

# DETERMINANTS OF FIRM'S PERFORMANCE: THE CASE OF COMPANIES LISTED IN MUSCAT SECURITIES MARKET

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## Abstract

It's worthiness to say that the performance of firms is influenced by many conventional factors such as capital structure, firm size, and sales growth influence firm. The main objective of this article is to identify different determinants for the firm financial performance for the listed companies in Muscat Securities Market index (MSM30). The study was carried out in Oman, with a particular reference to MSM30. A quantitative research method has been implemented using the data published in annual reports which are available on the Muscat Securities Market website. In particular, non-financial firms indexed on the MSM30 over the period of 7 years (2009 – 2015) were analyzed. In total, 19 firms were identified with 133 observations. The data analysis has been done using a multiple linear regression model. The findings of this study showed that the firm performance has a negative relationship with the leverage ratio, while the sales growth and firm size have a positive impact on the firm performance. Debt offers a disciplinary mechanism as propounded by agency theory did not receive support in MSM30. Instead, findings suggest internal funding might seem to be more appropriate for firms in MSM30. Therefore, these firms should wisely finance themselves through debt without overleveraging. Also, firm performance was driven by sales growth and firm size which was consistent with other findings. This study gains its originality by being one among few attempts in Muscat Securities Market to understand how and why conventional factors such as capital structure, firm size, and sales growth influence firm performance in a certain way.

**Keywords:** firm performance, MSM, leverage ratio, sales growth, firm size

## Introduction

Understanding the firm's performance (FM) and different factors affect it is one of most important research areas in the field of social sciences. There are studies which has critically examined the firm's performance (FM) across the borders in two main aspects. The first investigates the relationship between conventional factors and the FM, many literatures came under this umbrella through many studies analysed the impact of conventional factors on the FM while other studies investigated the corporate governance mechanisms and the FM. The second dominant approaches employed in most the existing studies are related to the FM in terms of corporate governance mechanisms like board characteristics and charter provisions and the pattern of ownership structure (Alsartawi, 2018). Though, the conventional elements like size of the firm, the capital structure and firm's growth have been investigated in many contexts, but the results were not consistent across the studies and there is some inconsistency in the existing studies across the countries (Aroui et al., 2014). The reason behind that inconsistency is due to the nature of their market characteristics and organizational environment. There is, still, debate about the impact of capital structure and its' construction on the FM. Broadly speaking, there is no consensus in the results obtained by the existing research as these are developed based on numerous theoretical backgrounds. Hence, it is essential to develop the common suitable approach across the countries in terms of the relevancy of the conventional factors and its impact of the FM. Oman is the country which contributes significant amount of economic contribution to the world from the Middle East region. Therefore, it is essential to address the needs of identifying the influencing

conventional factors and its impact on the FM in Oman context to enhance the confidence level of the investment decision for the better corporate performance.

### **MSM30**

The Muscat Securities Market Index (MSM 30) was launched in 1992 with a base level of 1000 as on June 1990 and over the period the selection of sample has changed, and it has reached to 30 samples. It is a capitalization-weighted index of the 30 most liquidated, largest and profitable firms in the market from various industries like manufacturing and services companies. The main motto of MSM 30 is to reflect the fair price movements of the listed securities in MSM and serve as a benchmark to other listed firms in MSM to enhance their performances. The main eligibility of firms to be indexed in MSM 30 is market capitalization, liquidity and performance. The assigned weights are 40, 45 and 15 percent respectively (MSM, 2017).

### **Capital Structure and Firm Performance**

The widely used Modigliani and Miller (MM) irrelevance theory (1958) without corporate taxes stated that the decision of using debt and equity to form a capital structure is irrelevant in terms of value of the levered firm ( $V_U = V_L$ ). This theory consists of the assumptions like ignoring the bankruptcy costs, transaction costs and asymmetric information underlying in the market. This assumption has been criticized either way by many researchers in their empirical studies according to their chosen environment. In 1963 MM has brought the new relevance theory confirmed the capital structure relevancy to the firm's value after considering the impact of corporate taxes. Here, leverage ratio reacts in the opposite direction when weighted average cost of capital (WACC) increases or decreased in a particular firm. The tax shield acts as protective covenants against the cost of capital when the firm depends on higher debt as the main source of capital. However, as the leverage ratio increases beyond the optimum level, it causes financial distress costs and bankruptcy cost.

More or less these two assumptions have created debates and arguments among the researchers and it gave different findings and solutions. The scholars have come out with different views in terms of the relevance of capital structure on the value of the firm. The conflict of interest arises among the managers and shareholder due to changes in agency cost assumptions (Jensen & Meckling, 1976). The managers may involve in activities that are not with the interest of shareholders' and it creates conflict among them due to the result of ownership separation from control. Most of the outcomes were against the irrelevance proposition of capital structure to the value of the firm. They debated that the debt could align managers with the concept of wealth maximization. The managers serve best to the interest of their shareholders, if the firm financed through debt. On the other hand, financing through debt limits the operational ability of the managers. Grossman & Hart (1982) stated that the bankruptcy cost creates an irrecoverable burden on managers and it will emerge the firm's reputational risks. Hence, it is the major responsibility of the managers to avoid any such risks. So, most of the occasion this pulls the managers to make informed investment decisions and consumes less perquisites. Further, Jensen (1986) argues based on free cash flow assumptions that managers have to be involved in the activities which divert the interests of shareholders where there is excess flow cash occurs. Instead, it is suggested that to use debt to serve as a disciplinary mechanism.

Myers and Majluf (1984) have come out with different perceptions towards the use of debt by firms. They tend to argue in line with the role of asymmetric information and imperfect market efficiency. The bond and shareholders expect higher rate of return in order to balance the increased risks of asymmetric information. This statement supports that the use of external resources causes more cost to the firms. They supported that the firm must use pecking order theory by using the internal resources mostly rather than sourcing through various external sources. The firms must look on internal fund as the first option and tend move on debt and equity respectively to manage the cost of capital. This statement develops an argument that the internal sources are considered as free sources of capital when compared other sources like issue of debt and shares to the public. But the issue of debt is relatively cheaper than issue of equity and it signals management ability in managing their fixed payment commitments.

The impact of higher leverage ratio on FM has been reviewed by many researchers according to these theoretical foundations. The positive association between these two variables has been witnessed by many researchers. Kyereboah-Coleman (2007) found that higher leverage ratio has a significantly positive impact on the FM in

Microfinance institutions in Ghana. This study states that the economy of scale and enhanced overall efficiency has impacted positively by the higher leverage ratio of the firm. Berger et al. (2006) found a positive relationship between higher leverage ratio and FM in US banking industry. In the same line, Margaritis and Psillaki (2010) found that higher leverage ratio positively impacts the FM in French firms which is belonging to low and high growth industries. Jermias (2008) confirms with the above findings and it emphasized that the higher leverage ratio increases the advantage of tax shields and impose more constraints on managers in response to bondholders' priority of claims.

On contrary, there are studies found a negative relationship between the use of higher leverage ratio and FM. Ebaid (2009) inferred that higher leverage ratio negatively impacts the FM in non-financial listed firms in Egypt, as the higher leverage of ratio of the firms indicates the tendency of risk taking ability of the managers of the firms and perhaps, it tends to avoid the risky investments. Sheikh and Wang (2012) found that the use of different measures of capital structure such as short term and long-term debt ratio shows a negative relationship on firms' performance in Pakistan. Vijayakumaran (2018) inferred that there is a negative relationship indicating that this finding is in line with "pecking order theory" in Chinese Industrial listed firms' panel data investigation. Consistently, Rao et al. (2007) observed a negative relationship between these two variables in listed companies in Muscat Securities Market (MSM). The study infers that the static trade off theory of capital structure couldn't be considered in Oman context. The reason is being that the Oman debt market is relatively underdeveloped and the borrowings also expensive when compared to other sources of capital. Further the study argued that the tax advantages attained through the use of debt could not compensate the challenges of high distressed and bankruptcy costs that emerge from debt financing. Hence, this argument is in line with dynamic tradeoff theory (Frank & Goyal, 2008). Due to perplexed results, the following non-directional hypothesis is proposed:

H1: There is a relationship between leverage ratio and FM.

### **Firm Size and Firm Performance**

The firms which are larger in their sizes are measured in terms of balance sheet assets are considered to be matured firms. The reason is that the firms larger in sizes are less susceptible to asymmetric information. This alleviates the dependency of larger firms using retained earnings. These earnings are the sources and it is to be invested in high earning investments. The larger firms are expected to experience more agency problems. Hence, these firms restore to incorporate a robust governance mechanism (Holder et al., 2011). According to Pillaia et al. (2018) the larger firms enjoy the market reputation and economies of scale. These firms are highly supported by the regulators and the general public. These firms are having secured external network and it gives an edge over the smaller firms in terms of establishing concrete relationship with the external parties and are enjoying the protective covenants of less cost-intensive than smaller firms. Bercovitz and Mitchell (2007) also supported these findings such as the FM is highly relying on the firm size.

In the GCC context, several studies conducted on FM and the corporate governance using the control variable of firm size. The outcome of these studies are consistent in terms of there is a positive relationship between firm size and FM (Al-Malkawi & Pillai, 2013; Fallatah & Dickins, 2012). Further, these studies stated that larger firms within GCC context are characterized by high reputation, institutional and affluent families' ownership. These supports give them an extensive flexibility in accessing the various sources of finance in an easy and efficient manner. To be align with this logic, the current study proposes the second hypothesis as follows:

H2: There is a relationship between firm size and FM.

### **Sales Growth and Firm Performance**

Bercovitz and Mitchell (2007) resisted with the positive impact of the firm's growth on FM, as the firm requires growing for their survival in the business. Most of the occasions, the small firms are finding difficulty in achieving the target growth rate. Hence, it is difficult for them to make the sustainable profit to survive in long run. Hikino and Chandler (2009) stated in their studies that there is a positive association between firm growth and performance of the firm. The growth enables the firm to achieve high economies of scale and sales growth. This takes them as advantages in terms of producing low cost product or services than the smaller firms. The scale of operations of the larger firms limits the growth of smaller firms substantially and this takes a competitive advantage and thus enhances their operational profits. Canals (2001) stated that the larger firms are capable of attracting the external

talents as they themselves show their growth in terms of economies of scale and operational performance. This advantage is highly influencing the FMs positively.

According to the corporate finance theories, Koller et al. (2010), growth in sales is largely considered as the second driving force of shareholders after the return on investment. The reason is being that the shareholders' value is highly based on the firm's future cash flows. These future cash is highly depending the growth of the firm sales. Most of the studies found that sales growth positively impacts the FM. If the firm makes sufficient profit through sales growth will motivate the managers to take some profitable business ventures. This gives the growth to the firms in terms of economies of scale and learning curve. The growth makes them as superpower in the competitive market and helps to earn the increased profit and thus impacts the market share positively (Brush et al., 2000). Consistent with these inferences, it is expected that sales growth will have a positive influence on FM.

H3: There is a positive relationship between sales growth and firm performance.

## **Data and Research Methods**

### *Sample Selection*

As on 22 January 2019, Muscat Securities Market index (MSM30) encompasses 30 firms that belong to manufacture and service industries. There are 11 firms are from the financial services sector and 19 firms belong to the category of non-financial listed firms. Since, the financial service firms are having different regulatory requirements; the study excludes these 11 firms to be able to reach the optimum results. Hence, the current study takes into account the 19 non-financial listed firms to assess determinants of FM. The data has been collected from firm's annual reports available in the MSM website over the period of 7 years, starting from 2009 until 2015.

### *Measurement of Variables*

FM was measured using return on assets and Tobin's Q. According to Al-Saidi & Al-Shammari (2013), these measures have been used in the studies as main indicator of FM. Though there are other performances measurements have been used in the studies, the ROA and Tobin's Q are the familiar tools which are used to analyse the FM (Haniffa & Hudaib, 2006). While ROA reflects an accounting measure, Tobin's Q is forward-looking and reflects market performance and future firm's growth.

The current study employs three independent variables, they are i) leverage ratio, ii) firm size and iii) sales growth. The leverage ratios have been used as the proportion of total debt to total assets of the firm. Tobin's Q was measured by calculating; market value of ordinary shares plus total debt divided by the book value of gross assets of firm (Haniffa & Hudaib, 2006).

Firm size was measured by calculating the natural algorithm of sales (log sales). Sales growth was measured by applying growth rate formula:  $(\text{Firm sales in a year (t)} - \text{firm sales in year (t-1)}) / \text{firm sales in year (t-1)}$  (Viguerie et al., 2011). Finally, industry type was assigned a dummy variable (service = 1 and manufacture = 0).

### *Data Analysis*

The proposed hypotheses have been measured through multiple linear regression model. The skewness, Kurtosis and outliers of each variable have used to measure the normality assumption of the collected data. There were no evidences of deviation observed from normality distribution and there was no evidences observed in terms of multi-collinearity. To ensure the FM measurement is not influenced by the industry type, the study employed T test. It has been found that the FM indicators differ according to the industry type. On the other hand, few random missing values were identified; they were replaced in SPSS by median imputation technique.

## **Results**

The selected 19 non-financial sector firms consist of 11 service sector firms and 8 firms belonging to manufacturing industry. Table 1 shows the results.

**Table 1. Industry Type**

Industry Type	Frequency
Manufacturing	8
Service	11
Total	19

The table 2 represents the descriptive analysis of the selected samples with 133 observations. The mean score of two measures such as ROA and Tobin’s Q indicates that there is positive performance for the selected firms over the period of selected 7 years. Firms under this sample have a disparity of leverage ratio. Similarly, the sales growth shows a disparity too. Overall, all the variables showed univariate normality through adequate skewness and kurtosis. There was no issue of outliers which might lead to biased results.

**Table 2. Descriptive Analysis**

Variable	Sample	Minimum	Maximum	Mean	STD	Skewness	Kurtosis
ROA	133	-11.22	39.08	10.7423	7.86658	0.64	1.891
TOBINQ	133	0.29	3.26	1.4016	0.48143	0.697	1.85
Leverage	133	0	95.54	27.7793	25.44368	0.904	-0.113
S.Growth	133	-89.86	140.84	5.8579	26.3426	0.687	7.061
Firm Size	133	15.91	20.54	18.2805	1.30664	0.042	-1.069

Furthermore, VIF values were investigated in the two regression models with Tobin’s Q and ROA as dependent variables. VIF values as shown in Table 3 were found to be within the acceptable range, as the guidelines provided by Yoo et al., (2013).

**Table 3. Multi-collinearity Analysis (VIF Values)**

	TOBIN'sQ	ROA
	1.295	1.295
	1.066	1.066
	1.224	1.224

The extensive collected literature confirmed that the industry type such as manufacture and service industry influence on FM. The influencing factor like capital intensity may infers the variations in the performance based on the industry type (Al-Saidi & Al-Shammari, 2013). In MSM 30 there are two industries are relevant in nature and these treated as dummies in SPSS. Industry type is considered as a control variable and the service industry is coded with 1 and manufacturing industry is coded with 0.

Two models of regression analysis were conducted using SPSS. The first model consists of three independent variables, they are i) leverage ratio, ii) firm size and iii) sales growth. The Tobin’s Q has been used as a dependent variable. The second regression model has tested with the same independent variables. However, ROA was used as a measure of FM. The explanatory power of the first model is 10.4% and 20.5% for the second model. Leverage ratio was found to have a consistent negative relationship with both the two FM indicators. This results in accepting (H1) by confirming a negative relationship of leverage ratio and FM. Similarly, and as expected, sales growth and firm size were found to have a positive impact on FM using two measures of FM. Therefore, H2 and H3 were

accepted too. Table 5 shows such information. Industry type as a control variable was negative and significant on ROA. This indicates that manufacture firms listed in MSM30 perform better than service firms in MSM30.

**Table 4. Regression Analysis**

Variables	TOBIN'sQ – 1st Model	ROA – 2nd Model
Adj. R- Square	0.104	0.205
Leverage Ratio	-0.35***	-0.473***
S.Growth	0.184***	0.256***
Firm Size	0.271***	0.246***
Industry Type	-0.101	-0.144*

\*\*\*significance level< 0.01, \*significance level<0.05, \*significance level<0.1

**Discussion**

The construction of optimum capital structure, the selection of debt and equity composition and the relevancy on FM are acknowledged by supporting evidence in MSM30. This finding contrasts the first MM proposition of irrelevance theory. Among, the proposed variables the leverage ratio was found to have the highest impact on the FM of selected MSM 30 companies. This result indicates the importance of constructing the optimum capital structure on the FM. The negative relationship requires further discussion in MSM30. A possible reason of this relationship was provided by Rao et al. (2007), who argued that in Oman context debt cost is expensive. The financial distress cost increases whenever the amount of leverages increases of the selected firms. Further, the benefits of tax shields proposed in the static tradeoff theory may not be maintained. This is because the tax shield benefits may not offset the financial distress cost in MSM30 firms. This finding may also contradict the notion of 1<sup>st</sup> type of agency theory, which stipulates debt could result in the disciplinary mechanism of manager’s behavior, which is in return increases FM. Instead, our results indicated that high leverage ratio inversely affects the FM. It could be the reason for the argument that the debt mechanism may not be an effective corporate governance mechanism. Since, the new revised corporate governance code of conduct in Oman may impose better oversight over manager’s activities, more than debt issuing could do. The new code has brought in massive changes in the board characteristics in terms of the number of board meetings, the number of independent directors and other charter provisions. In line with Ebaid (2009), we offer another explanation of this negative relationship. High leverage ratio could increase the lenders’ influence through the infliction of stringent debt covenants. Due to these covenants the managers are less likely to invest in risky profitable investments. Hence, pessimistic approach of the managers in terms of taking an investment decision negatively impacts the FM.

The FM not only positively influenced by the capital structure but also the firm size and the sales growth were found to be positive. Such results are widely consistent with other empirical findings as in (Ebaid, 2009). Possible reasons for such relationship could be offered in the context of MSM30. Indeed, MSM30 are considered to be larger firms with high market capitalization in GCC region. These firms have a well-established external network, unlike the smaller firms who require higher costs, in order to exploit and deepen the relationship with external parties. Furthermore, these larger firms have economies of scale and learning curve that facilitate and smooth their performances. In addition, these firms have better flexibility in financing options where they can use debt financing to fully avail the feature of tax shield effects. Larger firms could access more debts due to their history and reputation and ability to diversify risks adequately more than smaller firms could do.

**Conclusion**

The present study investigates the relationship of capital structure, firm size and sales growth in a distinctive environment and in the securities market, Oman. The period of seven years from 2009 to 2015 has been taken for the study by using the annual reports of non-financial listed firms in MSM30. Despite the proliferation of studies in this regard, our empirical findings validated MM theories applicable to MSM30 in relation to the optimum capital

structure, size of the firm and sales growth. Especially, Oman context has a paucity of this type of studies. Our investigations revealed a negative relationship between FM and leverage ratio. Based on the current study, it is suggested that the capital structure has material effects on FM in MSM30. Accordingly, firms should not over leverage themselves due to the inverse impact of leverage on FM. Over leveraging seems to curb manager's ability to invest in profitable investments due to the covenants to debtholders. Also, debt costs seem to be outweighing the benefits might be received by tax shield effects. Instead and in line with pecking order theory, firms in MSM30 may find other financing options to be more beneficial, such as internal funding like retained earnings and reserves. Although, the internal funding and its impact on FM were not within the scope of this study. Nevertheless, we offer alternative finance options for MSM30 away from relying heavily on debt.

### **Future Research**

This study provides the basis to investigate the determinants of FM within MSM30 using conventional factors. In the future, researchers should investigate the corporate governance and ownership structures influence on the FM. The conventional factors could be used as control variables. In light of revised code of corporate governance, it is also required to validate the effectiveness of the new charter provisions in context of MSM and how likely such provisions had improved FM.

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