Applied Mathematics & Information Sciences
An International Journal

http://dx.doi.org/10.18576/amis/160502

An Empirical Study of the Relationship Between Earnings per Share, Net Income and Stock Price

A. T. Gharaibeh[1], M. H. Saleh[2], O. Jawabreh[3,], and B. J. A. Ali [4]*

[1]Department of Accounting, The University of Jordan, Aqaba, Jordan
[2]Department of finance, The University of Jordan, Aqaba, Jordan
[3]Department of Hotel Management, Faculty of Tourism and Hospitality, The University of Jordan, Aqaba, 77110, Jordan
[4]Accounting and Finance Department, Applied Science University, Kingdom of Bahrain

Received: 12 May 2022, Revised: 22 Jul. 2022, Accepted: 1 Aug. 2022.
Published online: 1 Sep. 2022.

Abstract: In this paper, we investigate the impact of earnings per share and net income on stock prices. The sample consists of six manufacturing businesses listed on the Jordanian stock exchange (JSE) between 2011 and 2021. Using panel data, a model was developed to assess the stock price drivers of manufacturing businesses. To determine if a link exists between the dependent variable and the independent variable, a model utility test is used in regression. P-value hypothesis testing is often employed in model utility testing. R2 coefficient of determination is used in this paper's model utility test approach. A simple linear regression model with significance levels = 0.01, 0.025, and 0.05 is used to assess the usefulness of the model utility test in determining the significance of the regression model. It is shown that findings revealed a negative association between net income and share price, but a positive relationship between Earnings per Share (EPS) and stock price. Investors may utilize the study's findings to make investment decisions by paying attention to the company's financial parameters, such as earnings per share and net income. This study recommends that investors should be aware of the factors that influence stock prices prior to making investing decisions if they want to ensure that they will receive a reasonable return.

Keywords: Earnings per Share (EPS), Manufacturing Sector, Net Income (NI), Stock price (SP).

1 Introduction

Financial ratios have fascinated equity investors throughout the years, and there is a great deal of interest in financial ratios since they are used to anticipate stock returns [1]. Numerous macroeconomic and firm-specific factors impact stock returns, making the valuation of stocks significantly more difficult and complex than that of other assets [2]. Therefore, stock market investors and portfolio managers must research the elements that affect stock price [3]. Despite the fact that [4,5] stated that empirical evidence at the time provided strong support for the random walk theory and that in the case of market efficiency, both technical and fundamental analysis were ineffective for gaining additional returns in stock markets, the relationship between financial ratios and stock price has been extensively studied in the financial literature.

At the moment, companies are focused heavily on revenues in order to survive in a dynamic and uncertain environment [2,6,7]. Managers' quality and efficiency are also dependent on their capacity to recognize the factors that might lead to higher profitability [8]. Profitability is defined as a company's earnings gained from sales after subtracting all costs made within a certain time [1, 7, 9]. In the opinion of [7,10], it is one of the most important markers of management success, shareholder satisfaction, investment attractiveness, and the viability of the organization. Without a doubt, the ultimate purpose of every company is to maximize its shareholders' wealth by growing the value of its stock [10,11]. As a result, understanding efficacy metrics is critical [12-17].

Many researches have conducted investigations on the primary factors of stock price [1]. The present literature comprises financial components to capture the influences on stock price, and numerous financial measures, such as Earnings per Share and Net Income, have been utilized to investigate the empirical connection with stock price. The primary goal of this research is to look at the link between stock price and to examine the link between stock price and current ratio, (Earnings Per Share, and Net Income are used). Investors need more information about the firm (sector) in which they want to invest, thus this study aims to help them understand the influence of net income and profits per share on share price in the Jordanian Pharmaceutical and Medical Industry sector.

The pharmaceutical industry in Jordan is considered one of the most important industrial sectors that are distinguished

*Corresponding author e-mail: o.jawabreh@ju.edu.jo

by their product quality [18], so it has a good reputation both locally and internationally. They export to more than 87 countries, the majority of which are Arab countries, with the United Arab Emirates at the forefront of importer destinations (Saudi Arabia, Algeria, and Iraq), Non-Arab markets that are appealing for this sector's products include the United States, Turkey, Ukraine, and Pakistan.

The following is how the paper is organized: Section 2 comprises a review of the literature, Section 3 documents the data and methods, Section 4 is an analysis, and Section 5 has the results and conclusion.

2 Literature Review

2.1 Signaling Theory

Ross (1977) [19] created the signaling theory, which explains how a corporation should alert prospective investors. These signal notifies the user of the steps taken by management to satisfy the desires of the owner. According to signaling theory, it is crucial to communicate investors' perspectives on the company's future. Investors are supposed to use dividend announcements as a signal in making investment decisions. Managers have information about the company's qualities that is not available to the market. This data is beneficial if the firm's current or planned investments have a positive influence on its future cash flows. If management can send a convincing message, the public will be satisfied and information will be believed, which will be reflected in the stock price. As a result of asymmetric information, it is imperative that investors and the general public get signals through management actions.

2.2 Previous studies

Referring to previous literature reviews that interact with earlier variables. Numerous research had been conducted to determine the elements that influence the stock prices of various industries and markets.

Earnings per Share, Price to Book Value, and Dividend Payout Ratio have a considerable impact on stock prices, as demonstrated by ten studies. In the meantime, the Net Profit Margin has little impact on stock prices. These findings suggest that EPS, PBV, DPR, and NPM ratio information can be evaluated by anyone when making investment decisions.

Similar result was by [20] that earnings per share affects stock prices positively. While Debt to Equity Ratio and Return on Assets have no effect on the price of a company's stock. According to the findings of this study, Earnings Per Share, Debt to Equity Ratio, and Return on Assets have an impact on the Stock Price.

Moreover, [8] demonstrated that there are positive connections between net profit or Net Profit Margin and stock price, and that the same holds true for the adjusted anticipated profit. The research reported in [11] revealed that the share price has a considerable impact on net income and comprehensive income, but a negligible impact on profit volatility. Consequently, net income and comprehensive income are crucial to the share price, and investors may utilize both variables for additional fundamental analysis.

A significant study discovered a favorable association between earnings per share and share price [10, 21-26] in service firms and [20, 27-31] in manufacturing companies [10, 21-26, 27-31].

While [32-34] discovered a negative link between stock price and the relationship between the two variables, their explanation for the stock price was inadequate. [35] book value is more significant than earnings per share in determining the influence of a company's stock price. [36] a positive association exists between the financial and industrial sectors.

While [37, 38] revealed that profitability ratios (return on assets, return on equity, gross profit margin, and net income margin) have no effect on the market value of shares, [11] demonstrated a strong correlation between dividends per share and stock price. According to [37], share return, profitability multiplier, economic growth, and inflation rate have a substantial impact on stock price, although deposit interest and cash supply do not. There are positive links between net operating cash flow and its efficacy, and the investor in the (JSE) is unconcerned with the adequacy and effectiveness of net operating cash flow while making an investment decision based on the stock price, as demonstrated by [39, 40].

3 Method

For the goal of conducting research, the study used six of the manufacturing companies that were listed on the Jordanian Stock Exchange (JSE) over the course of the period 2011-2021, (table 1) in order to evaluate the relationship between earnings per share, net income, and stock price.

Table 1. Sample of the study

	Company	Founding
1.	Dar Al Dawa Co.	1975
2.	Arab Center:	1983
3.	Middle East Pharma:.	1993
4.	The Jordanian Pharmaceutical Manufacturing:	1978
5.	Hayat Pharmaceutical Industries Co:	1994
6.	Philadelphia Pharmaceuticals:	1993

The stock price is the current price of a listed/traded share on the stock exchange, as determined by market participants and the supply and demand for the relevant shares on the capital market. A business's stock price shows its worth to investors; hence, high stock prices motivate investors to invest cash in the company [8].

Net income -is a vital indicator for analyzing the health of a firm and denotes the profit a company receives after the total of all deductions and expenses are removed from total revenue. The net profit represents the enterprise's core profitability. "It consists of the activity's revenues minus its expenses" [41].

Earnings per share is among the most important financial factors to help investors choose a company to invest in. To conduct this function, all companies must compute it using the same methods so that the results may be compared accurately. As a result, the IASB (International Accounting Standards Board) developed a unique standard that strictly governs its computation and presentation in financial statements. In December 2003, International Accounting Standard 33 - Earnings per Share was issued. It was originally introduced for financial statements generated after January 1, 2005. One revision of the standard occurred in 2008 [42]. Earnings per share (EPS) is one of the most influential factors in deciding the share price of a firm. A corporation with a high EPS is profitable and has more profit to distribute to shareholders (Bankrate.com, 2021).

Analysis Techniques

In order to find solutions to the issues raised by this study, the following tasks will need to be completed as part of this study:

1. doing the calculations necessary to determine the ratio of banks financial statements in accordance with the operational definition of variables.

2. Carry out the regression based on the analytical model, determine the importance of each coefficient, and carry out the analysis.

Regression Analysis

All of the variables included in the research have been deemed stationary at degree 0, which means that these variables may be utilized unmodified in the regression equation. The findings of the research variables are presented in Table 4.

This study's primary purpose is to determine if there is a statistically significant positive correlation between share price (stock) (SP) and the financial performance in the Jordanian pharmaceutical manufacturing industry, as assessed by Net income (NI) and earnings per share (EPS).

This study examined the impact of certain profitability factors (NI) and (EPS) on the stock (share) price of the Pharmaceutical segment of manufacturing businesses listed on the JSE throughout the study period (2011-2021). We illustrate panel data models; panel data comprise data temporal and spatial dimensions.

1- The formula regression model of panel data as follows:

$$Yit= B0+B1Xit,1+B2Xit,2+BkXit, k +Vit,i$$

We are using regression models in three types:

1) The OLS model:

$$Y= B0+B1X1+\ldots.BkXk+V$$

This model is applied from Bevan and Danbolt, which examined the determinant of capital structure of UK corporations for period (1991-1997).

2) The fixed effect model:

In the fixed effect model, unobserved heterogeneity is supposed to be linked to the explanatory variable (Xitk), whereas idiosyncratic error (Uit) is believed to be independent of the explanatory variable (Xitk) [43].

3) Randomized effect model:

The random effect is acceptable when cross-sectional units are chosen at random from a large population [44].

[45] investigates the Lagrange multiplier (LM) test for random effects.

The Hausman test is used to determine whether the fixed effects model or the random effects model should be utilized.

If the null-hypothesis is not rejected, random effects are used because they provide more accurate estimators [46].

To quantify the effects of the two parameters, we develop a regression model using EViews. The Jordanian Pharmaceutical and Medical Industries sectors' stock price is determined by the following two hypotheses:

Hypothesis

H01: There is no statistically significant association between share (stock) price and Net income.

H02: There is no statistically significant association between share (stock) price and earnings per share.

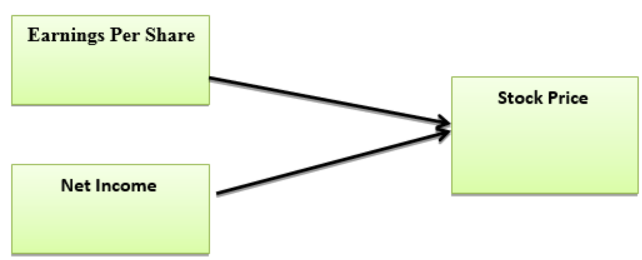

Fig.1: Research framework

Descriptive statistics

The mean stock price is 1.58, and its standard deviation is 1.33. Maximum value is 8.09, skewness is 2.47, and kurtosis is 8.74.

The average rise in net income is -0.69, with a standard deviation of 2.63.

Maximum value is 4.24, skewness is -2.81, and kurtosis is 11.

The adjusted earnings per share have a mean of 0.49 and a standard deviation of 0.28.

The highest value is 1.51, skewness is 0.79, and the kurtosis is 1.50.

In regression analysis, we employ three distinct methods: (OLS) ordinary least square, the fixed effect, and the random effect.

OLS analysis is used to analyze the direct impacts of the independent variable (net income growth) on the dependent variable (adjusted earnings per share) (stock price). Fixed effect is an estimator model applicable to panel data analysis.

This strategy prevents the lag of the dependent variable (stock price) from being included in the model as an explanatory variable.

Fixed effects estimate is used to demonstrate homogeneity in positions where the firm's own (time-invariant) characteristics are associated with the independent variable.

Random effect models, often known as variance components models, are statistical models whose parameters are random variables.

In panel data analysis, random effect models are used.

When assuming the lack of fixed effects.

To choose between the two models of fixed and random effects, we do a Hausman test with the null hypothesis H0: the preferred model is random effect. In contrast, fixed effect is the alternative.

The preferable model is the fixed effect model.

This test ensures that the model's regressors are linked with the unique mistakes.

The null hypothesis suggests that they are not.

The primary result indicated that the Hausman test based on Chi-square 0.28122 P-value: 0.8688 df= 2 was significant. We do not thus reject the null-hypothesis H0: the model is random effect.

The rationale refer to the P-value is more than 5%:

Table 2: Shows descriptive statics.

	N	Min	Max	Mean	Std. Devi	Skewness		Kurtosis	
SP	66	0.14	8.09	1.581	1.332	2.47	0.295	8.74	0.582
NI	66	-13.288	4.24	-0.690	2.627	-2.815	0.295	11	0.582
EPS Adjusted	66	0.004	1.518	0.491	0.277	0.789	0.295	1.508	0.582

Correlation

The coefficient of partial correlation found in the correlation matrix refers to the positive link that exists between stock price and earnings per share (EPS), as well as the negative relationship that exists between stock price and the rate of increase in net income.

Since the partial correlation between independent variables is low, equivalent to 0.16, we do not have an issue with multicollinearity between independent variables.

Table 3: Correlation.

Table (3) Correlation			
	SP	G in NI	EPS Adjusted
Stock Price	1	-0.225	0.593
G in NI		1	0.161
EPS Adjusted			1

4 Results

This section NO 4 comprises the results of the report, according to the random effect regression result, there is a lack of statistical parameter according to (Z) test, that the growth in net income with negative sign to reflect that there is a negative relationship between growth in net income and the share price for Jordanian industrial companies in the pharmaceutical sector during the study period, which corresponds to [33, 35, 36].

This negative link exists because the majority of pharmaceutical businesses (almost one-third) suffered continuous losses during the research period, and 40 percent of their output is dependent on foreign companies' franchising rights, while 60 percent is dependent on licensing.

Which means that a rise in successive income loss leads to a fall in share price. It should be mentioned that because JSE is inefficient, stock prices do not represent the true financial status of pharmaceutical businesses. It is highlighted that these firms suffer from consistent losses, and several of them are in financial distress. However, the EPS metric has a positive association with stock price, which means that when EPS increases by 1%, the stock price increases by 3.12%. According to the (Z) score test, the precise probability value of the test is less than 5%, which corresponds to the research by [10, 23, 24, 26, 29-31].

According to the coefficient of determination R2, and the modified coefficient of determination R2, the model's overall explanatory power was satisfactory. It is obvious that the independent variables analyzed explain 43 percent of the variations in the share price (interpretive variables).

When we used the Chi-square test to analyze the overall significant statistics for the model, the result was 52.1688 with a P-value less than 5%.

Except for the intercept parameter, the regression model result revealed that the explanatory model was statistically significant according to the Z – test.

To do that, Study utilized the Basic Linear Regression Analysis, as shown below.:

Table 4: Indicates Regression.

Variables	OLS			Fixed effect			Random effect		
	Coefficient	T- test	P-value	Coefficient	T-test	P-value	Coefficient	Z-value	P-value
Intercept	-0.59	-0.228	-0.82	-	-		-0.066	-0.248	
G in NI	-0.166	-3.49	0.0008	-0.611	-3.06	0.034	-0.166	-3.477	-0.005
EPS Adjusted	3.105	6.87	0.0000	3.30	5.617	0.0000	3.12	6.7929	0.001
Observation	66			66			66		
R-square	0.457			0.417			0.452		
Adjusted R-square	0.439			0.285			0.435		
F – statistic	26.53		0.004	18.98		0.000			
Chi-sq	-	-	-	-	-	-	52.166		
P-value	0.0004			0.000			0.000		

5 Conclusions

A few would argue that EPS is the most well-known, yet also the most contentious, financial performance statistic accessible. EPS, although being a perennial favorite of financial specialists and laypeople alike, is prone to egregious distortion and incorrect interpretation. This study looked at the impact of Earnings per Share and Net Income on stock prices in Jordanian manufacturing businesses listed on the Jordanian Stock Exchange (JDX) from 2011 to 2021.

A variety of variables influence pharmaceutical company share prices, some of which are connected to the success of pharmaceutical businesses in the sector and others to the economic and legislative environment (tax breaks and investment incentives). Political factors in the region, as well as shocks relating to raw material pricing and manufacturing requirements, as well as abrupt shocks such as the Covid 19 outbreaks, all have an influence on stock values.

This study recommended: first, further research to determine why this significant area of the industrial sector is experiencing financial difficulties, since (16.6 percent) is not experiencing losses, and 50 percent did not pay any dividends throughout the study period and yet persisted. Second, more research is needed to determine the likelihood of these companies going bankrupt. Third, investigations are being conducted with the cooperation of JSE to increase the transparency and detail of the data supplied by the JSE bulletin. Future research might build on the current study by including additional firms over longer periods of time. Furthermore, comparisons of EPS growth analyses across sectors may be made, and some assumptions, such as the assumption of no new share issuance, can be modified in order to tweak the model and verify its conclusions. Hopefully, this study will lead to a better understanding of the elements that influence EPS growth, as well as allow analysts and other financial statement users to apply a more nuanced interpretation of reported EPS growth. The study has significant limitations, such as the exclusion of some factors from the analysis (capital expenditures, company size, and dividends) due to the low statistical relevance of these variables with stock price in earlier studies.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

References

[1] Harban, F.J.M.J., B.J.A. Ali, and M.S. Oudat, The Effect of Financial Risks on the Financial Performance of Banks listed on Bahrain Bourse: An Empirical Study. Information Sciences Letters, 2021. 10(S1): p. 71-89.

[2] Jawabreh, O., et al., The Strategic Deployment of Information Systems Attributes and Financial Performance in The Hospitality Industry. Information Sciences Letters, 2022. 11.

[3] Alrabei, A.M., et al., The Impact of Mobile Payment on the Financial Inclusion Rates. Information Sciences Letters, 2022. 11(4): p. 1033-1044.

[4] Fama, E.F., Efficient capital markets: A review of theory and empirical work. The journal of Finance, 1970. 25(2): p. 383-417.

[5] Öztürk, H. and T.A. Karabulut, The relationship between earnings-to-price, current ratio, profit margin and return: an empirical analysis on Istanbul stock exchange. Accounting and Finance Research, 2018. 7(1): p. 109-115.

[6] Wibowo, E., S.S. Utami, and A.R.A. Dewati, The Effect of Return on Equity, Earning Per Share, and Net Profit Margin on Stock Prices of Banking Companies Listed on the Indonesia Stock Exchange for the Period of 2018–2020. Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 2022. 5(1): p. 162-171..

[7] Ali, B.J. and M.S. Oudat, Accounting Information System And Financial Sustainability Of Commercial And Islamic Banks: A Review Of The Literature. Journal of Management Information & Decision Sciences, 2021. 24(5): p. 1-17.

[8] Sukesti, F., et al., Factors affecting the stock price: The role of firm performance. The Journal of Asian Finance, Economics, and Business, 2021. 8(2): p. 165-173.

[9] Jawabreh, O., et al., Evaluation of The Contents of the Five Stars Hotel Website and Customer Orientation. Information Sciences Letters, 2022. 11(4): p. 1077-1085.

[10] Wang, Fei, Wanling Chen, Bahjat Fakieh, and Basel JA Ali. "Stock price analysis based on the research of multiple linear regression macroeconomic variables." Applied Mathematics and Nonlinear Sciences (2021).

[11] Susanto, H., et al., The impacts of earnings volatility, net income and comprehensive income on share Price: Evidence from Indonesia Stock Exchange. Accounting 7, 2021. 7(5): p. 1009-1016.

[12] Salameh, A., et al., From Citizens Overview: Which Antecedents' Can Assist to Increase Their Satisfaction Towards the Ubiquity of Mobile Commerce Applications? International Journal of Interactive Mobile Technologies, 2020. 14(17): p. 45-55.

[13] Alqaraleh, M.H., et al., The Mediating Role of Organizational Culture On the Relationship Between Information Technology and Internal Audit Effectiveness. Corporate Governance and Organizational Behavior Review, 2022. 6(1).

[14] ALNawaiseh, K.H., et al., The Relationship Between the Enterprise Resource Planning System and Maintenance Planning System: An Empirical Study. Information Sciences Letters, 2022. 11(5): p. 1-11

[15] Alkhodary, D., et al., Visitor Management System Design and Implementation during the Covid-19 Pandemic. Information Sciences Letters, 2022. 11(04).

[16] Alawamleh, H.A., et al., The Challenges, Barriers And Advantages Of Management Information System Development: Comprehensive Review. Academy of Strategic Management Journal, 2021. 20(5): p. 1-8.

[17] Al Nawaiseh, K.H., et al., DIMENSIONS OF CORPORATE GOVERNANCE AND ORGANIZATIONAL LEARNING: AN EMPIRICAL STUDY. Journal of Management Information and Decision Sciences, 2021. 24: p. 1-11.

[18] Ali, B.J., et al., Integration of Supply Chains and Operational Performance: The Moderating Effects of Knowledge. Information Sciences Letters, 2022. 11(04): p. 1069-1076.

[19] Wiguna, S. and E. Murwaningsari, The Effect of Systematic Risk, Operating Cash Flow and Growth Opportunities on Future Earnings Response Coefficients (FERC), Working Capital as A Moderation Variable. International Journal of Social and Management Studies, 2022. 3(2): p. 34-45.

[20] Hidayat, W., et al., The effect of earning per share, debt to equity ratio and return on assets on stock prices: Case Study Indonesian. Academy of Entrepreneurship Journal, 2020. 26(2): p. 1-10.

[21] Bratamanggala, R., The factors affecting board stock price of Lq45 stock exchange 2012-2016: Case of Indonesia. European Research Studies Journal, 2018. XXI(1): p. 115 - 124.

[22] Akbar, T. and A. Afiezan, Determination of Sharia Stock Price through Analysis of Fundamental Factors and Macro Economic Factors. Account and Financial Management Journal, 2018. 3(10): p. 1739-1745.

[23] Osama and Shank, Financial And Non-Financial Determinants That Affect Stock Market Prices For Industrial Public Shareholding Companies Listed At Amman Stock Exchange (Empirical study). 2018, Middle East University.

[24] Avdalovic, S.M. and I. Milenković, Impact of company performances on the stock price: An empirical analysis on select companies in Serbia. Economics of Agriculture, 2017. 64(2): p. 561-570.

[25] Kumar, P., Impact of earning per share and price earnings ratio on market price of share: a study of auto sector in India. International Journal of Research, 2017. 5(2): p. 113-118.

[26] Arkan, T., The importance of financial ratios in predicting stock price trends: A case study in emerging markets. Finanse, Rynki Finansowe, Ubezpieczenia, 2016(79): p. 13-26.

[27] Jawabreh, O., et al., Customer Expectation in Five Star Hotels in Aqaba Special Economic Zone Authority (ASEZA). International Journal of Innovation, Creativity and Change, 2020. 11(4): p. 417-438.

[28] Jawabreh, O., Innovation management in hotels industry in aqaba special economic zone authority; hotel classification and administration as a moderator. Geo Journal of Tourism and Geosites, 2020. 32(4): p. 1362-1369.

[29] Idawati, W. and A. Wahyudi, Effect of earning per shares (EPS) and return on assets (ROA) against share price on coal mining company listed in Indonesia stock exchange. Journal of Resources Development and Management, 2015. 7: p. 79-91.

[30] Al-Habashneh, F., et al., Factors affecting the price of the stock market in the Amman Stock Exchange during the period 1984-2011. 2014.

[31] Menaje Jr, P.M., Impact of selected accounting and economic variables on share price of publicly listed banks in the Philippines from 2002-2008. DLSU Business & Economics Review, 2012. 22(1): p. 35-62.

[32] Jahmani, A., I. Bourini, and O.A. Jawabreh, The relationship between service quality, client satisfaction, perceived value and client loyalty: A case study of fly emirates. Cuadernos de Turismo, 2020(45): p. 219-238.

[33] Kenneth, A.C., et al., Accounting Information and Stock Price: Empirical Evidence from Quoted Manufacturing Firms in Nigeria. International Journal of Progressive Sciences and Technologies, 2021. 28(2): p. 230-244.

[34] Kurnia, M.R., The Effect of Interest Coverage Ratio, Basic Earning Power and Earning Per Share on Stock Price at PT. Indofood Sukses Makmur Tbk. Jurnal Simki Economic, 2022. 5(1): p. 50-59.

[35] Nautiyal, N. and P. Kavidayal, Analysis of institutional factors affecting share prices: The case of national stock exchange. Global Business Review, 2018. 19(3): p. 707-721.

[36] Ahmadi, A., The stock price valuation of earnings per share and book value: Evidence from Tunisian firms. The Journal of Internet Banking and Commerce, 2017. 22(1): p. 1-11.

[37] Saleh, M.M.A., et al., Requirements for enhancing the standard of accounting education and its alignment with labor market requirements a case study hospitality and industrial sector in Jordan. Journal of Sustainable Finance & Investment, 2021: p. 1-18.

[38] Saleh, M.M.A. and O.A. Jawabreh, Role of environmental awareness in the application of environmental accounting disclosure In tourism and hotel companies and its impact on Investor's decisions in Amman Stock Exchange. International Journal of Energy Economics and Policy, 2020. 10(2): p. 417.

[39] Saleh, M.M.A., et al., Environmental accounting as perspective for hotels of Aqaba special economic zone authority (ASEZA). Problems and perspectives in

management, 2018(16, Iss. 4): p. 169-185.

[40] Abd AlJalil, T., The Effect of Net Operating Cash Flows on the Market Share Price of Jordanian General Industrial Companies. Jordan Journal of Business Administration, 2012. 153(657): p. 1-23.

[41] Jayathilaka, A.K., Operating Profit and Net Profit: Measurements of Profitability. Open Access Library Journal, 2020. 7(12): p. 1-11.

[42] Prewysz-Kwinto, P., Earning per share under international accounting regulations and based on the example of companies listed on the Warsaw Stock Exchange. 2021.

[43] Bougie, R. and U. Sekaran, Research methods for business: A skill building approach. 2019: John Wiley & Sons.

[44] Baltagi, B.H. and B.H. Baltagi, Econometric analysis of panel data. Vol. 4. 2008: Springer.

[45] Greene, W. and C. McKenzie, An LM test based on generalized residuals for random effects in a nonlinear model. Economics Letters, 2015. 127: p. 47-50.

[46] Fischer, F. and G.J. Miller, Handbook of public policy analysis: theory, politics, and methods. 2017: Routledge.

Adnan Turki Said Gharaibeh

Instructor at The university of Jordan – Aqaba Branch, faculty of business – Accounting department from 2009 till now. Master of Business (MBA) - Accounting, Yarmouk university, Irbid-Jordan July 2003 "Thesis (The Use of IAS No.520" Analytical Procedures" by Jordanian Auditors)". BA in Accounting Yarmouk university, 1986. **Field study and interests:** Financial Accounting, IFRS Accounting, applying IFRS in auditing firms in Jordan.

Mohammad H. Saleh is an Associated Professor at the Department of Finance, Faculty of Business, The University of Jordan, Aqaba Branch. He got his PhD in Managerial Economic from the Faculty of Business, The University of Jordan, Jordan, in 2008. He got his MA in Economic from the Faculty of Business, The University of Jordan, Jordan, in 1992. He got his BA in Economic and Statistic from the Faculty of Business, The University of Jordan, Jordan, in 1988. **Field study and interests:** Competitiveness, Econometrics, and Financial Statistics

Omar Jawabreh is an Associated Professor at the Department of Hotel Management, Faculty of Tourism and Hospitality Management, The University of Jordan, Aqaba Branch. He got his PhD in hospitality and tourism management from the Faculty of Economics and Business (JNVU), India. **Field study and interests:** Tourism Accounting, culture and sustainable tourism, marketing, Hospitality

Basel J. A. Ali earned a Bachelor of Commerce from Aligarh Muslim University, India, in 2001, a Master of Commerce -Accounting from Jai Narain Vays University, India, in 2012, and a Ph.D. in Accounting from University Malaysia Perlis, Malaysia, in 2017. He is currently an Assistant Professor at Applied Science University in Bahrain.