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Present a model of factors affecting financial health of listed banks in Tehran Stock Exchange

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Abstract

This paper presents a model of factors affecting financial health of listed banks in Tehran Stock Exchange. Thus, factors affecting financial health of banks were identified and research hypotheses were developed accordingly, following the interviews with 48 experts in accounting and financial management. Then, the theoretical foundations of research were collected by referring to databases, dissertations, and relevant articles; and then financial data of 11 banks for a period of 10 years (2011-2020) were collected, research variables were measured and default regression tests were performed in data analysis section. In next step, amodel of factors affecting on financial health was presented through multivariate linear regression, research hypotheses, tests and finally, through nonlinear power regression and artificial neural network algorithms. The study findings explained that financial reporting quality, corporate governance and investment efficiency has a positive significant effect on banks' financial health; while, financial leverage has a negative significant effect on financial health of banks. Other findings also stated that the firefly algorithm outperformed the backup machine and decision tree algorithms in banks' financial health forecasts, with decision tree algorithm outperforming the backup machine algorithm.

Keywords: Financial Health, Financial Reporting, Corporate Governance, Financial Leverage, Investment Efficiency

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1 Introduction

The subject of financial health of companies evaluations has been an important issue for a long time, with several topics to the discussion of the financial health of companies dedicated in accounting and management. In fact, most theoretical articles address the more valid criteria for evaluating the financial health of companies. Some believe that there is no ideal index to measure the financial health of companies. The real value of the company is a necessity to evaluate the financial health of the company, and it is necessary to use accepted criteria considering as much as possible the various aspects of limitations in activities and the possibility of benefiting from facilities [7]. On the one hand, the need of organizations to adapting to today's dynamic and complex business environment to continue to survive, which is caused by the development of competitive markets, and on the one hand the pressure of investors on managers to determine the value and explain accurate and transparent measurement criteria, caused companies

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to review traditional reward and financial health assessment systems and re-test them to check whether they were a correct and reliable basis for decision-making or not? At present, financial health assessment techniques are based on economical theories rather than the accounting principles frameworks. It is because the capital of the company is considered one of the most limited economic resources of the countries, and for this reason, economists and financial experts are always looking for ways to use it optimally to provide it to the managers of economic units [9]. Therefore, the validity of the procedures that are used for the optimal allocation of society's resources and savings in efficient and productive activities needs to be reviewed and revised which ultimately leads to economic and social growth and gaining people's confidence in the proper use of their capital. Today many businesses are involved with different external and internal pressures, including products and their quality, information technology, customers and rules and regulations. Accordingly, while addresing such pressures, creating long-term value for shareholdersshould be at the forefront of the activities of various companies [2]. Therefore, the importance of this subject has made the researcher to present the model of factors affecting the financial health of banks.

First, to formulate research hypotheses, factors affecting financial health were identifies through interviews with 48 experts in accounting and financial management and research hypotheses were formulated accordingly. Table 1 shows the interviewees descriptive statistics.

Table 1: The interviewees descriptive statistics

No.	Description	Number
1	Continuous member of the society of certified accountants	17
2	Official expert of the Judiciary	10
3	University faculty member with the academic rank of assistant professor and higher	21
	Total	48

In the following, the research hypotheses are explained as follows.
The first hypothesis: The quality of financial reporting has an effect on financial health.
The second hypothesis: Corporate governance has an effect on financial health.
The third hypothesis: Financial leverage has an effect on financial health.
The fourth hypothesis: Investment efficiency has an effect on financial health.
The fifth hypothesis: The firefly algorithm has a higher ability to predict financial health than the decision tree algorithm.
The sixth hypothesis: The firefly algorithm has a higher ability to predict financial health than the vector machine regression algorithm.
The seventh hypothesis: The decision tree algorithm has a higher power to predict financial health than the vector machine regression algorithm.

2 Literature Review

2.1 Domestic Literature

Devanipour et al. [4] discussed the quality measurement model of financial statements. The results showed that the improved average quality of the financial statements of 57 companies selected as a sample during the years 2015-2017. Abbasi et al. [1] evaluated the information content of the rating model using financial health indicators and early warning in banks. The results of this research showed a positive significant relationship between the rating pattern and indicators of financial health and early warning. Qaderi et al. [11] developed the concept of accounting structures of sustainability and financial health of companies in the capital market of Iran. The research findings showed that the financial health of companies is influenced by accounting sustainability structures (voluntary accounting activities, transparency of accounting thinking and social responsibility reporting). Rezazadeh Karsalari et al. [12] investigated the effect of banking performance on the liquidity creation in the banking system. The results showed that the performance of banks has a positive significant effect on the liquidity creation.

2.2 Foreign literature

Nicolas & Dario [9] investigated the lack of financial health in different periods of companies' life. They found that the slope between income and financial health is well defined: the lower the income, the poorer the financial health. However, low income (having few economic resources) may not be sufficient to characterize economic vulnerability, and

financial deprivation (perceived having insufficient economic resources) may further reduce financial health. Accordingly, initially analysis of national data (more than 275,000 participants from more than 200 years- country) showed that financial deprivation was associated with twice the likelihood of suffering from a decline in financial health. This relationship was observed in 90% of financial observations. Second, analysis of longitudinal data (over 20,000 participants over 20 years of assessment) showed that exposure to financial scarcity over the life course decreased financial health. Stéphane & Norheim [13] estimated and compared the consequences of risk protection and financial health in economic evaluations. The is a descriptive applied research. The data collected through the questionnaire was enserted into the SPSS25 software system. For the inferential analysis of the variables, various statistical tests, including the Kolmogorov Smirnov test and regression, were used for the statistical analysis of the data. The research results showed that financial health factors (economic, personal, social and political) have an effect on financial performance.

The investigated research method is descriptive-causal, since this research seeks to investigate cause and effect relationships between variables. On the other hand, the current research is a post-event research in terms of data collection. In the data analysis step; in the first stage, the descriptive statistics of the variables are explained, based on which, the status of the variables is discussed in general terms and based on the dispersion indices. In the second stage, statistical tests are described. In this way, at first, the normality of the error statements of the hypothesis test model is checked using Jarek-Bera test. In the next step, the reliability of the variables is challenged through Im, Pesaran and Shin's test. In the next step, colinearity between variables is tested through tolerance indices and variance inflation factor. In the following, the variance of the heterogeneity of the variables is checked using White's test and the selection of the panel data method against pooled data is done using Limer's F test. In the following, using the Hausman test, the selection of fixed effects method against random effects is discussed, and finally, using multivariable multi-linear regression, the hypotheses are tested. Finally, the model is presented based on the findings of neural networks and nonlinear regression. For this purpose; at first, the regression models to test the hypotheses are introduced as follows.

The regression model of the first hypothesis

$$FH_{it} = \beta_0 + \beta_1 FRQ_{it} + \beta_2 MTB_{it} + \beta_3 SIZE_{it} + \beta_4 CFO_{it} + \beta_5 TANG_{it} + \varepsilon_{it}$$

The regression model of the second hypothesis

$$FH_{it} = \beta_0 + \beta_1 COR_{it} + \beta_2 MTB_{it} + \beta_3 SIZE_{it} + \beta_4 CFO_{it} + \beta_5 TANG_{it} + \varepsilon_{it}$$

The regression model of the third hypothesis

$$FH_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 MTB_{it} + \beta_3 SIZE_{it} + \beta_4 CFO_{it} + \beta_5 TANG_{it} + \varepsilon_{it}$$

The regression model of the fourth hypothesis

$$FH_{it} = \beta_0 + \beta_1 INVE_{it} + \beta_2 MTB_{it} + \beta_3 SIZE_{it} + \beta_4 CFO_{it} + \beta_5 TANG_{it} + \varepsilon_{it}$$

It should be noted that neural networks will be used to test the fifth to seventh hypotheses, and the power nonlinear regression model will be used to provide the model. In the following, the operational definitions of the research variables are explained as follows.

3 Variables

3.1 Dependent Variable

3.1.1 Financial Health

The mentioned variable is financial in the sense of profitability and continuity of economic unit activity[6] to determine the state of financial health based on the studies of Naido [8], bank health is classified into three levels:

Healthy: A bank is considered healthy if its profit after PAT is positive or REG is zero or positive in the current year and during the research period. According to the assumption of continuity of activity of banks, in this research it is assumed that a bank that has been profitable for 7 consecutive years and has the highest ratio of accumulated profit to its capital can have continuity of activity. In this case, the bank will be scored three.

Intermediate: A bank has an intermediate status, which its PAT is positive or REG is negative in the current year during the time period of the research (which, of course, will cause the continuation of its activity to be at risk.). In this case, the bank will be scored two.

Helpless: It is a status of an economic unit in which it has suffered a loss (PAT is negative) and if this loss is such that its REG is more than 50% of the capital for 2 consecutive years leading to the current year, the assumption of continuity has violated the activity. In this case, the bank will be scored one [6, 8, 10].

The mentioned variable is financial in the sense of profitability and continuity of economic unit activity [6] to determine the state of financial health based on the studies of Naido [8], bank health is classified into three levels:

3.2 Independent Variables

3.2.1 Financial Reporting Quality

In the current research, according to equation (3.1), the model of Dechow & Dichev [3] and Francis et al [5] is used to measure the quality of financial reporting.

$$TCA_{i,t} = \beta_0 + \beta_1 CF_{i,t-1} + \beta_2 CF_{i,t} + \beta_3 CF_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_0 \tag{3.1}$$

wher TCA_{it}: total current accruals of the bank in year t, CF_{it-1}: cash flows of bank i in year $t-1$, CF_{it}: cash flows of bank i in year t, C_{it+1}: cash flows of bank i in year $t+1$, ΔREV_{it} : change in sales income of bank i in year t compared to year $t-1$, PPE_{it}: gross value (cost price) of property, machinery and equipment of bank i in year t. The total current accrual (TCA) is obtained from equation (3.2).

$$TCA_{i,t} = \Delta CA_{i,t} - \Delta CL_{i,t} - \Delta CASH_{i,t} + \Delta STDEBT_{i,t} \tag{3.2}$$

ΔCA_{it}: change in current assets of bank i in year t compared to year $t-1$, ΔCL_{it}: change in current liabilities of bank i in year t compared to year $t-1$, $\Delta CASH_{it}$: change in cash balance of bank i in year t compared to year $t-1$ and $\Delta STDEBT_{it}$: the change in short-term received financial facilities of bank i in year t compared to year $t-1$. Cash flows of bank i in year t (CFi,t) are also obtained from equation (3.2.1).

$$CF_{i,t} = NIBE_{i,t} - TCA_{i,t} + DEPN_{i,t}$$

where $NIBE_{it}$: net profit before unexpected accruals of bank i in year t, TCA_{it}: total current accruals of bank i in year t, and $DEPN_{it}$: depreciation expenses of bank i in year t. According to relation (3.1), if the quality of accruals is high, then accruals can reflect major changes in current, past and future cash flows, and as a result, the bank-specific residual (εit) in relation (3.1) is the basis of the quality of financial reporting in this research. Specifically, the financial reporting quality index is defined as the inverse of the square of the balances of bank i. The higher the square of the residuals is, it is interpreted as a sign of weaker accruals and higher financial reporting quality. Therefore, the quality index of financial reporting can be defined in the research as follows:

$$FRQ = \frac{1}{\varepsilon^2}$$

3.2.2 Corporate Governance

The number of 13 factors is defined virtually (two-sided) to measure the characteristics of the corporate governance system, based on the information listed in Table 2; and if they are met, a score of one and otherwise, a score of zero will be the criterion of action.

Following the aforementioned data collection, the assigned score of each bank in each year is calculated by the following relation.

$$\text{COR} = \frac{\text{Total score}}{13}$$

3.2.3 Financial Leverage

Financial leverage is calculated from the ratio of a bank's total liabilities to its total assets at the end of the year.

3.2.4 Investment Efficiency

The investment efficiency is calculated from the difference between the sale amount of assets and capital expenditures (including the costs of property acquisition, major repairs, etc.).

Table 2: Determinants of corporate governance

No.	Item	Assessment type
1	Use of non- obligatory members in the board of directors	If the ratio of non-obligatory members to total members is less than the ratio calculated for all banks in one year, zero, otherwise one.
2	Differentiation of the CEO role from the chairman of the board of directors	Not diffireniating the role of CEO from the board of directors, zero and otherwise one.
3	CEO stability	Change of CEO in the last two years, zero, otherwise, one.
4	The rotation of the audit firm's partners	No change in the partners signing the bank's audit report in the last two years, zero, otherwise one.
5	Shareholders with the right to control	If the shareholders do not have the right to control, zero and otherwise one (shareholders who own more than 50% of the bank's shares).
6	Concentration of ownership	If the free floating shares of the bank are greater than the average of the free floating shares of all banks, zero and otherwise one.
7	Institutional shareholders	If the institutional shareholders own more than 5% of the bank's ordinary shares, one and zero otherwise.
8	Transactions with related parties	If the ratio of transactions with persons related to the bank's sales is greater than the average of all banks, it is zero and otherwise it is one.
9	Dependability (annual adjustments)	The presence of annual adjustments net of taxes is zero and otherwise one.
10	Dependability (auditor's opinion)	An unacceptable comment is zero and otherwise one.
11	An internal audit unit	Absence of internal audit unit, zero and otherwise one.
12	Having a website	Having a website, one, zero otherwise.
13	Auditor type	If the bank is audited by auditing institutions, zero, if it is audited by the auditing organization, one.

3.3 Control variables

3.3.1 MTB Ratio

The mentioned variable is measured from the following relationship.

$$\text{MTB}\frac{\text{Market value of equity}}{\text{Common equity owners rights}}$$

3.3.2 Bank Size

Bank size is the natural logarithm of total bank assets at the end of the year.

3.3.3 Cash Flow Ratio

The mentioned variable is measured from the following relationship

$$\text{CFO} = \frac{\text{Cash flows from operating activities}}{\text{Total assets}}$$

3.3.4 Tangible Assets

The ratio of tangible assets is obtained from the following relationship.

$$\text{TANG} = \frac{\text{Tangible assets}}{\text{Total assets}}$$

The statistical population in this research was the banks listed in Tehran Stock Exchange from the beginning of 2010 to the end of 2019 for ten years. Further, a systematic elimination (screening) method was used to obtain the desired statistical sample, with 11 banks were selected as the screened statistical population.

4 Findings

4.1 Descriptive Statistics

Investigating descriptive statistics, normality test and non-collinearity analysis

Table 3 shows descriptive statistics of research variables.

Table 3: Descriptive statistics and results of non-collinearity analysis between research variables in the period under review

Variable	Symbol	Mean	Median	Max.	Min.	SD.	VIF
Financial health	FH	0.211	2.000	3.000	1.000	1.985	2.421
Financial reporting quality	FRQ	0.225	0.331	0.451	0.112	1.875	2.392
Corporate governance	COR	0.461	0.538	0.769	0.307	2.252	2.295
Financial Leverage	LEV	0.641	0.601	0.824	0.405	1.609	2.227
Investment efficiency	INVE	1.151	2.005	3.452	-1.121	3.452	2.331
Operating cash flows	CFO	0.291	0.333	0.583	-0.166	2.007	2.252
Bank size	SIZE	12.155	12.714	17.225	9.151	1.122	2.096
Tangible assets ratio	TANG	0.685	0.669	0.905	0.427	2.225	2.032
Profitability	MTB	1.985	1.785	2.007	1.121	3.155	2.444

Variable	Symbol	J.B	J.B.P	Kkurtosis	Skewness
Residual of the first hypothesis model	Residual	100.854	0.085	1.248	1.635
Residual of the second hypothesis model		109.552	0.077	1.237	2.606
Residual of the third hypothesis model		101.121	0.078	1.215	2.224
Residual of the fourth hypothesis model		104.618	0.081	2.546	2.008

Considering that the value of the variance inflation factor (VIF) is less than five, it can be concluded that there is no collinearity between the research variables. Also, considering that the skewness and kurtosis are in the optimal range of 3 and 3, and considering that the probability value of Jarque-Bera's statistic is higher than the 5% error level; the normality of the statistical distribution of the error statement of the research model hypothesis is verified.

4.2 White's Test

Table 4 shows the result of the test.

Table 4: The results of White's test

Test	Hypothesis	Probability of the test statistic
White test	First	0.0895
	Second	0.0777
	Third	0.0951
	Fourth	0.0785

According to the above table; the probability of White's statistic is higher than the 5% error level, and thus, the hypothesis of variance heterogeneity is rejected.

4.3 Chaw and Hausman Tests

In the first step, to test the research hypotheses, choosing the appropriate regression model is a priority. In the first stage, using the F test, the selection of the panel data pattern has been done against the pooled data. Table 5 shows the test results.

Table 5: Selection of panel data model versus pooled data in research hypothesest

Test	Hypothesis	Probability of the test statistic
Chaw test	First	0.0000
	Second	0.0000
	Third	0.0000
	Fourth	0.0000

Considering that the probability of the Chaw -test statistic is less than the 5% error level, the use of panel data is confirmed. For this reason and to select the fixed effects model against the random effects model, the Hausman test was used to perform regression and test the hypotheses. Table 6 shows the test results.

Table 6: Choosing the pattern of fixed effects versus random effects in research hypotheses

Test	Hypothesis	Probability of the test statistic
Hausman	First	0.0000
	Second	0.0000
	Third	0.0000
	Fourth	0.0000

Considering that the probability of the Hausman test statistic is less than the 5% error level. Therefore, the use of a fixed model is confirmed against the random effects model in the mentioned hypotheses.

4.4 First Hypothesis Test

Table 7 shows the fixed effects regression model of the mentioned hypothesis.

Table 7: Fixed effects regression model of the first hypothesis

Statisticss / Variable	Symbol	Coefficient	t-test	P-Value
Constant	C	4.174	1.165	0.0785
Financial reporting quality	FRQ	5.584	5.212	0.0000
Operating cash flows	CFO	5.934	9.781	0.0000
Bank size	SIZE	7.584	7.258	0.0000
Tangible assets ratio	TANG	3.352	1.225	0.0811
Profitability	MTB	-2.115	-1.298	0.0998
R Squared	Adj R Squared	Durbin-Watson	F-test	F-value
0.801	0.720	2.134	46.225	0.0000

The above table results show that the financial reporting quality has a positive and significant effect on financial health; because, while the sign of the regression coefficient is positive (5.584); the significance level of the t statistic (0.0000) is less than the 5% error level. Therefore, the first hypothesis of the research is confirmed at the 95% confidence level. In the following, the adjusted R squared of the model states that about 72% of the changes in financial health of banks are explained by changes in other variables.

4.5 Second Hypothesis Test

Table 8 shows the regression model of the fixed effects of the mentioned hypothesis.

Table 8: Fixed effects regression model of the second hypothesis test

Statisticss / Variable	Symbol	Coefficient	t-test	P-Value
Constant	C	0.331	5.658	0.0000
Corporate Governance	COR	6.552	2.173	0.0002
Operating cash flows	CFO	-0.211	-4.451	0.0000
Bank size	SIZE	-1.151	-0.583	0.1174
Tangible assets ratio	TANG	1.985	0.112	0.3295
Profitability	MTB	-2.227	-0.166	0.5990
R Squared	Adj R Squared	Durbin-Watson	F-test	F-value
0.685	0.610	2.245	25.121	0.0000

The above table results show that corporate governance has a positive and significant effect on financial health; because, while the sign of the regression coefficient is positive (6.552); the significance level of the t statistic (0.0002) is less than the 5% error level. Therefore, the second research hypothesis is confirmed at the 95% confidence level. In the following, the adjusted R squared of the model states that about 61% of the changes in financial health of banks are explained by changes in other variables.

4.6 Third Hypothesis Test

Table 9 shows the regression model of the fixed effects of the mentioned hypothesis.

Table 9: Fixed effects regression model of the third hypothesis test

Statisticss / Variable	Symbol	Coefficient	t-test	P-Value
Constant	C	5.629	0.301	0.0951
Financial Leverage	LEV	-4.454	-6.989	0.0000
Operating cash flows	CFO	1.985	1.152	0.6237
Bank size	SIZE	3.452	-0.297	0.0015
Tangible assets ratio	TANG	3.155	2.851	0.0692
Profitability	MTB	2.032	0.382	.9430
R Squared	Adj R Squared	Durbin-Watson	F-test	F-value
0.784	0.698	2.111	40.212	0.0000

The the above table results show that financial leverage has a negative significant effect on financial health; because, while the sign of the regression coefficient is negative (-4.454); the significance level of the t statistic (0.0000) is less than the 5% error level. Therefore, the third hypothesis of the research is confirmed at the 95% confidence level. In the following, the adjusted R squared of the model states that about 70% of the changes in the financial health of banks are explained by the changes in other variables.

4.7 Fourth Hypothesis Test

Table 10 shows the regression model of the fixed effects of the mentioned hypothesis.

Table 10: Fixed effects regression model of the fourth hypothesis test

Statisticss / Variable	Symbol	Coefficient	t-test	P-Value
Constant	C	21.370	0.217	0.3125
Investment Efficiency	INVE	6.251	7.541	0.0000
Operating cash flows	CFO	-3.192	-4.239	0.0000
Bank size	SIZE	-7.526	-4.298	0.0000
Tangible assets ratio	TANG	9.958	4.465	0.5420
Profitability	MTB	9.198	4.121	0.0021
R Squared	Adj R Squared	Durbin-Watson	F-test	F-value
0.666	0.648	2.198	48.445	0.0000

The the above table results show that the effectiveness of investment has a positive significant effect on financial health; because, while the sign of the regression coefficient is positive (6.251); the significance level of the t statistic (0.0000) is less than the 5% error level. Therefore, the fourth research hypothesis is confirmed at the 95% confidence level. In the following, the adjusted R squared of the model states that about 65% of the changes in financial health of banks are explained by changes in other variables.

4.8 Compavtation of predictive power of neural network algorithms

First, the actual values were compared with the predicted values in all three models to get better and more specific results. Table 11 shows the comparison results.

Table 11: Summary of neural network algorithm results

Dependant variable	Actual	Firefly algorithm	Decision tree algorithm	Vector machine regression algorithm
Financial health	-0.125	-0.007	0.164	0.301

The above table shows that the firefly algorithm has a higher power to predict financial health than the decision tree algorithm, the firefly algorithm has a higher power to predict financial health than the vector machine regression algorithm, and the decision tree algorithm has a higher power to predict financial health than the vector machine regression algorithm. Therefore, the fourth, fifth, sixth and seventh main hypotheses of the research are confirmed. According to the results of linear regression models and nonlinear power regression models, a multivariable nonlinear model is explained to explain the pattern of factors affecting financial health by accounting variables. so that if:
Y: financial health,
FRQ: financial reporting quality,
COR: corporate governance,
LEV: financial leverage,
INVE: investment efficiency.
So, the comprehensive model of factors affecting the financial health of banks will be designed as follows:

$$Y = \alpha + (FRQ)^{\beta 1} + (COR)^{\beta 2} + (LEV)^{\beta 3} + (INVE)^{\beta 4}.$$

That by converting the aforementioned non-linear regression models into linear models; the main model of the research is designed as follows:

$$xc \ln Y = \ln \alpha + \beta_1 \ln(FRQ) + \beta_2 \ln(COR) + \beta_3 \ln(LEV) + \beta_4 \ln(INVE)$$

5 Discussion and conclusion

This paper aimed to observe the factors affecting the financial health of banks. For this purpose, first 48 experts in accounting and management were interviewed. The expert opinions indicate that the main factors affecting financial health are the quality of financial reporting, corporate governance, financial leverage and investment efficiency. The first hypothesis results indicated that the quality of financial reporting has a positive significant effect on financial health. Also, The the second hypothesis results indicated that corporate governance has a positive and significant effect on financial health. Further, the third hypothesis results indicated that financial leverage has a negative significant effect on financial health. Moreover, the fourth hypothesis results indicated that the effectiveness of investing has a positive significant effect on financial health.

6 Suggestions

According to the findings of the research, commercial bank managers are suggested to help the financial health of banks by improving the quality of published accounting information. It is also suggested to them to provide the necessary grounds for disclosing corporate governance information. According to the findings of this research, the more corporate governance information is disclosed, the better the financial health of banks will be. On the other hand, bank managers can contribute to the financial health of the bank by reducing the settlement of debts from the assets and also managing the capital structure. Finally, bank managers can contribute to the financial health of controlled commercial banks through healthy and efficient investment activities. Investors can also invest in banks that have transparent and high-quality financial reports. On the other hand, they can make the disclosure of corporate governance information the basis of their judgment and invest in banks that are at a high level in terms of disclosing such information; because the disclosure of more corporate governance information to a large extent guarantees the financial health of banks. Also, investors can invest in banks that have a favorable capital structure and low financial leverage, because it is through favorable financial leverage that the financial health of banks is guaranteed to an acceptable extent. Finally, they are suggested to invest in units that have successful and efficient investment activities. In fact, the efficiency of investment guarantees insures to a large extent the financial health of banks. Finally, it is suggested to stock market activists and standardization bodies to develop the necessary and executive standards for disclosing corporate governance information. In such a way that the compilation of such information forces companies to disclose more corporate governance information and this guarantees their financial health. It is also suggested to them to develop reliable, correct and precise criteria to measure the financial health of banks.

Limitations

The presence of different criteria for measuring corporate governance was one of the main limitations of the current research, which was possible by using other criteria; the results of the research are different from the results of the current research.

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