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Measurement the Impact of Financial and Business Risk on Performance: Evidence of Industrial Sector of Oman

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Abstract

This paper aims to analysis the impact of financial and business risk on performance in ten industrial sector of Sultanate of Oman. The population is 47 firms from the period 2009 to 2013. The results indicate there is a statistical significant impact of earnings growth at business risk on performance at significant level 5% and current ratio and financial leverage at financial risk on performance at significant level 1%. The multiple regressions show there is a significant impact of all business and financial risk variables on performance at significant level 10%. The stepwise regression also shows that the financial risk related to current ratio variable between all independent variables is a significant impact on performance at significant level 1%. The researcher recommends to promotion exploit the political stability and strong relations with other countries to increase the size of international trade exchange and minimize the risk of investments and encourage local workforce in contributing to the gross domestic product and employment.

Keywords: financial risk, business risk, performance, industrial sector

1. Introduction

The decision-making process of firms need the information to analysis all the problems that surround the firm, whether internal or external, and thus the investor needs information to evaluate the investments and often relies on the study of horizontal time series to interpretation the events of the future. Many firms in the process of evaluating internal risks such as financial risk and business risk or operational risk, where the financial risk definition, a risk which includes financial position and how assets and liabilities management of either risk but the operational or business risk related to production process or daily (operational) processes, which can be add value and competitive advantage over other processes. In addition, the financial statements constitute important data to the investor for adoption in the evaluation of investments through financial figures and analysis to clarify the firm's image and financial position in the market. The recent global financial crisis was a vital example of the risk that the world has seen as many of the states lost earnings as a result of the collapse of certain global markets and business dealings that have become limited because poor liquidity where it became necessary attention dramatically in risk measurement (Cruz, 2002).

Each firm is different in the estimation of the risk and different nature of their work and their circumstances and the success or failure of firms depends on the extent to accept the risk. The firms try to reduced risk where institutional innovation includes resolutions different risks so that the risk may have positive effects in increasing the return and opportunities which will reflect positively on increasing shareholder wealth. Risk is mean a difference between the actual event and expected as firms try to reduce the risk to a minimum through the prediction of the event and find strategic alternatives as the acceptance of a specific percentage of risk depends on the personal characteristics of the owners, for example, shareholders have the advantage to take the risk in accepting investment projects or reservation policy defensive investment projects to enter each of these strategies depends on the possibilities available to companies and financial strength (Raei, 2011).

The purpose of this study came from that the industrial sector of Oman is witnessing lately a significant evolution due to changes of oil prices, which are an important source of revenue of the government which led to a decline in revenues in the public budget, which draw attention to promote interest and diversify the industrial sector resources and support to get to the high numbers of earnings, through which the economy national to

achieve significant growth, but this thing is peppered many of the operational and financial risks at the corporate level and that may variations of the performance. So this study explain and measurement the impact of financial and business risk on performance of industrial sector of Oman. This study is structured in five sections: introduction, literature review, research methodology, empirical results and finally, conclusion & recommendations.

2. Literature Review

There are many studies explain the and the financial and business risk for example, (Meulbroek, 2002) found that strategic decisions of firm have an impact on the risk of operational processes which contribute to the increased responsibility on employees to achieve strategic objectives, which may positively, reflected on the physical distributed incentives. Other study explained that institutional innovation must include the risks through its activities so operational risk raises by increasing the skills and creative ideas in the firm (Saunders, 2003).

Bollen (2004) examined the levels of risk in the NASDAQ stock market and found the sensitivity of these stocks respond to the risk compare with other markets and the prices of these stocks affected by the sizes of firms. Sagi et al. (2005) found that firms do not care about the operational risk premium to have more risk than other firms. Kirkpatrick (2009) found that the members of the board of directors firms are planning of strategies at the level of an institution, but fail to do so in the surrounding risk control and effect of performance.

There is a statistically significant in explaining the model of CAPM and market risk spreads (Amiri et al., 2010). Chen (2011) found there is a negative relationship between the market value of capital and stock returns as a result of changes in risk factors, which may reflect on the performance of banks.

Boermansa & Willebrands (2012) found the importance of protect risk attitudes for business development and the results show negative impact of risk taking on microenterprise performance. Yang & Tsatsaronis (2012) found that risk of banks in the market have a positive relationship with leverage and the proportion of the carrying value of the market, while there is a negative relationship with the performance of all these results vary depending on the stage of the business sector and the economic situation. Rashkan, et al. (2013) found the quality and timing of the entry of the stock of the market have a statistically significant effect on stock returns and the information is important part for increasing the sale and purchase of shares.

Akbarian (2013) this study explain the impact of financial factors firms and factors of market and environment and the results show differentiation between market and economic risk and between financial factors of firms. Many factors related to economy, efficiency and effectiveness have impact significant to risk of audit (Dauiotaite, 2013). Other study found that not different between profit and not-for-profit hospitals in quality performance and the result shows about not vary significantly (Abazari et al., 2014). The external risks such as the risk of the market and the economy have an impact on the firms value and operating risk (Abazari et al., 2014).

3. Methodology of the Study

This study used empirical methodology to test the problem and applied in the industrial sector in the Muscat Securities Market, where data collected from the annual financial statements of firms.

3.1 Data & Population Selection

This study includes ten industrial sectors from the period 2009-2013 listed of Muscat Security Market (MSM) in Oman for 48 firms but I take only 47 firms because one firm in food & beverages sector not have cover data. The industrial firms sectors structured as the following: seventeen firms in food & beverages sector, two firms in cement sector, two firms in engineering sector, two irms in textiles sector, four firms in mining sector and six firms in construction materials support sector, six firms in paper, packaging & glass sector, three firms in chemicals sector, one firm in pharmaceuticals sector, four firms in electrical & mechanical sector.

3.2 Hypotheses of the Study

Through literature review many studies such as (Pourheydari & Aflatuni, 2006), (Biase & Apolito, 2012), (Abazari et al., 2014) and (Alaghi, 2012) used many variables in different locations and based on these literature previous variables, I designed the model my study and diagnosed the independent and dependent variables to measure business and financial risk to test the following hypotheses' statement:

HO-1: No statistical significant impact of the business risk on performance in industrial sector of Oman.

HO-2: No statistical significant impact of the financial risk on performance in industrial sector of Oman.

HO-3: No statistical significant impact of all independent variables (business risk and financial risk) on performance in industrial sector of Oman.

3.3 The Variables & Model Selection

3.3.1 Dependent & Independent Variables of Study

İn this study used the dependent variable performance (PER) and measure by net profit ratio (NPR) calculated by net profit or loss divided by net sales revenue for every firm from 47 firms in ten industrial sectors. The independent variables are business risk (BR) and financial risk (FR), the business risk used two measures:

1) Earnings variability (EV): calculate by the standard deviation earnings-to-price ratio;

2) Earnings growth (EG): calculate by the current year of net profit minus previous year of net profit divided previous year of net profit.

Where the financial risk used also two measures as the following:

1) Financial leverage (FL) calculate by dividing of total debt to total asset;

2) Current ratio (CR) calculates by dividing total current assets to current liabilities.

3.3.2 Model Selection

$$PER_{it} = \alpha_0 + b_1 BR_{it} + b_2 FR_{it} + \varepsilon_{it} \quad (1)$$

Where, PER_{it} = Performance and measured by Net Profit Ratio (NPR) and business risk (BR_{it}) related to Earnings variability (EV) and Earnings growth (EG), But the financial risk (FR_{it}) related to financial leverage (FL) and current ratio (CR).

4. Empirical Results and Discussion Hypotheses

4.1 Financial Descriptive Analysis of Variables

Table 1 shows the average financial numbers of each sector of dependent and independent variables of ten industrial sectors from the period 2009 to 2013. The mean of dependent variable of net profit ratio is high in cement sector as 0.31 but the low ratio is in construction materials support as -1.42967. There are two independent variables shows one of them financial risk that measured by two variables the financial leverage and current ratio and the high numbers is in pharmaceuticals sector as 1.864348 and Mining sector as 4.25 respectively, and low number is in cement sector as 0.249 and the engineering sector as 1 respectively. The second variable is business risk that measured by two variables also by earnings variability and earnings growth and the high numbers in both measures is in textiles sector as 0.459 and 1.77 respectively, and low number is in pharmaceuticals sector as 0.008 and the electrical & mechanical sector as -23.33 respectively.

Table 1. Average financial number of dependent and independent variables of each sector in industrial sector

Industrial sector	NPR	FL	CR	EV	EG
Food & Beverages	0.007647	0.534261	2.247059	0.236227	-1.06679
Cement	0.31	0.249854	2.9	0.073259	0.299164
Engineering	0.016	0.774484	1	0.041863	-0.33445
Textiles	-0.108	0.307026	1.9	0.459844	1.779861
Mining	0.059	0.413419	4.25	0.187186	-0.22271
Construction Materials Support	-1.42967	0.622923	1.666667	0.079517	-0.19043
Paper, Packaging & Glass	-0.21833	0.545058	1.6	0.10284	-0.24855
Chemicals	0.194	0.267203	3.466667	0.033079	0.141518
Pharmaceuticals	0.076	1.864348	2.2	0.008717	1.460256
Electrical & Mechanical	-0.1015	0.577615	2.34	0.356428	-23.3394

The reason for the high percentage of the net profit ratio is that the cement sector of large and old sectors on the level of industry and relied upon by the Omani economy, where increased amounts of cement consumption during the previous years as the economic development of government spending on infrastructure projects to help the growth and stimulate the construction sector. Annul statistical bulletin (2014) that included in National Center for Statistics and Information in Sultanate of Oman show that revenue from the construction sector is also steadily increased from 1,116.5 million RO in 2008 to 1,455.9 million RO in 2012 and the average contribution of the sector to the gross domestic product of the Sultanate of about 5% over the past five years.

The financial leverage of the industry sector rising in Pharmaceuticals sector as a result of taking steps implementation of international accreditation for hospitals process through the establishment of standards for quality and safety, international drug policy official and private high-cost and consider the establishment of Drug Safety Research Center, and the introduction of the drug's safety skills medicines and use. Also, the rise in liquidity circulating in the mining industry sector requires cash available due to high inventory compared traded obligations

4.2 Descriptive Statistics of Variables

Table 2 shows the descriptive statistics results of each of dependent and independent variables of ten industrial sectors from the period 2009 to 2013. Table 2 shows four variables analyses for minimum, maximum, mean and standard deviation. The high number of mean is in financial leverage 0.5401 and low in earning growth -0.4614 and the high standard deviation is in net profit ratio 1.336 and low value is in current ratio 0.2816.

The results show that the minimum was a negative result due to the financial crisis, which has made firms generally low results in operational work while many firms have to schedule operational activity and find markets for competition which led to improved financial results gradually and this is reflected in the ratio of earning growth of firms.

Table 2. Descriptive statistics of dependent variable and all impendent variables of industrial sector

Descriptive Statistics	NPR	FL	CR	EV	EG
Minimum	-8.90	0.10	-0.40	0.00	-2.80
Maximum	0.41	1.86	0.99	1.27	1.97
Mean	-0.1880	0.5401	0.2703	0.1818	-0.4614
Standard Deviation	1.336	0.3461	0.2816	0.2993	0.8328

4.3 Simple Regression Analysis

Table 3 shows the simple regression analysis for business risk on performance in ten industrial sectors listed on MSM of Oman. This results shows the significant impact of earnings growth variable at the sign level = 5%, where the t- value = 2.345 as was the R= 0.330 while the R^2 was 0.109. This result explain that most industrial sectors lead to rise in annual revenue generated, which reflected positively on the performance, as strong competition in the sector in the light of political stability and a safe environment of Oman. Since the government support the industrial sector firms recently led to improved performance that reflected on the market by giving them many of the loans and facilities to increase their locally and abroad markets.

Table 3. Simple regression analysis for business risk and performance of industrial sector

Model	Unstandardized Coefficients		standardized Coefficients				
	B	Std Error	Beta	T-Value	Sig	R	R^2
Constant	-0.119	0.231					
Earnings Variability	-0.377	0.663	-0.084	-0.568	0.573	0.084	0.007
Constant	5.645E-02	0.213					
Earnings Growth	0.530	0.226	0.330	2.345	0.024**	0.330	0.109

*Denote Sig at p <0.10, ** Denote Sig at p< 0.05, and *** Denote Sig at p< 0.01

The results of table 4 shows the simple regression analysis for financial risk on performance in ten industrial sectors listed on MSM of Oman. The results explain the significant in both variables for current ratio and financial leverage variables at the sig 1%, and the positive t- value = 2.881 and negative t- value = -3.398 respectively but the correlation R= 0.398 and 0.452 and R^2 was 0.159 and 0.204 respectively.

The most of the industrial sectors have high liquidity, where the ratio was greater than 1 for most of the sectors where I arrived in the mining sector 4.25 and 3.46 in chemical sector and the reason for that is the reservation and balanced policy in the investment and expansion in the market, which has affected positively the relative

growth in the performance of most of the firms also notes that financial leverage is a negative impact on performance and this logical explanation in the financial science and was the largest percentage in the pharmaceutical sector to require this sector of research, studies and higher production and input costs.

Table 4. Simple regression analysis for financial risk and performance of industrial sector

Model	Unstandardized Coefficients		standardized Coefficients				
	B	Std Error	Beta	T-Value	Sig	R	R^2
Constant	-0.121	0.061					
Current Ratio	0.454	0.158	0.398	2.881	0.006***	0.398	0.159
Constant	0.755	-0.328					
Financial Leverage	1.745	0.514	-0.452	-3.398	0.001***	0.452	0.204

*Denote Sig at p <0.10, ** Denote Sig at p< 0.05, and *** Denote Sig at p< 0.01

4.4 Multiple Regression Analysis

The results of table No. 5 & No. 6 used multiple regression tests to explain the impact of all impendent variables EV, EG, CR, FL on performance. The results of the study explain the significant for all impendent variables and net profit ratio at the sig = 5%, and the value F = 2.822 and the R= 0.465 while the R^2 was 0.216. The results show there is a medium correlation 0.465 between the all independent variables combined on performance of the industrial sector also pointed out that coefficients table No. 6 show the variable current ratio had a significant impact on the performance of firms at T- value = 1.835 and sig = 0.074 = at 10% sig level.

Table 5. Multiple regression analysis for all independent variables and performance of industrial sector

All Independent Variables	R	**R^2**	**F- Value**	**Sig**
FL, CR, EV, EG	0.465	0.216	2.822	0.037**

*Denote Sig at p <0.10, ** Denote Sig at p< 0.05, and *** Denote Sig at p< 0.01

Table 6. Coefficients of multiple regression analysis for all independent variables and performance of industrial sector

Model	Unstandardized coefficients		Standardized Coefficients	T-Value	Sig
	B	Std. Error	Beta		
Constant	-9.50E-02	0.146		-0.650	0.519
FL	-0.171	0.165	-0.172	-.1.040	0.305
CR	0.346	0.188	0.303	1.835	0.074*
EV	-9.76E-02	0.072	-0.190	-1.350	0.184
EG	4.795E-02	0.057	0.118	0.834	0.409

*Denote Sig at p <0.10, ** Denote Sig at p< 0.05, and *** Denote Sig at p< 0.01

4.5 Stepwise Regression Analysis

Table 7. Stepwise regression analysis (coefficients) for all independent variables and performance of industrial sector

Model	Unstandardized Coefficients		standardized Coefficients				
	B	Std. Error	Beta	T- Value	Sig	R	R^2
Constant	-0.121	0.061					
Current Ratio	0.454	0.158	0.398	2.881	0.006***	0.398	0.159

*Denote Sig at p <0.10, ** Denote Sig at p< 0.05, and *** Denote Sig at p< 0.01

The results of Table 7 used stepwise regression test to explain which variables have the impact between all impendent variables EV, EG, CR, FL on performance. The results of the study shows that the financial risk related to current ratio variable is statistically significant on net profit ratio at the sig level 1%, where the t- value = 2.881. As was the R= 0.398 while the R^2 was 0.159.

In general the results in all Tables No 1, 2, 3, 4, 5, 6, 7 explain the industrial sector in sultanate of Oman, this sector is playing the vital role with other sectors which are at the moment trying to diversify its production processes and the level of interest in the economy as a whole to relieve pressure on the oil and gas sector. Annul statistical bulletin (2014) that included in National Center for Statistics and Information in Sultanate of Oman present that the industrial sector made good progress in the Sultanate of Oman is reflected in the actual added value achieved by the sector in 2011 and that nearly three billion RO, which represents a rate of 10.3 percent of GDP, as well as reflected in the increasing number of industrial projects. Sultanate of Oman seeks through several industrial projects to raise the contribution of the manufacturing sector in the GDP of the country to 15% by 2020, and the contribution of the sector in the GDP of the Sultanate is currently about 10%, and the gross domestic manufacturing value rose from about (2965.2) million RO in 2011 to (3040.1) million RO in 2012.The "industrial innovation" center, which was established in 2010 and one of the projects that enhance the performance of the industrial sector through research and development and building research capacity in the field of sustainable industrial growth and create knowledge.

Industry sector constitutes one of the most supportive of the national economy sectors and diversification of income sources to reduce dependence on oil as its importance lies in its ability to fill a large part of commodity needs of the Omani society, especially in the field of building and construction as well as the potential to provide employment opportunities. Where attention was paid to free industrial zones and the integration of production processes have been some industrial areas, including the establishment especially in Sohar and Salalah and Duqm that is the first step to encourage local and foreign investors and increase employment opportunities.

Specialized industrial free zones and economic zones contribute to the enrichment of the economic activity and attract foreign investment and open export markets for manufacturing, are also considered an effective tool to achieve the transfer of knowledge and technology and diversify sources of income and employment opportunities for citizens and economic goals. Sultanate of Oman is distribution the industrial zones and free zones on the various governorates of the Sultanate's policy to develop and provide employment opportunities where. Sultanate of Oman establishment seven industrial zones are: Rusayl, Sohar, Raysut, Nizwa, Sur and Buraimi and Sumail.

The establishment of the Special Economic Zone Authority in Duqm city is new national added economy through existing projects, such as Duqm Port and dry dock to repair ships and a number of tourism and logistics areas, and plans Sultanate to implement a number of major in this area of industrial projects and attract investments of about 15 billion dollars over ten years the next, has been designing special economic zone. Duqm city is try to achieve continuous growth in the number of jobs that will be provided to the citizens, In recent years focused on the establishment of the Sultanate of free zones as a gate open to attract investment and attract local and foreign capital through offerings of the advantages and incentives and facilities for projects built them.and provide free zones package of investment incentives and facilities notably tax exemptions and simplify the associated licenses and permits procedures and allowed the import of all goods traded in the State and exemption from the minimum investment and the freedom to use the currency and the exemption of profits and other incentives income tax requirement.

5. Conclusion and Recommendations

The analysis of financial statements is not sufficient alone to assess the financial performance of the firms, but beyond that risk diagnosis firm whether current or future risk. The risk of firms must identify the business and financial risks. This paper attempts to analyze the impact of financial and business risk on performance in ten industrial sector of Oman. The population is 47 firms from the period 2009 to 2013. The results indicate there is a significant impact of earnings growth as business risk on performance and current ratio and financial leverage as financial risk on performance. The multiple regressions show there is a significant impact of all business and financial risk variables on performance. The stepwise regression shows that the financial risk related to current ratio variable is the variable has a significant impact between all variables on performance. The researcher recommends to take advantage of the benefits of the strategic location and political stability of the Sultanate of Oman compared to other countries, which may contribute to increased international trade between the countries and reduce risk in industrial investment projects and must also be interest in promoting economic diversification and not rely on oil and gas sector as a resource large earnings. Finally, continuing work to encourage local

workforce in contributing to the gross domestic product and employment.

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