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THE IMPACT OF INVESTOR PROTECTION AND THE ADOPTION OF ACCOUNTING STANDARDS ON THE QUALITY OF EARNINGS

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Abstract: *This study examines the effects of mandatory IFRS adoption and investor protection on the quality of accounting earnings in 43 Companies listed on Tehran Stock Exchange. The results suggest that earnings quality increases for mandatory IFRS adoption when a company's investor protection regime provides stronger protection. The results highlight the importance of investor protection for ûnancial reporting quality and the need for regulators to design mechanisms that limit managers' earnings management practices.*

Key words*: Earnings quality; Discretionary accruals; Accruals quality; Earnings persistence*

INTRODUCTION

Improvement of accounting earnings quality depends on at least two factors: high quality accounting standards and a country's overall investor protection (Soderstrom & Sun, 2007). The adoption of a common set of accounting standards such as IFRS improves earnings quality because management is under pressure to provide a true and fair view and engage in fewer earnings management activities. Ewert and Wagenhofer (2005) noted thiswhen they observed that high quality accounting standards reduced earnings management and improved reporting quality. Barth *et al.* (2008) suggested that firms that adopted IFRS were less prone to engage in earnings smoothing and were more likely to recognize losses in an appropriate manner. Jennings *et al.* (2004) and Armstrong *et al.* (2010) reported similar findings.

RESEARCH VARIABLES

Nondiscretionary accruals = {[sales in year *t** (current accruals in year *t*–1/sales in year t –1)] + [gross PPE in year *t** (depreciation in year *t*–1/gross PPE in year *t*–1)]}/total assets in year *t*–1

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where,

Current accruals = Δ[total current assets-cash and cash equivalents-treasury stock shown as current assets] –Δ[total current liabilities-total amount of debt in current liabilities-proposed dividends.]

Discretionary accruals are then calculated as the firm's actual total accruals in year t, minus nondiscretionary accruals for year t where total accruals are calculated as the difference between operating income and cash flow from operations, scaled by lagged total assets.

The model in the regression Eq below tests whether the quality of earnings is a function of mandatory IFRS adoption, the country's investor protection, and the interaction of these two variables. In addition, we include a set of firm-specific controls for other factors that may affect discretionary accruals.

$$DACCR_{it} = \beta_0 + \beta_1 \, IFRS + \beta_2 \, INV + \beta_3 \, IFRS * INV + \beta_4 \, SIZE_{it} + \beta_5 \, LEV_{it} + \beta_6 GWTH_{it} + \beta_7 \, CFO_{it} + \beta_8 \, \beta PPE_{it} + \beta_9 \, LAGLOSS_{it} + \text{fixed effects}$$

where,

discretionary accruals scaled by lagged total assets for ûrm i in year t IFRS dummy variable that takes the value of 1 for a given country in the years after

DACCR it mandatory IFRS adoption and 0 otherwise INV investor protection measured six ways:

BOIND board independence (ii) SEC enforcement of securities laws (WEF, 2008)

(iii) MIN protection of minority shareholders' interest (WEF, 2008)

(iv) ACC enforcement of accounting and auditing standards (WEF, 2008)

(v) JUD judicial independence (WEF, 2008)

(vi) PRESS freedom of the press (Kaufmann *et al.*, 2007)

SIZE natural logarithm of total assets in $ thousands for firm i in year t

LEV it total long-term debt/total assets for firm i in year t

GWTH sales growth rate, defined as the sales in year t minus sales in year t-1 and scaled by sales in year t-1

CFO operating cash flows for firm i in year t scaled by lagged total assets

ΔPPE growth rate of PPE, defined as the gross PPE in year t minus gross PPE in year t-1 and scaled by gross PPE in year t-1

LAGLOSS dummy variable equals 1 if firm i reports negative income before extraordinary items in year t-1

Fixed effects industry and year fixed effects

This research used accruals as a measure of the quality of earnings. The methodology for testing the effect of adopting IFRS and the degree of investor protection and method was used by Wang, Frankys (2008) will follow.

RESEARCH DESIGN

DACCRit = β0+β1IFRS + β2INV + β3IFRS*INV + β4SIZEit + β5LEVit + β6GWTHit + β7CFOit + β8ΔPPEit + β9LAGLOSSit+fixed effects DACCRit Nondiscretionary accruals={[sales it*(current accruals in year t-1/sales in year t-1)]+[gross PPEit *(depreciationit-1 / gross PPEt-1)]}/ total assetst-1 Current accrualsit=Δ[total current assetsit-cash and cash equivalentsit]-Ä[total current liabilitiesit-proposed dividendsit]

In this model:

DACCR :Accruals.

IFRS: dummy variables in the case of newly issued accounting standards and the application of one and zero otherwise.

INV: investment protection on five sub-index measuring Shdhbr.

Boindit: independent board i in year t

Secit: accepted in the exchange of firm i in year t.

Minit: protection of shareholders if the amount exceeds the minimum rate of interest is the profits of firm i in year t

Accit: accepted accounting standards the company i in year t if the auditor's report non-compliance is not a standard one, otherwise zero.

Judit: non-duality responsibility of the CEO (if the manager is not active chairman of the board 1, otherwise 0) firm i in year t.

SIZEit: the natural logarithm of total assets.

LEVit: ratio of total long-term debt to total assets.

GWTHit: growth of sales based on the percentage increase or decrease in sales over the previous year is calculated.

CFOit: cash from operating activities.

ΔPPEit: the growth rate of fixed assets of the company.

LAGLOS Sit: dummy variables that if the company i of the unexpected before the income statement in the year t-1 report operating losses are equal to one, otherwise it is zero.

Current accrual sit: total current liabilities of firm i in year t.

Total current asset sit: total current assets of firm i in year t

Cash and cash equivalents: Cash and cash equivalent sit firm i in year t.

Total current liabilities: total debt of the company i in year t.

Proposed dividend: proposed dividend sit firm i in year t.

Nondiscretionary accrual sit: involuntary commitments.

Sales: sales it i in year t.

Gross PPEit: total gross fixed assets of the company in year t.

Depreciationit-1: depreciation expense in the year t-1.

Total assetst-1: total assets of the company in year t-1.

POPULATION AND SAMPLE

Research statistical population included all companies accepted in Tehran's stock Exchange. In this research, the categorized financial date of active companies accepted in Tehran's stock exchange were applied. The reason of selecting this mentioned statistical population is that Tehran's stock Exchange organization has relative comprehensive information on companies position and their economic and financial performances and it can be said that it is the only information resource by which we can access to the financial information resources of companies and test research models. The method used to test the sample is a systematic eliminating method that from above considerations, a number of statistical population companies were selected. The period of study was 11 years, from 1991 to 2001. The statistical sample companies should have the following conditions:

1) Companies should be an investment one.
2) It should contribute in the exchange from 1990-2001.
3) The end of financial year is limited to March and the financial year is not changed during the above period.
4) In all studied year, the required information and data is available for them.

RESEARCH HYPOTHESES

With regard to the main question the research hypotheses are as follows:

H_1: There is a meaningful relationship between the quality of earnings and using the financial accounting standards.

H_2: There is a significant relationship between the earnings' quality and applying financial accounting standards and independence of board.

H_3: There is a significant relationship between the earnings' quality and applying financial accounting standards and the protection of shareholders.

H_4: There is a significant relationship between the earnings' quality and applying financial accounting standards and the adoption of accounting standards.

H_5: There is a significant relationship between the earnings' quality and applying financial accounting standards and lack of duality of responsibility of managing director.

MODEL ESTIMATION RESULTS OF RESEARCH

F-value regression indicates the explanatory power of the model. The statistics probability is less than 0.01 for this model and it can be said that the model is significant at the reliability level of 99% and is valid. The consideration of Durbin Watson statistic (2.20) also confirms the fact that there is no autocorrelation between the components of disturbing because this amount is between 1.5 and 2.5.

RESEARCH HYPOTHESIS TESTING

After model estimation, the research hypotheses testing results are studied and interpreted. In general, five hypotheses are proposed in the study.

The first hypothesis testing results

H_0: There is no significant relationship between the quality of earnings and using the Financial Accounting Standards.

H_1: There is a significant relationship between the quality of earnings and using the Financial Accounting Standards.

As the results of Table 1 shows, the p_Value (0.0514) of the relationship between the quality of earnings and using the Financial Accounting Standards in companies listed in the Tehran Stock Exchange with likely of 95% is less than the significance level of 0. 5. Hence, H_0 is rejected and H_1 namely the existence of a significant relationship between the quality of earnings and using the Financial Accounting Standards in companies listed in the Tehran Stock Exchange is confirmed. The coefficient of the variable of using Financial Accounting Standards is equal to 0.22 which shows that whatever the companies listed in the Tehran Stock Exchange utilize more Financial Accounting Standards, the earnings quality is also increased and whatever the companies listed in the Tehran Stock Exchange utilize less Financial Accounting Standards, the earnings quality is decreased as well.

Table 1
Results of the model estimation of research

p_Value	Z statistic	SE	Estimated rate	Variable symbol	Variable name
0.3465	-0.942444	0.045481	-0.042864	ACCIT	Adoption of accounting standards
0.0014	3.218773	0.022240	0.071585	BOINDIT	Independence of Board of Directors
0.8470	0.193032	0.027202	0.005251	GWTHIT	Sales growth
0.0514	1.953791	0.116129	0.226892	IFRS	New issued accounting standards
0.0030	2.982833	0.059563	0.177667	JUDIT	Lack of duality of responsibility of managing director
0.5447	-0.606273	0.066063	-0.040052	LAGLOSS	Condition of operating profit
0.0466	-1.995756	0.109243	-0.218023	LEVIT	Financial Leverage
0.7955	-0.259400	0.026427	-0.006855	MINIT	Protection of shareholders
0.1028	-1.635000	0.001923	-0.003144	PPEIT	growth rate of fixed assets
0.3654	-0.906206	0.054407	-0.049304	SIZEIT	Company Size
0.0168	-2.399796	0.023225	-0.055735	IFRSBOINDIT	Multiplicative effect of the independence of the board and new issued accounting standards
0.0045	-2.859434	0.051736	-0.147936	IFRSMINIT	Multiplicative effect of the protection of shareholders and the new issued accounting standards
0.1619	-1.401152	0.063773	-0.089356	IFRSJUDIT	Multiplicative effect of lack of duality of the responsibility of managing director and the new issued accounting standards
0.6925	0.395799	0.048146	0.019056	IFRSACCIT	Multiplicative effect of adopting accounting standards and new issued accounting standards
0.4084	0.827462	0.251870	0.208413	C	Intercept
Significance of F statistics coefficient of determination 0.42		0.0000			F statistics: 5.58
	Number of Observation 437			Dourbin Watson Test 2.20	

Source: Research Findings

The second hypothesis testing results

H_0: There is no significant relationship between the quality of earning and using the Financial Accounting Standards and independence of the board.

H_1: There is a significant relationship between the quality of earning and using the Financial Accounting Standards and independence of the board.

According to the results of Table 1, the p_Value (0.01) of the relationship between the quality of earning and using the Financial Accounting Standards and independence of the board in companies listed in the Tehran Stock Exchange with likely of 95% is less than the significance level of 0.05. Hence, it can be concluded that H_0 is rejected and H_1 (the existence of a significant relationship between the quality of earning and using the Financial Accounting Standards and independence of the board in companies listed in the Tehran Stock Exchange) is verified. The coefficient of the variable of simultaneous effect of Financial Accounting Standards and independence of the board is equal to – 0.05 which indicates that the quality of earning is reduced in companies with independent Board of Directors that simultaneously apply the standards of financial accounting; In other words, the results suggest that the greater the board independence along with applying accounting standard in a specified period, the earnings quality will be declined.

The third hypothesis testing results

H_0: There is no significant relationship between the earning quality and using the Financial Accounting Standards and the protection of the shareholders.

H_1: There is a significant relationship between the earning quality and using the Financial Accounting Standards and the protection of the shareholders.

By looking at the table 1, the p_Value (0.0045) of the relationship between the earning quality and using the Financial Accounting Standards and protection of the shareholders in companies listed in the Tehran Stock Exchange with likely of 95% is less than the significance level of 0. 5. Therefore, it can be found that H_0 is rejected and H_1 (there is a significant relationship between the earning quality and using the Financial Accounting Standards and the protection of shareholders in companies listed in the Tehran Stock Exchange) is accepted. The coefficient of the variable of the simultaneous impact of Financial Accounting Standards and the protection of shareholders is equal to – 0.14 which shows that the earning quality is reduced in companies that simultaneously apply Financial Accounting Standards and also their earnings are more than bank interest rate. In other words, results demonstrate that whatever the acquired earnings to be more than bank interest rate (the increase of risk due to the enhancement of return and interest) and Accounting Standards to be applied in a specific period in that company, the earning quality will be declined.

The fourth hypothesis testing results

H_0: There is no significant relationship between the earning quality and using the Financial Accounting Standards and the adoption of the Accounting Standards.

H_1: There is a significant relationship between the earning quality and using the Financial Accounting Standards and the adoption of the Accounting Standards.

Based on the results of the table 1, the p_Value (0.69) of the relationship between the earning quality and using the Financial Accounting Standards and simultaneous adoption of the Accounting Standards in companies listed in the Tehran Stock Exchange with likely of 95% is less than the significance level of 0.0 5. Thus, H_0 is verified and it can be concluded that the application of Financial Accounting Standards and simultaneous adoption of the Accounting Standards have no significant effect on the earning quality of the companies listed in the Tehran Stock Exchange and accordingly, the fourth hypothesis is rejected.

The fifth hypothesis testing results

H_0: There is no significant relationship between the earning quality and using the Financial Accounting Standards and lack of duality of the responsibility of managing director.

H_1: There is a significant relationship between the earning quality and using the Financial Accounting Standards and lack of duality of the responsibility of managing director.

With respect to the Table 1, the p_Value (0.16) of the relationship between the earning quality and using the Financial Accounting Standards and lack of duality of the responsibility of managing director in companies listed in the Tehran Stock Exchange with likely of 95% is more than the significance level of 0.0 5. Therefore, H_0 is confirmed and it can be found that the application of Financial Accounting Standards and lack of duality of the responsibility of managing director have no significant effect on the earning quality of the companies listed in the Tehran Stock Exchange and accordingly, the fifth hypothesis is rejected.

CONCLUSION

Control variables tested in this study include firm size, financial leverage, the growth rate of fixed assets, sales growth and operating profit situation. According to the tables (1), the calculated p_Value for variable firm size is equal to 0.36 that the test results in significant level of 0.05 with reliability level of 95% are rejected and therefore, there is no significant relationship between firm size and the quality of earnings. The calculated p_Value of financial leverage variable is equal to 0.04 which indicates that with reliability level of 95% the meaningful effect of variable in the significant level of 0.05 is verified and financial leverage is one of the factors affecting the quality of earnings. The calculated P_Value of sales growth variable is equal to 0.84 which indicates that with reliability level of 95% the significant effect of the variable in the significant level of 0.05 is rejected and there is no significant relationship between sales growth and earnings quality. The calculated P_Value of the growth rate of fixed assets is equal to 0.10 which shows that with reliability level of 95% the significant impact of the variable in the significant level of 0.05 is rejected therefore, there is no significant relationship between the growth rate of fixed assets and earnings quality. The last tested control variable in this study is the operating profit situation. The obtained P_Value for this variable was higher than the significant level of 0.05, thus, its significant relationship with the dependent variable is rejected with reliability level of 95%.

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