ORIGINAL ARTICLE Received 2 April. 2019 Accepted 17 December. 2019

Open Access Journal
ISSN: 2333-0783
ACADEMIC JOURNAL OF ACCOUNTING AND ECONOMIC RESEARCHES

Vol. 9, Issue 1, 28-37, 2020

Academic Journal of Accounting and Economic Researches

ISSN: 2333-0783 (Online)
ISSN: 2375-7493 (Print)
ajaer.worldofresearches.com

Profitability and Stock Returns With Regard To Life Cycle and Industry Type

Zahra Moradi*, Ali Akbar Arbabian, Bita Damghani
Department of Accounting, Shahid Beheshti University, Tehran, Iran

A B S T R A C T

The main aim of this study was to investigate and analyses the relationship between profitability and stock returns with regard to firm's Life Cycle and Industry Type of the companies listed in Tehran Stock Exchange. To this aim, Return on Assets (ROA) was considered as the independent variable, the rate of firms' stock returns as the dependent variable, and the firm's Life Cycle and Industry Type as the control variables. In this study, the required data were collected during the time span of the years 2012 to 2017 and with regard to five industry, being chemical industry, food industry, inorganic nonmetal industry, pharmaceutical industry, and car industry. The results of investigating 111 companies showed that firm's Life Cycle and Industry Type were influential in the relationship between profitability and stock returns, leading to an increase in adjusted R^2.

Keywords: Stock Returns, Profitability, Firm's Life Cycle, Industry Type.

INTRODUCTION

In the last three decades the relationship between profitability and stock returns was at the spotlight of accountancy research. Numerous researchers have investigated the relationship between stock returns and accounting earnings with regard to different definitions of profitability. Easton, Harris, and Ohlson (1992), has provided thorough investigations. The main hypothesis of these studies was that profitability is an important and influential factor in company valuation models. The majority of the studies that have examined different aspects of the relationship between profitability and stock returns have actually been trying to confirm the value of accounting data(Campbell, 2015; Fama & French, 2006; Hao, Jin, & Zhang, 2011; Hirshleifer, Hsu, & Li, 2018).

A host of evidence about the power of the information content of profitability for explaining returns shows that profitability is an effective determinant of stock returns, especially when the data are averaged in an extended period of time. However, a number of studies have shown that, in the short run, the relationship between profitability and returns is quite unstable in the course of time, meaning that profitability is incapable of contributing to the prediction of future stock returns. To overcome this problem, many researchers have investigated the power of variables other than profitability to improve the profitability model and preliminary returns

*Corresponding Author: sabaalah@yahoo.com

To cite this article: Moradi, Z., Arbabian, A. A., Damghani, B. (2020). Profitability and Stock Returns With Regard To Life Cycle and Industry Type. *Academic Journal of Accounting and Economic Researches*, 9 (1), 28-37.

(Bollerslev, Li, & Zhao, 2019; Guo & Savickas, 2006). Among these variables that have attracted the attention of university scholars are firm's Life Cycle and industry type. Financial theories claim that, on average, firms have high growth and profitability in the preliminary stages of their Life Cycle. On the other hand, the big size of firms and low and even negative profitability growth are characteristic features of the firms that are in the final stages of their Life Cycle. This can raise the question as to whether differences in profitability information content that is related to the differences found in different stages of firm's Life Cycle can explain stock returns with regard to industry type. In this line, the term "Rate of Return" is used for describing the rate of increase or decrease of investment during the period of maintaining assets. The expected Rate of Return informs the investors of the average profit that they can anticipate to earn in a particular period of time. This investors' expected return is composed of two elements, namely investment profit and dividend(Acquaah & Chi, 2007; Rohrbeck & Kum, 2018).

One of the elements considered important in the risk of paying dividend and in earning investment profit is firm's Life Cycle. According to Gordon and Walter and concerning Life Cycle, firms are divided into three categories of growth, maturity, and stagnant. Firms in the growth stage increase stock price by accumulating benefit. Firms in the maturity stage do not have suitable opportunity and therefore their dividend policy does not have any significant influence on the stock price, though their stable dividend ratio leads to a decrease in risk taking. Firms in the stagnant stage, on the other hand, have to divide their benefits and therefore carry in themselves high risk. Different firms, based on different criteria, can be divided into any of the above-mentioned categories. The firms with high sales growth and high growth of investment expenses and short Life Cycle are usually recognized as firms in the growth stage(Anthony & Ramesh, 1992; Diebecker, Rose, & Sommer, 2017). On the contrary, the firms with low sales growth and low growth of investment expenses and long Life Cycle are usually recognized as stagnant firms, and mature firms lie between these two groups. Therefore, it is to be expected to consider Life Cycle and industry type as influential factors in the relationship between profitability and stock returns(Black, 1998; Khidmat, Wang, & Awan, 2019).

REVIEW OF THE RELATED LITERATURE

Profitability

Profitability refers to a firm's ability to have high income-to-expenses ratio. Profitability is the final result of all of a firm's programs and financial decisions, and gives analysts final answers about the manner of running a company. The return on total asset-profitability ratio and return on shareholders' equity (ROE) are usually used for measuring profitability(Buzzell, Gale, & Gale, 1987; Parnell John, 2010).

ROA

The Rate of Asset (ROA) is one of financial ratios obtained by dividing the sum of net income (income minus expenses) by average total assets. The ROA is related to a firm's buying and selling skills, and is not influenced by the firm's financial structures. This ratio is the returns that firms allocate to all of the investors and creditors. Some analysts deem this ratio as the final index of evaluating the efficiency and competence of managers in running the affairs of a business organization. However, because of the use of profitability in calculating the rate of assets return, the problem inherent in profitability also holds true for this criteria rate. With regard to assets, because they are shown in their clerical net value in balance sheets, the real value of assets may be much higher or lower than their clerical value. Therefore, low rate of asset returns does not necessarily mean that the assets should be used somewhere else.

Similarly, high rate of asset returns does not mean that firms should take action to purchase the same assets and earn more returns(Claver, Molina, & Tarí, 2002; Ntoung et al., 2017).

The Firm's Life Cycle

All living beings including plants, animals, and humans follow life curve or Life Cycle. These beings are born, grow, get old, and finally demise. These living beings, in every stage of their Life Cycle, have special behavioral patterns for overcoming the problems of that stage as well as the problems of transmitting from one stage to another. The theory of Firm's Life Cycle assumes that economic firms and agencies, like other living beings, are born, grow, and demise, and for this reason they possess life curve or Life Cycle(Miah & Sharmeen, 2015; Savor & Wilson, 2016). This special life cycle has four stages of (1) the birth or emergence, (2) growth, (3) maturity, and (4) decline.

1 . The firm's emergence stage: The beginning stage of a business Life Cycle is clearly indicative of highest levels of business risk. In this light, there are a host of risks that should be taken into account such as whether a new product is influential or not, and if so whether or not it is successful in being accepted by potential customers, and if so, whether the market will grow enough to cover the expenses of developing the product and introducing it to the market. Even when all of these risks are dealt with successfully, the question arises as to whether the firm will have enough share of the market to cover the firm's investment in the particular industry. In this study, because of stock exchange (buying and selling) inactivity of newly-emerged companies and/or because of their non-stock feature, three stages of Life Cycle have been considered, which are growth, maturity, and decline, and the birth or emergence stage has been ignored.

2 .The firm's growth stage: In this stage, the increase in profit and liquid assets circulation is of considerable importance. In the growth stage a business organization has overcome the fear of quick exit from the market, and by surviving in the market has been partially successful. In this stage, the business organization is actively seeking ways of utilizing development techniques, and needs more investment in order to have access to new products and long-term competitive advantage. Business organizations in this stage rely on advances in technological changes(Hansen & Wernerfelt, 1989; Kumari & Kumar, 2018).

3 . The firm's maturity stage: In this stage, the capacity of initial investment for meeting high market demand is sufficient and the business organization will create more incoming cash. Compared to other stages of Life Cycle, in this stage the business organizations have fewer technological changes. A stable environment leads to financial results that are not considerably different from the results of a previous year(Jenkins, Kane, & Velury, 2004).

4 . The firm's decline stage: With the entrance of the business organization into the decline stage, the business risks will be reduced. In this stage, the business organization usually faces sales reduction, technology replacement, and even products obsolescence. Also, in this stage the income of the business organization is on the minimum and probably even negative. Moreover, because of operating loss and limited investment opportunities as well as the overall recession, the Return on Investment (ROI) is usually low. In this light, demand for goods and services of the organization will be reduced, and the ineffective business organizations are forced to leave the industry(Buzzell et al., 1987).

Hosseini, Ahmadi, and Moqadam (2013) and Lafmejani (2017), in a studies investigated the relationship between stock returns and the price-earnings (P/E) ratio of the companies listed in Tehran Stock Exchange. The obtained results confirmed the hypothesis of his study in that stock that has low price-earnings ratio has higher return in comparison to the stock that has high price-earnings ratio. Namazi and Khansalar (2011), also investigated and analyzed the

relationship between rate of stock returns and financial ratios. The results of examining all the relevant companies as well as examining industries individually showed that there was a significant and meaningful relationship between liquidity ratio, returns ratio, operating ratio, profitability ratio as well as market ratio, and rate of stock returns. In relation to examining all the relevant companies, liquidity ratio, returns ratio, and market ratio, and in the case of examining industries individually, liquidity ratio and profitability ratio had high coefficient of correlation.

Fakhari and Yousefnezhad (2006), investigated the relationship between net income growth and operational benefit growth of the companies with systematic risk, and considered the two variables of company size and industry type as the controlled variables. The obtained results showed a significant positive relationship between systematic risk and both net profit growth and operational benefit growth. Thus, the result of this particular study accentuated the usefulness of accounting variables for evaluating systematic risks. The first investigation in the field of accountancy about firm' Life Cycle was carried out by Anthony and Ramesh [3]. After classifying companies into the growth, maturity, and stagnant stages, they examined the relationship between accounting performance measures (such as sales growth and capital investment) and stock market price. Their aim was to investigate market reaction to disseminated accounting information in different stages of Life Cycle, which showed that there was a significant relationship between operation and stock market price in different stages of Life Cycle in a way that there was a steady decline in the response coefficients of unexpected sales growth and unexpected capital investment from the growth to the stagnant stages. Black [4] investigated the relationship between the incremental value-relevance of earnings and cash flows and different stages of business organizational Life Cycle, and concluded that in the birth and decline stages cash flow was more value-relevant than earnings, but in the maturity stage it was the other way around.

Jenkins et al. (2004), investigated the impact of the firm's Life Cycle on the value-relevance of disaggregated earnings components. They hypothesized that firms in different Life Cycle stages take different strategic actions. Concerning the value relevance of profitability components, the results of their study showed a shift in the value relevance of earnings components from a growth emphasis early in the Life Cycle to a profitability emphasis later in the Life Cycle. Xu (2007), also investigated the effect of the firm's Life Cycle on the expected rate of return. The main result of the study showed that the value relevance of the risk factors is conditional on firm's Life Cycle stages.

Acquaah and Chi (2007), in a study concluded that industry type and internal factors of firms such as managerial capabilities and firm's human resources have important effects on firm-specific profitability, but the effects of internal factors is stronger than industry type. Olavarrieta and Friedmann (2008), investigated the effect of three factors, industry type, internal factors (such as inventions, innovations, branding, and firm's performance) and market conditions (such as prosperous or stagnant markets) on firm's profitability. Their results showed that inventions and innovations have important effects on profitability and after these factors, market conditions have also an effective impact on profitability, but industry type does not have much influence in this regard. Buzzell et al. (1987), believe that the development of an industry influences the performance of all the firms that are members of that industry. Also, Scherer and Ross (1990), assert that industries' organizations, because of determining the rate of supplying the market with product as well as the policy of product pricing, influence firms' profitability. The studies of Schmalensee (1985), by selecting firms with more than 500 million dollars McGahan and Porter by selecting firms which had more than 10 million dollars annual revenue both showed that industry type has an important role in firms' profitability.

Research Hypotheses

The hypotheses of the study are as follows:

Hypothesis 1: *There is a positive relationship between profitability and stock returns.*

Hypothesis 2: *There is a positive relationship between profitability and stock returns with regard to industry type. This hypothesis deals with five industry types, being chemical industry, food industry, inorganic nonmetal industry, pharmaceutical industry, and car industry.*

Hypothesis 3: *There is a positive relationship between profitability and stock returns with regard to firm's Life Cycle. This hypothesis in branched into three more minor hypotheses:*

3.1 .*There is a positive relationship between profitability and stock returns of the firms in the growth stage of Life Cycle.*

3.2 .*There is a positive relationship between profitability and stock returns of the firms in the maturity stage of Life Cycle.*

3.3. *There is a positive relationship between profitability and stock returns of the firms in the stagnant stage of Life Cycle.*

METHODOLOGY

The aim of this study was to investigate and analyze the relationship between profitability and stock returns with regard to firm's Life Cycle and industry type of the companies listed in Tehran Stock Exchange. Concerning the categorization of studies based on their aim, this study is an applied study. Applied studies aim to develop applied science in a particular field of study. Moreover, concerning the design and nature of the study, the present study is a correlational one because it is aimed at investigating the relationships between different variables.

Variables

The dependent variable of the present study, which has been used as the criterion for knowing stock returns, is the rate of companies' total stock returns.

The independent variable which has been used for explaining annual returns is Return on Assets (ROA), which is based on profitability.

ROA is calculated by dividing net income (earnings after interest and taxes) by average total assets (E/A).

$E =$ *Earnings after interest and taxes*

$A =$ *Total Assets*

Finally, the two variables of Life Cycle and Industry Type have been examined as the control variables.

Calculating Variables

In this study, the Easton and Harris's (1991) model, which is used for testing the information content of stock returns and profitability, has been used. First, ordinary least squares (OLS) is used for examining the relationship between variables.

$$RTN_t = \alpha_0 + \alpha_1 ROA + u_i$$

For the purpose of examining the effect of firm's Life Cycle, the considered firms – based on sales growth criteria, change in investment expenses, and firm's age – are divided into three types: firms in the growth stage, firms in the maturity stage, and firms in the stagnant stage. In this line, we have:

$$SG_t = ((SALES_t - SALES_{t-1}) / (SALES_{t-1}))*100$$

$$CEV_t = (CE_t / VALUE_t)*100$$

$$AGE = CYEAR - FYEAR$$

Where

SG_t = *firm's sales growth*

CEV = change in investment expenses
AGE = age of the firm
SALESt = Sales per year

CEt = Investment expenses in the year t (which is obtained from change in stable assets between the years t and t¯1).
VALUEt = market value of shareholders' equities plus clerical value of long-term debts during a year.
CYEAR = Current year of calculations
FYEAR = foundation year of the firm

As shown table 1, we have divided the firms into three categories in a way that firms in the growth stage receive 3 points, firms in the maturity stage 2 points, and firms in the stagnant stage 1 point. Then, we have summed up the points of these three criteria for every firm in order to obtain the combined point for every firm.

Table 1. Categorization of firms based on Life Cycle

Life Cycle	SG	CEV	AGE
Growth	High	High	Young
Maturity	Medium	Medium	Mature
Stagnant	Low	Low	Old

According to the afore-mentioned combinations of categories, we have rank ordered the firms so that it becomes clear as to what firms are in the growth, maturity, or stagnant categories. Then, for every type of firms we calculated the following formula.

$RTNt = \alpha 0 + \alpha 1 ROA + ui$

Finally, for the purpose of investigating the relationship between profitability and stock returns with regard to industry type, the above equation was calculated for every industry individually.

The Population and Sample of the Study

The population of this study is the companies listed in Tehran Stock Exchange during the years 2012-2017. For the purpose of drawing a sample, because of having a number of limitations, systematic sampling has been used. For comparative reasons, the firms that had been listed in Tehran Stock Exchange during the years 2012-2017 and that had their fiscal year ended in the month Esfand of Iranian year (corresponding to the 20th of March of the Gregorian year) were considered as eligible firms for the sample. Also, the firms needed to be among the chemical industry, food industry, inorganic nonmetal industry, pharmaceutical industry, and car industry in order to provide the required data for the study. Based on these considerations, 111 firms listed in Tehran Stock Exchange were considered eligible to be examined.

RESULTS

The aim of estimating regression models was to examine the relationship between return on assets rate and stock returns. For this purpose, the F statistic, which shows the significance of the model, is estimated. Also, the R squared and adjusted R-squared are used for analyzing and showing the power of determining the model. The more the adjusted R-squared is, the stronger the model is in determining the model. In this study, the adjusted R-squared is 4.4 %, showing that return on assets rate accounts for almost 4.4 percent of the variation in the stock returns.

Durbin-Watson test with the critical value of 1.96 showed that there was no autocorrelation problem. Testing the hypothesized significance of the model was carried out by comparing significance level of the estimated F statistic with the determined significance level in this study (0.05), showing that the significance level of F statistic was smaller than .05 level of significance. Therefore, the null hypothesis in the 95% confidence interval is rejected, which shows that the regression model is meaningful. After testing the meaningfulness of the regression model, the meaningfulness of every one of the variables was tested. In this stage, the

significance of t value should be tested. If this value is smaller than 5%, the hypothesis will be rejected at the 95% confidence interval. The constant value of the model and Return on Assets rate are significant in .05 significance level. The t value of the stock returns equals 5.398, which is more than critical value, and therefore, the meaningfulness of the relationship in the .05 significance level is confirmed. In other words, it can be concluded that there is a significant positive relationship between the Return on Assets rate and stock returns.

Table 2. The results of testing the research model

Model	**R**	**R^2**	**Adjusted R^2**	**SE**	**Durbin-Watson**
1	0.215	0.046	0.044	65.834	1.965

The dependent variable: stock returns

For the purpose of testing the second hypothesis of the research, a model similar to the model used for testing the first hypothesis was used with the difference that in this case, the model is examined for every industry specifically and individually. Therefore, 5 models (models 2 to 6) have been estimated. As can be seen in table 3, with regard to F statistic, it can be concluded that all the models are significant at the .05 significance level. Similarly, based on t statistic related to return on assets, it can be concluded that in all of the models and in all of the examined industries, there is a positive significant relationship between stock returns and return on asset rate at the .05 significance level. Among the industries, the relationship between stock returns and return on asset rate has mostly been accounted for by pharmaceutical industry by 10.9%, and after that by inorganic nonmetal industry. Also, chemical industry has the smallest power for accounting for this relationship. This difference shows that compared to other industries such as pharmaceutical industry, there are more factors in chemical industry that can be influential in stock returns.

Table3. The statistics related to the significance of the model in different industries

Model						**ROA**		
	Industry	Dependent	R^2	F	(Sig.)	Beta	t	Sig.
2	Food	Stock Returns	4.2	6.583	0.014	2.521	2.469	0.014
3	Chemical	Stock Returns	3.6	3.666	0.037	0.74	2.971	0.005
4	Pharmaceutical	Stock Returns	10.9	18.645	0.01	2.098	4.272	0.000
5	Inorganic nonmetal	Stock Returns	9.1	8.826	0.005	1.582	2.913	0.005
6	Car	Stock Returns	4.2	8.07	0.005	1.514	2.8	0.005

For the purpose of testing the third hypothesis, models similar to the models used in testing the first hypothesis are used with the difference that in the models used for testing the third hypothesis, the firms have been categorized based on their Life Cycle into three categories. As can be seen in table 4, the F value is significant in all of the models and therefore it can be said that all of these models are meaningful. Also, with regard to t statistic related to profitability variable (Return on Assets rate) and in relation to every one of the stages of the Life Cycle, it can be said that this variable has significant value relevance to Return on Assets. With regard to the adjusted R^2 of every one of the firms, it can be concluded that there is a significant positive relationship between profitability and Returns with regard to firm's Life Cycle. It is also important to note that adjusted R^2 in the stagnant stage is 4.5, which is higher than this statistic in other stages of the Life Cycle.

Table 4. The statistics related to the relationship between profitability and Returns with regard to firm's Life Cycle

Model						**ROA**		
	Life Cycle	Dependent	R^2	F	Sig.	Beta	t	Sig.
7	Growth	Stock Returns	2.6	6.345	(0.013)	1.14	2.519	0.013
8	Maturity	Stock Returns	3.5	8.29	0.004	1.073	2.879	0.004
9	Stagnant	Stock Returns	4.5	10.317	0.002	1.667	3.212	.002

CONCLUSION

As the first hypothesis of the study, which mentioned that there is a significant relationship between profitability and Stock Returns, has been confirmed, it is suggested that principal managers and shareholders, for decision-making purposes and stock investing, pay special attention to the issue of profitability. With regard to the fact that the five minor hypotheses of the study (minor hypotheses number 1 to 5) have been confirmed, it can be concluded that, based on the analyses shown, the second main hypothesis of the study is also confirmed. In other words, there is a significant positive relationship between profitability and Stock Returns. The results also showed that industry type is an influential factor in this relationship. In other words, there is a significant positive relationship between profitability (return on assets rate) and Stock Returns with regard to industry type. The results of testing the hypotheses based on industry type showed the effect of industry type on the relationship between variables in the sense that making decisions based on profitability criterion would not lead to the same results in all types of industries or firms. Among the industries, the relationship between stock returns and return on asset rate has mostly been accounted for by pharmaceutical industry by 10.9%, and after that by inorganic nonmetal industry. Also, chemical industry has the smallest power for accounting for this relationship. This difference shows that compared to other industries such as pharmaceutical industry, there are more factors in chemical industry that can be influential in stock returns. Therefore, it is suggested that managers and shareholders pay special attention to the relationship between profitability and stock returns in different industries so that they can make better decisions about their own investing policies according to a firm's characteristics.

As the minor hypotheses of 1, 2, and 3 have been confirmed, it can be concluded that based on the analyses carried out, the third main hypothesis is also confirmed. In other words, there is a significant positive relationship between profitability and Stock Returns. The results of the study showed that Life Cycle is an influential factor in the relationship between profitability and Stock Returns. The results also showed that adjusted R^2 in the stagnant stage is 4.5, which is higher than this statistic in other stages of the Life Cycle, and therefore, it can be concluded that in the stagnant stage profitability has a more influential role in Stock Returns. For this reason, managers, shareholders, and financial analysts are recommended to pay more attention to the issue of profitability, which can have an important role in describing a firm's situation in every one of its Life Cycle. In this way and by considering firms' characteristics, they can make more accurate decisions about investing policies and getting expected Stock Returns. All in all, it can be concluded that Life Cycle and industry type are influential factors in the relationship between profitability and Returns in a way that by inserting every one of them in the regression formula, the adjusted R^2 increases. The distinctive feature of this research is considering the Life Cycle and industry type variables in the relationship between profitability and Stock Returns, with the results accentuating the role of Life Cycle in investment decision making.

REFERENCES

Acquaah, Moses, & Chi, Tailan. (2007). A longitudinal analysis of the impact of firm resources and industry characteristics on firm-specific profitability. *Journal of Management & Governance, 11*(3), 179-213.

Anthony, Joseph H, & Ramesh, Krishnamoorthy. (1992). Association between accounting performance measures and stock prices: A test of the life cycle hypothesis. *Journal of Accounting and economics, 15*(2-3), 203-227.

Black, Ervin L. (1998). Life-cycle impacts on the incremental value-relevance of earnings and cash flow measures. *Journal of Financial Statement Analysis, 4*, 40-57.

Bollerslev, Tim, Li, Sophia Zhengzi, & Zhao, Bingzhi. (2019). Good Volatility, Bad Volatility, and the Cross Section of Stock Returns. *Journal of Financial and Quantitative Analysis*, 1-31. doi: 10.1017/S0022109019000097

Buzzell, Robert Dow, Gale, Bradley T, & Gale, Bradley T. (1987). *The PIMS principles: Linking strategy to performance*: Simon and Schuster.

Campbell, John L. (2015). The fair value of cash flow hedges, future profitability, and stock returns. *Contemporary Accounting Research, 32*(1), 243-279.

Claver, Enrique, Molina, José, & Tarí, Juan. (2002). Firm and Industry Effects on Firm Profitability:: a Spanish Empirical Analysis. *European Management Journal, 20*(3), 321-328.

Diebecker, Jan, Rose, Christian, & Sommer, Friedrich. (2017). Corporate Sustainability Performance Over the Firm Life Cycle: Levels, Determinants, and the Impact on Accounting Performance. *Determinants, and the Impact on Accounting Performance (December 8, 2017)*.

Easton, Peter D, Harris, Trevor S, & Ohlson, James A. (1992). Aggregate accounting earnings can explain most of security returns: The case of long return intervals. *Journal of Accounting and Economics, 15*(2-3), 119-142.

Fakhari, H. , & Yousefnezhad, S. (2006). Study on the relationship between earning growth and risk. *Accounting and Auditing Review, 13*(3), 89-109 [In Persian].

Fama, Eugene F, & French, Kenneth R. (2006). Profitability, investment and average returns. *Journal of financial economics, 82*(3), 491-518.

Guo, Hui, & Savickas, Robert. (2006). Idiosyncratic volatility, stock market volatility, and expected stock returns. *Journal of Business & Economic Statistics, 24*(1), 43-56.

Hansen, Gary S, & Wernerfelt, Birger. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic management journal, 10*(5), 399-411.

Hao, Shengquan, Jin, Qinglu, & Zhang, Guochang. (2011). Relative firm profitability and stock return sensitivity to industry-level news. *The Accounting Review, 86*(4), 1321-1347.

Hirshleifer, David, Hsu, Po-Hsuan, & Li, Dongmei. (2018). Innovative originality, profitability, and stock returns. *The Review of Financial Studies, 31*(7), 2553-2605.

Hosseini, Hossein, Ahmadi, Mohammad Ramezan, & Moqadam, Sirus Korahi. (2013). The investigation of the relationship between cash holding and working capital with abnormal stock return in the companies listed in Tehran stock exchange. *Advances in Environmental Biology, 7*(10 S1), 3099-3116.

Jenkins, David S, Kane, Gregory D, & Velury, Uma. (2004). The impact of the corporate life-cycle on the value-relevance of disaggregated earnings components. *Review of Accounting and Finance*.

Khidmat, Waqas Bin, Wang, Man, & Awan, Sadia. (2019). The value relevance of R&D and free cash flow in an efficient investment setup. *Asian Journal of Accounting Research, 4*(1), 95-111.

Kumari, Ranjita, & Kumar, Nishant. (2018). Determinants of Firm Performance: A Conceptual Analysis. *Pacific Business Review International, 10*(11), 133-140.

Lafmejani, M. (2017). The relationship between size, book-to-market equity ratio, earnings–price ratio, and return for the Tehran stock Exchange. *Accounting, 3*(1), 11-18.

Miah, Md Dulal, & Sharmeen, Kashfia. (2015). Relationship between capital, risk and efficiency. *International Journal of Islamic and Middle Eastern Finance and Management, 8*(2), 203-221.

Namazi, Mohammad, & Khansalar, Ehsan. (2011). An investigation of the income smoothing behavior of growth and value firms (case study: Tehran stock exchange market). *International Business Research, 4*(4), 84.

Ntoung, AT Lious, Vila Biglieri, JE, Outman, Ben C, Masárová, Eva, Babounia, Aziz, & Kome, Cacilia Mesonge. (2017). Family firms and performance empirical analysis from Spain. *Corporate Ownership & Control, 14 (4-2)*, 380-395.

Olavarrieta, Sergio, & Friedmann, Roberto. (2008). Market orientation, knowledge-related resources and firm performance. *Journal of business research, 61*(6), 623-630.

Parnell John, A. (2010). Strategic clarity, business strategy and performance. *Journal of Strategy and Management, 3*(4), 304-324. doi: 10.1108/17554251011092683

Rohrbeck, René, & Kum, Menes Etingue. (2018). Corporate foresight and its impact on firm performance: A longitudinal analysis. *Technological Forecasting and Social Change, 129*, 105-116.

Savor, Pavel, & Wilson, Mungo. (2016). Earnings announcements and systematic risk. *The Journal of Finance, 71*(1), 83-138.

Scherer, Frederic M, & Ross, David. (1990). Industrial market structure and economic performance. *University of Illinois at Urbana-Champaign's Academy for entrepreneurial leadership historical research reference in entrepreneurship*.

Schmalensee, Richard. (1985). Do markets differ much? *The American economic review, 75*(3), 341-351.

Xu, Bixia. (2007). Life cycle effect on the value relevance of common risk factors. *Review of Accounting and Finance, 6*(2), 162-175.