Financial Ratios and Firm's Value in the Bahrain Bourse

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Abstract

This paper attempts to measure how financial ratios explain the firms' value through price earnings ratio or market to book ratio in the Bahrain Bourse. All listed companies in Bahrain Bourse, with the exception of the closed ones, are used over the period of 1995 to 2013. Using all the main categories in financial ratios such as profitability, liquidity, efficiency and debt, the paper found that return on assets (ROA) is the most determinant factor in explaining the market value followed by financial leverage and beta. Furthermore, the findings revealed that the size of the firm also has a significant effect on its market value. The size of the firm is measured through total assets and Tobin's Q ratio. In this respect, investors perceive different signals from small firms compared to large ones, and from growth firms compared to no-growth firms. On the sector analysis, it is found that ROA is the main determinant factor for explaining the value of the firm.

Keywords: Bahrain Bourse, Firm Value, Tobin's Q, Financial Ratios, Size and Sector Effect.

1. Introduction

When one looks at a financial statement position, or a statement of profit and loss and other comprehensive income, it is to decide whether a company is doing well or badly, or whether it is financially strong or vulnerable. One would be looking in the figures in order to help make judgments. Ratio analysis involves comparing one figure against another to produce a ratio, and assessing whether the ratio indicates a weakness or strength in the company's affairs. Investment ratios help equity shareholders and other investors to assess the value and quality of an investment in the ordinary shares of a company. These ratios include earnings per share (EPS), dividend per share, dividend cover, price-earnings (P/E) ratio, market to book (M/B) and dividend yield.

Earnings per share measures the return on each ordinary share in the year. It is the amount of net profit for the period attributable to each ordinary share which is outstanding during the period. Price-earnings ratio is the ratio of a company's current share price to earnings per share. A high P/E ratio indicates strong shareholders confidence in the company and its future, e.g., in profit growth, and a lower P/E ratio indicates lower confidence. Market to book ratio indicates how investors value the company, a high MB ratio signals investors satisfaction about the company.

The key to obtaining meaningful information from ratio analysis is comparison. This may involve comparing ratios over time within the same business to establish whether things are improving or declining, and comparing ratios between similar businesses to see whether the company being analyzed is better or worse than average within its specific business sector. Malikova and Brabec (2012) argued that investors select suitable companies to invest in through financial analysis of financial statements, and financial ratios are mainly influenced by the presumptions according to those the financial statements have been prepared. Price earnings ratios as a measure of the value of a company's share relative to its earnings potential enable comparisons of companies of similar size within a particular industry. However, companies with somewhat similar earnings not necessarily have the same P/E ratios. For example, ExxonMobil and Marathon Oil, are large oil and gas companies reported in 2006, EPS of $6.68 and $6.93 respectively, as was reported by Jordan et al. (2009). Although strong earnings are reported by both companies their P/E ratios varied significantly (11.60 and 6.40) respectively. These discrepancies could be explained by different market (investors) perceptions of the two firms as noted by Pratt (2001), "The greater the optimism that investors are attaching to a firm's future income stream, the higher is its P/E ratio".

Ball and Brown (1968) addressed how investors value accounting earnings. They noted that higher earnings imply higher stock value and vice versa. The ability of a company to pay dividend is argued by Keim (1990) where he noted that variations in share prices arise because of different expectations of cash flows (dividends). Ou and Penman (1989) argued that since dividends are paid out of earnings both earnings and dividends payments are determinants of share prices.

This study attempts to look into why companies operating in the same industry, are of similar size, and report almost the same level of earnings over the same period are viewed by the market differently with respect to future earnings and cash flow potential. The study would look into different financial statements variables as measures to provide useful information to explain the variation in firms values. This value could be stock values relative to current earnings (P/E) or stock market price to book value of equity (M/B). The market under investigation is Bahrain's market, i.e. all companies listed on Bahrain Bourse.

2. Bahrain Bourse

The Bahrain Bourse was established in 1987 by Amiri Decree and officially commenced operations in June, 1989 with 29 listed companies. Currently, there are 50 companies listed on the stock market. The Bahrain Bourse operates as an autonomous institution supervised by an independent board of directors, chaired by the governor of the Central Bank of Bahrain. There are three indices that track the Bahrain Bourse: The Bahrain All Share Index, the Dow Jones Bahrain Index and the Estirad Index. Companies trading on the Bahrain Bourse include 7 in commercial banks, 14 in investment, 6 in insurance, 8 in the service, 3 in the industrial and 6 in hotel and tourism sector. In addition, 5 overseas companies in commercial banking, investment and services sectors and 2 closed ones trade on Bahrain Bourse.

3. Literature Review

If the capital providers want to choose which company to invest their resources in, they need to compare the contemporary financial position and performance of selected companies and try to forecast their future developments, as argued by Wahlen and Wieland (2011) and Lev et al. (2010). Užik, and Šoltés (2009) provided that in the case of listed companies, it could be helpful to use rating as an evaluative criterion of the successfulness of the selected companies.

To enable the selection of the "right company" to invest in, analysis and comparison of the possible candidates have to be made. The candidate companies could be estimated with the help of the financial analysis, especially through the comparison of selected financial ratios of these companies. The analysis with the help of financial ratios is suitable especially for external users of financial information because they do not have access to the internal data of the company. So there has to be ensured that financial reporting grants a fair presentation of an organization's economic activities, as argued by Ingram and Albright (2007).

McLeaney and Atrill (2005) reported that financial ratios provide quick and relatively simple means of assessing the financial health of a business. These ratios are mostly used as a starting point for more detailed financial analysis because they can refer to the areas of good and bad performance as well as areas of significant changes, which would be analyzed more carefully. Nobes and Parker (2006) argued that financial ratios could also be called accounting ratios because they describe the relationship of certain items of financial statements. These ratios are very popular in practice namely for simplicity of their calculation and easy availability of input data. The price/earnings ratio is cited as an important consideration in several areas within financial decision-making, but especially where common stock is concerned, Brealey (1969) and Stern (1972). Pringle (1973) provided that where the decision is a choice between security type, the higher the P/E ratio, so the argument goes, the more attractive is equity. Those who argue that a high P/E ratio favors the use of equity do so on the grounds that the higher P/E, the fewer the number of shares that must be issued for a given volume of funds and the less the resulting dilution of earnings per share (EPS). However, EPS could be ambiguous because of inter-period trade-offs, moreover it does not take account of the quality of earnings.

Evidence of a relationship between stock returns and P/E had been provided by different studies, Dowen and Bauman (1986), Keim (1990) and Fama and French (1992). The evidence showed that firms with low P/E ratios outperform companies with high P/E ratios. This could be because with high P/E ratio stocks investors would bid the prices too high. However, when the expected growth in the earnings does not materialize the share prices will suffer. On the other hand, Beaver (1989) and Mande (1994) argued that because P/E ratios are predictors of future earnings, they are also linked to share price. They provided evidence that earnings help investors in evaluating a firm's ability to pay dividend, stock price is, in turn, eventually affected by expectations regarding future earnings. Ou and Penman (1989) identified factors that could explain the variation among firm's P/E ratios. They used Logit models and a set of independent variables as forms of ratios: liquidity, turnover, profitability and leverage. They concluded that several ratios provide useful information for predicting the direction of the change in earnings for the next period.

Anderson and Brooks (2006) concludes that P/E ratios result from a network of internal and external influences of the firm. These influences are as follows: 1) The year: since the average P/E ratio varies over the years as the confidence of investors changes from year to year. 2) The sector: sectors varies in the rate of growth of their earnings. 3) The size: Dowen and Bauman (1986) and Keim (1990) argued that P/E ratios are linked to firm's size, i.e. larger firms have higher P/E ratios. 4) The idiosyncratic effects as argued by Anderson and Brooks (2006) that similar sized firms in the same industry and in the same year have dramatically different P/E ratios. Jordan et al. (2009) added that idiosyncratic effects represent factors unique to individual firms which cause differences in firm's P/E ratios.

Examining the performance of value strategies in the Athens Stock Exchange Kyriazis and Christou (2013) reported the superiority of value strategies formed on the basis of stocks with low price-to-earnings, high dividend yield ratios, and low market-to-book ratios. Ivanov et al (2014) investigated whether firms with current negative economic value-added (EVA) perform well in the future. Tracking the returns of portfolios ranked from the most positive to the least negative EVAs and correlating to four accounting variables, return on assets,

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market-to-book ratio, leverage and size. Results indicated that firms with lower leverage ratio exhibit higher portfolio returns. Moreover firms in the least negative EVA and the second least negative EVA categories are able to turn around and generate positive abnormal returns. Ersalan (2013) reported that portfolios containing lower book-to-market ratio firms perform better than those containing high book-to-market ratio firms. Size factor has no effect on portfolios having big-size firms but can explain the excess return variation on portfolios having small and medium-sized firms. In an attempt to explain the phenomenon that sock returns are related to firm size and the book-to-market ratio, Mossman and Rakhmayil (2011) reported that firms' characteristics reflect sensitivity to the macroeconomic environment. Tests results demonstrated a linkage, however, exists between this sensitivity and the relationship of returns to market value and book-to-market.

Barber and Lyon (1997) documented that the relation between firm size, book-to-market ratios, and security returns, similar for financial and nonfinancial firms. Moreover, they provided evidence that survivorship bias does not significantly affect the estimated size or book-to-market premiums in returns. Peterkort and Nielsen (2005) found no relation between average stock returns and the book-to-market ratio in all-equity firms after controlling for firm size, and an inverse relation between average stock returns and the book-to-market ratio in firms with negative book value of equity. An Indian evidence was provided by Sharma and Mehta (2013) by examining the consistency in the performance of various portfolios constructed on the basis of three fundamental factors, earnings-to-price ratio, book-to-market ratio and size of the firm. Analysis of yearly performance of various portfolios has not given any sound base to believe on these parameters as a short-term stock selection criteria. The highest inconsistency was found in the performance portfolios based on market cap of the firm rather than portfolios based on earnings-to-price ratio or book-to-market price ratio.

4. Methodology

From the literature, we developed the idea of generally explaining the market value through certain financial ratios for the listed companies in the Bahrain Bourse. Then to test the same model for the size, growth and sector differences. This argument provided the basis to develop three hypotheses (models) that are shown in the next section. The hypotheses developed by determining ratios which could give some explanation to the value of the firm. Price to earnings ratio or market to book ratio are considered as measures of firm's value which could be determined by a set of financial ratios. These ratios are debt to total assets (D/TA), total asset turnover (TA T/o), return on assets (ROA), return on equity (ROE), financial leverage (FL), current ratio (CR), times interest earned ratio (TIE) and Tobin's Q ratios (Q). Out of these ratios, three hypotheses are rewritten in a model format and are developed to explain this relationship. The first model is named as the general model of the whole market, i.e. all listed companies. The next model is developed to test for the size and growth effect and finally the general model is used and tested for each sector separately to measure the sector or industry effect. These proposed models are presented below.

The General model:

$$MV_{it} = \beta_0 + \beta_1 D/TA_{it} + \beta_2 TA\ T/o_{it} + \beta_3 ROA_{it} + \beta_4 ROE_{it} + \beta_5 FL_{it} + \beta_6 CR_{it} + \beta_7 TIE_{it} + \beta_8 Beta_{it} + \beta_9 IT/o_{it} + \beta_{10}TA_{it} \dots\dots(1)$$

$$\begin{aligned}
\text{Where,} \quad MV_{it} &= \text{market value for firm } i \text{ in time } t \\
D/TA_{it} &= \text{debt ratio for firm } i. \text{ in time } t \\
TA\ T/o_{it} &= \text{total assets turnover for firm } i \text{ in time } t \\
ROA_{it} &= \text{return on assets for firm } i \text{ in time } t \\
ROE_{it} &= \text{returns on equity for firm } i \text{ in time } t \\
FL_{it} &= \text{financial leverage for firm } i \text{ in time } t \\
CR_{it} &= \text{current ratio for firm } i \text{ in time } t \\
TIE_{it} &= \text{times interest earned ratio for firm } i \text{ in time } t \\
Beta_{it} &= \text{Tobin's q ratio for firm } i \text{ in time } t \\
I\ T/o_{it} &= \text{Inventory turnover ratio for firm } i \text{ in time } t \\
TA_{it} &= \text{Total Assets for firm } i
\end{aligned}$$

The Size and Growth effect:

$$MV_{it} = \beta_0 + \beta_1 D/TA_{it} + \beta_2 TA\ T/o_{it} + \beta_3 ROA_{it} + \beta_4 ROE_{it} + \beta_5 FL_{it} + \beta_6 CR_{it} + \beta_7 TIE_{it} + \beta_8 Beta_{it} + \beta_9 IT/o_{it} + \beta_{10} Size_{it} \dots\dots(2)$$

$$\begin{aligned}
\text{Where, } MV_{it} &= \text{market value for firm } i \text{ in time } t \\
D/TA_{it} &= \text{debt ratio for firm } i. \text{ in time } t \\
TA\ T/o_{it} &= \text{total assets turnover for firm } i \text{ in time } t \\
ROA_{it} &= \text{return on assets for firm } i \text{ in time } t \\
ROE_{it} &= \text{returns on equity for firm } i \text{ in time } t \\
FL_{it} &= \text{financial leverage for firm } i \text{ in time } t \\
CR_{it} &= \text{current ratio for firm } i \text{ in time } t \\
TIE_{it} &= \text{times interest earned ratio for firm } i \text{ in time } t
\end{aligned}$$

Q_{it}	=	*Tobin's q ratio for firm i in time t*
$I\,T/o_{it}$	=	*Inventory turnover ratio for firm i in time t*
$Size_{it}$	=	*total assets for firm i in time t*
D_{TA}	=	*1 for large and 0 for small firms*
D_Q	=	*1 for Q >1 for growing firms, 0 otherwise*

The Sector effect:

To test for the sector effect, the general model is applied to each sector and a model is developed for each one.

4.1. The Data

The study represents all 44 local listed companies in the Bahrain Bourse with the exception of the closed listed companies. Table 1 highlights these sectors and the number of the companies in each sector over the period of the study 1995 to 2013. Data is extracted from Bloomberg data base with many years of data are reported as (N/A) which caused to drop few years from the analysis for certain companies. Therefore companies under investigation during the period of the study do not necessarily have the same time period, for example, some have seven years of data and the rest have 12 years. Pooling the data, the study uses cross-sectional-time-series analysis with a total of 646 number of observations. Missing data caused the number of observation to drop sharply.

Table 1: Summary of the listed companies by sectors in the Bahrain Bourse

Sector	Number of companies
Commercial Banks	7
Investment	14
Insurance	6
Services	8
Industrial (manufacturing)	3
Hotel and tourism	6
Total	44

Table 2 provides definitions for the variables used in the study along with the categories of each ratio. For the purpose of the analysis, descriptive statistics along with correlation matrix is used to describe the data, find relationship between ratios, and to detect the existence of multicolinearity in the models if any. For further model development, stepwise multiple regression technique is used and the null hypothesis in all cases are rejected at the 5% level of significance or less.

5. Results and findings

Table 3 summarizes the descriptive statistics for all the ratios proposed to be in the models. The inconsistency in the degrees of freedom (N) is due to the unavailability of the data for certain ratios and periods. Total assets (TA) shows that there is a wide range in the size of the firms used in the study with a minimum of (3.462) and a maximum of (32,744). Almost all the ratios are found to be skewed in either directions, which is the norm for ratio distributions.

Table 2: Variables definition

Variables	Descriptions	Categories
P/E ratio	Price earnings ratio: market price per share divided by earnings per share	Market ratio
M/B ratio	Market price per share divided by the book value per share	Market ratio
D/TA	Debt ratio: total debt (short-term + long-term) divided by total assets	Debt ratio
TA T/o	Total assets turnover: total sales divided by total assets	Efficiency
ROA	Return on assets: net income available to common shareholders divided by total assets	Profitability
ROE	Return on equity: net income available to common shareholders divided by total equity.	Profitability
FL	Financial Leverage: total assets divided by total equity	Financial Risk
CR	Current ratio: current assets divided by current liabilities	Liquidity
TIE	Times interest earned ratio: operating income divided by interest expense	Safety
Beta	Market risk which is computed by security market line model	
Tobin's Q	Tobin's Q ratio: market value of a firm divided by its replacement value of the assets. A ratio more than 1 is considered as a growing and appreciating firm by investors and vice versa if it is less than one.	Growth
I T/o	Inventory turnover ratio: cost of goods sold divided by inventory	Efficiency
Size	Which is measured by total assets. Using dummy variable (D), total assets more than median is considered as 'large' firms and less than or equal to median is 'small' firms.	
D_{TA}	Dummy variables for the size, '0=small', '1=large'	
D_Q	Dummy for Q ratio, 'Q $\leq$ 1' and 'Q > 1'	

Table 3: Summary of descriptive statistics

Ratios	N (df)	Min	Max	Mean	Std Dev	Skewness	Kurtosis
MB	339	.28	4.90	1.25	.66	1.20	2.69
Beta	349	-3.60	4.83	.59	.95	.88	4.13
TATo	592	-.17	2.12	.33	.39	2.05	4.13
ROA	597	-38.03	31.48	5.62	7.35	-.19	4.06
TA	627	3.46	32744.00	1776.61	5408.99	4.05	15.87
FL	597	-7.58	31.55	3.43	3.61	2.12	7.88
ROE	593	-127.15	57.32	9.65	16.45	-3.35	22.20
CR	283	.13	325.08	8.36	30.68	8.29	74.28
Q	441	.39	3.24	1.14	.42	1.95	5.33
I T/o d	212	4.03	584.39	67.34	57.81	3.62	29.19
PE	316	.05	583.33	19.53	51.18	7.76	68.51

Table 4 highlights the correlation matrix for all the ratios used as dependent and independent variables. At 1% level of significance, return on assets and return on equity gives the strongest correlation (r = 0.774) which is expected to be strongly positively correlated. Total assets turnover and return on asset has a significant moderate positive correlation (0.535). All correlation coefficient are tested at 5% and 1% level of significance. Using stepwise multiple regression, the system automatically drops the less significant variable in each model.

Table 4: Correlation Matrix

		MB	Beta	PE	DTA	TA To	ROA	FL	ROE	Q	I T/o	Tie	CR
MB	r	1	.117*	-.057	-.001	.203**	.373**	.037	.400**	.838**	.215*	.239*	-.149
	N	339	320	303	331	319	324	324	324	269	113	68	139
Beta	r	.117*	1	.149**	.254**	-.150**	-.036	.159**	.009	.039	.057	.413**	-.114
	N	320	349	301	340	327	332	332	331	278	120	68	148
PE	r	-.057	.149**	1	.122*	-.118*	-.195**	-.028	-.215**	-.062	.084	-.298*	.159
	N	303	301	316	306	297	300	300	299	252	112	63	136
DTA	r	-.001	.254**	.122*	1	-.244**	-.340**	.383**	-.096*	-.098*	.429**	.085	-.115
	N	331	340	306	627	592	597	597	593	441	212	119	283
TATo	r	.203**	-.150**	-.118*	-.244**	1	.535**	-.336**	.335**	.428**	.052	.149	-.172**
	N	319	327	297	592	592	592	592	588	425	212	111	269
ROA	r	.373**	-.036	-.195**	-.340**	.535**	1	-.393**	.774**	.608**	-.091	.337**	-.160**
	N	324	332	300	597	592	597	597	593	428	212	116	274
FL	R	.037	.159**	-.028	.383**	-.336**	-.393**	1	-.121**	-.135**	.368**	.109	-.141*
	N	324	332	300	597	592	597	597	593	428	212	116	274
ROE	r	.400**	.009	-.215**	-.096*	.335**	.774**	-.121**	1	.437**	.050	.306**	-.184**
	N	324	331	299	593	588	593	593	593	425	212	116	274
Q	r	.838**	.039	-.062	-.098*	.428**	.608**	-.135**	.437**	1	.036	.229*	-.137
	N	269	278	252	441	425	428	428	425	441	149	92	196
I T/o d	r	.215*	.057	.084	.429**	.052	-.091	.368**	.050	.036	1	.115	-.066
	N	113	120	112	212	212	212	212	212	149	212	90	212
Tie	r	.239*	.413**	-.298*	.085	.149	.337**	.109	.306**	.229*	.115	1	-.347**
	N	68	68	63	119	111	116	116	116	92	90	120	114
CR	r	-.149	-.114	.159	-.115	-.172**	-.160**	-.141*	-.184**	-.137	-.066	-.347**	1
	N	139	148	136	283	269	274	274	274	196	212	114	283

* Significant at the 0.05 level (2-tailed)   ** Significant at the 0.01 level (2-tailed)

Models Developed

Given the unavailability of certain data for the Bahrain market, the best measure for market value is found to be market to book ratio (MB). Price earnings ratio could not give good explanation to the model. Running stepwise multiple regression, table 5 summarizes the best general model developed for the factors which explain market value of the firms.

Table 5: The General Model (Dependent variable = Market to book ratio)

Model	Unstandardized Coefficients		Standardized Coefficients	T
	B	Std. Error	Beta	
(Constant)	0.744	0.070		10.636
ROA	0.041	0.005	0.477	8.642
FL	0.083	0.016	0.405	5.161
Beta	0.082	0.037	0.114	2.228
TA	-0.00003	0.00001	-0.247	-3.326
Adj-R^2 = 0.215, Standard Error (Se) = .581, Df = 307				

Table 5 highlights that the main factors or ratios which explain the market value are mainly ROA (t=8.642) which has a positive relation to the market and followed by financial leverage (t=5.161), beta (t=2.228) and total assets (t=-3.326). This means that investors in Bahrain market are considering mainly the profitability of the firm and the financial leverage, which as a product is equivalent to return on equity (ROE). Furthermore, they are considering beta, which is the market risk and it is found to have a positive relation to the firm's value. Investors in Bahrain market seem to appreciate risk, whether it is from the market or from the firm. Total assets which could be a measure of the size of the firm, is found to have negative sign, which indicates that the smaller the total assets, i.e., the smaller the firm, the more investors value the firm, and the bigger the size of the firm, the less investors are attracted to value it high. All ratios are statistically significant at 1% level. Dividing the firms into small and large sizes based on the median, two models are developed and reported in table 6 which compares the regression results for the small firms compared to the large ones. Market value for the small firms are mainly explained by ROA (t=7.446), financial leverage (t=4.932), and beta of the firm (t=2.161), with all the coefficients are highly significant at 5% level. For the large firms, market value is mainly statistically and significantly explained by ROA (t=6.175) and financial leverage (t=2.848) at 1% level.

Table 6: The Size Effect: (Dependent variable = Market to book ratio)

Size	Models	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Adj-R^2
	Coefficient	B	Std. error	Beta			
Small (df: 139)	(Constant)	0.295	0.142		2.077	0.040	0.316
	ROA	0.039	0.005	0.548	7.446	0.000	
	FL	0.419	0.085	0.362	4.932	0.000	
	Beta	0.132	0.061	0.153	2.161	0.032	
Large (df: 170)	(Constant)	0.862	0.107		8.033	0.000	0.177
	ROA	0.047	0.008	0.465	6.175	0.000	
	FL	0.045	0.016	0.214	2.848	0.000	

Using Tobin's Q indicator as a measure of growth, firms are divided according to those with Q ratio above 1 as growing and highly valued firms and those with less than or equal to 1 as not growing and less valued ones. Dummy variable for Q ratio (D_Q) is added to the model and the coefficient (t=13.291) indicates that the null hypothesis is strongly rejected at 1% level of significance. This rejection means that investors perceive different ratios from growing firms compared to non growing ones. Table 7 summarizes the regression results and highlights that market value of firms are determined by ROA (t=6.657), financial leverage (t=3.461), and total assets (t=-2.062). But this relationship differs for different growing firms. Dividing the sample into two categories, i.e. high growth and low growth firms, table 8 summarizes two different models for these groups. Looking at growing firms, investors are interested in ROA (t=5.561) and financial leverage (t=2.999), while for not growing firms investors are interested in ROA (t=3.497) only. Both models are highly significant at less than 1% level.

Table 7: The effect of Tobin's Q on the Model

Model	Unstandardized Coefficients		Standardized Coefficients	T
	B	Std. error	Beta	
(Constant)	0.424	0.067		6.365
D_Q	0.840	0.063	0.596	13.291
ROA	0.031	0.005	0.340	6.657
FL	0.048	0.014	0.237	3.461
TA	-0.000014	0.000	-0.125	-2.062
Adj-R^2 = 0.578, Standard Error (Se) = .446, Df = 262				

Table 8: The Size Effect using Tobin's Q ratio

Size	Models	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Adj-R^2
	Coefficient	B	Std. error	Beta			
No growth (df: 95)	(Constant)	0.622	0.023		26.723	0.000	0.106
	ROA	0.012	0.004	0.339	3.497	0.000	
Growing (df: 154)	(Constant)	1.184	0.113		10.482	0.000	0.159
	ROA	0.037	0.007	0.509	5.561	0.000	
	FL	0.047	0.016	0.275	2.999	0.000	

Looking for the sector effect, the sample is divided into six main sectors. These sectors are listed in table 9 along with a model which is developed for each sector. It shows that almost all the sectors give similar explanation to the market values with the exception of the manufacturing sector. On average, investors are interested in the level of the profitability in the company in the form of ROA and financial leverage of the firms, regardless of which sector the firm operates in. What differentiates the manufacturing sector from others, is that these firms, on average are providing beta as a signal to the investors. Table 9 summarizes the findings for sector analysis with six models which are developed for these sectors. All models are highly statistically significant at less than 1% level.

Table 9: Summary results for the sector analysis

Sectors	Models	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Adj-R^2
		B	Std. error	Beta			
Commercial Banks (60)	(Constant)	0.618	0.198		3.124	0.003	0.232
	ROA	0.082	0.024	0.395	3.440	0.001	
	FL	0.106	0.031	0.394	3.429	0.001	
Hotels & Tourism (36)	(Constant)	0.637	0.103		6.154	0.000	0.378
	ROA	0.044	0.009	0.629	4.875	0.000	
Insurance (36)	(Constant)	1.386	0.175		7.938	0.000	0.597
	ROA	-0.065	0.019	-0.412	-3.498	0.000	
	TA	-0.001	0.000	-1.275	-5.981	0.000	
	FL	0.182	0.072	0.511	2.531	0.016	
Investment (77)	(Constant)	1.180	0.084		14.107	0.000	0.171
	ROA	0.030	0.007	0.427	4.114	0.000	
Manufacturing (17)	(Constant)	0.562	0.026		21.700	0.000	0.667
	Beta	0.108	0.018	0.829	5.919	0.000	
Services (75)	(Constant)	0.380	0.126		3.025	0.003	0.518
	ROA	0.091	0.010	0.724	9.030	0.000	
(Degrees of freedom (Df) in parenthesis)							

6. Conclusion

This paper attempts to determine whether financial ratios, such as profitability, liquidity, efficiency and debt management can provide any explanation to the variation in the firm's value which is measured by its P/E or M/B ratio. Since these financial ratios are important to the stakeholders, mainly investors, creditors, owners and managers, the study intends to test whether such ratios are providing any signals to the market which as a result provide some changes to the P/E or M/B ratios. To answer this question, four models are developed to explain the relationship between these ratios and the value of the firm. These ratios are determined by a set of financial ratios such as (D/TA), (TA T/o), (ROA), (ROE), (FL), (CR), (TIE), (TA), (Beta or market risk) and Tobin's Q ratios. These four models are used to test for the general model, size effect, sector effect and lag effect. Using stepwise regression technique, different models are developed to explain this relationship.

Generally, results conclude that return on assets (ROA), as a profitability measure, provides signals to the investors and actually explains partially the market to book value. The other three ratios which are found to be significant in explaining the market are: Financial leverage, total assets and market risk or beta. Dividing the sample into small and large firms through Tobin's Q ratio to look at the size factor, what differentiate small from the large firms is the beta factor, which is highly significant for small firms while it is insignificant for the large ones. Looking into sector analysis, almost all sectors consider ROA as the main factor in explaining the market value. Hotels and tourism is the only sector which considers the inventory turnover ratio in days. Due to the unavailability of certain data for Bahrain Bourse, the study claims that there are some shortages in the models developed and that these models could be stronger otherwise and that market ratios could be explained by more significant variables (ratios).

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