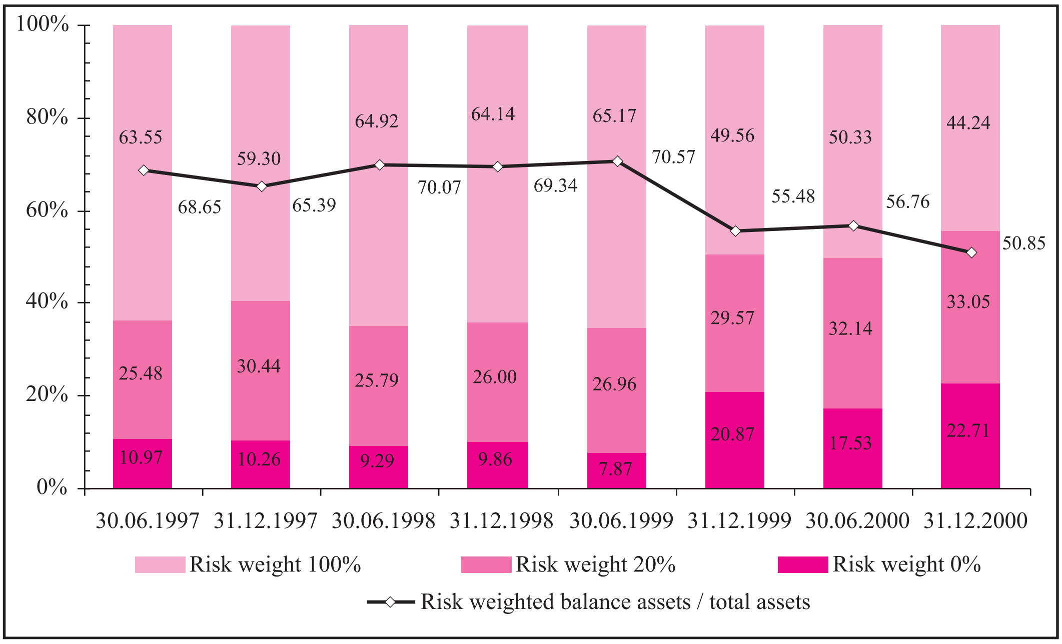
The chart 10 indicates that as of December 31, 2000, the balance sheet assets which involve certain degree of risk, accounts for 50.9% in the total banks' assets, which is by 4.6 percentage points lower compared to December 31, 1999.

The analysis indicates that the balance sheet items with 100% risk-weight which represent the item "other assets"[3] still dominate the structure of the risk-weighted balance sheet assets of the Macedonian banks at the end of December 2000, followed by the balance sheet items with 20% risk-weight which refer to the claims on banks.

[3] The item "other assets" includes all balance sheet items other than those which according to the prescribed methodology are included in the items for which a risk weight 0% and 20% is prescribed. The largest items included in "other assets" are the following: loans to non-financial entities, fixed assets and other claims.

Chart 10

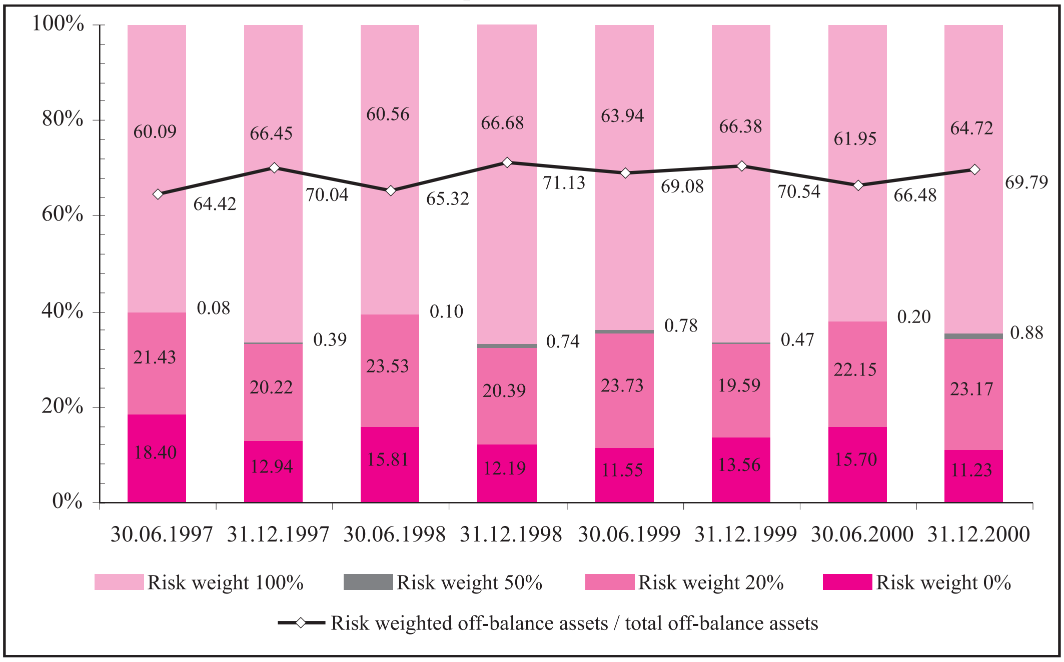
Structure of the Risk-weighted Balance Sheet Assets of the Banks
in the Republic of Macedonia




The risk off-balance sheet items account for 69.8% of the total off-balance sheet operations of the banks, which compared to the previous three years, is almost unchanged.

Chart 11

Structure of the Risk-weighted Off-balance Sheet Assets of the Banks
in the Republic of Macedonia



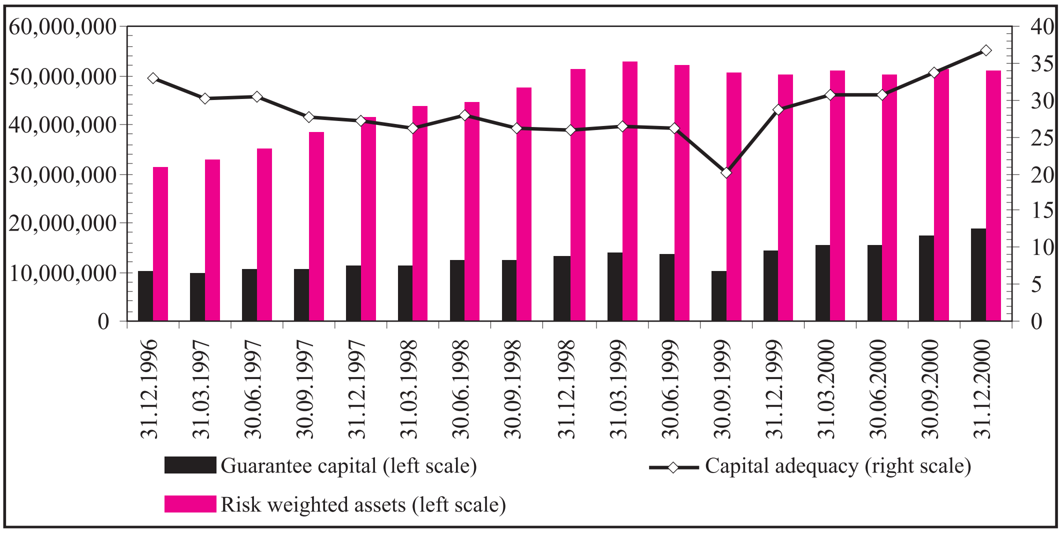

Same as the risk-weighted balance sheet assets, the 100% risk-weighted items referring to the uncovered guarantees, letters of credit and other off-balance sheet items still dominate the structure of the risk-weighted off-balance sheet assets. At the end of December 31, 2000, their structural share equaled 64.7% and compared to December 1999, it registers 1.7 percentage points decline.

As of December 31, 2000, the relation between the total guarantee capital and the total risk-weighted assets of the Macedonian banks results in average capital adequacy ratio of 36.7%. As of December 31, 2000, the capital adequacy ratio of the five largest banks equaled 26.9% and relative to the average capital adequacy ratio of all banks it is lower by 9.8 percentage points. The capital adequacy ratio of the two largest banks is most significant and accounts for 23.4%, which is by 13.3 percentage points lower relative to the average capital adequacy ratio of all banks and by 3.5 percentage points relative to the capital adequacy ratio of the five largest banks. The average capital adequacy ratio of other banks is 60% which is by 23.3 percentage points higher relative to the total average.

The differences in the capital adequacy ratio of each bank are due to several reasons. The lower capital adequacy ratio of the five largest banks arises from their developed and extensive deposit base, which provides additional sources of funds besides the capital. These structures of the financial potential supports large scope of activities primarily credit activity. Therefore, it should be considered that the items with 100% risk-weight constitute the largest part of the risk-weighted assets, primarily composed of loans to non-financial entities, thus directly acting towards increase in the risk-weighted assets. Unlike the five largest banks, the smaller banks handle with scarce deposit base and poor structure of financial potential, meaning that their credit activity is within the framework of their capital and their poor deposit base. Additionally, this structure of financial potential implies risk-weighted assets within the scope of their capital and therefore, a high capital adequacy ratio.

Chart 12

Movements of the Guarantee Capital, the Risk-weighted Assets and the Capital Adequacy Ratio




Unlike the previous years when the capital adequacy ratio registered slight fall, the chart above indicates on-going upward trend of this ratio, which began in the last quarter of 1999 and continued till the end of December 2000. As of December 31, 2000 compared to

December 31, 2000, when the capital adequacy ratio was lowest, it registered an increase of 16.5 percentage points. In 2000 compared to December 1999, the increase in the ratio equaled 7.9 percentage points.

The upward trend of the capital adequacy ratio at a level of overall banking system, was primarily due to the increment in the capital adequacy ratio of the largest bank – Stopanska Banka a.d. Skopje due to the further capitalization and assets restructuring in the process of its selling.

Each bank in the Republic of Macedonia meets the minimum required capitalization of 8%. The bank-by-bank analysis indicates that the lowest capital adequacy ratio equals 23%. Relative to the average level of capital adequacy which equals 36.7%, the capital adequacy ratio of 6 banks is below the average level, while the capital adequacy ratio of the remaining 16 banks exceeds the average level.

### 4.3. Liquidity Risk

In 2000, the strengthening of the banks' deposit potential and their capital position resulted in increased liquidity of the banking system.

The share of liquidity assets[4] in the total banking system assets equaled 45.5% at the end of 2000 or 6.5 percentage points more compared to the previous year. The accounts with foreign banks dominate the structure of liquid assets with 64.83%, out of which the largest portion is available foreign currency funds or short-term deposits of foreign banks. The remainder is funds and balances in the National Bank of the Republic of Macedonia (18% of the liquid assets) and securities rediscounted by the National Bank of the Republic of Macedonia (11.75%).

Table 12

Liquidity Indicators

(in thousand Denar)

| | 2000 | 1999 |
|---|---|---|
| Total assets | 81,999,326 | 72,254,610 |
| Liquid assets | 37,255,394 | 28,086,009 |
| Total deposits | 46,644,384 | 39,714,309 |
| Total liabilities | 54,465,956 | 50,448,548 |
| Short-term deposits | 43,954,402 | 32,996,007 |
| Gross credits | 36,744,633 | 33,251,344 |
| - Liquid assets / Total assets | 45.43% | 38.87% |
| - Liquid assets / Short-term deposits | 84.76% | 85.12% |
| - Short-term deposits / Total deposits | 94.23% | 83.08% |
| - Short-term deposits / total liabilities | 80.70% | 65.41% |
| - Total deposits / Gross credits | 126.94% | 119.44% |

On the side of sources of funds, the sight deposits and the short-term deposits with up to 3 months maturity acco–unted for 94.23% of the total deposits or 80.7% of the total liabilities of the banking system, at the end of the year, which compared to the pre–vious year is an increase of 11.2 and 15.3 percentage points, respectively. Over the whole year, the financial potential of the banking system indicates on-going upward trend, which

[4] Funds and balances in the National Bank of the Republic of Macedonia, securities with the National Bank of the Republic of Macedonia rediscount, checks and funds on the account with domestic and foreign banks with maturity of up to 3 months.

is most significant in the part of the sight deposits and short-term deposits, which indicates that these sources of funds are stable.

In 2000, the National Bank of the Republic of Macedonia commenced activities for developing the model of maturity compliance between the assets and banks' sources of funds. The testing period and analysis of the results of the tests continued in 2001 in order to identify the effects from the implementation of the model.

Taking into account the lack of model for maturity compliance between the assets and the sources of funds for analyzing the liquidity, apart from the indicators for structural share of the liquid funds and sight deposits and short-term deposits, the performances of the banking system liquidity can be analyzed by using the monetary regulation instruments of the National Bank of the Republic of Macedonia and the liquidity management instruments defined as a last resort.

In 2000, the banks in the Republic of Macedonia preserved a balance of compulsory reserve above the allocation requirement, while the usage of funds from the compulsory reserve was within the permitted limit of 60%[5] a day, excluding one bank which once in the course of the year used funds from the compulsory reserve above the permitted amount of 60%.

The average system of allocating compulsory reserve enables the banks to allocate smaller amount of compulsory reserve in the days when they expect large outflows of funds at the expense of the larger allocations in the days when they expect higher inflow of funds.

Table 13

Movement of the Requirement for Allocation
and Usage of the Funds from the Compulsory Reserve

(in thousand Denar)

| Period | Requirement for allocation of compulsory reserve | Compulsory reserve balance | Used compulsory reserve | Percentage of compulsory reserve usage | Cumulative amount of allocated compulsory reserve | Average amount of compulsory reserve | Percentage of allocated compulsory reserve for the month (%) | Excess (deficiency) allocated funds for compulsory reserve |
|---|---|---|---|---|---|---|---|---|
| I | 1,350,473 | 1,420,353 | - 69,880 | - 5.17 | 13,071,094 | 1,369,468 | 101 | 241,601 |
| II | 1,355,557 | 1,334,694 | 20,863 | 1.54 | 19,303,562 | 1,433,712 | 106 | 734,165 |
| III | 1,337,791 | 1,366,587 | - 28,796 | - 2.15 | 18,620,649 | 1,391,213 | 104 | 295,734 |
| IV | 1,285,153 | 1,263,360 | 21,793 | 1.70 | 16,845,869 | 1,310,857 | 98 | 178,767 |
| V | 1,345,220 | 1,548,780 | - 203,560 | - 15.13 | 18,562,512 | 1,541,277 | 115 | 1,463,485 |
| VI | 1,355,061 | 1,420,000 | - 64,939 | - 4.79 | 19,781,124 | 1,423,387 | 105 | 1,059,306 |
| VII | 1,344,923 | 1,386,606 | - 41,683 | - 3.10 | 19,228,786 | 1,481,568 | 110 | 1,432,354 |
| VIII | 1,332,229 | 1,511,007 | - 178,778 | - 13.42 | 20,424,140 | 1,582,005 | 119 | 2,414,180 |
| IX | 1,320,218 | 1,537,756 | - 217,538 | - 16.48 | 20,199,783 | 1,613,880 | 122 | 3,004,584 |
| X | 1,325,852 | 1,446,402 | - 120,550 | - 9.09 | 19,623,046 | 1,429,271 | 108 | 2,002,574 |
| XI | 1,336,423 | 1,504,445 | - 168,022 | - 12.57 | 21,154,513 | 1,544,416 | 116 | 2,632,332 |
| XII | 1,348,772 | 1,853,341 | - 504,569 | - 37.41 | 22,984,522 | 1,841,647 | 136 | 5,634,735 |
| Average for the year | 1,336,473 | 1,466,111 | - 129,638 | - 9.70 | 19,149,967 | 1,496,892 | 112 | 1,757,818 |

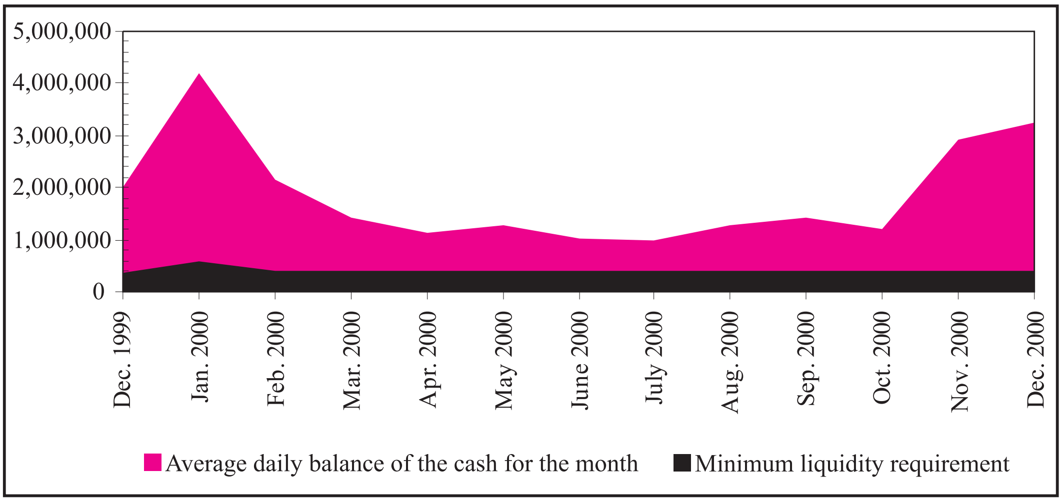
The increased amount of compulsory reserve allocation requirement in the course of the year reflects the strengthening of the banks' deposit base.

[5] In 2000, the limit of using funds from the compulsory reserve increased from 40% to 60%.

The banks in 2000 preserved considerably higher amount of the average daily balance of cash exceeding the minimum liquidity requirement. In the course of the year (February – August period and October), only one bank failed to meet the minimum liquidity requirement.

Chart 13

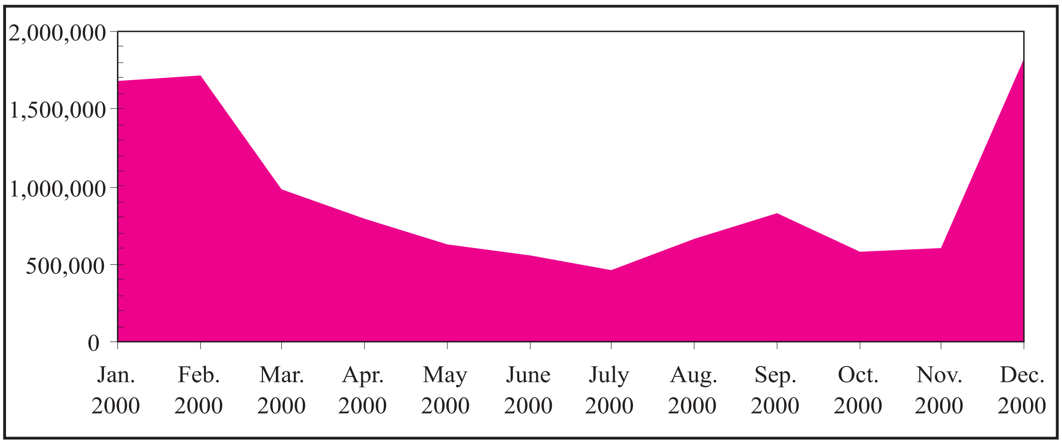
Fulfillment of the minimum liquidity requirement




The banks primarily used the high amount of liquid funds exceeding the minimum liquidity requirement to subscribe for CB bills. Due to the increased liquidity of banks at the end of the previous year and the beginning of the current year, the monetary regulation instruments, which were used by the Central Bank over the previous years, were proved to be inefficient. Therefore, in April 2000, the treasury bills were subjected to certain modifications i.e. two alternative types of CB bills auction were introduced as follows: “interest rate tender” and “volume tender”. In addition, standardized maturity of 28 days was introduced. The interest rate at the CB bill auction reached its highest level in May, when the risk-weighted interest rate equaled 9.77%, while in the second half of the year, the interest rate registered permanent decrease, thus reducing to 6.84% at the end of the year.

Chart 14

Treasury bills of the NBRM (CB Bills)




The Money market is of great importance for the banks’ liquidity management, through which they can place portion of the excess available funds. Considering the fact that the liquidity of the bank in the course of the year was high, the supply on the Money Market in the course of the whole year was higher compared to the demand, which resulted in decrease in the average interest rate, which reduced from 11.5% in January to 7.2% at the end of the year.

Table 14

Movements on the Money Market in 2000

(in thousand Denar)

| Period | Supply | Demand | Realization | Average amount of funds used on the Money market | Weighted interest rate |
|---|---|---|---|---|---|
| I | 1,260,000 | 1,146,000 | 1,091,000 | 243,357 | 11.53% |
| II | 2,130,000 | 1,996,000 | 1,908,000 | 374,301 | 11.77% |
| III | 1,906,000 | 2,399,000 | 1,895,000 | 332,205 | 11.91% |
| IV | 1,700,000 | 2,245,000 | 1,665,000 | 323,876 | 11.82% |
| V | 2,043,000 | 1,683,000 | 1,538,000 | 286,990 | 10.33% |
| VI | 2,208,000 | 2,049,000 | 1,829,000 | 355,493 | 9.77% |
| VII | 2,210,000 | 1,905,000 | 1,789,000 | 351,776 | 9.07% |
| VIII | 2,153,000 | 1,747,000 | 1,513,000 | 329,360 | 8.74% |
| IX | 2,188,000 | 1,679,000 | 1,635,000 | 396,860 | 8.46% |
| X | 2,684,000 | 2,084,000 | 1,893,000 | 434,838 | 8.55% |
| XI | 2,386,000 | 1,598,000 | 1,528,000 | 382,830 | 7.01% |
| XII | 1,921,000 | 1,799,000 | 1,671,000 | 330,358 | 7.15% |
| Average for the year | 2,065,750 | 1,860,833 | 1,662,917 | 345,187 | |

Over the previous years, the Denar deposit auctions have been playing the role of basic monetary regulation instrument by the National Bank of the Republic of Macedonia. The increased liquidity of the banking sector, which primarily was a result of the increased foreign currency inflows in the country after the end of the Kosovo crisis, was typical for the second half of 1999 and 2000. These movements in the banking sector set aside the role of this instrument, which on the other hand led to the need of its revision. The most significant changes in the deposit auctions are the following: a) the auctions are held once a week in accordance with the monthly timetable of the credit auctions and monthly projections for the banking system liquidity movements; b) the banks which want to participate at the credit auctions should posses securities in their portfolio (CB bills, bonds, certificates for deposits issued by banks, commercial bills), which can be offered by banks as a collateral for receiving credit at the auctions, which previously have not been pledged to other entity. At the beginning of each quarter, the National Bank of the Republic of Macedonia publishes a list of securities that will be taken as collateral for receiving credits at the auctions.

Due to the aforementioned facts and changes in the conditions that are to be met i.e. the collateral that should be pledged to the National Bank of the Republic of Macedonia, the usage of this instrument is reduced to a minimum. After the changes made in April 2000, only two banks used this instrument in October with a maturity of 7 days, while the weighted interest rate equaled 8.94%.

Banks use the Lombard credit as a liquidity instrument defined as a last resort i.e. the National Bank of the Republic of Macedonia actively uses this instrument for financing the liquid deficits of the banks. At the moment, the only securities which can serve as collateral for Lombard credit are the CB bills, the bonds issued by the Republic of Macedonia for the

Table 15

Credit Auctions in 2000

| Month | Number of banks | Total amount of credits extended at the auction (in thousand Denar) | Maturity (days) | Average weighted interest rate (in %) |
|---|---|---|---|---|
| I | 1 | 3,670,000 | 1-3 | 11.54 |
| II | 1 | 4,200,000 | 1-3 | 11.56 |
| III | 2 | 4,200,000 | 1-3 | 12.00 |
| IV | 2 | 300,000 | 1-7 | 13.85 |
| V | | | | |
| VI | | | | |
| VII | | | | |
| VIII | | | | |
| IX | | | | |
| X | 2 | 500,000 | 7 | 8.94 |
| XI | | | | |
| XII | | | | |

old foreign exchange savings deposits and the CDs issued by the banks. In 2000, this instrument has a marginal role in the banks' liquidity management, primarily as a result of the fact that the banks do not have collateral i.e. securities, which can be pledged to the Central Bank.

Only two banks were beneficiaries of Lombard credit in February – June period.

Table 16

Used Lombard credits in 2000

| Month | Number of banks | Amount of Lombard credit (in thousand Denar) | Maturity (days) | Interest rate (in % p.a.) |
|---|---|---|---|---|
| I | - | - | - | - |
| II | 1 | 54,000 | 1 | 18.5 |
| III | 1 | 46,000 | 2 | 18.5 |
| IV | 1 | 524,000 | 4 | 18.5 |
| V | 1 | 1,064,000 | 8 | 17.5 |
| VI | 1 | 50,000 | 1 | 17.5 |
| VII | - | - | - | - |
| VIII | - | - | - | - |
| IX | - | - | - | - |
| X | - | - | - | - |
| XI | - | - | - | - |
| XII | - | - | - | - |

The National Bank of the Republic of Macedonia in compliance with the framework of the monetary policy projection and the necessary amount of reserve money adopts decisions on swap transactions. The Central Bank executes the swap transactions in two directions and carries out: a) spot purchase and forward sale of foreign currency and b) spot sale and forward purchase of foreign currency. In 2000, frequent execution of swap transactions was registered, due to the fact that large number of banks does not have adequate collateral for using Lombard credit.

The banks used this liquidity management instrument defined as a last resort 48 days in the year, while the average daily used amount equaled Denar 36.2 million.

Table 17

Swap Transactions in 2000

| Month | Number of banks | Weighted average monthly extension of SWAP transactions (in thousand Denar) | Days of using |
|---|---|---|---|
| I | 1 | 180,108 | 1 |
| II | 1 | 7,001 | 1 |
| III | 4 | 114,574 | 14 |
| IV | 6 | 199,058 | 9 |
| V | 4 | 183,209 | 9 |
| VI | | | |
| VII | 2 | 192,216 | 8 |
| VIII | 2 | 95,530 | 4 |
| IX | | | |
| X | 1 | 17,691 | 2 |
| XI | | | |
| XII | 2 | 9,540 | 6 |

## 4.4. Analysis of the Profitability of Banks in the Republic of Macedonia and Assessment of Their Efficiency

### *4.4.1. Income Statement Structure*

According to the Annual account for 2000, the net income of the banks in the Republic of Macedonia amounted to Denar 645 million, on aggregate basis, which is an increase of Denar 142 million or 28.3% compared to 1999. The sources of the presented financial result for 2000, the reasons for its increase compared to the previous year, as well as the degree of reality from aspect of reflection of the actual profitability potential of the Macedonian banks can be identified through the structural and comparative analysis of the aggregated Income Statement presented in Annex 2 of this report.

The **total interest income** of the banks at the end of 2000 amounted to Denar 5,165 million, which is an increase of Denar 356 million or 7.4% compared to the total interest income at the end of 1999. The analysis indicates that the interest income from enterprises (80.7%) dominate the structure of the total interest income, which compared to December 31, 1999 declined by Denar 1,129 million or by 21.3%. This was primarily a result of the downward trend of the banks' lending interest rates, which began in 2000. In the analyzed period from December 31, 1999 to December 31, 2000, the category "interest income from banks" indicates a 47.8% increment, which is a result of the growth in the share of placements to other banks in the structure of the total assets of the overall banking system. On the other hand, the 20.6% increase in the interest income from households is related to the acceleration of the credit activity of part of the banks regarding the crediting of households, while the 147.9% increment in the category "interest income from other clients" is primarily due to the collection of interest from bonds issued by the Republic of Macedonia in compliance with the "Law on Guarantee of the Investment of Strategic Investors and for overtaking certain claims on end beneficiaries by the Republic of Macedonia in Stopanska Banka a.d Skopje" (Official Gazette of the Republic of Macedonia no.86/99).

In 2000, the reversed interest income of the banks in the Republic of Macedonia were Denar 1,304 million or by 29.7% less compared to 1999, due to the slight trend of improvement of the banks' credit portfolio quality. If the additionally determined non-performing interest in the amount of Denar 39 million, which does not influence the banks' balance is taken into account, the actual interest income would amount of Denar 5,126 million.

At the end of 2000, the total banks' **interest expenses** equal Denar 2,572 million, which is by 3.5% less compared to the interest expenses at the end of 1999. The interest expenses to enterprises still dominate the structure of interest expenses, which on December 31, 2000 amounted to Denar 992 million, which is an increase of 2.2% compared to the same period of the previous year. The upward trend in the interest expenses to households should be underlined, which equals 14.7% for the period from December 31, 1999 to December 31, 2000, due to the return of confidence of the citizens in the Macedonian banks. On the other hand, category "interest expenses to banks" decreased by Denar 205 million or 25.6% in the analyzed period from December 31, 1999 to December 31, 2000, due to the decline in interest rate on the Money Market, as well as the fall in the total amount of borrowings from banks used in the course of the year.

At the end of the year, due to the movements of the total interest income and total interest expenses, the **net interest income** of the Macedonian banks amounted to Denar 2,594 million and compared to the end of 1999, it was higher by Denar 449 million or by 20.9%. Simultaneously, due to the trend of improvement of the credit portfolio quality of the Macedonian banks in 2000, as well as the amendments to the Decision on Classification of the on-balance and off-balance sheet assets items of the banks and savings houses according to their risk level (Official Gazette of the Republic of Macedonia no.111/2000),[6] the **net provisions** for potential losses on December 31, 2000 compared to the previous year were brought down by Denar 491 million or by 14.4%, thus amounting to Denar 2,922 million at the end of 2000. Nevertheless, the net interest income could not cover the net provisions for potential losses, meaning that the **net interest income after provisioning** of the Macedonian banks is a negative value (Denar -328 million), as of December 31, 2000. Apart from the fact that the financial result of the banks from their basic function (mediation between the economic entities that generate profit and those which incur losses) including the expenses based on potential losses for credit risk is a negative value, in 2000 registered downward trend of the negative net interest income based on provisions. As of December 31, 2000, the aggregated income statement of the Macedonian banks registered negative net interest income after provisioning in the amount of Denar 1,268 million. Provided that the unallocated provisions for potential losses (including the additionally determined non-performing interest) in the amount of Denar 313 million, identified through the on-site examinations are taken into consideration, which does not influence the income statement, the net interest income incurred negative amount of Denar 641 million.

The analysis of the income and expenses, related to the performance of traditional off-balance sheet banking operations, indicated that the banks in the Republic of Macedonia generated net income from fees in the amount of Denar 1,866 million, in 2000. Compared to the previous year, they surged by Denar 159 million or by 9.3%.

In 2000, the generated income from dividends, net income from securities, exchange rates and other incomes amounted to Denar 3,668 million. Structurally observed, the share of the category “other income” (82.9%) is the most significant, which at the end of 2000 amounted to Denar 3,040 million. The extraordinary income dominate the structure of other income amounting to Denar 2,306 million, which are lower by 14.1% in the analyzed period. The aggregated balance sheet analysis indicates that unless the banks hadn’t shown any extraordinary income in their balance sheet, which are considered as random income, the financial result of the overall banking system would have had negative value. This conclusion gives negative connotation of the profitability performances of the banks in the Republic of Macedonia.

At the end of 2000, the category “general and administrative expenses” equaled Denar 3,084 million, which is an increase of Denar 442 million or 16.6%, compared to 1999. The share of expenses for salaries (60.4%) dominate this category, which on December 31, 2000 amounted to Denar 1,862 million or a 13.3% increase compared to December 31, 1999.

On December 31, 2000, 18 of 22 banks operating in the banking system of the Republic of Macedonia recorded positive financial result, while the remaining 4 banks recorded negative

[6] According to the amendments to the aforementioned decision, the banks may , by their own judgement, use two alternatives for the risk-weight for the claims classified in the risk category A, as follows: 0% and 2%.

financial result. Compared to December 31, 1999, half of the banks registered improvement of their financial result, while the financial result of other half of banks deteriorated.

*4.4.2. Banks' Profitability and Efficiency Indicators*

The estimation and analysis of the basic indicators, which reflect the performances of these two aspects of the banks' operations,[7] represent the second level of the profitability analysis of the banks in the Republic of Macedonia and the assessment of their efficiency.

The Return on Average Assets (ROAA), estimated as a relation between the recorded banks' financial result of the banks for 2000 and their average assets for the same period, equals 0.8%, which is an unchanged profitable potential of the Macedonian banks, compared the December 31, 1999. According to this indicator, 100 assets units of the Macedonian banks generate 0.8 net income units. According to the internationally accepted standards, the return on assets should exceed 1%.

The Return on Average Equity (ROAE), estimated as a relation between the banks' net income for 2000 and average own funds for the same period, equals 3.8%. Besides the registered growth of 0.3 percentage points relative to December 31, 1999, the conclusion remains that the profitability performances of the Macedonian banks are low. According to the internationally accepted standards, the return on equity should range between 5% and 10%.

The banks' profitability potential and efficiency can also be identified through the relation between the operational expenses and total generated income. On December 31, 2000, this indicator equaled 0.83, meaning that Denar 0.83 operational expenses generated Denar 1 income. Thus, in the same period, it would be necessary to incur Denar 0.39 salary expenses in order to generate Denar 1 income.

The relation between the expenses for allocation of provisions for potential losses and net interest income equals 1.13, thus registering negative margin of generating net interest income, meaning that Denar 1.13 expenses from provisions for covering the credit risk generated Denar 1 net interest income in 2000.

The improved liquidity of the banking system of the Republic of Macedonia in 2000, resulted in gradual decrease in the banks' interest rates. The nominal weighted lending interest rates p.a. equaled 18.9% (1.6 percentage points lower compared to 1999), while the nominal weighted deposit interest rates p.a. equaled 11.2% (0.3 percentage points lower compared to 1999). These movements of the interest rates caused decrease in the interest margins of 1.3 percentage points, which on average in 2000 equaled 7.7 percentage points. Although upward trend has been registered, the high interest margins indicates banks' inefficiency compared to the other economies in transition where they range between 3 and 5 percentage points, on average.

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[7] The estimations have been made on a basis of recorded balance sheet values of the aggregated income statement of the Macedonian banks, without taking into a consideration the unrecorded expenses based on additionally determined provisions for potential losses and additionally determined non-performing interest.

* * *

The quantification of several additional indicators, which incorporate the total number of employees relative to the recorded net income, as well as relative to the total banks' assets, is another aspect of the banks' efficiency analysis.

On December 31, 2000, the total number of employees in the banks and savings houses in the Republic of Macedonia equaled 3,918, which is by 73 employees or by 1.9% more, compared to December 31, 1999. Thus the share of savings houses in the total number of employees equaled 2.7%.

The relation between the recorded banks' net income as of December 31, 2000, and the total number of employees indicates that one employee in the Macedonian banks generates Denar 169 thousand net income, on annual basis. Such an estimated capacity for generating income by employee equaled Denar 134 thousand on December 31, 1999, which indicates slight upward trend of this indicator in 2000. However, the growth is not sufficient to identify satisfactory efficiency of the banks in the Republic of Macedonia.

The level of indicator "total net assets / number of banks' employees" confirms the previous conclusion. As of December 31, 2000, one employee in the Macedonian banks accounts for Denar 21,505 thousand net assets.

Important aspect of the analysis of the efficiency of the Macedonian banks and savings houses is the qualification structure of their employees, given in the table below:

Table 18

Qualification Structure of Employees of the Macedonian Banks and Savings Houses

| As of 31.12.2000 | Total number of employees | Ph. D & M. Sc. | % | University degree | % | Advanced specialist's training | % | Intermediate specialist's training | % | High-skilled, low-skilled & under-skilled | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Banks | 3,813 | 19 | 90.5 | 983 | 96.0 | 289 | 97.3 | 2297 | 97.8 | 225 | 98.7 |
| Savings houses | 105 | 2 | 9.5 | 41 | 4.0 | 8 | 2.7 | 51 | 2.2 | 3 | 1.3 |
| Total | 3,918 | 21 | 100.0 | 1,024 | 100.0 | 297 | 100.0 | 2,348 | 100.0 | 228 | 100.0 |
| % of share | 100.0 | 0.5 | | 26.1 | | 7.6 | | 59.9 | | 5.8 | |

The table indicates that the qualification structure of the employees of the banks and savings houses in the Republic of Macedonia is unfavorable. More than half of the employees has high school degree and lower level of education. The share of the employees with university degree equals 26.1%, while the employees with Ph.D. and M. Sc. degree account for 0.5% of the total number of employees.