

Toward Efficient Management of Working Capital: The case of the Palestinian Exchange

Ibrahim M. Awad¹ and Abdel-Rahman Al-Ewesat²

Abstract

The importance of this study comes from the truth that financial statements' users need reliable, relevant, and useful financial information that should be reflected in stock prices. However, this study aims at investigating current ratio, receivables turnover, inventory turnover, and earnings per share for 18 companies listed on PEX over the period from 2006 to 2011. Regression analysis and econometric techniques of Unit root test, Co-integration, and Granger causality are applied. The study outcomes indicate that stock prices of companies listed on PEX are affected by working capital components. The results of traditional Granger Causality reveal that there is no causal relationship between stock prices and working capital components. In addition, there is a positive relationship between CR and EPS and stock prices whereas there is a negative relationship between RT and IT. The paper concludes that cash, times of receivables collection and inventory turnover are necessary to be taken into account by both investors and companies for improved the management of working capital at the PEX.

¹ Department of Economics, Al-Quds University, e-mail: iawad@econ.alquds.edu

² Department of Accounting,, Al-Quds University, e-mail: aewesat@gmail.com

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1 Introduction

The Palestinian Exchange (PEX) was established in 1995 to promote investment in Palestine. The PEX was fully automated upon establishment- the first among the Arab Stock Exchanges. The PEX became a public shareholding company in February 2010 responding to principles of transparency and good governance. The PEX operates under the supervision of the Palestinian Capital Market Authority. The market index is known as Al-Quads Index. There are 41 listed companies in PEX as of June 31st, 2010 with market capitalization of about \$2.5 billion across five main economic sectors: banking and financial services, insurance, investments, industry, and services. Most of the listed companies are profitable and trade in Jordanian Dinar, while others trade in US\$. Only stocks are currently traded on PEX, but there is potential and readiness to trade other securities in the future (PEX website).

In 2009, the PEX ranked thirty-third amongst the worldwide security markets, and regionally comes in second in terms of investor protection. PEX's Vision provides a model for Arab and regional financial markets, through providing innovative services, proposing ideal investment opportunities in securities, attracting investments, using of state-of-the-art technology, complying with the rules of corporate governance, and establishing constructive relations with Arab, regional and global markets. PEX aims at providing a safe and enabling trading environment characterized by efficiency, fairness and transparency, to increase the investment awareness of the local community and enhance PEX relations with local, Arab and international economic institutions and forums, to increase the

depth of the exchange by continuously listing new companies and to provide new and diverse financial tools and services (PEX website).

Management of working capital means how the firm will efficiently and effectively use the cash to finance its operations or its activities, deal with inventory, receivables collections, pay current maturities. In other words, how firms should use cash in order to generate cash, which requires the company to make financial plans. "Proper planning is necessary for the efficient working of any organizations. This can be in terms of marketing, production/operations, human resources and financial plans (Dash and Hanuman, 2009).

The existing literature on the management of working capital is limited in scope, and most prior studies use variables such as current ratio, quick ratio, and net working capital to evaluate enterprises' management of short term working capital. We will investigate determinants of the management of working capital, including business indicator, industry effect, debt ratio, growth opportunities, operating cash flow, firm performance and firm size (Chiou and Cheng, 2006). Added to this, in Palestine we are not only lacking of empirical studies that focus on working capital management, but also it is still non-existent.

Working capital management plays role in the efficiency and effectiveness determination, so that reported net working capital can be a good indicator about the financial position of the firm, and therefore stock prices adjust to reflect that information. Working capital also includes important elements that support investors, creditors, and other users in making their decisions because working capital includes cash and short term asset that can easily converted into cash. In addition, through working capital, investors can measure current financial performance and expect future flows. Accordingly, they may decide to buy, sell or hold securities.

However, the overall objective of this proposed study is to provide both decision-makers and researchers with specific recommendations and information on water capital management. It also investigates and uncovers the importance and

usefulness of working capital in supporting operating activities and in relation to market share. The specific objectives are to: (1) determine whether or not the working capital of Palestinian companies listed in PEX is efficiently managed; (2) investigate the relationship between working capital management and stock prices; (3) provide investors and other users with importance of working capital in measuring financial performance of company; and (4) provide policy makers with some recommendations regarding working capital presentation in financial statements.

The remainder of the paper is organized as follows: Section 2 discusses previous empirical studies. Section 3 shows the hypothesized relationship between working capital management and stock prices. Section 4 describes the research methodology being followed. Section 5 presents the results and Section 6 provides our conclusions and recommendations.

2 Previous Research

All companies are required to release financial statements to provide financial information concerning their financial situations. Users of those statements are always interested in investigation the financial situation of firms. They use analysis of current assets including cash, short term investments, accounts receivable, inventory, and prepayments and use current liabilities such as accounts payable, wages and salaries payable, tax payable to measure the efficiency and effectiveness of working capital management. Accordingly, working capital management requires efficient and effective use of cash because efficient working capital means availability of cash. This analysis may support these users to make profitable decisions. Hill, Kelly, and Highfield (2010) studied factors influencing working capital behavior and found a weak negative correlation exists between working capital requirements and market share. If the

managers aggressively manage working capital accounts (cash, accounts receivables, inventories, accounts payables, and prepayments), this will result in cash flow streams (Reason 2004). Petersen and Rajan (1997) found that receivables are directly related to profitability and capital market access and Emery (1987) indicates that it is more profitable to increase inventory in time the sales have increased and Singh (2008) concluded that the size of inventory directly affects working capital and its management. That is, inventory is a major component in working capital that may affect cash generation and indicate the ability of firm to meet its debts as they come due.

In our study we will measure the extent to which that information is useful for decision making. According to researchers in finance, stock prices can reflect the accounting information, which is contained in the financial statements. If accounting information or other financial disclosures reflects items that affect firm's value, then they should be reflected in the firm's security price (Schroeder et al. 2005). To gauge the financial performance of any company, financial statements' users will use financial ratios as tools for financial measuring process. As such, the financial ratios capture the relationship between stock prices and financial performance. In addition, the financial ratios indicate that some listed companies in PEX face liquidity problems and insufficient net working capital, but still achieve increasing stock prices. We will, therefore, examine the relationship between working capital management and stock prices. Awad and Daraghmah (2009) indicate that the serial correlation tests indicate that the PEX (previously named PSE) is inefficient at the weak-level. Furthermore, the runs tests conclude that the PSE at the weak-form is inefficient. Boisjoly (2009) indicated that there were significant shifts in the means of the accounts payable, working capital per share and cash flow per share measures over the investigated period. That is, because financial analysts and financial statements' users need information about sources of cash, cash generated from operating activities, efficiency of using assets to generate that cash, and evaluating expected future

cash flows, they have to study working capital elements and efficiency of managing those elements. So, firms can depend on internal financing sources in order to finance their operations by making rapid sales and producing efficiently. Mathews et al. (2010) revealed that Firms with greater internal financing capacity and superior capital market access employ more conservative working capital policies. Deloof and Jegers (1999) concluded that payables are positively related to financing deficits.

Generally, recorded working capital and its elements constitute good indicators of availability of liquidity, which in turn positively or negatively affect(s) stock prices. Schroeder et al. (2005) indicated that the evaluation of a company's working capital position and current operating cycle can highlight possible liquidity problems. Liquidity problems can arise from the failure to convert current assets into cash in a timely manner or from excessive bad debt losses. Therefore, liquidity is an important aspect that conveys a good picture about the ability of the firm to generate cash and pay short-term liabilities and long-term debts as they come due.

The financial analysts investigate the sources of cash and takes information about investing, financing, and operating activities from statement of cash flow to verify the value of cash as recorded in the balance sheet. They then investigate the accounts receivables and creation of allowance for doubtful accounts, efficiency of receivables collection, and efficiency of managing inventory in relation with profitability. Deloof (2003) concluded that management of working capital has a significant impact on profitability. This conclusion leads us to say increasing collection of receivables, selling of inventory and delaying of accounts payables will lead to higher earnings per share, which may affect stock prices. As such, company can efficiently manage those components to achieve that strategy to increase its capital market access. Nobanee et al. (2009) suggested more accurate measures of the efficiency of working capital management where optimal levels of inventory, receivables and payables are identified. So, financial ratios related to

working capital can be used in order to examine efficiency of working capital management and measure the existence of relationship between working capital and stock prices.

Working capital elements are represented by sales, cost of goods sold, gross profit, accounts receivables, inventory and net income, which will be adjusted to result in cash availability for operations. However, those elements are different in their relationships to working capital management. Lazaridis and Tryfonidis (2006) showed that there is statistical significance between profitability-measured through gross operating profit- and the cash conversion cycle.

3 Main Hypothesis

We expect that financial information regarding efficient working capital management makes no difference in stock prices at the PEX, so that the main hypothesis of this study is formulated as follows:

H₀: Working capital management doesn't affect the stock prices.

H₁: Working capital management affects the stock prices.

4 Methodology

The study depends on econometric models to investigate the long run causal relationship between dependent variables and independent variables. They check the long run relationship between price index and working capital components that measured by current ratio (CR), receivables turnover (RT), inventory turnover (IT), and earnings per share (EPS). Because the study depends on time series data, those variables may be affected by each other from period to period. Accordingly, the study uses unit-root test to investigate whether the current year is affected by

the previous year. Then we use Granger test to investigate causality between variables. After that, regression analysis is used to investigate the significance of variables. The study population contains about 45 companies and 18 companies have been randomly selected as a sample during the stipulated study period (2006-2010). Because the financial statements weren't released on a quarterly basis until 2006, we selected twenty four companies that were the only listed companies on that date. But six companies are excluded because of lack of data. The data collected is secondary data (time series data) based on deriving financial ratios that related to working capital components from the financial statements of listed companies in the PEX. The data will be analyzed by using Econometric techniques such as unit root tests to investigate data stationary and error correction model to investigate the reliability of data measure and causality. Multiple regression analysis will be used to allow variables to be measured. Our study basically depends on multiple regression as a mean to investigate the relationship between dependent and independent variables. Regression indicates the probability that the regression output isn't by chance. The small the small the P the R isn't by chance. The four important parts of the output of regression are: Accuracy of R square, significance of F of the regression, reliability of coefficients, and residuals show no patterns. Thus, we will determine whether or not dependent variable is affected by independent variable(s). In this case, we will examine the goodness of fit of the model. In order to test the goodness of fit for the model, adjusted R², t_s, and p-value will be used.

With regard to the metric of relationship between stock price and efficient working capital, the following model is used:

$$Y = f(x) = a + k_1x_1 + k_2x_2 + k_3x_3 + k_4x_4 + k_5x_5,$$

where, Y is the dependent variable; Price index (PI) that is affected by independent variables, a: constant (Y intercept), X₁: current ratio (CR), X₂: receivables turnover (RT), X₃: inventory turnover (IT), X₄: change in cash (CIC), X₅ is EPS. This model is used for better understanding of the factors influencing

working capital behavior as reflected in the WCR. The required ratios are:

1- Current ratio = current assets / current liabilities

2- Receivable turnover $r = \text{net sales} / \text{average trade receivables}^*$

*Average trade receivables = $(\text{beg. Receivables} + \text{Ending Receivables}) / 2$.

3- Inventory turnover = cost of goods sold / average inventory*

*Average inventory = $(\text{Beg.} + \text{end.}) / 2$

4- Earning per share = Net income / # of shares outstanding

This model is likely to be helpful to future research. It is the first to investigate the factors influencing the investment in working capital. On the basis of this model, stock price, as the dependent variable, is affected by the mentioned variables that are denoted by Xs. If the company produces products with high quality and low cost, the sales will grow, which in turn increase the earnings per share (EPS). Cash flow from operating activities will be reflected in stock prices. In other words, an increase in the inventory turnover indicates that sales increase, which will increase EPS, but will not increase cash because the sales may be on account which may be negatively reflected in stock price because EPS is a general indicator of performance. However, we have to consider whether these sales are on account or not because if the accounts receivable are quickly collected, the cash will increase and therefore it increases the ability of the company to meet its obligation. As a result, increase in accounts receivable turnover will increase the cash and therefore improve the firm's liquidity.

Therefore, those five variables can be considered as independent variables to the correlations between Xs (Measurements of efficient working capital management) and y (stock price).

Our study depends on quarterly data from Jan.1, 2006 through Dec.31, 2010 with 20 observations (The only data are available at PEX website because the PEX is still young). A theory of finance holds that stock prices y_t are affected by financial information. Stock price could be affected by information related to working capital presented in balance sheet and measured by selected six financial

ratios. Stock prices denoted by y_t are determined by working capital measurements denoted by X_s .

4.1 Unit-root test

As mentioned above, the study undertakes econometric framework for analysis of stock prices changes. However, we will use unit root tests by utilizing a Dickey Fuller test in order to test the stationary of time series data,

$$x_t = f(x_{t-1})$$

The analysis depends on the following format:

$$y = f(x_1, x_2, x_3, x_4, x_5, x_6).$$

Dickey and Fuller (1979) actually consider three different three regression equations that can be used to test for the presence of a unit root (Enders, 2010):

$$\Delta y_t = \gamma y_{t-1} + \varepsilon_t \quad (1)$$

$$\Delta y_t = \alpha_0 + \gamma y_{t-1} + \varepsilon_t \quad (2)$$

$$\Delta y_t = \alpha_0 + \gamma y_{t-1} + \alpha_2 t + \varepsilon_t \quad (3)$$

From null hypothesis the time series has no clear overall trend direction, the relevant parameters restrictions for a stochastic trend are that $\alpha = 0$ and $\rho = 0$. The alternative of a stationary process corresponds to $-2 < \rho < 0$ and in this case ρ is included to model the possibly non-zero mean of the process. So the testing problem become: (Heij et al. 2004)

$$H_0: \alpha=0 \quad \text{and} \quad \rho=0, \quad \text{there is a trend}$$

$$H_1: (-2 < \rho < 0) \quad \text{and} \quad \alpha \neq 0, \quad \text{there is no trend.}$$

The simplest stochastic trend model is the random walk model:

$$\Delta y_t = \alpha + \varepsilon_t$$

So that

$$y_t = y_1 + \alpha (t-1) + \varepsilon_t$$

The hypotheses regarding time series is:

$$H_0: \text{non-stationary}$$

$$H_1: \text{stationary}$$

The application of the model regarding stock prices in relation with working capital components, the following test equation used:

$$\Delta sp_t = \beta_0 + k_1 sp_{t-1} + \varepsilon_t$$

In addition, we use the following model for cointegration analysis:

$$\Delta x_t = \sum x_{t-1} + a + \varepsilon_t$$

To investigate the stationary level of the sample observations, we use unit root test.

This requires: (Heij et al, 2004)

- Plotting time series y_t and x_t for unit root test.
- Test the cointegration between the series y_t and x_t
- Estimate error correction model for the series $y_t=f(x_{t-1})$

That is, to test whether unit root is present in an autoregressive model:

$$Y_t = \beta y_{t-1} + \varepsilon_t;$$

where y_t is the stock price that changes over time by t , which is the time index, α is a coefficient, and ε_t is the error term. If $\beta=1$, a unit root is present and would be non-stationary under this assumption. The regression model can be written as:

$$\Delta y_t = (\beta-1) y_{t-1} + \varepsilon_t = \alpha y_{t-1} + \varepsilon_t,$$

where Δ is the difference in stock price and this model could be estimated for unit root is applicable to test $\alpha = 0$ where $\alpha = \beta - 1$.

This model can be rewritten as follows:

$$\Delta SP = \alpha + \alpha T + \sum \beta_1 \Delta CA_{t-1} + \sum \beta_2 \Delta AR_{t-1} + \sum \beta_3 \Delta I_{t-1} + \sum \beta_4 \Delta EPS_{t-1} + \varepsilon_{t-1},$$

where ΔSP is change in stock prices, α is y -coefficient (constant), T is time trend, β is the percentage change in stock price, ΔCA is change in current assets, ΔAR is change in accounts receivables, ΔI is change in inventory, ΔEPS is change in earnings per share, and ε is error term.

4.2 Co-integration model

According to the abovementioned model, we will use unit root test to test the stationary of time series data. Accordingly, we will consider the joint dependent time series variables. When the data or variables are stationary, we will use error correction model as a mechanism between the time series. In other words, we will investigate whether or not the time series data are cointegrated. The Cointegration Model will be used because the independent variables are actually correlated while multiple regression indicates that they aren't correlated. The Cointegration model tries to discover Multicollinearity among variables. This can help for testing hypothesis that the stock prices are related or not to working capital management. The required regression model is:

$$y_t = kx_t + \varepsilon_t$$

In case the data is stationary, so we can use cointegration modal. Models to be used to test changes of variables are;

$$\Delta y_t = y_t - y_{t-1} \quad \text{and} \quad \Delta x_t = x_t - x_{t-1},$$

where Δy_t is change in stock prices, whereas Δx_t is change in independent variables (Xs). Such as, we employ an econometric tool of time series variables- stock prices and all mentioned independent variable. If stock prices and independent variables are non-stationary, then the time series are cointegrated. To write a linear combination of the stationary variables Δy_t and Δx_t , we derive the following cointegration model:

$$\Delta y_t = \beta_0 \Delta x_t - \beta_1 \Delta y_t + \sum \Delta y_{t-k} + \sum \Delta x_{t-k} + \varepsilon_t$$

$$\ln(\text{stock prices}) = k_0 + k_1 (\text{years of investment}) + \varepsilon_t$$

More specifically, the model is:

$$y_t - (y_{t-1} - y_{t-1}) = kx_t + k(x_{t-1} - x_{t-1}) + \varepsilon_t,$$

if the two variables y_t and x_t are both integrated of order 1- that is, if they both contain stochastic trends- then the ECM model $y_{t-1} - y_{x_{t-1}} - \delta$ can be written as a linear combination of the stationary variables \square_t , Δy_t and Δx_t and their lags. This implies that $y_{t-1} - y_{x_{t-1}}$ is also stationary.

The model can be rewritten as follows: (Heij, Boer, Franses, Kloek, Dijk, 2004)

$$\Delta y_t = - (y_{t-1} - kx_{t-1}) + kx_t + \varepsilon_t$$

This will support empirical results if the hypothesis is confirmed regarding working capital management and stock prices.

4.3 Causality Test

Under this test, we use the causality test of Granger in order to investigate whether or not there is a causal relationship between two variables in the long-run and which one causes this relationship. Thus, the Granger model is used to investigate how much of current Y can be explained by a past value of X-independent variable. If the independent variables- Xs are statistically significant, Y can be Granger caused by those Xs and then Xs help in the prediction of Y. However, to determine the relationship, Granger causality test can provide indication of the relationship between those variables. This leads to acceptance or rejection of H_0 using F-test and probability. The following equation can estimate of that relationship:

$$\Delta x_{t-1} = \alpha_1 \Delta x_{t-1} + \beta_1 \Delta y_{t-1} + \square_t$$

where X is the independent variables and y is the dependent variable- PI.

This study requires gathering data from financial statements of 17 listed firms in Palestinian Exchange (PEX) and then analyzing the information related to working capital management using financial ratios as a test of hypothesis. The data include quarterly financial statements including information on sales, cash, receivables, inventories, operating cash flows, and current payables. This information will be used in order to derive financial ratios to be used as measurements of efficient market hypothesis. As such, the study undertakes a quantitative approach because the analysis mainly considers financial ratios as measurements for working capital management. The source of data will be the

financial statements of the selected 18 companies listed on PEX, which are secondary data. This data will be obtained from the official website of PEX.

5 Empirical Results and Analysis

This study used quarterly observations of price index in relation of working capital components' ratios. As mentioned before, the period of time under examination starts from Jan.1, 2006 through Dec.31, 2010 with 20 observations. Figure 1 provides general look of Average PI direction of 18 companies listed on PEX during the mentioned period. Figure 2 provides description of CR, RT, IT, and EPS trends under examination over the 20 quarters.

As Figure 1 and 2 depicted before, the data don't appear stationary and there is no trend, so we use unit root test at lag 2 to investigate the extent to which the current year is significantly affected by previous year.

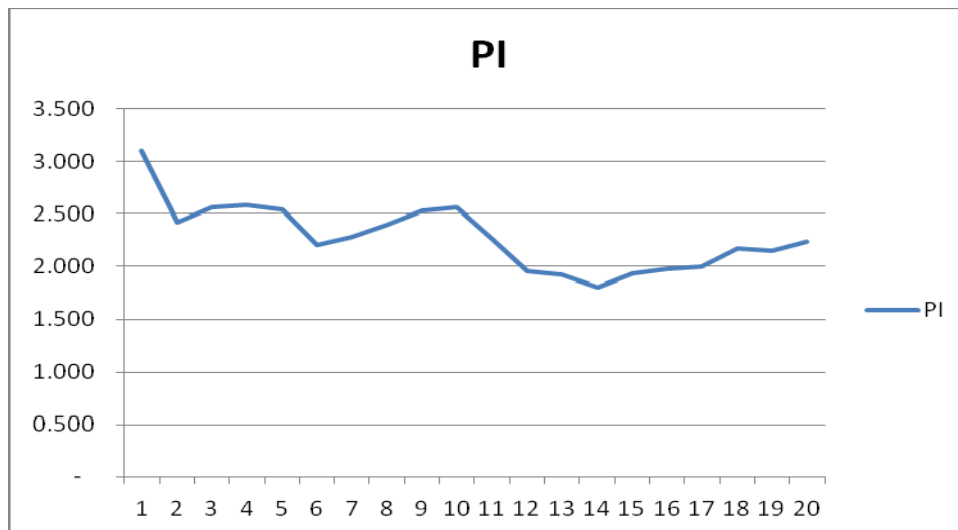


Figure 1: Price Index (PI) trend from Jan.1 2006 to Dec.31, 2010.

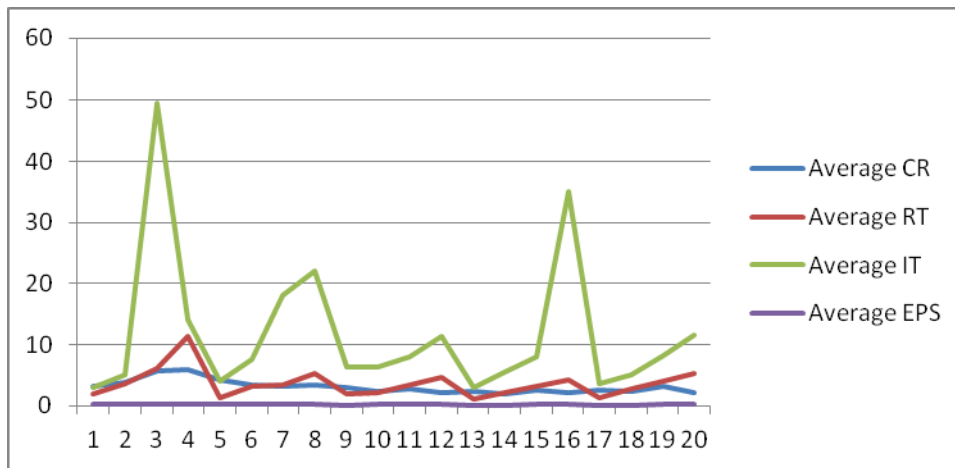


Figure 2: Independent variables trend from Jan.1 2006 to Dec.31, 2010.

5.1 Augmented Dickey-fuller

Table 1 shows the results of the Augmented Dickey fuller unit root test investigating whether data under examination period are stationary or not and determining if there is a trend or not.

Table 1: ADF tests for dependent and independent variables

Variable	D(PI,3)	D(CR,3)	D(RT,3)	D(IT,3)	D(EPS,3)
Test critical val. at 5%	-3.791172	-3.791172	-3.759743	-3.791172	-3.759743
One-sided p-value	0.2690	0.0055	0.0001	0.0060	0.0003
Co-efficient	0.478442	0.822831	0.572006	1.501432	0.748066
Std. Error	0.462361	0.291177	0.074001	0.467542	0.199412
t-statistic	1.034780	2.825881	7.729674	3.211330	3.751363
Prob.	0.3310	0.0223	0.0000	0.0124	0.0038
Adjusted R-square	0.594676	0.929172	0.985015	0.883082	0.881526
F-statistic	4.814614	35.10871	231.0663	20.63772	27.04225
Prob(F-statistic)	0.025038	0.000031	0.000000	0.000221	0.000024
Durbin-Watson stat	1.387536	2.443654	2.611892	2.379845	1.743838

At level of 5% significance, we conclude the time series data are stationary and there is a trend, so CR, RT, IT, and EPS are considered by investors and they are reflected in stock prices, and therefore, we accept H1 in favor of Ho.

5.2 Co-integration analysis

As indicated before, cointegration test determine whether non-stationary series is cointegrated or not. In Table 2, cointegration output presented to support the result regarding residuals, so we can accept whether series stationary or not.

Table 2: Cointegration output

Variable	Eigenvalue	Trace statistic	0.05 critical value	Prob.
PI	0.109717	2.091877	3.841466	0.1481
CR	0.138460	2.682610	3.841466	0.1014
RT	0.415157	9.655415	3.841466	0.0019
IT	0.564601	14.96686	3.841466	0.0001
EPS	0.324583	7.063659	3.841466	0.0079

According to cointegration output, trace test indicates no cointegration at the 0.05 significance level and at a probability of 0.1481; we accept H0 and reject H1. Thus the residuals regarding PI and CR are non-stationary and therefore there is no cointegration between those variables. However, trace test indicates 1 cointegration eqn(s) at the 0.05 level regarding RT, IT and EPS, thus we reject H0 and accept H1, and thus the residuals regarding RT, IT and EPS are stationary and therefore there is a cointegration between those variables.

5.3 Granger Causality Test

As mentioned before, this test is used to investigate whether or not there is a causal relationship between two variables in the long-run and which one causes this relationship.

Table 3: Pairwise Granger Causality Tests

Lags: 2			
Null Hypothesis:	Obs.	F-Statistic	Probability
CR does not Granger Cause PI	18	1.77892	0.20754
PI does not Granger Cause CR		1.54068	0.25092
RT does not Granger Cause PI	18	1.29461	0.30710
PI does not Granger Cause RT		1.46945	0.26586
IT does not Granger Cause PI	18	0.94196	0.41492
PI does not Granger Cause IT		1.68795	0.22300
EPS does not Granger Cause PI	18	0.55199	0.58872
PI does not Granger Cause EPS		3.06965	0.08093
RT does not Granger Cause CR	18	2.86621	0.09306
CR does not Granger Cause RT		17.2798	0.00022
IT does not Granger Cause CR	18	3.01866	0.08379
CR does not Granger Cause IT		4.09217	0.04183
EPS does not Granger Cause CR	18	0.21361	0.81044
CR does not Granger Cause EPS		2.78001	0.09883
IT does not Granger Cause RT	18	3.15299	0.07650
RT does not Granger Cause IT		0.59532	0.56574
EPS does not Granger Cause RT	18	3.47552	0.06178
RT does not Granger Cause EPS		2.47899	0.12245
EPS does not Granger Cause IT	18	1.05001	0.37782
IT does not Granger Cause EPS		0.80017	0.47019

Thus, the Granger model is used to investigate how much of current Y can be explained by a past value of X- independent variable. Table 3 contains output of Pairwise Granger Causality Tests to support the analysis.

Thus, we conclude that CR, RT, IT, and EPS aren't likely to cause stock price represented by price index at level of 5% significance. That is, nearly P-values > 0.05 for all variables. In addition, independent variables don't affect each other, which indicate there is no causal relationship between dependent and independent variables. So, we accept the null hypothesis that indicate that that series data not stationary. As A result, there is no causal relationship between dependent and independent variables on the basis of traditional Granger causal test.

5.4 Regression Analysis

To describe the relationship between variables, we must use regression as a mean to do that. Multiple regression describe the relationship among dependent variable (PI) and independent variables (CR, RT, IT, EPS) and independent variables. The mathematical form of multiple regression is

$$PI = \alpha + k_1CR + k_2RT + k_3IT + k_4EPS + \epsilon_t$$

In Table 4 is presented a multiple regression output regarding dependent and independent variables. From regression output, the model that can describe the relationship between dependent and independent variables is:

$$PI(X) = 1.55 + 0.198CR - 0.098RT - 0.006IT + 3.6EPS$$

To assess whether this model is likely to describe the relationship between Y and Xs, the overall significance should be evaluated. From regression output, Adj. R2 = 0.495 and R2 having statistically significant regression coefficients, which means that the Xs explains and describe only 0.495 of dependent variable PI and Multicollinearity isn't a problem for this model.

Table 4: Regression stat

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.555992	0.168739	9.22131	0
CR	0.197976	0.060554	3.269418	0.0052
RT	0.097901	0.037727	-2.594977	0.0203
IT	0.006336	0.005109	-1.240023	0.234
EPS	3.583704	1.279767	2.800278	0.0135
R-squared	0.60155	Mean dependent var	2.28065	
Adjusted R-squared	0.495296	S.D. dependent var	0.314631	
S.E. of regression	0.223522	Akaike info criterion	0.053702	
Sum squared residual	0.74943	Schwarz criterion	0.302635	
Log-likelihood	4.462976	Durbin-Watson stat.	1.427933	
F (of regression)	5.661	Sig.	0.006	

This indicates that the investors consider other variables to evaluate the working capital in order to buy, hold or sell. The F-value is 5.661, which has a P-value of 0.006, indicates that the model is significant. T-values show that coefficients for CR, RT and EPS are significant but the coefficient of IT isn't significant. The model can be considered significant but it doesn't explain high level of variation. Accordingly, at the 0.05 significance level we can reject H_0 that states that the stock prices aren't affected by working capital management and accept H_1 that states that the stock prices are affected by working capital management. As a result, the investors consider working capital components, especially information regarding liquidity and consider the ability of the firm to meet its current liabilities as come due on which they take their investing decisions.

6 Conclusions and Policy Implications

In Palestine, empirical studies on working capital management are very rare or non-existent yet. This study is likely to be the first one in Palestine that examines the relationship between stock price and information about working capital components including cash, receivables, inventories, current liabilities of 18 companies listed on PEX.

The variables of CR, RT and EPS aren't normally distributed, but IT is normally distributed, so the study confirms that investors consider information regarding liquidity, receivables and EPS, but they aren't significantly considered by investors when they make their decisions. So far we observed that financial ratios related working capital components are considered by investors and reflected in stock prices and those prices not significantly increasing as depicted in figure 1. According to Augmented Dickey-fuller test (ADF), time series data regarding independent variables are stationary but for dependent variable aren't and management of working capital components doesn't affect stock prices. Depending on Traditional Granger test, there is no causal relationship between variables and this isn't in conformance with the studies of Dash and Hanuman (2009) and Lazaridis and Dimitrios (2006). But regression output indicates that Stock prices are related to management of working capital components. In addition, we observed a positive relationship between CR, EPS and stock prices, whereas RT and IT are negatively related to stock prices because of inability to collect all receivables or to sell inventory. Furthermore, receivables and inventories aren't efficiently managed to generate cash and therefore paying current liabilities. Such as, investors can depend on financial information related working capital components to measure firm's ability to meet liabilities as they come due.

The paper findings also provide two important implications. Firstly, the information that is revealed should be very useful for prudent investors and PEX. Secondly, we can conclude that working capital management might be an

important necessary to be taken into account by both investors and companies. This is likely to improve working capital management.

The study indicates that the information about working capital components is important and should be considered because this information measures the ability of firm to pay debts and investors should consider that information. To recommend, professional organization should require companies to release detailed information and strengthen disclosure about current asset and current liabilities. For further research, as the PEX is still young and lack of empirical studies, so that conducting other studies on PEX is of special value to both researchers and policymakers.

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