

Recent Accounting Reforms in the Selected Middle Eastern Countries

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Abstract. This paper examines the value relevance of accounting information in Selected Middle Eastern countries (Bahrain, Saudi Arabia and UAE) for the per-period and post-period of accounting reforms, which could be described the effect of accounting standards reform in these countries. The results obtained from a combination of regression and portfolio approach, show that accounting information is value relevant in selected stock exchanges.

Keyword: Value Relevance, IFRS, Accounting Information, Bahrain, UAE, Saudi Arabia

1. Introduction

Middle East countries implement economic reforms to stimulate private investment, promote economic growth and support the transition to market economy. It is difficult to define the direct impact of the accounting system reform on economic transformation, as many other conditions have influenced the transition process. However, with the important role of financial reporting and control in the economic system, it is reasonable to assume that countries that are more effective in reforming the accounting system would move faster toward economic transformation (McGee, 2008). In this way, Middle East accounting bodies have experienced some major changes during the past several years. Prior to 1980, there were no national accounting standards for countries in this region because of the absence of accounting organizations. Underdevelopment of accounting and auditing standards is one of the main problems for auditors' confirmative job and investors in making investment decisions. For example, this was one of the main reasons for Kuwait's stock market crash in 1982 (Wagdy, 2001). Therefore, Middle East countries had to use accounting standards of other countries to start the process of making value relevant information. Development of accounting during this period was essentially a result of the influence of several economic factors such as: entrance of multinational enterprises and international accounting firms, licensing of international financial institutions and increasing presence of expatriate accountants and foreign technology (Yapa & Wijewardena, 1995). After 1980, a number of important international forces created significant changes in the Middle East markets and accounting bodies. International economic/political interdependence, foreign direct investment and multinational corporate strategy, new technology, international financial markets, the growth of business services and activities of international regulatory organizations started to flourish. The core of these reforms was in the financial sectors, which enabled most of the Middle East countries to establish or resurrect their stock markets and improve the security market regulations. As a result of these steps, stock market indicators such as market capitalization and foreign direct investment (FDI) to Middle East gradually increased. Khan (2006) indicates that criteria such as reliability, comparability and usefulness may be used to assess the quality of information for attracting FDI.

Investors' need for reliable and relevant financial information has been the key factors of accounting reform in the Middle East. These two factors protect domestic and foreign investors from any fraud or

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misleading financial data (Wagdy, 2001). However, value relevance approach measures both relevance and reliability because accounting information is reflected in the price (Barth, Beaver & Landsman 2001). Despite all efforts to develop the financial markets, the accounting and economic growth, a crucial gap in the literature remains and to the best of our knowledge, there is no empirical research to identify the effects of accounting standards reforms on value relevance of accounting information in this region. Consequently, this study aims to investigate the value relevance of accounting information in selected countries in the Middle East (i.e. Bahrain, Saudi Arabia and UAE). In particular, it measures whether the quality of accounting information in these countries has improved or whether it has not yet become relevant despite all efforts.

2. Literature Review

Numerous value relevance studies have established (e.g. Choi, 2007; Qystein & Frode, 2007; Filip, 2010). Among the literature documented for the Middle East region, there is some empirical evidence on Tunisian stock market (Ben Naceur & Goaid, 2004), Kuwait stock market (El Shamy & Kayed, 2005), Tehran stock exchange (Pourheydari et al. 2008), Saudi Arabia stock exchange (Alsalman, 2003) and Egypt stock market (Ragab & Omran, 2006). The findings of these studies showed selected accounting factors have influenced the perception of investors, even though the effect of these factors was not the same in different markets.

In all research studies done there are no mention to reform of the accounting standards in this reign. For example, Saudi Arabia reviewed and developed accounting standards over 1996 and 1999 (Saudi Organization for Certified Public Accountants). Bahrain Commercial Companies Law 2001 requires all companies to prepare their financial statements in accordance with the International Financial Reporting Standards, IFRs (Marat T, & Shoult, 2005). Moreover, all companies listed on the Abu Dhabi Securities Markets (ADSM) are required to publish IFRS financial statements since 2003 (Aljifri, 2008; Deloitte, 2007). And also to the best of our knowledge, there is no empirical research that uses regression-variations and the portfolio-returns approaches to test of value relevance. Therefore, an evaluation of the value relevance of accounting information, especially after changes in the economic and accounting environment in recent years is an important area to research.

3. Methodology

In this study, the regression-variations and the portfolio-returns approaches was used to investigate and to operationalize the value relevance of accounting information. It was because they provide different perspective on the issue of value relevance of accounting information. By using the regression-variations approach, we measured the value relevance as the percentage of variations in the returns or market value explained by the accounting figures. Portfolio-returns approach shows a portion of total returns that could be earned from financial statement information which control for changes in the volatility of market returns over time.

3.1 Regression-Variations Approach

A regression-variations approach measures value relevance based on the explanatory power of accounting information as a measure of market value; the ability of earnings to explain annual market-adjusted returns (return model); and the ability of earnings and book values of equity to explain market values of equity (price model).

3.1.1 Earning Return Model

$$R_{jt} = \beta_0 + \beta_1 \text{EPS}_{jt} / P_{jt-1} + \beta_2 (\text{EPS}_{jt} - \text{EPS}_{jt-1}) / P_{jt-1} + e_{jt}$$

R_{jt} : annual return (including cash dividends) of firm j shares for period t , P_{jt-1} : stock price at date of accounting announcement for firm j during period t , EPS_{jt} : annual earnings per share for firm j during period t , $\text{EPS}_{jt} - \text{EPS}_{jt-1}$: change annual earnings per share for firm j from period $t-1$ to t , e_{jt} : error term

3.1.2 Price Model

$$P_{jt} = \beta_0 + \beta_1 \text{BVPS}_{jt} + \beta_2 \text{EPS}_{jt} + \beta_3 \text{CFPS}_{jt} + e_{jt}$$

P_{jt} : the market price per share of firm j at time t , $BVPS_{jt}$: book value of firm j at time t , EPS_{jt} : earnings of firm j for period ending at time t , $CFPS_{jt}$: Cash flow of firm j for period ending at time t , e_{jt} : error term

3.2 Portfolio>Returns Approach

The portfolio-returns approach defines the value relevance of accounting measures as the proportion of information in security returns captured by the accounting measures (Alford, Jones, Leftwich, & Zmijewski., 1993; Chang, 1998; Francis & Schipper, 1999; Hung, 2001) . Thinggaard and Damkierb (2008) further defined value relevance as the difference between the return on the long position and the return on the short position; that is, the market-adjusted return that can be earned on the long position and the market-adjusted return that can be lost on the short position. This approach measures value relevance as the total return that could be earned from a portfolio based on perfect foresight of earnings.

3.2.1 Portfolio Selection Based on Sign (SIGN- Δ EARN)

The Portfolio>Returns Approach is based on Alford et al. (1993), Francis and Schipper (1999), Hellstrom (2006) and Thinggaard and Damkierb (2008). As an example, following is the procedure for selecting a portfolio based on sign of changes in EARN. First, an earnings-based hedge portfolio is created. The primary Firm-specific return $(P_{it}-P_{it-1}+d)/P_{it-1}$ is calculated for all firms over a 15 month period. The market-adjusted return on security j , $R_{j,t}$, is defined as the compound (with dividend) return minus the return on the value-weighted market portfolio for each year sample (The study uses all share index return). All companies in the total sample are ranked according to the change in accounting earnings. The change in accounting earnings is calculated on a year basis. A hedge portfolio is formed by going long in shares with positive earning changes and short in shares with the negative earning changes. The market-adjusted return is later calculated for both the long position and short position as an average of returns for all companies included in the long short positions, respectively:

$$R_L = \sum_{j=1}^{N_L} \frac{R_j}{N_L} \quad R_S = \sum_{j=1}^{N_S} \frac{R_j}{N_S}$$

Where R_j is a market-adjusted return for an individual company and N_L and N_S are the number of companies in the long position and in the short position, respectively. Note that N_L and N_S are equal. The hedge portfolio return (value relevance) is defined as the difference between the return on the long position and the return on the short position: that is, the market-adjusted return that can be earned on the long position and the market-adjusted return that can be lost on the short position:

$$R_H = R_L - R_S$$

Second, for each accounting-based hedge portfolio and year, the market-adjusted returns on a portfolio formed on the basis of perfect foreknowledge of future stock returns are calculated. This portfolio takes long (short) positions in the stocks in each accounting-based hedge portfolio with positive (negative) 15-month market-adjusted returns. The market-adjusted return on this returns-based hedge portfolio in year t is denoted R_{tH} where H is the type of accounting hedge portfolio. The accounting-based hedge portfolio returns are expressed as a percentage of R_{tH} . This controls for time-series differences in the variation in market-adjusted returns (Francis & Schipper, 1999) , and the resulting ratio (denoted %mkt) describes the proportion of all information impounded in stock prices that is captured by accounting information in a given period (Thinggaard & Damkierb, 2008).

3.2.2 Portfolio Selection Based on Sign and Magnitude

As mentioned above, Portfolio Selection based on sign and magnitude applies to Δ EARN, Δ ROE and Δ CF. following is a description for calculating the value relevance of earning with this method. The method for calculating other factors with the same ROE and cash flow is similar. The primary calculations of market-adjusted returns are similar, based on the sign of accounting information. For example, for the Δ EARN $_{jt}$ portfolio, we take long positions in the stocks with the highest 40% of Δ EARN $_{j,t}$ and short positions in the stocks with the lowest 40% of Δ EARN $_{j,t}$, thereby disregarding the middle 20%. Thus, both the sign and the strength of the change in earnings are extracted from the total available information in

financial statements. The market-adjusted return is afterwards calculated for both the long position and short position as an average of returns for all companies included in the long short positions, respectively.

4. Data, Sample Selection and Descriptive Statistics

Table 1 provides descriptive statistics for all the variables used in selected countries. The samples show high standard deviation in all datasets, which confirms the variability of firm's size and industry classification traded in these markets. The change is most important between the periods before and after reform. The Means of all variables increase significantly this suggests that the size and possibly the profitability of the companies in the sample in these countries increase after reform.

5. Empirical Results

Table 2 presents the empirical results for the regression-variations approach in selected countries for total sample and per-period and post-period reforms. The result of explanatory power from price and return regressions in selected countries show accounting information are value relevance. Empirical results using the price model show that the value relevance of accounting information is the highest in Bahrain (83%), followed by UAE (76.6%) and Saudi Arabia (68%), while based on the return model UAE with 30.3% is higher than Bahrain with 13.4% and Saudi with 3%. Comparisons of coefficients indicate that EPS has a higher explanatory power than other variables in all selected countries.

A comparison of the results for per-period and post-period reforms demonstrates that explanatory power (R²) of accounting information based on price and return regressions increased in Bahrain (since 51% to 74%) and in Saudi (since 69% to 75%) while it decreased for UAE (since 87.5% to 45%). It could be interpreted to mean that reform of the accounting standards improved relevancy of accounting numbers in the Saudi Arabia and Bahrain stock exchanges, but it didn't improve relevancy of accounting numbers in the Abu Dhabi stock exchanges.

Table 3 presents the results of portfolio approach based on the sign of accounting numbers. Table 3 based on the sign, clearly demonstrate that foreknowledge of information in the financial statements are relevant for investors in all selected countries. Investment strategies based on a preview of the sign of the change in ROE would earn higher average market-adjusted return throughout the sample period in UAE (38.7%), Saudi Arabia (18%) and Bahrain (25.68%) than others accounting numbers. on the hand, investor based on a preview of the sign of the change in CFP would earn lower average market-adjusted return throughout the sample period in selected countries. It means that investments based on accrual-based information are more profitable than cash based information. Table 3 also presents results of portfolio approach based on the sign and magnitude of accounting numbers.

A comparison of the result based on two portfolio method show, although the details of the results are not same, but there are similarity in conclusion and main results. Both of them show accounting numbers are value relevance in selected countries and reforms in accounting standards have effect on value relevancy of accounting information in these countries.

6. Conclusions

This paper has examined the impact of reforms in Selected Middle East countries on the value-relevance of accounting information in these countries. The value-relevance of accounting information is clearly supported by the current findings from regression and portfolio approaches in the selected stock exchange. A comparison of the results for the periods before and after adoption, based on both regression and portfolio approaches, shows an improvement in value relevance of accounting information after the reform in accounting standards in Bahrain and Saudi Arabia stock exchanges, while the results for UAE stock market, shows a decline in value relevance of accounting information after the reform in accounting standards. It could be interpreted to mean that following to IFRS in UAE didn't improve value relevancy of accounting information.

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Table 1 Descriptive Statistics

Name of variables	UAE sample (in UAE's dirham)		Bahrain sample (in Bahrain's dinar)		Saudi Arabia (In Saudi's riyal)	
	mean	Std. Dev.	mean	Std. Dev.	mean	Std.Dev.
Panel A: Total Sample						
P3 (Market price per share of firm)	5.25	4.49	0.34	0.25	25.18	25.23
EPS (Earning per share)	.39	.43	0.03	0.03	1.136	1.75
BVP (Book value of equity-per share)	2.73	2.46	0.25	0.22	11.60	5.85
CFP (cash flow per share)	.344	.93	0.02	0.07	1.666	2.07
R (annual return)	.362	1.04	0.19	0.41	.235	2.24
EPS/P (Earning per share / price)	.078	.057	0.09	0.05	.031	.12
ΔEPS(change annual earnings per share)	.016	.063	0.01	0.06	.0036	12
Panel B: Before Reform						
P3 (Market price per share of firm)	2.26	1.42	0.20	0.10	12.67	11.43
EPS (Earning per share)	0.16	0.15	0.02	0.01	0.64	1.15
BVP (Book value of equity-per share)	1.38	1.11	0.17	0.14	10.22	5.10
CFP (cash flow per share)	0.28	0.39	0.02	0.03	1.24	1.37
R (annual return)	0.11	0.18	0.10	0.37	0.08	0.39
EPS/P (Earning per share / price)	0.06	0.03	0.09	0.05	0.02	0.15
ΔEPS(change annual earnings per share)	0.00	0.04	0.01	0.05	-0.01	0.12
Panel C: After Reform						
P3 (Market price per share of firm)	6.25	4.73	0.43	0.28	36.05	28.14
EPS (Earning per share)	0.47	0.47	0.04	0.03	1.53	2.02
BVP (Book value of equity-per share)	3.19	2.62	0.31	0.24	12.69	6.17
CFP (cash flow per share)	0.36	1.05	0.02	0.09	2.00	2.44
R (annual return)	0.34	0.81	0.23	0.42	0.34	0.77
EPS/P (Earning per share / price)	0.08	0.06	0.09	0.06	0.04	0.10
ΔEPS(change annual earnings per share)	0.02	0.07	0.01	0.07	0.01	0.13

Table 2 Result of Regression-Variations Approach

Years	Panel A: Price Model										Panel B: Return Model					
	Bahrain(96-00& 01-08)				UAE(00-02 & 03-08)				Saudi Arabia(93-99& 00-08)							
	β_0	β_1	β_2	R^2	N	β_0	β_1	β_2	R^2	N	β_0	β_1	β_2	R^2	N	
Total sample	.06	.69	3.5	.83	234	2.97	.22	4	.766	136	.25	1.27	9.5	.68	640	
<i>t-st.</i>	2.8***	8.5***	6.9***			3.4***	.69	7.8***			.06	4.3***	11.5***			
Before reform	.1	-.003	5.6	.51	90	.71	.19	7.7	.875	34	3.1	.7	3.1	.69	280	
<i>t-st.</i>	9***	-.035	13***			6.7***	2.2**	44***			11***	18***	14.7***			
After reform	.13	.13	6.2	.74	144	2.6	.06	5.6	.45	144	14.7	.49	9.9	.75	360	
<i>t-st.</i>	7.7***	2.35**	8.3***			5.5***	.49	15***			2.28***	1.39	7.7***			
Equation 1: $p_{it} = \beta_0 + \beta_1 bvp_{it} + \beta_2 eps_{it} + e_{it}$																
Equation 2: $R_{it} = \beta_0 + \beta_1 eps_{it}/p_{it-1} + \beta_2 (eps_{it} - eps_{it-1})/p_{it-1} + e_{it}$																
Total sample	.01	1.57	.45	.134	216	.03	2.4	3.7	.303	119	.16	.49	.26	.03	600	
<i>t-st.</i>	.2	6.33***	1.4			.17	1.74**	2.11**			1.9**	1.37	.51			
Before reform	-.02	.82	.40	.156	72	-.08	3.2	-.64	.302	17	.01	.58	-.65	.057	240	
<i>t-st.</i>	-.65	6.1***	1.57			-.9	2.34**	-.63			.51	4.***	-2.6***			
After reform	-.006	2.15	.48	.164	144	.12	1.5	5.3	.282	102	.29	1.2	.26	.065	360	
<i>t-st.</i>	-.09	5.37***	1.03			.4	.66	1.73*			1.8*	1.84*	.55			

Notes:

***, **, * indicates significance at 0.01, 0.05 and 0.10 levels

T-statistics based on White heteroscedasticity-consistent standard errors.

*for full sample and two sub-samples of return model are used GLS with Cross Section Weight

* For full sample of price model is used GLS Fixed effects model but for sub-samples of price model are used GLS with Cross Section Weight

Table 3 Portfolio-Returns Approach

Panel A: Mean Market-Adjusted Returns MAR on accounting hedge portfolio (%) and proportion of the total hedge portfolio MAR can be earned by the per-knowledge of accounting information based on sign in selected countries.																		
Year	Saudi Arabia						UAE						Bahrain					
	ΔEARN		ΔROE		ΔCFP		ΔEARN		ΔROE		ΔCFP		ΔEARN		ΔROE		ΔCFP	
	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt
T.Per	16.6	19.5	16.3	18.0	10.8	15.4	17.4	30.9	30.1	38.7	3.9	11.3	9.62	25.56	8.87	25.68	4.54	12.47
B.Re	6.8	14.1	3.8	8.5	8.2	14.5	19.4	58.1	15.1	45.1	0.0	0.0	10.6	27.40	9.30	26.11	1.20	5.68
A.Re	23.1	23.2	24.6	24.4	12.6	16.0	17.0	26.4	32.6	37.6	4.5	13.2	9.15	24.64	8.66	25.47	6.21	15.86
Panel B: Mean MAR on accounting hedge portfolio (%) and proportion of the total hedge portfolio MAR can be earned by the per-knowledge of accounting information (%mkt) based on sign and magnitude for selected countries.																		
Year	Saudi Arabia						UAE						Bahrain					
	ΔEARN		ΔROE		ΔCFP		ΔEARN		ΔROE		ΔCFP		ΔEARN		ΔROE		ΔCFP	
	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt	%	%mkt
T.Per	16.1	20.7	25.5	23.1	9.8	13.8	27.6	30.7	31.9	35.9	3.9	11.4	7.86	22.57	9.12	28.16	2.61	7.69
B.Re	12.6	21.4	8.2	14.2	5.8	10.5	33.5	62.1	18.4	44.2	0.3	0.9	7.23	21.84	7.58	24.58	0.59	2.26
A.Re	18.5	20.2	37.1	29	12.5	15.9	26.7	20.5	34.1	34.5	4.5	13.2	8.18	22.94	9.89	29.94	3.62	10.41

EARN= Earnings Per Share, ROE= Return On Equity Per Share, CFP= Cash Flow Per Share
T.per= total period, B.Re= Before Reform, A.Re= After Reform