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INTERNAL RATING SYSTEMS IN BANKS IN BOSNIA AND HERZEGOVINA: EVALUATION OF FINANCIAL AND NON-FINANCIAL PERFORMANCE INDICATORS OF COMPANIES

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Abstract

This paper examines the application of rating systems by banks in Bosnia and Herzegovina (BiH) for assessing the creditworthiness of corporate entities. The study investigates the prevalence of rating systems and the incorporation of financial and non-financial indicators. Data were collected through a survey conducted among 17 banks in BiH using purposive sampling. Rating systems comprising both quantitative and qualitative modules dominate and are used by 9 (81.82%) banks, while the remaining 2 (18.18%) banks use rating systems containing only quantitative modules. The final rating of a company is a combination of quantitative and qualitative ratings. The influence of the quantitative rating varies: it entirely determines the rating in two banks, has an impact ranging from 80% to 90% in two banks, from 70% to 80% in two banks, from 60% to 70% in three banks, and the lowest impact of 50-60% in two banks. According to the research results, the most influential financial indicators, that is indicators that most significantly affect the assessment of the company's quantitative rating, were singled out: the ratio of total liabilities to total assets (36.36%), debt repayment time from cash flow (18.18%), the ratio of cash flow to total liabilities (9.09%) and return on equity (9.09%). According to the opinion of the surveyed bankers, the most significant qualitative indicators, that is non-financial performance indicators that have the greatest influence on the rating of the qualitative module, are: management quality (9 banks) and the company's position on the market (6 banks). Banks are encouraged to develop standardized rating systems that incorporate both quantitative

and qualitative indicators based on the indicators of business performance of companies operating in BiH. Future research could investigate the extent to which the bank's internal rating systems incorporate and monitor the bank's credit culture.
Keywords: banks, internal rating systems, company rating, financial and non-financial business indicators

INTRODUCTION

In the BiH banking sector, loans are the largest asset position in all commercial banks, therefore, the level of quality of loan portfolios significantly affects the successful operations and profits of each bank. In this regard, it is necessary that banks in BiH apply the principles of credit risk measurement in accordance with the recommendations of the Basel Agreement, according to which two approaches to credit risk measurement are possible: Standardized Approach and Internal ratings-based approach - IRB. Therefore, we can say that the use of rating systems plays a crucial role in banks' credit risk management processes, particularly in evaluating the creditworthiness of corporate clients.

Using the internal rating approach, banks independently assess the credit risk parameters for individual clients, in order to calculate the bank's required capital for reserves. By developing internal ranking systems and adapting them to their own needs, banks obtain systems that determine the risk of their clients with great precision. Internal rating systems are used to decide on the amount of credit for each debtor individually, define risk categorization and placement reservations, and enable early detection of problem loans.

The aim of this paper is to:

- Present the conceptual definition and purpose of internal rating systems,
- Explain the principles of good rating systems,
- Give a brief overview of the use of internal rating systems in US banks and banks in the EU, with reference to the factors implemented in the said rating systems,
- Present the results of the study on the application of internal rating systems in banks in Bosnia and Herzegovina,
- Identify the financial and non-financial indicators used within the quantitative and qualitative modules of banks' rating systems in Bosnia and Herzegovina.

INTERNAL RATING SYSTEMS: DEFINITION AND PURPOSE

In banking literature, we encounter various definitions of credit rating. It is highlighted as an assessment of a company's creditworthiness summarized in a single grade or number. It provides an assessment of the current and future ability of a company to fully and timely meet its obligations (payments and interests) (Bruckner et al, 2003, p.27). It can be said that credit rating is a standardized, objective, incremental, and current assessment of a company's creditworthiness (Füser, 2001, p. 37). The minimum requirements to be met by internal rating and risk measurement systems are to ensure, quite generally, a valid assessment of borrower and transaction characteristics,adequate risk differentiation and sufficiently exact and consistent estimates of the risk parameters (Datschetzky et al, 2003, p. 84).

A robust internal risk rating system should offer a carefully designed, structured, and documented series of steps for the assessment of each rating. The goal is to generate accurate and consistent risk ratings for many different types of company. Typically, a bank internal risk rating system assigns two kinds of ratings. First, it assigns an obligor default rating to each borrower that identifies the borrower's probability of default. Second, it assigns a loss given default rating to each available facility, independently of the obligor default rating, that identifies the risk of loss from the facility in the event of default on the obligation (Crouhy et al, 2006, pp. 244-245).

According to Deventer and Ouram, internal rating systems have traditionally been used in financial institutions for a very limited set of purposes, as detailed below (Deventer et al, 2002, pp 392-393):

- Acceptance or rejection of new transactions: Ratings of various types, but especially internal ratings, have traditionally been an index of whether a new transaction should be accepted or rejected.
- Monitoring of credit quality: The migration of the credit rating composition of the portfolio has been used as an index of the overall quality of a portfolio.
- Allocation of resources: A deterioration in particular credit's internal rating results in an increase in the monitoring and collection resources devoted to protecting the bank's interest.
- Adequacy of loan loss reserves: Both regulators and management use the distribution of portfolio quality, as measured by internal ratings, to judge the adequacy of the financial accounting-based reserve for loan losses in the current accounting period.
- Adequacy of capital: Both regulators and management use the portfolio risk composition, as measured by internal ratings, to judge the fundamental creditworthiness of the institution as a whole.

In addition, the mentioned authors point out that with the help of recently developed tools it is possible to use credit ratings for important purposes such as: pricing, valuation and hedging.

Guided by Basel Committee on Banking Supervision and empirical experiences, Krahnen and Weber cite 14 principles or requirements that a good rating of the system should own (Krahnen & Weber, 2001, pp. 10-17):

1. Comprehensiveness: A bank's rating system should be able to rate all past, current and future clients
2. Completeness: A bank should rate all current clients and keep on rating its past clients
3. Complexity: A bank should have as many different rating systems as necessary and as few as possible. The reasons for choosing the number of rating systems should be made transparent.
4. POD-definition: Probabilities of default must be well defined.
5. Monotonicity: This requirement defines the relation between ratings and expected default frequencies. POD should be taken as the primitive and rating is derived from there on. If two PODs are identical, the ratings also must be identical.
6. Fineness: The rating system can vary in the degree of fineness. It should always be as fine as necessary
7. Reliability: The rating system should be reliable.
8. Back-testing: The (ex-ante) probability of default should not be significantly different from the (ex-post) realized default frequency.
9. Informational efficiency: Ratings should be informationally efficient, that is, it should not be possible to predict rating changes based on rating history. All the available information should be modeled correctly in the rating.
10. System development: A rating system must be improved over time.
11. Data management: Past and current rating data should be easily available.
12. Incentive compatibility: The rating process must be embedded in the organization of credit business such that the risk of misrepresentation by credit officers is minimized.
13. Internal compliance: The distribution of rating outcomes is constantly monitored by controllers, assisted by random inspection.
14. External compliance: The adherence of a bank's management to its agreed rating standards is monitored by neutral (uninterested) outside controllers, either on a continuous, or on a random basis.

The procedure for assigning a rating within the bank's internal rating system can be represented as an 8-step analysis process in which the following are evaluated (Crouhy et al, 2006, pp. 246-254):

1. Financial assessment - Result of step 1: preliminary borrower rating
2. Management and other qualitative factors

3. Industry ratings summary
4. Financial statement quality
5. Country risk
6. Comparison to external ratings (if available)
7. Loan structure

Result of steps 1 to 7: final borrower rating and probability of default

8. Assessment of loss given default rating each facility

The final result: facility rating representing the product of probability of default and expected amount of losses

In practice, the most common are hybrid internal rating systems: a combination of rating systems, that is, models, which are based on expert opinion (qualitative information and rating), and quantitative methodologies. So, in practice, quantitative or statistical models are often used for the quantitative part of the creditworthiness assessment, that is, the financial analysis of the debtor, and for the qualitative assessment, models based on expert opinion (Jakovčević & Jolić, 2013, pp. 168-169).

Within the framework of the quantitative module, the financial indicators of the company's business performance are assessed, based on which the company is assigned a quantitative rating. Within the framework of the qualitative module of the rating system, an evaluation of the company's non-financial business performance is carried out, which determines its qualitative rating. It is necessary that the qualitative rating and the financial rating form a logical whole. Any significant deviation of the qualitative from the financial rating must be critically considered, as well as all illogicalities of a long-term nature (or example, a consistently bad financial rating despite the positive results of the assessment of qualitative factors).

The so-called knock-out criteria can be included in the bank's rating, which existence means the automatic award of the worst rating to the company, that is, the rejection of the credit request. These knock-out criteria can be, for example, the freeze of the client's account, a disorderly credit history, delays in the settlement of credit obligations, and delays in the settlement of tax obligations, and so forth. In addition to the already mentioned knock-out criteria, the bank's rating system can also consider warning signs and negative information. The above information can affect the borrower's rating in three ways:

1. The combined rating of the client can be reduced at least by a predetermined number of categories;
2. Determining the "best possible" rating of the client, that is, a worse rating is also possible;
3. Classification of the client in the previously defined rating category

Possible warning signs, which need to be considered, as well as their potential impact on the rating of the borrower's company, are shown in the following Table 1.

Table 1. Impact of warning signs on client's rating

Rating reduction by at least one level, but not lower than rating 8: • One man's risk • Significant changes in management, especially regarding reduced revenues or structural reorganization
Reduction of rating by at least two steps, but not lower than rating 8: • Increase in additional indebtedness by 50% or more within 12 months • Uncontrolled growth • The client is not operating at full capacity (reduction of business capacity up to 50%) • Insufficient protection in the form of insurance • Non-transparent flow of money between affiliated companies of the group (for example, schedule of expenses, loans, services, and such)
Rating reduction by at least three degrees, but not lower than rating 8: • Negative findings in audit reports • High business risk due to: − Political and legal changes − Technical progress − Environmental protection policies • Disproportionate private benefits of the owner / director (expensive lifestyle, luxury hobbies)
The best possible rating is 8: • Court proceedings against members of the Board • Delay in payment of salaries to employees

Source: Internal rating of a bank in BiH

In addition, it is important to emphasize that it is necessary to implement the internal rating systems in the daily operations of the bank and to explain its functioning to users of the rating system. It is necessary to change the bank's internal credit policies and procedures for the use of the rating system to be a *conditio sine qua non* in the bank's credit operations. It is very important to develop applications for using internal rating systems that are user-friendly. And last but not least, it is necessary to provide employees with adequate training for the use of the rating system and the correct interpretation of the obtained rating results.

In the continuation of the paper, we will briefly present research on the application of internal rating systems in US banks and banks in EU countries, as well as basic indicators of financial and non-financial business performance that are evaluated within the aforementioned ratings.

RATING SYSTEMS IN US BANKS AND BANKS IN EU COUNTRIES: A BRIEF OVERVIEW

Treacy and Carey based their research on information from internal reports and credit policy documents for the fifty largest U.S. bank holding companies. The rating systems in these US banks evaluate the following risk factors: the borrower's financial condition, size, industry, and position within the industry; the reliability of the borrower's financial statements and the quality of its management; elements of transaction structure (for example, collateral); and miscellaneous other factors. Banks vary somewhat in the particular factors they consider and in the weight they give each factor. Financial statement analysis is central to appraising the likely adequacy of future cash flow and thus the ability of the borrower to service its debt. The focus of analysis is on the borrower's debt service capacity, taking account of its free cash flow, the liquidity of its balance sheet, and the firm's access to sources of finance other than the bank. Historical (and to a lesser extent, projected) earnings, operating cash flow, interest coverage, and leverage are typically analyzed, with exact definitions of financial ratios used in the analysis varying across banks and, in some cases, across borrowers or loan types. As a context for financial statement analysis, the characteristics of the borrower's industry are often considered (such as cyclicality, general volatility, and trends in cash flow and profitability). Indeed, the financial analysis often includes a formal comparison of the borrower's financial ratios to prevailing industry norms. A related factor, the borrower's position in its industry, is also an important factor in determining ratings. Those borrowers with substantial market power or that are perceived to be ''market leaders'' in other respects are considered less risky because they are thought to be less vulnerable to competitive pressure. Almost all internal rating systems cite the borrower's management as an important consideration in assigning the risk grade (Treacy & Carey, 1998, pp. 905-906).

Austrian credit institutions have to report to the Oesterreichische Nationalbank (OeNB) for each reportable borrower, also the value of collateral held against major loans, the amount of specific loan loss provisions made, and the credit rating given to the borrower. Banks are obliged to also disclose to the OeNB their internal principles and rules for the valuation of collateral, the calculation of specific loan loss provisions and the establishment of internal credit ratings. Overall, the Austrian banks were found to operate a total of 53 different rating credit systems. The rating criteria used are highly heterogeneous and differ in detail among bank and client segments. Regarding the approaches used for corporate credit analysis (SMEs and large enterprises), the majority of the credit rating systems analyzed rely on three different mechanisms: quantitative factors, qualitative factors, and warning signals/negative information. With most banks, the quantitative factors considered are derived almost exclusively from an analysis of the annual financial statements, with the main focus being on the equity ratio and the debt structure. In addition, dynamic cash flow or EBITDA-based ratios are considered, suchas EBITDA (earnings before interest, taxes, depreciation and amortization) versus bank liabilities or cash flow versus operating performance. Other inputs factored into the analysis include other ratios such as turnover ratio or credit periods. In addition to analyzing the annual financial statements, some banks also examine account information such as use of overdrafts and credit lines, repayment periods and credit balances versus turnover. For an assessment of the qualitative factors most of the statistical models use a questionnaire with a scoring system. In assessing soft facts, banks look primarily at questions relating to the management, the accounting system and the borrower's market position. Particular attention is devoted to the quality of the management, succession rules, the enterprise's position in the market, its geographical location, the quality of its accounting system, orders booked and the quality of the organization. Very often current negative information and additional warning signals are considered in analyzing and rating enterprises. Such additional information is frequently rated in a standardized manner. Delays in paying interest charges and redeeming principal, changes in the use of overdraft facilities or disputes with the management are of the primary interest (Datschetzky et al, 2003, pp. 82-95).

Fleischhacker and Kirchberg conducted a research on the use of ratings to determine the creditworthiness of small and medium enterprises in banks in Austria, with a sample of 103 respondents. This study showed that internal rating systems of banks mostly consist of two independent rating models – quantitative and qualitative. The quantitative rating determines the company's economic position through balance sheet analysis and key performance indicators. As a complement to this assessment based on historical data, the qualitative rating aims to improve the predictability of a client's future business performance. On average, the weight of the quantitative rating in the final rating score is 69.60%, while the qualitative rating has an average weight of 30.40%. Interestingly, 77.70% of banks include "private" information about the company owner in the quantitative rating when assessing small and medium enterprises. This includes considering the owner's asset situation, debts, additional incomes, and so forth (Fleischhacker & Kirchberg, 2007).

Research on the way to determine the creditworthiness of clients in German banks showed that the criteria applied by these banks within their internal rating systems are almost no different from those applied by the international rating agencies S&P and Moody's. This can be seen in Table 2.

Table 2. Rating criteria of agencies and banks

S&P	Moody's	Bank – internal rating
Financial risk: • Balance sheet and P&L • Financial policy • Return • Capital structure • Cash-flow • Financial flexibility	Financial risk: • Cash-flow • Liquidity • Debt structure • Equity and reserves	Economic situation: • Earnings (Cash-flow, return,...) • Financial situation (Capital structure, liquidity,...)
Business risk • Industry code • Competitive situation	Competition and business risk: • Relative market share,competitive position • Diversification • Turnover, costs, returns • Sales and purchases	Business situation: • Industry assessment • USP and competition • Product mix • Special risks • Forecasts: earnings and liquidity
	Legal structure and legal risk: • Consolidation of related firms	• Legal structure
• Management	Quality of management: • Planning and controlling • Managerial track record • Organizational structure • Entrepreneurial succession	(Quality of) management: • Experience • Succession • Quality of accounting and • controlling
		Customer relationship, account management

Source: Krahnen & Weber. (2001), p. 8

The study conducted by CSES (Center for Strategy and Service Evaluation) titled "Evaluation of Market Practices and Policies on SME Rating" examined the implementation of rating models in banks across EU countries and associated members. The rating systems used by banks in the EU consist of two main types of factors: quantitative and qualitative factors, which are usually separated into quantitative and qualitative modules, yielding separate results. Combining these results provides the company's rating. Qualitative ratings typically account for 20-40% of the company's final rating, depending on the type of bank and client. For banks that grant loans to newly established businesses without a long operating history, the final rating for these companies is determined by 60-70% qualitative and 30-40% quantitative ratings. (Centre for Strategy & Evaluation Services*,* The European Commission, 2013).

OBJECTIVE AND METHODOLOGY

The aim of the research was to determine the extent to which banks in BiH employ rating systems for assessing the creditworthiness of corporate entities. Additionally, our objective was to find out which quantitative and qualitative indicators of business performance are most often used in the rating systems of BH banks, and to what extent banks rely on the rating assessment when making decisions on (dis)approving credit requests.

Within the framework of empirical research, a survey was conducted among banks operating in Bosnia and Herzegovina (BiH). Data was collected through a questionnaire survey, which was completed by 17 banks. The sample of banks was selected using purposive sampling, as follows. Survey questionnaires were sent via email, along with a request for interviews with relevant employees, to all banks operating in Bosnia and Herzegovina. The author of the article personally interviewed 14 bankers from different banks, while 3 banks provided completed questionnaires via email. Bank employees involved in decision-making processes related to corporate lending in banks in Bosnia and Herzegovina (directors of branches/regions, risk managers, business relations managers) were surveyed. The questionnaire was developed by the author of the study. The research findings on these aspects are presented below.

ANALYSIS AND FINDINGS

Out of the 17 surveyed banks, 11 (64.70%) use rating systems to assess the creditworthiness of corporate entities, while 6 (35.30%) banks do not use rating systems.

It is important to note that only two banks have rating systems specifically developed for the BiH market. In the other banks, rating systems are developed for banking groups in their parent countries (5 banks) or for the banks in Central and Eastern European (4 banks).

Six banks use different rating systems to assess the creditworthiness of small and medium enterprises versus large enterprises, while five banks use the same rating systems to evaluate the creditworthiness of these entities. Rating systems comprising both quantitative and qualitative modules dominate and are used by 9 (81.82%) banks, while the remaining 2 (18.18%) banks use rating systems containing only quantitative modules.

The final rating of a company is a combination of quantitative and qualitative ratings, with the influence of the quantitative rating varying between banks.: it entirely determines the rating in two banks, has an impact ranging from 80% to 90% in two banks, from 70% to 80% in two banks, from 60% to 70% in three banks, and the lowest impact of 50-60% in two banks.

In five banks, the revenue of the company affects the influence of the quantitative rating, with higher revenue increasing the impact of the quantitative rating. Six banks stated that the revenue of the company does not affect the weight of the quantitative module in the final rating score.

According to the research results, the quantitative modules of the bank rating system usually contain 7 or more financial indicators in 9 banks, while in the remaining two banks the quantitative modules contain 6 or 5 financial indicators. Quantitative modules most often contain the following financial indicators: current liquidity indicator (11 banks), ROE - return on equity (11 banks), interest expense coverage ratio (9 banks), credit liability coverage (9 banks), and the ratio of total liabilities and total assets (9 banks).

The following financial indicators have the greatest percentage effect on the evaluation of the company's quantitative rating: the ratio of total liabilities to total assets in four banks, debt repayment time from cash flow in two banks, the ratio of cash flow to total liabilities in one bank, and return on equity in one bank.

Banks, when analyzing financial indicators, compare the values of financial indicators in time periods in the following way: most often (9 banks) in such a way that they compare their growth/decline for a certain company by years of operation, then in two banks the indicator value is compared with the average of a certain industrial branches, in two banks indicators are compared with predetermined parameters (theoretical or given by the bank), while in two banks indicators are analyzed in all the ways mentioned above.

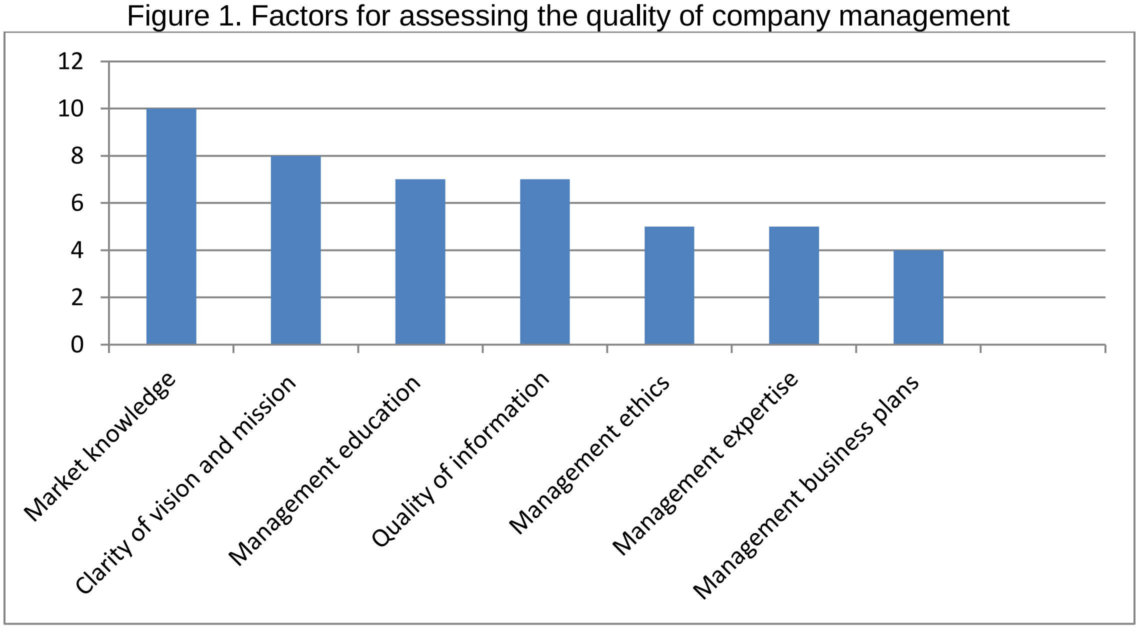
According to bankers surveyed, the most significant non-financial indicators within the qualitative module of rating systems are: company management quality (9 banks), followed by the company market position (6 banks). Two banks consider planning quality, accounting quality, and customer relationships to be essential. One bank each believes that cooperation with the bank, cost management quality, product/service quality, company account freeze history, and industry-specific affiliation are the most crucial indicators. Multiple answers were possible for this question.

Table 3. The most significant qualitative indicators of the rating system in banks in BiH

The most significant qualitative indicators	Number of banks
Management quality	9
Company's market position	6
Planning quality	2
Accounting quality	2
Customer relationships	2
Cooperation with the bank	1
Cost management quality	1
Product/service quality	1
Account freeze history	1
Industry-specific affiliation	1

When assessing company management quality, banks primarily consider their market knowledge (10 banks), followed by the clarity of company vision and mission (8 banks). Furthermore, 7 banks evaluate management education and the quality/completeness of information provided by management to banks. A slightly smaller number of banks evaluate management ethics (5), management expertise/proficiency (5), and management business plans (4).

Figure 1. Factors for assessing the quality of company management



The majority of banks, as many as 16 (94.10%) of the 17 surveyed, assess "private" information about the owner/director of the company as part of determining the company's creditworthiness. As for the mentioned "private" information, the banks most often consider the following: 13 banks consider the property status of the owner/director of the company, 10 banks assess the lifestyle of the owner/director of the company, 8 banks are also interested in savings deposits that the owner/director of the company has in the bank/banks , 5 banks are interested in whether the owner/director of the company has a propensity for vice, while 3 also record the credit history of the owner/director of the company. Please note that it was also possible to choose more than one answer to this question

The influence of qualitative rating on the final rating score is as follows: it ranges from 40-50% in 2 banks, from 30-40% in 3 banks, from 20-30% in 2 banks, and from 10-20% in 2 banks. In 2 banks, the qualitative module has no influence on the credit rating score.

In most banks (72.73% or 8 banks), corrections to the final company rating are allowed, while this is not permitted in 27.27% of banks. Rating changes in banks where this is possible are most often performed by credit risk managers (in 5 banks), then by bank credit committees (2 banks), while in one bank this is possible for both, but with an additional explanation.

The majority of banks (63.64% or 7 banks) do not provide companies with feedback on the factors that influence their rating level, while 36.36% or 4 banks provide companies with this information. Little over half of the banks, however, provide companies with feedback on measures to improve the rating, namely 54.55% of banks, while other banks do not do this.

To the question related to the method of assessing the creditworthiness of a legal entity in banks, we received the following answers: in 6 (35.30%) banks, the creditworthiness assessment is carried out in the traditional way through financial analysis, 10 (58.80%) banks assess the creditworthiness of legal entities of persons combining financial analysis and evaluation of the rating system, while only one (5.90%) bank relies entirely on the evaluation of the rating system

As a reason for rejecting credit requests, only 7 banks (41.18%) cited the company's negative rating. Other reasons for rejecting the loan request are: over-indebtedness of the company (16 banks), then unfavorable information about the company (10 banks), inadequate collateral (6 banks), unsatisfactory transaction (5 banks), and low capitalization of the company (3 banks). It was possible to choose more than one answer to this question.

CONCLUSION

The research investigated the utilization of rating systems by banks in Bosnia and Herzegovina (BiH) to assess the creditworthiness of corporate entities, focusing on the evaluation of financial and non-financial indicators. The study highlighted several key findings regarding the prevalence of performance indicators and structure of rating systems.

The research results show that the majority of banks in Bosnia and Herzegovina (64.70%) use rating systems to assess the creditworthiness of legal entities. However, only two banks (11.76%) have rating systems developed for the BiH market. In banks, rating systems that consist of quantitative and qualitative modules dominate and are used in 9 (81.82%) banks, while the other 2 (18.18%) banks use rating systems that contain only quantitative modules. This means that for these banks, non-financial business indicators are not considered within the rating system and do not affect the final rating of the company.

The most influential financial indicators, that is, indicators that most significantly affect the assessment of the company's quantitative rating, were singled out: the ratio of total liabilities to total assets (36.36%), debt repayment time from cash flow (18.18%), the ratio of cash flow to total liabilities (9.09%) and return on equity (9.09%).

The quantitative rating in two banks affects the final rating completely. From 80% to 90% is the influence of the quantitative rating in two banks. In two banks, this influence is from 70% to 80%. In three banks, the quantitative rating affects the final rating from 60% to 70%, while it has a smaller influence of 50-60% in two banks.

According to the opinion of the surveyed bankers, the most significant qualitative indicators, that is, non-financial performance indicators that have the greatest influence on the rating of the qualitative module, are: management quality (9 banks) and the company's position on the market (6 banks). The majority of banks assess "private" information about the owner/director of the company in determining its creditworthiness.

As for the feedback that banks provide to companies, there is clearly room for improvement here, since 63.64% of banks do not provide information to companies about the ranking method, that is, they do not provide explanations about the factors that influence the company's rating. To prepare companies for future rating improvement, it is important that banks take on a more significant advisory role, and that they propose measures to companies so that they can take in order to improve their rating, which currently only accounts for 54.55% of banks do. Based on the results of the research, it can be concluded that banks in BiH do not rely enough on the company's rating when approving credit requests, since the reason for rejecting requests in only 41.18% of banks is a negative company rating. This conclusion is supported by the high percentage of banks (72.73%) in which correction of the rating assessment is allowed, that is, a subjective and potentially biased correction of the rating assessment is enabled.

RECOMMENDATIONS

Considering the results of the study, in order to improve credit processes in banks and to enable better use of the internal rating system, the following improvements may be proposed:

1. Standardized Rating Systems: Banks are encouraged to develop standardized rating systems that incorporate both quantitative and qualitative indicators based on the indicators of business performance of companies operating in BiH. This will ensure a more comprehensive assessment of corporate creditworthiness and enable an assessment of credit risk to a level acceptable for each bank individually.
2. Banks should develop different rating systems for large corporations and SMEs, since various studies have shown that the final rating of large companies is more significantly influenced by financial factors of business, while the rating of SMEs has a greater impact on non-financial factors of business
3. Feedback Mechanisms: Banks should consider providing feedback to companies regarding the factors influencing their rating levels. Offering insights into areas for improvement can foster better relationships and transparency in credit assessment processes.

By addressing these recommendations, banks can refine their credit assessment practices, improve risk management strategies, and contribute to more informed lending decisions in the banking sector of Bosnia and Herzegovina.

LIMITATIONS AND FURTHER STUDIES

A limitation of this study is that it was conducted on a relatively small sample of banks operating in one country, and it would be desirable to conduct a more extensive study on a larger sample and on banks operating in EU countries. Taking all the above into consideration, suggestions for future research and the way forward could be as follows:

1. Weightage of qualitative modules: Further investigation is warranted to determine the optimal weighting of qualitative indicators in final rating scores. Understanding how different qualitative factors contribute to overall credit assessments can refine rating methodologies.
2. Impact of quantitative ratings: Research can explore the impact of quantitative ratings on credit decisions and loan approval rates. Examining instances where quantitative modules significantly influence credit scores can provide insights into decision-making processes.

3. The connection between internal ratings and credit culture: to investigate the extent to which the bank's internal rating systems incorporate and monitor the bank's credit culture.

This scientific paper provides a thorough examination of the application of rating systems in evaluating corporate creditworthiness in Bosnian banks, contributing valuable insights to academic discourse and practical implications for the banking industry in BiH.

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