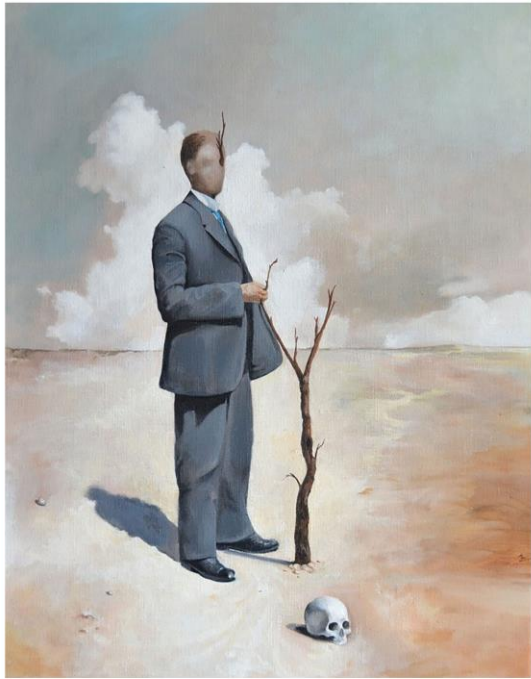


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The possibility of using (Model M-Score Beneish) to predict the earnings management by the lagging banks and placing them under trusteeship in the Iraqi environment. Applied study in a sample of Iraqi banks

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Abstract

This study aims to determine the extent to which Model M-Score Beneish can be used to forecast troubled banks before default and place them under trusteeship. The research data indicated that all the banks that were placed under the tutelage of the Central Bank of Iraq were practicing the earnings management policy. Concluded this study that the banks that manipulate their profits are the banks it is more likely to be managed by a bad administration and may suffer in the near future from a delay in paying its financial obligations.

Keywords: banks, Earnings management, Beneish M-Score

La posibilidad de utilizar (Model M-Score Beneish) para predecir la gestión de ganancias de los bancos rezagados y colocarlos bajo tutela en el entorno iraquí. Estudio aplicado en una muestra de bancos iraquíes

Resumen

Este estudio tiene como objetivo determinar hasta qué punto el modelo M-Score Beneish se puede utilizar para pronosticar los bancos en problemas antes del incumplimiento y colocarlos bajo fideicomiso. Los datos de la investigación indicaron que todos los bancos que fueron puestos bajo la tutela del Banco Central de Irak estaban practicando la política de administración de ganancias. Concluyó este estudio que los bancos que manipulan sus ganancias son los bancos que tienen más probabilidades de ser administrados por una mala administración y pueden sufrir en un futuro cercano un retraso en el pago de sus obligaciones financieras.

Palabras llave: bancos, Gestión de ganancias, Beneish M-Score

Introduction:

Some companies' earnings management practices provide shaded information to users in general and investors in particular, This is reflected in the negative decision-making process on the one hand and the manipulation of market prices of stock on the other.

In contrast, these practices have become common in companies, especially local companies listed on the Iraq Stock Exchange. Therefore, it is necessary to search for a tool that leads to the knowledge of these practices to avoid manipulation of stock prices on the one hand and making the wrong decisions by investors on the other.

Researchers believe that the reason for the practice of earnings managing and providing shaded financial statements is that there are some gaps in the preparation of financial statements and this leads to concerns about the quality of the financial statements and their honesty. (edmond, 2016: 59).

The purpose of this study is to understand how earnings management practices can be discovered. As well as an attempt to apply, this method for some troubled banks and know the possibility of discovery before defaulting.

Earnings management practices defined as management practices to ma-

nipulate profits aimed at achieving certain management gains and reaching a level of profits consistent with the expectations of financial analysts. Researchers argue that Earnings management can be classified into three categories (gunny: 2005, 1):

- Fraudulent accounting
- Accruals Management
- Real Earnings management.

Three different concepts of Earnings management can be represented in colors (romend & yaari: 2008):

White color (good Earnings management) and black (bad Earnings management) gray (between good management and bad management) (neutral Earnings management). The following diagram can illustrate this:



Good Earnings management enhances transparency in financial statements. Bad Earnings management leads to frank and deliberate misrepresentation and fraud in the financial statements.

Neutral earning management is the manipulation of financial reports within the limits of compliance with accounting standards and principles and can be opportunistic or enhance efficiency in the financial statements.

According to (Scoot: 2003) that the earning management is that managers choose the accounting policies that achieve them the specific goal of maximizing the value of profits and this is known as management opportunism.

Various discussions support and oppose earning management practices. The opposing team believes that earning management is an unaccept-

able phenomenon and needs to be reduce. The risk is that the flexibility found in accounting principles and standards will be miss used and shaded. The support team believes that these practices are acceptable in order to mitigate unusual fluctuations in profits and this will improve the provision and transmission of useful information to users of the financial statements (skors, 2014: 19).

Literature review:

The earnings management is a practice that influences decisions made by corporate investors, which has led to the need to investigate companies that use such practices that aim to shade investors.

(Edmond Ofori: 2016) researched Enron and confirmed that it uses shaded financial reports to shade investors and other users. The Company's annual reports to the stock market from 1997 to 2001 were analyzed using Modified Altman Z-Score and Beneish M-Score detective models to detect early earnings management practices. The study found that financial fraud could have been detect in the company since 1997.

(John MacCarthy: 2017) The aim of this study is to find out if earnings management and corporate failure can be detect if Altman Z-score and Beneish M-model are used. Information was collect from a database of US companies. It has been discover that there are manipulations and earnings management practices by these companies.

(B. Dbouk and I. Zaarour: 2017) this study used data for fifty-three companies obtained from the largest companies for four years and used the Beneish model. The companies were classify between manipulators and non-manipulators. The study confirmed that the application of the model helps the auditor to discover earnings management practices by these companies.

(Natalia V. Feruleva, et al: 2017) This study confirms that the Institute of Auditors is one of the most reliable bodies for determining the manipulation of financial statements in Russia. On the other hand, the costs associated with the audit became very high, which led to the use of the Beneish model to distinguish between companies that practice earnings management and those that do not. As well as determining the level of accuracy of expectations in case of fraud through overestimation of net assets and other practices.

(Zita Drábková1: 2014) This study discusses the possibility and methods of manipulating the financial statements through a case study of five accounting periods using the Beneish model. The tools that determine the

risks of financial manipulation and the most important methods of creative accounting analyzed and evaluated.

(Emmanuel Ikechukwu et al: 2018) This study focused on the role that predictive models play for early detection of creative accounting practices for industrial companies in Nigeria. The Beneish and Altman Z models have been use jointly to detect these practices. The annual financial statements, the published information in the fields, articles and others used to detect these practices and it was discover that there is a significant difference in the predictive power of the variables from the application of the two models.

(Nasrin Lotfi et al: 2017) The study confirms that the problem of financial fraud and fraud is important and may cause financial losses for individuals and institutions. This study aims to test the Beneish M-Score model in detecting financial fraud for listed companies on the Tehran Stock Exchange for a sample of 137 listed companies for 11 years 2005-2015. The study found that the accuracy of disclosure of fraudulent financial statements of companies listed on the Tehran Stock Exchange is 66% in general.

(Malline Bharath Kumar et al: 2018) In this study, the Beneish M-Score model used to detect the profit manipulation of 10 foreign companies and 10 Indian companies for the past five years. The companies were classify into manipulative and non-manipulative companies, as well as the use of forensic accounting in addition to the Beneish M-Score model.

Motivations and incentives

There are several purposes of profit management practice:

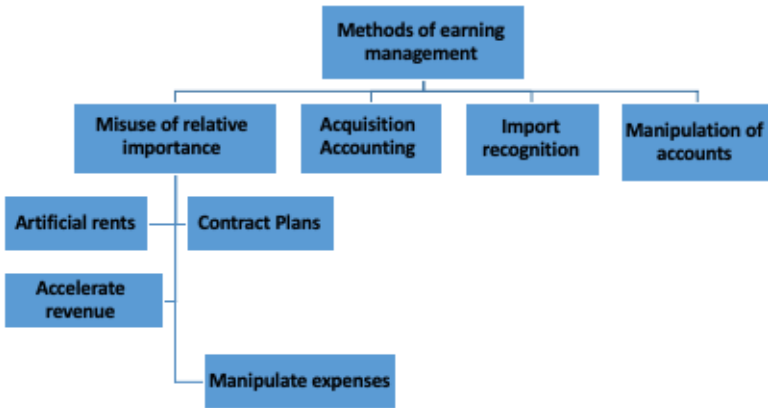
- Get administrative incentives: Managers consider managing the profits by transferring part of the future profits to the current period in order to maximize their reward in the current period. Managers can achieve you by choosing between accounting policies that result in transferring or transferring part of future profits to the current period (salah al,et, 2005 : 86).
- Forecasts and valuation of the financial market: The predominant use of accounting information by investors and financial analysts is to assist in the valuation of stocks. This creates an incentive for managers to manipulate profits in an attempt to influence stock prices in the short term (healy & wahlen, 1998: 12).
- Contractual motives: There are several contracts, including debt contracts, which is necessary to make pledges must be committed by the borrowing company during the contract period.
- Organizational motives: These motives occur when the company receives huge profits and managers reduce the value of profits disclosed for

the current year in order to avoid attracting and media attention (watt & zimmeram, 1990: 136).

- Manipulation of the tax burden: Taxation of companies is an incentive for management to practice profit management in order to reduce profits and reduce taxes, done through accounting standards that give freedom to choose from accounting alternatives without prejudice to accounting principles (skors, 2004: 26).

Methods and methods of exercising earning management:

There are several methods of earning management can be clarified through the following scheme:



Find (Al-maliye : 2016) that the earnings management is done through the two terms of the Accounting portal based on the use of accounting variables for the choice of profit accounting policies that includes benefits management, Optional accounting changes and disclosure management . The real input is through the use of administrative and operational decisions related to production and investment activities by changing the timing of financial events to modify the revenue or expenses (Al-maliye , 2016:8).

Fraudulent financial reporting with the aim of misleading and confusing internal and external users (employees of a company, investors, shareholders, creditors, government and regulatory agencies of the financial market is disastrous to the firm value. (edmond, 2016 : 59).

Conforms (Jung, Lee & Weber, 2014) Loopholes in preparation of financial reporting standards worldwide leads to fraudulent financial reporting.

This raise concerns about the high quality of financial reporting standards, the role of auditors of a firm and regulators of the financial market (Edmond, 2016: 59).

In addition (Eng, Sun & Vichitsarawong, 2014) consider the Frauds in organizations financial reporting cause many organizations business to collapse and impact negatively on the reputations, brands and image of many existing organizations (Edmond, 2016: 59). The purpose of the study is to understand the way in which earnings management practice is discovered, Conform (X. Yue, et al: 2007) the financial fraudulent behavior continued to increase with financial frauds being detected. The audit committee recognizes that traditional audit methods like manual verification of accounts as payroll, inventory, earnings and old sampling techniques, may no longer be adequate in view of the continuous integration between technological advancements and businesses. Auditors had limited analytic capabilities and jurisdiction to achieve maximum audit compliance with minimum audit costs at in-time judgments. Auditors need new tools in today's massive digital economy of Big Data transactions. Thus, new effective methods are becoming inevitable to complement and strengthen the various audit analytical procedures when running an audit assignment. (b.dbouk I.zaarour, 2017: 172).

Research Methodology

For the purpose of achieving the aim of the study, an M-score model was used to know the banks that practice profit management, and then influence the reliability of the financial statements, to predict the banks that will suffer from financial failure in the short term, three banks were placed under the trusteeship of the central bank; approved The test of the financial statements of the Iraq Stock Exchange for the three banks for a period of two years prior to the trusteeship of the Central Bank.

Imposing trusteeship on banks and managing profits:

The Central Bank of Iraq is responsible for the formulation and implementation of monetary policy related to the management and issuance of the monetary bloc, and oversee the work of government and private banks and follow-up the movement of capital and the sale of oil revenues from the dollar in the official auction to finance the government budget. The Central Bank shall grant a license to the Bank authorizing it to practice banking and provide banking services to the public, and to ensure the interests of individuals and companies dealing with and contribute to it. When the Bank is exposed to an economic crisis because of mismanagement or

any such problem, the Central Bank, which represents the legal reference authority for this entity it must intervene to protect the rights of individuals and companies dealing with that bank. Guardianship is imposed on all banks that have offended the banking business and the principle of trust, which should prevail in the banking process, especially since Article (40) of the Central Bank Law No. (56) Of 2004 granted this bank the authority to supervise all banks and the authority to take all necessary measures to regulate the work of banks and supervise its branches in order to comply with all the provisions of the Central Bank Law and the Banking Law.

The Banking Law No. 94 of 2004 gave the Central Bank of Iraq the authority to supervise and control banks operating in Iraq, Where paragraph one of Article 59 of this law to become the Central Bank of Iraq guardian of the bank in the following cases

(A) The Central Bank has determined that the Bank does not meet its financial obligations as they fall due.

B) The bank's capital is less than 5% of the minimum required by law

C) That a petition has been filed against bankruptcy against the Bank,

D) Issuing a decision by the Governor of the Central Bank of the need for guardianship of the Bank to ensure the stability and safety of the banking system as a whole.

The paragraph 2 of the same article authorizes the Central Bank of Iraq to put the bank under the tutelage whether the management of the bank's operations and operations is not safe and secure, Or the bank's actions affecting its financial integrity.

The guardian may be one person or a number of persons in accordance with article (60) of the Banking Law, Article (61) approved the suspension of the powers of shareholders and the powers of the management of the bank in all respects to prevent cases of waste of assets and the guardian to take these measures.

Model M-Score Beneish

Professor Daniel Beneish of the Kelly School of Business at Indiana University designed the model. Beneish's paper "Earnings Manipulation" was published in 1999; The M-Score Beneish model is a statistical model that uses financial ratios calculated with the accounting data of a particular company in order to verify whether the profits of the said company have been manipulated.

M-Score Beneish is calculated using eight financial ratios, using the income statement, balance sheet and cash flow statements of the company. The

company then calculates M-Score to determine the degree of profit manipulation.

Beneish believes that companies motivate them to manipulate profits if they have high sales growth, Degradation of gross profit margins, Higher operating expenses and higher leverage, It is likely to manipulate profits by accelerating sales recognition, increasing deferral of costs, raising receivables and reducing consumption. It is a probabilistic model, so it cannot detect companies that manipulate their profits with 100% accuracy. Three banks have been select by the Central Bank under the trusteeship to test the possibility of using the model M-Score Beneish to predict the lagging banks that should be place under the trusteeship; the test was based on the financial statements of banks for the two years preceding the trusteeship of the bank.

Days Receivable Index (DSRI):

$$DSRI = (\text{Net Receivables}_t / \text{Sales}_t) / \text{Net Receivables}_{t-1} / \text{Sales}_{t-1}$$

Table (1)

Day's sales in receivables Index (DSRI)

	Name of bank	DSRI	Weight
1	Al- Warka Bank for Investment & Finance	0.23	0.920
2	Dijla & Furat Development & Investment Bank	0.19	
3	Economy Bank For Investment	4.58	

Sales days in the receivables index. Measures the proportion of day’s sales in receivables versus the previous year as an indicator of revenue inflation. From the previous table we see the rise of DSR (4.58) in the Economy Bank for Investment, which indicates the possibility of accelerating the recognition of revenue in order to inflate profits, and the decrease of the value of DSR in other banks, which reduces the possibility of inflating profits.

Gross Margin Index (GMI):

$$GMI = [(Sales_{t-1} - COGS_{t-1}) / Sales_{t-1}] / [(Sales_t - COGS_t) / Sales_t]$$

Table (2)

Gross Margin Index (GMI)

	Name of bank	GMI	Weight
1	Al- Warka Bank for Investment & Finance	7.23	0.528
2	Dijla & Furat Development & Investment Bank	0.11	
3	Economy Bank For Investment	0.79	

Gross Margin Index represents the gross profit margin ratio compared to the previous year. From the table above, both Dijla & Furat Development & Investment Bank and Economy Bank for Investment have a low GMI value. There is a negative signal about the bank's outlook creating an incentive to inflate profits. Poorer units are more likely to manipulate profits.

Asset Quality Index (AQI):

$$AQI = [1 - (\text{Current Assets}_t + \text{PP\&E}_t + \text{Securities}_t) / \text{Total Assets}_t] / [1 - ((\text{Current Assets}_{t-1} + \text{PP\&E}_{t-1} + \text{Securities}_{t-1}) / \text{Total Assets}_{t-1})]$$

Table 3
Asset Quality Index (AQI)

	Name of bank	AQI	Weight
1	Al- Warka Bank for Investment & Finance	0.035	0.404
2	Dijla & Furat Development & Investment Bank	1.01	
3	Economy Bank For Investment	1.01	

Asset Quality Index (AQI): The ratio of non-current assets (other than plant, property and equipment) to total assets for one year compared to the previous year. From the above table, the value of AQI in Dijla & Furat Development & Investment Bank and Economy Bank for Investment may indicate that these banks postpone some costs by capitalizing them in order to inflate profits.

Sales Growth Index (SGI)

$$SGI = \text{Sales}_t / \text{Sales}_{t-1}$$

Table (4)
sales Growth Index (SGI)

	Name of bank	SGI	Weight
1	Al- Warka Bank for Investment & Finance	1.6	0.892
2	Dijla & Furat Development & Investment Bank	5.08	
3	Economy Bank For Investment	0.29	

The Sales Growth Index (SGI) measures the ratio of sales to the previous year. Their financial position and capital needs put pressure on managers to make profits. If the unit faces significant losses in share prices, it may have greater incentives to manipulate profits to maintain its appearance.

Depreciation Index (DEPI):

$$DEPI = (\text{Depreciation}_{t+1} / (\text{PP\&E}_{t+1} + \text{Depreciation}_{t+1})) / (\text{Depreciation}_t / (\text{PP\&E}_t + \text{Depreciation}_t))$$

Table (5)
Depreciation Index (DEPI)

	Name of bank	DEPI	Weight
1	Al- Warka Bank for Investment & Finance	1.47	0.115
2	Dijla & Furat Development & Investment Bank	7.15	
3	Economy Bank For Investment	1.088	

The depreciation index (DEPI) is the ratio of the depreciation rate in the year compared to the previous year. It is noted from the previous round that the value of DEPI is low for Economy Bank for Investment. Adopting a new way to increase income.

Table (6)
sales General and Administrative expense Index (SGAI)

	Name of bank	SGAI	Weight
1	Al- Warka Bank for Investment & Finance	2.63	- 0.172
2	Dijla & Furat Development & Investment Bank	0.19	
3	Economy Bank For Investment	1.98	

This General and Administrative Expenditure Index (SGAI) measures the ratio of SG&A expenses for one year in relation to the previous year. From the table above, the value of SGAI at Al- Warka Bank for Investment & Finance may be explain by the disproportionate increase in sales as a negative signal about the bank’s future prospects, thus creating an innovation to amplify profits.

$$LVGI = [(\text{Current Liabilities}_t + \text{Total Long Term Debt}_t) / \text{Total Assets}_t] / [(\text{Current Liabilities}_{t-1} + \text{Total Long Term Debt}_{t-1}) / \text{Total Assets}_{t-1}]$$

Table (7)
Leverage Index (LVGI)

	Name of bank	LVGI	Weight
1	Al- Warka Bank for Investment & Finance	0.9	- 0.327
2	Dijla & Furat Development & Investment Bank	0.28	
3	Economy Bank For Investment	0.98	

Leverage Index (LVGI) is the ratio of total debt to total assets for the year in relation to the previous year. From the previous table, the value of LVGI for both Al- Warka Bank for Investment & Finance and Economy Bank for Investment may increase. Create an incentive to manipulate profits to meet debt covenants.

Total Accruals to Total Assets (TATA):

$TATA = (\text{Income from Continuing Operations}_t - \text{Cash Flows from Operations}_t) / \text{Total Assets}$

Table (8)
total Accruals to total Assets (TATA)

	Name of bank	TATA	Weight
1	Al- Warka Bank for Investment & Finance	0.13	4.697
2	Dijla & Furat Development & Investment Bank	0.21	
3	Economy Bank For Investment	0.18	

Total Receivables to Total Assets (TATA): This is calculate as a change in the working capital accounts other than cash less depreciation. . Thus, a higher level of receivables is associated with an increased likelihood of profit manipulation.

$$\text{M Score} = -4.840 + 0.920 \times \text{DSRI} + 0.528 \times \text{GMI} + 0.404 \times \text{AQ} + 0.892 \times \text{SGI} + 0.115 \times \text{DEPI} - 0.172 \times \text{SGAI} - 0.327 \times \text{LVGI} + 4.697 \times \text{TATA}$$

Table (8)
Calculate M- Score

	Name of bank	M- Score
1	Al- Warka Bank for Investment & Finance	0.66104
2	Dijla & Furat Development & Investment Bank	2.01288
3	Economy Bank For Investment	0.76376

If the result of Beneish M is less than -2.22, then this indicates that the company under consideration is not a manipulator, If the Beneish M-score is greater than -2.22, it provides a signal that the company can be manipulate

From the table above it was note that all banks sample research was Beneish M-score greater than -2.22 and in varying proportions and perhaps Dijla & Furat Development & Investment Bank most likely, that it is manipulating profits (earnings management).

Conclusion:

Earnings management is a practice used to shade users in general and investors in particular. Beneish designed a model for discovering the manipulation of profits by companies, when analyzing the financial statements using the Beneish model M-score of three banks placed under the central bank's custody to test the predictability of these banks from paying their financial dues that are working to manage their profits. The results showed that all the research sample banks (lagging and placed under the commandments) was Beneish M-score greater than -2.22 in varying proportions and perhaps the Dijla & Furat Development & Investment Bank is the most likely that it manipulates the profits, and it can be concluded that the banks that manipulate their profits are the banks it is more likely to be managed by a bad administration and may suffer in the near future from a delay in paying its financial obligations.

Reference:

- 1- B-Dbouk and I Zaarour financial statement earnings manipulation defecation using a layer of machine learning, international journal of innovation management and technology, VOL8, NO, 3, 2017.
- 2- Edmond ofori , Detecting corporate financial fraud using modified Altman z-score and beneish m-score the case of Enron crop , research journal of finance and accounting , ISSN 2222-1697 , VOL,7 NO, 4 .2016 .
- 3- Emmanuel L Kechukwn Okoye , John , ugochukwe NWOYE, Mary, Fidelis Chidoziem ABiahu, international journal of academic research in accounting finance and management science VOL,2 ,NO 8 , 2017 .
- 4- Gunny,k, what are the consequences of real earnings management university of California , 2005.
- 5- Hassnan raghib talab, hakeem hammod, sallama Ibrahim, role of beneish m-score models in detecting of earnings management practices empirical study in listed banks of Iraq stock exchange , international journal of applied business and economic research ISSN 0972-7302, VOL 15 , NO,23, 2017.
- 6- Heahy.pm &wahlen j.m, a review of earning management literature and implication for standard setting national Burea of economic research, 1998.
- 7- Heba omar , the impact of earning management on shares market values A testing study on Jordanian engineering and constructing firm , thesis in accounting department college of business university.
- 8- Iraqi law of banks no 94, 2004.
- 9- John McCarthy, using Altman z-score and beneish m-score models to detect financial fraud and corporate failure a case study of Enron corporation, international journal of finance and accounting, ISSN 2168-4812, VOL, 6, PP, 159-166, 2017.
- 10- Joshne rohen varda yaari, earnings management emerging insights in theory practice and research, 2008.
- 11- Malline Bharath Kumar , Nandeesh G , Ricky Ayyappa , Kar-

tha jay Role of forensic accounting An analysis, IJRAR , VOL 5 , Issue 4 ,ISSN 2349-5138, 2018 .

12- Messod d. beneish, the detection of earning manipulation financial analyst's journal, VOL.55, NO.5, PP. 24-36, 1999.

13- Nasrin lotfi, Arezoo Aghaei chadegani, detecting corporate financial fraud using beneish m-score model, international journal of finance and management accounting, VOL 2, NO8, 2017.

14- Natalia V. feruleva, Maria A Shtefan, detecting financial statement fraud the evidence from Russia, journal of corporate finance research, VOL, 12, 2017.

15- Saleh, N.M., Iskandar, T.M., & Rahmat, M.M "Earnings Management and Board Characteristics: Evidence from Malaysia", Journal of Pengurusan, Vol.24: 77- 103.2005.

16- Tarjo,nurul herawati Application of beneish m-score models and data mining to detect financial fraud , Procardia social and behavioral sciences 17-18 September , 2015.

17- Tochukwu Gloria, Charles emenike onyali chidiebele, effect of earnings management on performance of corporate organizations in Nigeria, journal of administrative and economic sciences, 2012.

18- Vladimir patrik, application of banish m-score on selected financial statements, conference paper, 2016.

19- Watts,R.L & Zimmerman, Positive accounting theory a ten year perspective the accounting review, vol.65, no1, pp.131-156,1990.

20- X, Yue, Y we Y way. C.li & l.li and c.chu, a review of data mining based financial fraud detection research international conference on wireless communication networking and mobile computing, pp.5519-5522, 2007.

21- Zita, Drabkova, possibilities of identifying manipulated financial statements the international scientific conference INPRO-FORUM 135-140, online, ISSN 2336-6788, 2014.



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