

An Overview of Relationship Between Financial Ratios and Level of Transparency of the Disclosed Financial Information in Companies Listed in Tehran Stock Exchange

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Abstract: Nowadays, transparency of information plays a key role in increasing success of companies in line with their programs. Extensive disclosure can acquire investors' trust on different aspects of performance or operations of company, resulting in reduction in level of information asymmetry or reduction in information costs of investors. The present research intends to examine relationship between financial ratios and level of transparency of the disclosed financial information in companies listed in Tehran Stock Exchange during 2008-2013. Correlation has been used as the research method. Analysis of the results has been made via the research model and used to describe variables of descriptive statistics including mean, median and variable. Results from hypotheses were specified using t-statistics at confidence level (95%) via software Eviews. Results indicated that there is a positive significant relationship between ratios of liquidity, profitability, activity and transparency of financial information yet there is not a significant relationship between debt ratio and transparency of information.

Key words: Liquidity ratio, profitability ratio, debt ratio, activity ratio, transparency of financial information

INTRODUCTION

Representation of useful information on financial function of business unit for a wide range of users has been regarded as one of the aims of accounting reporting. Profit and loss statement has been regarded as one of the fundamental financial statements which meet this aim. Net profit will be product of profit and loss, mentioned as one of the important information which is used by investors and other users of financial statements. Some believe that investors respect more for the companies which have fixed and sustainable profit as a result earnings management and quality of reported earnings have been mentioned as the issues prevailed in accounting research during three recent decades regarding significance of reported profit in economic decisions and allocation of rare resources. Users of companies' financial reports require high quality financial information for decision making at the area of purchase, sale, evaluation of managers' performance and other important economic decisions. In general, investors invest in an economic unit when they have sufficient information on it and ensure it. On the other hand since financial statements provide valuable information for the intra-organizational group,

severe reliance on accounting figures especially profit provide strong stimulus for the managers so as take action to manipulate profit in favor of themselves.

This causes the users to acquire wrong information, whereby they adopt improper decisions (Aljifri, 2007). The more quality is in transparency and disclosure, the better information on how to administrate the company will be given the beneficiaries.

Extensive disclosure can acquire investors' trust on different aspects of performance or operations of company, resulting in reduction in level of information asymmetry or reduction in information costs of investors (Cormier *et al.*, 2009). It should be noted that different factors affect transparency of financial information. Financial ratios are the most important factors affecting transparency of financial information. Liquidity power of companies can be of great importance. Indeed, liquidity risk decreases in the companies with high current ratio. Liquidity risk which associates to the transactions in stock market causes purchase and sale of stock come to realize in secondary markets simply. This issue is of great importance for shareholders in sake of disclosure. Interest coverage ratio is another factor which contributes in determining transparency levels. Indeed, this ratio

displays companies' ability in debt interest repayment which is funded from profit. This ratio implies that to which extent the business unit pays the cost of interest of loans from the profit. Thus, unfavorable changes can indicate the problems due to inability of business unit in repayment of interest of loans. Hence, to compensate this weakness, the managers must display to the creditors that they have the ability to repay principal and interest of received credits and this can be of great importance in sake of disclosure on the behalf of companies. In general, the aforementioned factors and financial ratios indicate their influence on disclosure of financial information. With regard to the explanations given in this research, we intend to examine the relationship between financial ratios and transparency level of disclosed financial information in companies listed in Tehran Stock Exchange.

Literature review: Biddle *et al.* (2009) perceived that there is a negative relationship between quality of reporting in the companies which intend in more investment in business units and investment. In other words, higher quality of reporting causes avoidance of investor.

The main aim of this study is to investigate the relationship between Working Capital Management (WCM) and firm's profitability in the textile sector of Pakistan (Uyar, 2009). WCM plays an important role in firm's financial management decisions. An optimal WCM is expected to contribute positively to the creation of firm's value and enhancement of its profitability. Working capital, fixed assets' cost, cost of production, cost of debt (interest expense) and size (capital) of the firm as control variables are also used to investigate their effect on profitability (net income). A sample size of 55 textile companies in Pakistan has been selected for a period of 6 years, from 2003-2008. The relationship between WCM efficiency and profitability is examined using correlation, regression analyses and ANOVA (Analysis of Variance) test. The results show a strong positive significant relationship between WCM and firm's profitability in Pakistan's textile sector. In case of control variables, it is found that there is a significant relationship between working capital, fixed assets' cost, cost of production and size (capital) and profitability. However, results show a significant negative relationship between debt used by the firm and its profitability. The findings enhance the knowledge base of WCM and will help companies to manage working capital efficiently. Moreover, it will help the policy makers and decision making authorities to better orient themselves towards considering and adopting efficient ways of managing working capital.

Ogundipe *et al.* (2012) observed the relationship between Working Capital Management and Firms' Performance as well as Market Valuation in Nigeria using annual reports of fifty four non-financial quoted firms on the Nigerian Stock Exchange for the period 1995-2009. The results show working capital management (CCC) has a negative relationship with market valuation (Tobin Q). However, they found that debt ratio (leverage) is positively related to market valuation (Tobin Q).

Nobanee and Hajjar (2011) in a research entitled "Working Capital Management, Operating Cash Flow and Corporate Performance" stated that managers can increase profitability and turnover of cash flow of their company through reducing conversion period of cash flow. Further, reducing inventory conversion period and prolonging due date of the paid accounts can reduce profitability and cash flow of company.

MATERIALS AND METHOD

Quasi-experimental and prospective correlation has been used as the research method at the area of accounting research, categorized as an applied research as it can be used in the process of using information. The statistical population consists of all the companies accepted in Tehran Stock Exchange during 2009-2013.

Research hypotheses:

- There is a significant relationship between liquidity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange
- There is a significant relationship between profitability ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange
- There is a significant relationship between debt ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange
- There is a significant relationship between activity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange

Research variables (independent variable)

Financial ratios: In this research, financial ratios have been considered as independent variable and their relationship with transparency level of financial information is of importance (Adiloglu and Vuran, 2012). Financial ratios have been represented as follows:

Liquidity ratios: These ratios measure ability and power of company in paying short-term debts in due date, dividing into quick and current ratio. In other words, these ratios are obtained from comparison of current asset with current debt.

Current ratio: This ratio indicates that creditors can ensure that their receivables are paid due date. This numerical ratio is positive and >1 that it will be better from point of view of creditors if it is greater as much as possible:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current debts}}$$

Quick ratio: This ratio is obtained through dividing the quick assets on sum of debts. Quick assets include cash and bank, short-term securities and receivables. Items such as inventory and advance payment are not considered to calculate this ratio in order that the creditors enable to evaluate liquidity of business enterprise in repaying debts in a better way:

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current debts}}$$

Profitability ratios: Profitability ratios indicate to which extent the institution is administrated effectively and measure success of company in acquisition of net return to the sale income. Indeed, this ratio analyzes success of company in acquisition of profit and how to fund it from income, sale and investment, classified to seven indicators depending on type of analysis as follows:

Ratio of sale return:

$$\text{Sale return} = \frac{\text{Net profit}}{\text{Net sale}}$$

This ratio indicates that to which extent profit has been acquired out of 1 Rial sale. Further, this ratio indicates rate of return per Rial from sale.

Ratio of return on shareholders' equity:

$$\text{Return on shareholders' equity} = \frac{\text{Net profit}}{\text{Shareholders equity}}$$

This ratio is acquired by dividing net income less dividends on preferred stock divided by the average; this ratio indicates success of management in maximizing return on common shareholders' equity.

Ratio of return on assets:

$$\text{Return of sum of assets} = \frac{\text{Net income}}{\text{Sum of assets}}$$

This ratio is a better criterion to measure profitability of company compared to ratio of net income to sale and ratio of operating profit because it indicates power of management in effective use of assets.

Leverage ratio: These ratios determine and evaluate the relationship between the used financial resources in business enterprise in sake of debts or shareholders' equity and examine how they are combined. Indeed, this ratio indicates funding financial needs through creating debt.

Debt ratio:

$$\text{Debt ratio} = \frac{\text{Sum of debts}}{\text{Sum of assets}}$$

This ratio indicates the ability of company in tolerating reduction of income due to the losses without any risk to creditors' resources, so that the more this ratio is great, it will indicate high risk of creditors. The acceptable value of this ratio depends on stability of profitability during different years.

Activity ratio: Activity ratios determine to which extent the institution uses its resources in a more effective way. These ratios associate to comparison of sale and investment volume in different assets such as inventories, fixed assets, debtors and so forth.

Fixed asset turnover ratio:

$$\text{Fixed asset turnover ratio} = \frac{\text{Sale}}{\text{Fixed assets}}$$

Fixed asset turnover ratio compares the sales revenue a company to its fixed assets.

Inventory turnover ratio:

$$\text{Inventory turnover ratio} = \frac{\text{The cost price of sold good}}{\text{Average inventory}}$$

This ratio is acquired by dividing the cost price of sold good to the average inventory. This ratio is low rate might derive from reduction of sale or increase of inventory. Increase of inventory will be followed by the outcomes such as increase of maintenance cost and cash outlet flow. High inventory turnover might raise problems of inventory deficit to meet customers' needs.

Dependant variable

Transparency of information: In this research, scores of system of ranking the quality of disclosure and notification of Tehran Stock Exchange and separation of companies to companies with transparency of financial information are low and great. This method has been used in research by Gelb and Zarowin (2002). Companies are ranked based on the time (outside of selling) spent for forecasting earnings per share, unaudited financial statements during 3, 6 and 9 months, audit's opinion

about forecasting earnings per share, audit's opinion about financial report for the 6 months period, unaudited financial statements ended in the last month of the year and difference between forecasts and real audited performance. Further, under lack of timely representation of audited financial statements ended in the last month of year and scheduling for paying shareholders' profit, negative score per day delay is considered.

Research models: The model for the first hypothesis of research:

$$TRA = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \varepsilon$$

The model for the second hypothesis of research:

$$TRA = \alpha_0 + \alpha_1 X_3 + \alpha_2 X_4 + \alpha_3 X_5 + \alpha_4 X_6 + \varepsilon$$

The model for the third hypothesis of research:

$$TRA = \alpha_0 + \alpha_1 X_7 + \varepsilon$$

The model for the fourth hypothesis of research:

$$TRA = \alpha_0 + \alpha_1 X_8 + \alpha_2 X_9 + \varepsilon$$

TRA transparency of information:

- X_1 is current ratio
- X_2 is quick ratio
- X_3 is ratio of sale return
- X_4 is return on shareholders' equity
- X_5 is return on assets
- X_6 is price-to-earnings ratio
- X_7 is debt ratio
- X_8 is fixed assets turnover ratio
- X_9 is inventory turnover ratio

RESULTS AND DISCUSSION

Results from hypotheses testing: This study represents the results from implementing models and testing hypotheses. Concerning each of hypotheses, the details on information from software are proposed in specific tables so as to facilitate comparison and examination of hypotheses.

Testing the first hypothesis and its results: The first hypothesis states that there is a significant relationship between liquidity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange. The model below has been represented to test this hypothesis:

$$TRA = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \varepsilon$$

The results from testing the first hypothesis based on the model above have been represented in Table 1. Comparison of F-statistics (10.17) in Tabel 1 with the F-value in table indicates significance of fitted regression model at error level (1%). Value of adjusted determination coefficient equals to 0.506. This indicates that about 50% of the changes in transparency of information are elaborated via independent variables. Further, value of Durbin-Watson statistic equals to 2.028 that it can perceive that this statistics is at the area of lack of autocorrelation and there is not the problem under autocorrelation between error terms in the model. As observed in Table 1, estimated coefficient and t-statistics pertaining to vairables of current ratio (X_1) and quick ratio (X_2) are positive and significant at error level (5%). Hence, H_0 has been rejected and the first hypothesis of research is accepted at error level (5%). In other words, it can say that there is a positive significant relationship between liquidity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

Testing the second hypothesis and its results: The second hypothesis states that there is a significant relationship between profitability ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange. The model below has been represented to test this hypothesis:

$$TRA = \alpha_0 + \alpha_1 X_3 + \alpha_2 X_4 + \alpha_3 X_5 + \alpha_4 X_6 + \alpha_5 GWTH + \alpha_6 SIZE + \varepsilon$$

The results from testing the second hypothesis based on the model above have been represented in Table 2.

Comparison of F-statistics in Tabel 2 with the F-value in Table 2 indicates significance of fitted regression model at error level (1%). Value of adjusted determination

Table 1: Results from testing the first hypothesis

Variables	Coefficient	SE	t-statistic	Prob.
C	1.548329	0.452209	3.423927	0.0007
X_1	0.057195	0.025496	2.243323	0.0256
X_2	0.088938	0.038169	2.330112	0.0205
GWTH	0.108600	0.061340	1.770468	0.0777
SIZE	0.102181	0.046406	2.201869	0.0284

Dependent variable: TRA; Method: Panel EGLS (Cross-section weights); Sample: 1500; Periods included: 5; Cross-sections included: 100; Total panel (balanced) observations: 500; Linear estimation after one-step weighting matrix. Weighted statistics ((Effects specification) Cross-section fixed (dummy variables)): $R^2 = 0.528121$; Mean dependent Var. = 0.630139; Adjusted $R^2 = 0.506526$; SD dependent Var. = 0.464409; SE of regression = 0.144731; Sum squared resid. = 6.284103; F-statistic = 10.17002; Durbin-Watson Stat. = 2.028370; Prob. (F-statistic) = 0.000000

Table 2: Results from testing the second hypothesis

Variables	Coefficient	SE	t-statistic	Prob.
C	1.792746	0.460016	3.897136	0.0001
X ₃	0.084456	0.027771	3.041102	0.0026
X ₄	0.105662	0.052578	2.009625	0.0454
X ₅	0.109766	0.039318	2.791717	0.0056
X ₆	0.057869	0.034091	1.697485	0.0906
GWTH	7.97E-05	0.002775	0.028730	0.9771
SIZE	0.027967	0.010312	2.711922	0.0071

Dependent variable: TRA; Method: Panel EGLS (Cross-section weights); Sample: 1500; Periods included: 5; Cross-sections included: 100; Total panel (balanced) observations: 500; Linear estimation after one-step weighting matrix. Weighted statistics ((Effects specification) Cross-section fixed (dummy variables)): R² = 0.598595; Mean dependent Var. = 0.640559; Adjusted R² = 0.567541; SD dependent Var. = 0.512318; SE of regression = 0.144151; Sum squared resid. = 6.192254; F-statistic = 11.39496; Durbin-Watson Stat. = 2.132411; Prob. (F-statistic) = 0.000000

Table 3: Results from testing the third hypothesis

Variables	Coefficient	SE	t-statistic	Prob.
C	0.569752	0.027307	20.86466	0.0000
X ₇	0.004727	0.003108	1.520685	0.1294
GWTH	0.008206	0.047653	0.172200	0.8634
SIZE	0.074731	0.033151	2.254217	0.0249

Dependent variable: TRA; Method: Panel EGLS (Cross-section weights); Sample: 1500; Periods included: 5; Cross-sections included: 100; Total panel (balanced) observations: 500; Linear estimation after one-step weighting matrix. Weighted statistics ((Effects specification) Cross-section fixed (dummy variables)): R² = 0.423070; Mean dependent Var. = 0.632645; Adjusted R² = 0.401307; SD dependent Var. = 0.466740; SE of regression = 0.145912; Sum squared resid. = 6.408414; F-statistic = 9.075862; Durbin-Watson Stat. = 2.080103; Prob. (F-statistic) = 0.000000

coefficient indicates that the independent variables of model elaborate 56% of the changes in transparency of financial information in companies. Further, value of Durbin-Watson statistic indicates that there is not the problem under autocorrelation between error terms in the model.

As observed in this table, estimated coefficient and t-statistics pertaining to variables of sale return (X₃), Return on shareholders' equity (X₄) and return on assets (X₅) are positive and significant at error level (5%). Hence, H₀ has been rejected and the second hypothesis of research is accepted at error level (5%). In other words, it can say that there is a positive significant relationship between profitability ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

Testing the third hypothesis and its results: The third hypothesis states that there is a significant relationship between debt ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange. The model below has been represented to test this hypothesis:

$$TRA = \alpha_0 + \alpha_1 X_7 + \alpha_2 GWTH + \alpha_3 SIZE + \epsilon$$

The results from testing the third hypothesis based on the model above have been represented in Table 3.

Table 4: Results from testing the fourth hypothesis

Variables	Coefficient	SE	t-statistic	Prob.
C	0.439127	0.051410	8.541619	0.0000
X ₈	5.373296	1.164184	4.615502	0.0000
X ₉	0.120140	0.056557	2.124233	0.0383
SIZE	0.037151	0.042096	0.882530	0.3782
GWTH	0.118073	0.057346	2.058967	0.0404

Dependent variable: TRA; Method: Panel EGLS (Cross-section weights); Sample: 1500; Periods included: 5; Cross-sections included: 100; Total panel (balanced) observations: 500; Linear estimation after one-step weighting matrix. Weighted statistics ((Effects specification) Cross-section fixed (dummy variables)): R² = 0.569434; Mean dependent Var. = 0.640590; Adjusted R² = 0.538184; SD dependent Var. = 0.520693; SE of regression = 0.142446; Sum squared resid. = 6.087253; F-statistic = 10.23778; Durbin-Watson Stat. = 2.091040; Prob. (F-statistic) = 0.000000

Comparison of F-statistics in Table 4 with the F-value in table indicates significance of fitted regression model at error level (1%). Value of adjusted determination coefficient indicates that the independent variables of model elaborate 40% of the changes in transparency of information in companies. Further, value of Durbin-Watson statistic equaled to 2.08 indicating that there is not the problem under autocorrelation between error terms in the model. As observed in Table 4, estimated coefficient and t-statistics pertaining to variable of debt ratio (X₇) has been positive yet they are not significant. Hence, H₀ has been accepted and the third hypothesis of research is accepted at error level (5%).

Testing the fourth hypothesis and its results: The fourth hypothesis states that there is a significant relationship between activity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange. The model below has been represented to test this hypothesis:

$$TRA = \alpha_0 + \alpha_1 X_8 + \alpha_2 X_9 + \alpha_3 GWTH + \alpha_4 SIZE + \epsilon$$

The results from testing the fourth hypothesis based on the model above have been represented in Table 4. Comparison of F-statistics in Table 4 with the F-value in table indicates significance of fitted regression model at confidence level (99%). Value of adjusted determination coefficient indicates that about 54% of the changes in information transparency of company are elaborated by the variables of model. Further, value of Durbin-Watson statistic equaled to 2.091 indicating that there is not the problem under autocorrelation between error terms in the model.

As observed in this table, estimated coefficient and t-statistics pertaining to variables of fixed assets turnover ratio (X₈) and inventory turnover ratio (X₉) are positive and significant at error level (5%). Hence, H₀ has been rejected and the fourth hypothesis of research is accepted

at error level (5%). In other words, it can say that there is a significant relationship between activity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

CONCLUSION

Users of financial reports of companies require high-quality financial information for decision making in the context of purchase, sale, performance evaluation of managers and other economic decisions. In general, investors invest in an economic enterprise when they have sufficient information on it and ensure such information. On the other hand, since financial statements provide precious information for intra-organizational groups, severe reliance on accounting figures especially profit provides strong stimulus for the managers so as to take action to manipulate profit in their favor. This cause the users acquire wrong information, under which they adopt wrong decisions (Aljifri, 2007). The more disclosure and transparency have more quality, better information will be provided for the beneficiaries on how to administrate the company. Extensive disclosure can acquire investors' trust on different aspects of performance or operations and/or result in reduction of information asymmetry or reduction of investors' information costs (Cormier *et al.*, 2009). With regard to the given explanations, research hypotheses are elaborated in this study:

The first hypothesis: There is a significant relationship between liquidity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

In analysis of this hypothesis, it must state that self-confidence is developed in the companies through increasing power of liquidity at companies to meet their commitments. Indeed, these companies seek for transparency of assets and their debts to acquire necessary business and international credits among financial and credit institutions, through which they seek acquisition of liquidity through borrowing so as to implement their programs and develop their activities. In this regards, transparency of information increases and results in increasing trust among shareholders and increasing business credit among rest of companies. Increasing reliable flow of economic, social and political information which are available to all the beneficiaries expand transparency within communities. Advantage of this event lie on this fact that it can be effective for the governments in their tax transparency and acquisition of more taxes; further these transparencies increase the culture of accountability among authorities, under which

it can expect that not just we must have transparency of financial information but also we must witness an increase in transparency of accountability and growth of communities. On the other hand, lack of transparency in financial information causes an intentional ban of access to information occurs; further, wrong representation of information to acquire trust occurs from adequacy of relevance and quality of information. Result from this research is consistent with the research by Lyroudi, saying there is a positive significant relationship between liquidity and transparency of information. Further, result from this research is consistent with the research by Adiloglu and Vuran (2012).

The second hypothesis: There is a significant relationship between profitability ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

In analysis of this hypothesis, it must state that transparency of financial information increases by increasing profitability ratio. Indeed, profitability ratio indicates the ability of company in acquiring profit and increasing incomes of companies. This index has been constantly draw into attention by shareholders, investors and politicians to decide properly; on the other hand, it can be considered as weakness or strength to acquire new shareholders or maintain current shareholders for the company. Mentally, transparency of financial information increases in the companies with higher profitability index, and the reason lies on this fact that companies are evaluated by shareholders in a short term and this can come effective for the shareholders and investors who seek increasing their wealth in a short term. In other words, high extent of this index can create a credit, identity or advantage for the company compared to the competitors and this will come effective at levels of transparency of information. Result from this hypothesis is consistent with the results from the research by Wang (2002) who says that there is a positive significant relationship between profitability ratios and transparency of financial information.

The third hypothesis: There is a significant relationship between debt ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange.

With regard to the statistical analyses, it must say that estimated coefficient and t-statistics pertaining to vairable of debt ratio (X_7) has been positive yet they are not significant. Hence, H_0 has been accepted and the third hypothesis of research is accepted at error level (5%). Result from this hypothesis indicated that there is not a significant relationship between debt ratio and

transparency of financial information. The reasons for this lack of relationship can be different, including the reasons such as structures of political, economic and social system that each one can be effective in lack of this relationship. The important point lies on this fact that the more this ratio is high, it indicates high risk of creditors.

The fourth hypothesis: There is a significant relationship between activity ratios and transparency of financial information in the companies accepted in Tehran Stock Exchange. The result from this hypothesis indicated that the more extent of the index “activity of companies” increases, transparency of financial information increases. This result indicates that the companies can increase level of transparency by increasing their favorable activities and the reason for the increase of transparency lies on clearness of nature of duty and activity of companies at the area of considered industry. Companies can increase their activities and acquire more share and sale by increasing efficiency of their assets and increase suitable trainings to the staffs at the area of warehouse and proper use of fixed assets such as machineries and this helps for increasing transparency of information at companies. Result from this hypothesis is consistent with the research by Adiloglu and Vuran (2012).

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