Factors Leading the Investor to Price Securities in the Emerging Financial Market: A Survey Study in Oman

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This study adopts the extensively utilised methods, the precisely fundamental and technical analysis indicators, to survey investor opinion regarding securities pricing. The main objective of this paper is to explore the factors guiding the Omani investor to price the securities. A questionnaire was designed to collect the primary data, which includes 25 questions that cover most of the fundamental and technical analysis indicators relevant to securities pricing. The questionnaire was distributed on a simple random sample comprised of 100 Omani investors in the Muscat Securities Market, for two periods, December 2019 and January 2020. The study uses factor analysis to test two hypotheses. The first is regarding the fundamental and technical analysis indicators that may lead to the best mechanism to price the common stocks. In contrast, the second hypothesis concerns finding the significance level of the correlation coefficient between these indicators. Two key factors are highly involved with the Omani investors in the outcome of the study; every factor included indicators with statistically relevant correlation coefficients below 0.05. This study will help the Omani investor to understand the factors of pricing securities and to avoid overreactions toward price movements.

Key words: *Fundamental Analysis, Technical Analysis, Factor Analysis, Emerging Financial Market, Securities, Oman.*

Introduction

Trading of the financial assets listed on the stock exchange takes place according to the information transmitted among investors, to be then reflected in their pessimistic or optimistic investment behaviour, which affects market stock prices. Information is data that is organised in a way that gives meaning and value to the users, who in turn interpret it and determine its content to use it in

formulating decisions (Turban, 2001, 45). Information is not just a number; it is seen as rich in useful events and has economic value that benefits decision making related to the company (Christensens & Demski, 2003, 5). In the line of finance theory, pricing of securities depends on the credibility and objectivity of information that contributes to revealing the reality of the relevant environment and its prospects. Besides this, information guides the investor toward healthy choices. Therefore, the availability of appropriate, timely information will contribute to developing and stimulating savings towards investment opportunities, and mitigate the unjustified fluctuations of market prices. This happens within the framework of the efficient market hypothesis, which supposes that information inclusiveness determines the efficiency form (weak, semi-strong and strong). This hypothesis of an efficient market states that there is no time lag between analysing information received and reaching specific results regarding the fair value of the security, wherein investors interact with each other to achieve the equilibrium price. Many studies conducted since the eighties and up to the present indicate that investors could beat the market to earn abnormal returns due to the trades of insiders, that is, the trades made by some investors with the ability to understand and interpret the information. Also the lag period of information received and mass psychological and behavioural variables of the participants in the financial market.

The inconsistency and debate around the efficient market hypothesis has led to various theoretical and practical facts pertaining to the factors affect securities pricing. These facts represent a real problem in the emerging stock exchanges, in general, and the Muscat stock exchange specifically, as well as several other factors regarding disclosure level, transparency, monopolisation of information and the problem of the mass behaviour of investors. Accordingly, this particular problem still exists despite the measures taken by most emerging markets regarding improved disclosures and the timely financial reporting of necessary information to investors to ensure healthy decisions and improve the efficiency of the stock exchange. Therefore, this study examines the indicators that play a vital role in pricing the common stocks from the Omani investor's viewpoint by answering two questions: Is the Omani investor using the specific indicators of the fundamental and technical analysis to price common stock in the Muscat Securities Market? Which indicators reflect the interest of the Omani investor?

Theoretical Framework of the Study

In the corporate finance field, most of the accounting and non-accounting information is numerical data used as input by investors and financial analysts in formulating investment decisions in the firm stock. The extent of its transparency and availability to users with a cheaper cost and value is more interested in avoiding the mispricing of securities. Therefore, information guides the investor to pursue profitable investment opportunities and helps to determine the fair value of securities (stocks). Despite the importance of the information derived from accounting and nonaccounting data, it is unreasonable to exclude the personal factors of investors that governed their behaviour (Sharpe & Alexander, 1990, 683) (Fabozzi, 1999, 198). His or her desire to buy or sell transactions may be

affected by ambitions and fears about future market conditions (Aragon, 1989, 188) (Gitman & Zutter, 2017, 277).

The securities pricing issue gained the attention of researchers and academics, especially after Fama presented his pioneering work relating to the Efficient Market Hypothesis (E.M.H) in 1970 (Fabozzi & Modigliani, 2003, 117). The cognitive construction of the efficient market hypothesis was based on the assumption that there are large numbers of rational, profit-seeking investors in the marketplace who react quickly to the release of new information. As new information about stocks appears, investors reassess the intrinsic value of stock and adjust the price accordingly. Therefore, at any point in time, a stock price is an unbiased reflection of all available information and represents the best estimate of the stock's value (Tvaronavičienė and Michailova, 2006, 213).

Many studies have been conducted to ensure the validity of this hypothesis, or its invalidation; some of the results supported Fama's hypothesis and others disagreed (Higgins, 2001, 169, Ross et al., 2005, 350, Brigham & Ehrhardt, 2011, 269-271). The assumption of E.M.H. is inconsistent with Behavioural Finance Theory (BHT). This theory (BHT) states that there are important psychological and behavioural variables involved in investing in the stock market that provide opportunities for smart investors to profit (an investing glossary can be found on the web http://www.investorwords.com). In other words, the stock market prices change in response to investors' psychology rather than statistical data. Pessimism dominates the atmosphere and conditions of the stock exchange; investors will offer large quantities of stocks in an attempt to reduce potential losses and vice versa; the demand will increase, and the prices rise to buy the cash flows expected to be received in the future, in the case of optimistic speculation. In addition, varying the intelligence levels among investors will not generate identical expectations regarding the market conditions. Therefore, human intelligence provides opportunities for differentiated expectations to pursue profitable opportunities, and this will make the market prices move to change and achieve the equilibrium. In conclusion, the aforementioned explains that the changes in stock prices are a result of changes in the expectations of the investors, which should be seen as psychological or individual factors affecting fluctuations in the financial market. As a result, to ensure the healthy structural construction of securities pricing and keep the market efficient, the following must be emphasised:

1. The discovery of illogical reactions and the verifying of sources of information to modify the potential risks that will influence investor behaviour is necessary.
2. The need to identify the money laundering issues that have adverse effects on investor behaviour.
3. There is a need to be able to purify the published financial statements of companies from indicators of bias toward the company's performance.
4. There is a need to deal with doubtful information entering the market with high professionalism, to prevent the specific parties to affect the prices without economic or financial justifications.
5. A need to avoid the herd policy for investors through the timing of buying, holding or selling the security.

Literature Review and Hypotheses Formulation

A literature review is a basis upon which to determine the primary indicators of the problem in research. Therefore, the current study attempts to collect most of the variables adopted by previous studies regarding the securities pricing, and to verify the possibility of linking them within the fundamental and technical analysis framework and to explore its importance from the investors' point of view. It is worthy to mention that there are many studies conducted in the Arabian and non-Arab emerging financial markets regarding the use of various factors of fundamental and technical analysis to evaluate firm performance and securities. Niederhoffer and Regon (1977) explain that the change in profits explains more than 60 percent of the fluctuations in stock market prices. Beaver and Mores (1978) confirm that there is a positive correlation between share price and its profitability and revenue growth on the one hand, and with market risk on the other. Abdullah (1995) states an important relationship between the market prices of common stocks, earnings per share, return on equity and the Saudi financial market index. Al-Fadl's study (2001) indicates that firm size and the type of activity are insufficient by the disclosure percentage, and the data of the financial statements play an essential role in determining share prices. Russel and Torbey, (2002) state that movements in stock prices cannot be attributed merely to the rational expectations of investors, but also involve an irrational component. Dhillon and others (2003) state that the dividend announcement includes benefit information regarding future profits. There is a positive relationship between unexpected changes in the dividend paid, and future profits. Therefore, historical data is useful and becomes more valuable with the experience of investors to forecast expected earnings growth and then forecast stock returns (Selva, 2004).

Abu Nassar and Ethnibat (2005) confirm the importance of the disclosure issued by the Jordan Securities Commission for 1998 due to it meeting the investors' needs for information in terms of quantity and type. Al-Sharqawi (2005) says there is a benefit of the book value per share data in designing investment policies that lead to abnormal returns, and this benefit maximises in the case of an upward trend in market prices. Tvaronavičienė and Michailova (2006) state that the stock market reacts to monetary policy, external events, fiscal policy, business cycles, dividends, inflation and mass psychology. McInish (2008) confirms that the quality of the financial analyst's reports contributes to discovering the fair price of the security and helps investors make the best investment decisions. Besides which, it can mitigate unexplained fluctuations in share price and achieve efficient capital allocation (Schutte & Unlu, 2009). Dursan, Cemil and Ali (2013) used a decision tree approach to explain the useful financial ratio (Profitability, debt, and growth) to determine the firm performance measured by ROA and R.O.E. Mwangi and Murigu (2014) confirm the significance of several factors (equity capital, leverage, management competence, firm size and ownership structure) to evaluate firm performance and securities. Meanwhile, Fernandez (2016) and Koo (2016) made connections between accounting data and market indicators to evaluate firm performance, whereas, Issah and Antwi (2017) state that the macroeconomic factors (GDP, interest rate, inflation rate and others) play a vital role when forecasting firm performance in the United Kingdom. Matar et al. (2018) mention that the resulting organisational performance could be evaluated via return on assets and market to book value (MTV).

In respect to the relationship between corporate social responsibility (CSR) and market stock price, many studies have been conducted. Some confirm the positive relationship (Palmer 2012; Lins et al. 2017), while Iqbal et al. (2012) support a negative relationship. However, Odeh et al. (2020) did not find significant associations between CSR and the market stock price on the Amman stock exchange.

In view of all so far mentioned, one may suppose that most of the prior studies used fundamental and technical indicators to analyse securities prices. The most important difference of the current study is its aim to examine both indicators, due to not finding a similar study at the same level of the Sultanate of Oman. Therefore, this is the first study at the level of the Muscat Securities Market that examines the fundamental and technical indicators from the Omani investor viewpoint that are used to price the securities through the following hypotheses:

H$_1$: - *The connection between the fundamental and technical analysis indicators leads to build the best mechanism for pricing securities listed on the Muscat Stock Exchange.*

H$_2$: - *There is a statistically significant correlation between the indicators of the factors leading to price the securities listed on the Muscat Stock Exchange.*

Research Methodology

The selection of the study sample

The study population focuses on Omani investors. The study sample size was based on the rule of 100 (Gorsuch, 1983, Hatcher, 1994), a simple random including (100) individual. The population of the study sample was decided according to the varying level of the perception of investors of the indicators that affect the pricing of the securities. Alongside, their varied reactions toward the new information would determine the behaviour for selling and buying. Table 1 displays some sample characteristics.

Table 1: - Some characteristics of the sample individuals					
Qualification	Number	Percent	Experience (years)	Number	Percent
Master	10	10%	Less than 10	15	15%
Bachelor	75	75%	11 - 20	60	60%
*Others	15	15 %	Above 20	25	25%
* Individuals hold a scientific qualification diploma and lower Source: Researcher preparation based on statistical output					

Data collection and statistical methods of research:

The designed questionnaire included 25 questions concerning the fundamental and technical analysis indicators that were mentioned in most of the previous studies, owing to their importance. The

questionnaire was then subjected to refereeing by academic experts to verify its scientific integrity, and was modified according to their observations. The questionnaire was distributed to the research sample comprising 100 individuals, over two periods, December 2019 and January 2020. In each period, fifty questionnaires were distributed, and followed up in the field. The sheets of the questionnaire were subjected to the statistically process using the factor analysis method to identify the exact indicators used to price the securities in the Muscat Securities Market. Additionally, there was the measuring of the degree of saturation of each indicator with the other. Also, descriptive statistics were used to interpret the general average of the response trend and support the research hypotheses.

Criteria of scale grades

The questionnaire is designed to the five-point Likert scale. The values of the arithmetic averages of respondents were used as a criterion to determine the level and severity of the response. Therefore, the scale is divided into five equal limits, as shown in Table 2:

Table 2: The limits scale of the response degree	
Response Degree	Limits Average
Strongly Agree	5 - 4.20
Agree	4.19 – 3.40
Neutral	3.39 – 2.60
Disagree	2.59 – 1.80
Strongly Disagree	1 – 1.79

Stability and internal consistency of the study tool

The questionnaire was applied to a random sample consisting of 10 individuals from outside the study sample to verify the stability of the study tool. The Pearson correlation coefficient calculated test and retest method were applied with an interval of one week between the first and second applications, wherein the coefficient was 0.83 for all components of the questionnaire. Alongside, the Cronbach-Elva test was used to examine the internal consistency of the study tool, according to the answers of the respondents, wherein its value was 0.862, which is a positive value and high, indicating an increase in the reliability of the data and the reflection of the results on the research population.

Research Objectives:

The study aims to provide a big picture regarding the facts, reality and types of indicators that affect the movement of securities prices on the Muscat Securities Market, besides determining the strength of the correlation between these indicators and their role in the pricing mechanism from the Omani investors' point.

Operational definitions of survey indicators

This study extensively utilises the methods of fundamental analysis indicators which are related to the firm conditions and its profitability, besides some macroeconomic variables. Technical indicators include issues related to financial market conditions and stock price movements analysis.

Discussion

The results of the factor analysis method show the main factors leading to the pricing of securities, and to measure of how much of the variance of the observed variables a factor explains. Any factor with an eigenvalue ≥1 explains more variance than a single observed variable. The indicators of each factor were chosen based on the degree of saturation of each element within each factor; the element belongs to its factor if its saturation on that factor is greater or equal to 0.50. Based on the above terms, the study finds that two main factors explain 86 percent of the total variance in market prices, and other variables explain the remaining variance.

Analysis of the first factor

Table 3 shows components of the first factor, reflecting indicators that have a more significant impact on securities pricing from Omani investor viewpoints. This factor has an eigenvalue of (3.13) and includes eight variables. Five of them (1, 2, 3, 4 and 6) reflect the fundamental analysis indicator, arranged according to the percentage of their contribution to the factor. The remaining three (5,7 and 8) represent technical analysis indicators. The most fundamental indicator influencing the pricing decision is cash dividend stability, whereby it contributes 87.3 percent of the total variation of the factor. The kind of industry or sector in which the firm operates has the second rating as part of the factor with 74.4 percent, while the reinvest profits is the third element with 73.4 percent. The fourth and sixth elements of the fundamental analysis are the growth rate of cash dividend and return on investment, with 71.2 percent, 65.2 percent, respectively. As for the other indicators, previous stock price behaviour, the volume of trading and securities liquidity have indicated the importance of some technical analysis tools for determining price trends and forecasting their future movement, in addition to the marketability of the security. Therefore, the first factor supports the first research hypothesis, due to the components of the factor representing the best combination of the indicators to pricing the securities in the Muscat Securities Market.

No.	Table 3 Elements of the first factor	Contribution Rate
	Factor Indicators	
X1	Cash dividend stability	0.873
X2	The economic position of a firm in the industry	0.744
X3	Profit reinvestment	0.734
X4	Cash dividend growth rate	0.712
X5	Previous securities prices behaviour	0.673
X6	Return on Asset	0.652
X7	The volume of trading of stocks	0.634
X8	Securities liquidity	0.563
	Eigenvalue of factor	3.134
Source: Researcher preparation based on statistical output		

Descriptive statistics analysis:

Descriptive statistics of response trends toward the first factor also support the hypothesis. Table 4 presents the mean and the standard deviation for each component of the first factor, and at the general level of the answers, respectively. It appears the Omani investor gives priority to cash dividends and its stability, to be an essential factor in pricing securities. Moreover, the respondents agreed that the remaining information was serving the mechanism of pricing the security. Although the averages of each of the answers were different, the general response average is 3.71, and it falls within a scale 3.40-4.19, with a standard deviation of 0.322. That is, the respondents agree on the importance of the first factor's elements and their relevance to the pricing of securities on the Muscat Securities Market.

No.	Table (4) Trend of sample responses toward the first factor[*]	Mean	SD	Trend
	Factor Indicators			
X1	Cash dividend stability	4.03	.414	
X2	The economic position of a firm in the industry	3.93	.254	
X3	Profit reinvestment	3.90	.403	
X4	Cash dividend growth rate	3.73	.521	
X5	Previous securities prices behaviour	3.73	.521	
X6	Return on asset	3.67	.547	
X7	The volume of trading of stocks	3.37	.718	
X8	Securities liquidity	3.30	.702	
	Response general average	3.71	.322	Agree
* Descriptive statistics focus just on the elements of a factor. Source: Researcher preparation based on statistical output.				

Analysis of the correlation coefficients matrix of the first factor:

Table 5 reflects the correlation coefficients matrix between the elements of the first factor, and explains that all coefficients are positive and significant statistically at a level 5 percent. The coefficients are different as a result of the varying contribution rate of each element. The strong correlation between the cash dividend (X_1) and securities liquidity (X_8) with 0.87, and with the

volume of trading of stocks was 0.86. This result shows that the cash dividend plays a vital role in increasing the liquidity and turnover rate of securities in the Muscat Stock Exchange. In general, the remaining correlations explain that fundamental and technical analysis is critical to the Omani investor, and supports the second research hypothesis.

Table 5 Matrix of correlation coefficients of the first factor indicators								
	X1	X2	X3	X4	X5	X6	X7	X8
X1	1	0.72	0.69	0.77	0.65	0.70	0.86	0.87
X2	0.72	1	0.84	0.80	0.86	0.78	0.70	0.75
X3	0.69	0.84	1	0.82	0.72	0.69	0.79	0.65
X4	0.77	0.80	0.82	1	0.72	0.65	0.63	0.58
X5	0.65	0.60	0.72	0.72	1	0.75	0.69	0.68
X6	0.70	0.80	0.60	0.65	0.75	1	0.59	0.77
X7	0.86	0.64	0.76	0.73	0.69	0.70	1	0.65
X8	0.87	0.56	0.72	0.68	0.59	0.77	0.65	1
Source: Researcher preparation based on statistical output								

Analysis of the second factor

This factor has an eigenvalue of 1.332 and comprises six elements with a varied contribution ratio. They are ranked from the upper limit of 89 percent related to the quality and behaviour of the company's management, to the lower limit of 52 percent pertaining to the P/E ratio. Five indicators are regarding the fundamental analysis, and one reflected the technical analysis since the research sample believes that the management has a vital role in maintaining the survival and growth of the company. The remaining elements have a contribution rate of 75.3 percent, regarding the risks investing analysis in the company's shares, while 74.3 percent related to the reputation of the company. Then for the administration's orientations towards development and research to strengthening its position in the market, the percentage of its contribution was 68.4 percent and 64.3 percent, respectively.

Regarding the sixth element, the investor justifies the importance of the expected future profitability due to combining the price of the security in the market and profit per share (P/E Ratio). Although this factor supports the fundamental analysis compared with the technical, it also supports the first hypothesis.

Table 6 Elements of the second factor		
No.	Factor Indicators	Contribution Rate
1	Ethical behaviour of the management.	0.892
2	Stock risks.	0.753
3	Company reputation	0.743
4	Firm's expected economic position	0.684
5	Research and development expenditures	0.643
6	Share price-to-earnings ratio (multiplier)	0.522
Eigenvalue of factor		1.332
Source: Researcher preparation based on statistical output		

Descriptive statistics analysis of a second factor:

Descriptive statistics of response trends toward the second factor were also analysed. Table 7 explains the mean and standard deviation of the sampling responses to the elements of the second factor, arranged from the higher means to the lower. It appears that the general average for the reaction is 3.683 and there is a standard deviation of 0.311, and it falls within the scale level 3.40-4.19, which indicates that these elements add a deeper understanding of the information by connecting it to logical relationships that interpret the price movements.

Table 7 Trend of sample responses toward the second factor[*]				
No.	Factor Indicators	Mean	SD	Trend
X1	Ethical behaviour of the management.	4.00	.525	
X2	Stock risks.	3.87	.434	
X3	Company reputation	3.67	.547	
X4	Firm's expected economic position.	3.67	.479	
X5	Research and development expenditures	3.33	.547	
X6	Share price-to-earnings ratio (multiplier)	2.9	1.112	
Response general average		3.68	.311	Agree
[*] Descriptive statistics focus just on the elements of a factor. Source: Researcher preparation based on statistical output.				

Analysis of the correlation coefficients matrix of the second factor:

Table 8 displays the correlation coefficients matrix between indicators of the second factor. There is a positive and statistically significant relationship among factors, ranged between the lowest correlation of 50 percent and the highest correlation coefficient of 75 percent. These correlations explain the importance of indicators of the second factor to the price of the security from the Omani investor viewpoint. It is vital to analyse the management trends and managements' ability to invest the resources and manage risks of the investment, besides analysing management orientations towards development and research, to strengthen its position in the market.

Table 8 Matrix of correlation coefficients of the second factor indicators						
	X1	X2	X3	X4	X5	X6
X1	1	0.60	0.64	0.73	0.62	0.50
X2	0.60	1	0.58	0.70	0.65	0.68
X3	0.64	0.58	1	0.67	0.55	0.60
X4	0.73	0.70	0.67	1	0.75	0.62
X5	0.62	0.50	0.55	0.75	1	0.57
X6	0.50	0.60	0.52	0.62	0.57	1
Source: Researcher preparation based on statistical output.						

Descriptive statistics of the other indicators that not feasible:

Table 9 displays the indicators that have not been nominated due to the responses of the sample being within the neutral range 3.39 –2.60, and others within the disagreement ladder 2.59 - 1.8. Whereby these indicators are not crucial to the Omani investor, due to each indicator not belonging to a specific factor, and also, its saturation degree was less than 0.50.

Table 9 Trend of sample responses toward the other indicators that not feasible.				
No.	Indicators	Mean	SD	Trend
1	Strength of the company's financial position	3.38	.583	
2	Projected growth in earnings per share	2.6	.568	
3	Company debt ratio (leverage)	3.28	.556	
4	Stock dividends	2.35	.481	
5	Book value per share	1.8	.669	
6	Interest rates on alternatives investments	3.35	.681	
7	Firm size	3.37	.718	
8	Company's assets marketability	1.3	.702	
9	Rate of return on equity	3.25	.997	
10	Stability of the market	3.20	.994	
11	Company's annual sales	3.37	.583	
Response general average		3.71	.322	Neutral
Source: Researcher preparation based on statistical output.				

Concluding Remarks and Recommendations

- The first and second factors show that the Omani investor is interested in fundamental analysis and technical analysis indicators and they have combined effect on investor decisions. Therefore, the first question is answered, and the first research hypothesis is accepted.
- The descriptive statistics results of the two main factors state that the Omani investor relies on the fundamental analysis indicators compared to technical analysis. The cash dividend

represents the most interesting indicator of the Omani investor (a bird in the hand theory). Therefore, the second question is answered and supports the first research hypothesis.

- The results of the correlation matrix for the components of the two factors show that the connection between fundamental analysis and the technical analysis indicators lead to an effective mechanism for pricing the security. Therefore, the second question is answered and supports the second hypothesis.

- The study recommends the companies improve the quality and quantity of information disclosed in their financial reports according to a healthy structure of the information to support the capabilities of investors to make the best decisions. Moreover, failure to do this will be allowing insiders to beat the market in achieving abnormal returns.

- Securities commissions in emerging markets in general, and the Muscat Securities Market in particular, should accredit certified financial analysts to organise the relationship between the market and investors. They should also provide financial reports that include recommendations to investors about market prices.

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