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Does Comprehensive Income Provide Value Relevant Information?

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ABSTRACT

The purpose of this paper is to examine the value relevance of earnings, comprehensive income and other comprehensive income components for listed firms on Palestine Exchange. The data was collected from the audited financial statements of the 48 listed companies covering the periods from 2013 to 2018. The study employed balanced panel data regression analysis and utilized 288 firm-year observations as of January 2020. The findings revealed that the book value of equity, net income and comprehensive income are positively and significantly related to stock prices. The study also found that the gains or losses from financial instruments through other comprehensive income has negative and insignificant association with security prices. However, revaluation surplus and foreign currency translation adjustments have positive and insignificant link with stock prices. This study is the first in examining the value relevance of comprehensive income information in Palestine and provides useful information to existing and potential investors to consider comprehensive income information in conjunction with net income in their investment decisions.

INTRODUCTION

Existing and potential stock investors turn to analyze financial information of the listed firms in order to predict future earnings and stock values. Accounting information presented in the financial statements are essential sources for investors to make their financial decisions. Ball and Brown (1968), and Ohlson (1995) argued that financial information contains information content and considered useful to investors to explain stock prices and returns. Accordingly, financial statements are regarded value relevant. Several studies have been conducted to explore the value relevance of accounting information in predicting stock prices and returns in different countries (Ball and Brown,1968; El Shamy and Kayed, 2005; Black and White, 2003; Kadri et al., 2009; Badu and Appiah, 2018). Net income is one of the most significant financial information used by investors to assess company's performance and predict stock values. Net income is considered as the key performance measure and widely used by investors to evaluate the firm and make their crucial financial decisions. However, income statement excludes the consequences of significant items that might have influence on performance.

The main goal of standard setting organizations is to enhance the usefulness of financial information to help interested groups in making decisions relating to providing resources to the firm (Conceptual Framework for Financial Reporting, 2010). Comprehensive income was first introduced by FASB and then adopted by IASB (IAS 1) as a result of convergence project between the IASB and the FASB. Other comprehensive income, which is included in comprehensive income statement, comprises items of income and expense (including reclassification adjustments) that are not recognized in the income statement such as unrealized gains of property plant and equipment (revaluation surplus), the results of foreign currency translations and unrealized gains and losses from available for sale financial instruments. Thus, comprehensive income includes all changes in equity during a specific period resulting from transactions and other events, excluding transactions with owners in their capacity as owners (IASB, 2014).

Reporting comprehensive income has become increasingly important for stockholders and researchers (Yousefinejad et al., 2017). Several studies in different economic environments explored the value relevance of comprehensive income and other comprehensive income components and found significant association between comprehensive income information and security prices and returns (Kadri et al., 2009; Badu and Appiah, 2018; Kanagaretnam et al. 2009; Yousefinejad et al., 2017). However, in Palestine there is no empirical research that has yet examined the value relevance of comprehensive income and other comprehensive income components to the best of author's knowledge. The objective of this paper is therefore to investigate the information contents of earnings, comprehensive income and other comprehensive income components for companies listed in Palestine Exchange (PEX). The study attempts to discover whether reporting comprehensive income information has increased value relevance for users mainly investors by investigating the relationship between different performance measures and security prices. Furthermore, the study compares the predicting ability of comprehensive income information with other income measures for listed firms in Palestine Exchange. More specifically, the paper comes to seek the answer of the following questions:

Q1: Does reported net income provide value relevant information beyond book value of equity for companies listed in Palestine Exchange.

Q2: Does aggregated comprehensive income deliver value relevant information compared to earnings and book value of equity for companies listed in Palestine Exchange.

Q3: Does aggregated other comprehensive income provide value relevant information beyond net income and book value of equity for companies listed in Palestine Exchange.

Q4: Do the components of other comprehensive income contain value relevant information beyond net income, comprehensive income and book value of equity for companies listed in Palestine Exchange.

The remainder of the paper is organized as follows: section 1 presents literature review and development of hypotheses, data and methodology including variables and model specification are presented in section 2, empirical findings and discussions are described in section 3. Finally, conclusions that have been drawn from the results of the study and study limitations are presented in the last section.

1. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

This section includes review of relevant literature on value relevance of earnings, comprehensive income, aggregated other comprehensive income and other comprehensive income components. Moreover, research hypotheses are stated in this section.

1.1 Value Relevance of Net Income

The association between earnings and stock values has become a significant and controversial issue since the seminal work of Ball and Brown (1968) who stated that earnings have value relevance and explain stock returns. Ohlson (1995) explored the significant role of accounting information in security valuation and pointed out that earnings and book value of equity (BE) are the most significant variables that explain stock returns. The study referred to this association as "clean surplus relation" as the financial statements are articulated and all changes in assets and liabilities except those related to

dividends should pass through the income statement. Several studies conducted in many countries found significant association between earnings and stock values (Badu and Appiah, 2018).

Literature on value relevance provided mix results in regard with stock reactions to earnings. Black and White (2003) pointed out that earnings are less value relevant than book value of equity in Germany, and positive earnings provide more value relevant information than book value of equity in the United States. The study also provided mixed results for Japan. El Shamy and Kayed (2005) indicated that book value of equity is more value relevant than earnings companies experience negative earnings in Kuwait. Kadri et al., (2009) examined the value relevance of earnings and book value of equity and the association between operating cash flows and earnings in Malaysia during two financial reporting regime. The findings showed that book values and earnings are value relevant before adoption of IFRS, however during IFRS period only book value of equity is value relevant. Devalle et al. (2010) investigated the value relevance of earnings and book value following the adoption of IFRS in firms listed on Frankfurt, Madrid, Paris, London, and Milan stock exchanges. The findings revealed that earnings are more significant in explaining stock returns after the adoption of IFRS in Germany, France, and the United Kingdom, while the value relevance of book value of equity decreased except for the United Kingdom. Therefore, and based on Ohlson (1995) model the hypothesis is stated as follows:

H_1: Earnings has a significant positive relationship with the stock prices beyond book value of equity.

1.2 Value Relevance of Comprehensive Income

Accounting literature addresses the questions and debate about the most appropriate financial performance measure which provides value relevant information to investors. Literature addresses the concept of "all-inclusive income performance" where income is defined as the difference between beginning and ending book value of the equity which is based on "clean surplus accounting" (Devalle and Magarini, 2012). FASB defined comprehensive income as the sum of all changes in equity during a period arising from transactions and other economic events excluding transactions resulting from investments by owners and distributions to owners. International Accounting Standard 1 (IAS 1) points out that other comprehensive income includes items of income and expense that are not recognized in profit or loss. According to IAS 1, the complete set of financial statements should include a statement of profit or loss and statement of comprehensive income for the period. Thus, IFRS Foundation adopts the all-inclusive approach and considers total comprehensive income as financial performance measure.

Proponents of comprehensive income argue that it is a useful financial measure for financial statements users and improves the predictive ability of earnings and cash flows (Yousefinejad et al., 2017; Kanagaretnam et al. 2009). Literature on value relevance reported mixed results about the value relevance of comprehensive income. Some prior studies pointed out that comprehensive income is value relevant (Kanagaretnam et al.,2009). Most of the prior studies on this area provided evidence that comprehensive income doesn't dominate net income in explaining security returns and stated that net income is more value relevant (Landsman et al., 2011; Devalle and Magarini, 2012; Jahmani et al., 2017).

The study of Gorchakov and Hodgson (2011) investigated the usefulness of net income and comprehensive income components for investors for predictions using a sample of 16 European countries. The findings revealed that net income is more useful than comprehensive income in predicating future cash flows. Moreover, aggregated comprehensive income reflects conservative nature of income and has impact on capital providers in European economic environment. Mechelli and Cimini (2014) explored the incremental value relevance of net income and comprehensive income for European countries after the mandatory adoption of the IFRS. The results showed that net income is more value relevant than comprehensive income and the requirement to report statement of other comprehensive income has not influenced the value relevance of comprehensive income and other comprehensive income. Kabir & Laswad (2011) provided evidence that net income is potentially more persistent than total comprehensive income and more likely to explain security returns. Accordingly, the second hypothesis is formulated as follows:

H_2: Comprehensive income has a significant positive relationship with the stock price beyond net income and book value of equity.

1.3 Value Relevance of Other Comprehensive Income

For many years, the standard settings organizations (mainly IFRS foundation and FASB) have allowed certain gain and loss items to be excluded from net income and reported as other comprehensive income. The argument behind this treatment is that these items have not been realized and related to volatile fluctuations which limits prediction ability of security returns and future cash flows (Chambers et al. 2007). Therefore, making decision in regard with the prediction ability of other comprehensive income necessitate investigating whether other comprehensive income differs from or complement net income and cash flows in explaining firms' value. Studies have reported mixed results about the value relevance of other comprehensive income. Chambers et al. (2007) provided evidence that other comprehensive items are value relevant and priced by investors post-SFAS 130. Moreover, the study indicate that investors pay more attention to other comprehensive income reported in the statement of changes in equity rather than in the statement of financial position which implies that investors' awareness of the other comprehensive income information presented in the statement of changes in equity. Mechelli and Cimini (2014) examined the relative and incremental information content of comprehensive income and other comprehensive income across European Union countries. The finding revealed that net income is more value relevant than total other comprehensive income since other comprehensive income is transitory in nature. Therefore, the authors concluded that the IASB's mandatory requirement to disclose other comprehensive income in a separate statement has not enhance the value relevance of both comprehensive income and other comprehensive income. Therefore, based on prior research the third hypothesis is formulated as follows:

H_3: Aggregated other comprehensive income hasn't a significant positive relationship with the stock price beyond net income and book value of equity.

1.4 Value Relevance of Other Comprehensive Income Components

Several other studies have explored the prediction ability of other comprehensive income components. According to IAS1, the components of other comprehensive income comprises items of income and expenses that are not recognized in the income statement. These components include gains or losses arising from: changes in revaluation surplus, the financial statements translations of a foreign operation, re-measurement of defined benefit plans, financial assets measured at fair value through other comprehensive income, the effective portion on hedging instruments in a cash flow hedge, particular liabilities designated as at fair value through profit or loss and finance income and expenses from reinsurance contracts held excluded from profit or loss. Several studies have investigated the usefulness of these components in predicting firms' values in different countries. Mitro and Hossain (2009) concentrated on the value-relevance of pension transition adjustments after adoption of SFAC 158 using a sample of 697 Standard and Poor (S&P) companies. The findings revealed that the magnitude of pension transition adjustments is negatively associated with changes in security returns. Ernstberger (2008) explored the value relevance of changes in foreign currency translation adjustment, gains and losses on available-for-sale securities and cash flow hedges using a sample of firms listed on German stock exchange which voluntarily applied US GAAP or IFRS. The findings showed that other comprehensive income information under IFRS is more useful in explaining stock returns compared to US GAAP and only unrealized gains and losses from available-for-sale instruments provide incremental value relevant information for IFRS sample. Jahmani et al. (2017) employed Ohlson model and examined the value relevance of other comprehensive income components using a sample of Standard and Poor 500. The study found that derivative, hedging, and gains and losses from available for sale securities components had significant information content. However, aggregated comprehensive income and other comprehensive income information were not useful in perdition security returns.

In the context of developing countries, the study of Yousefinejad et al. (2017) investigated the value relevance of two components of other comprehensive income (unrealized changes on available for-sale

financial instruments and revaluation surplus of property plants and equipment) for companies listed on Bursa Malaysia. The study pointed out that other comprehensive income and the tested components are value relevant. The study emphasized the importance of the statement of comprehensive income in providing informative financial reporting. The present study considers the value relevance of different components of other comprehensive income, namely gains or losses arising from financial instruments through other comprehensive income, revaluation surplus, changes in foreign currency translation adjustment and actuarial gains and losses on defined benefit plans. Accordingly, the fourth hypothesis is written as follows:

H_4: Components of other comprehensive income has a significant positive relationship with the stock price beyond net income, comprehensive income and book value of equity.

2. DATA AND METHODOLOGY

This study takes a quantitative empirical approach and employs longitudinal (panel) data design. Necessary data were collected from the financial statements of the 48 companies listed on Palestine Exchange (PEX) covering the periods from 2013 to 2018. Thus, the study utilized 288 firm-year observations as of January 2020. The data related to stock prices were taken from the Website of Palestine Exchange. Thus, this paper utilizes a balanced panel data regression analysis which provides more power to statistical tests by including six observations on each firm in the sample. Furthermore, panel data design make control for heterogeneity data and therefore minimize the risk of getting biased results (Gujarati and Porter, 2009). The underlying aim of the present study is to examine the value relevance of comprehensive income and other comprehensive income components. To test the study hypotheses, this study applies price regression model used by several prior studies on value relevance (Yousefinejad et al., 2017; Devalle and Magarini, 2012; Jahmani et al. 2017), derived from the seminal study of Ohlson (1995). The basic price regression model is specified as follows:

$$P_{it} = \beta o + B_1 BVE_{it} + B_2 NI_{it} + \varepsilon_{it} \tag{1}$$

Where
P_{it} = Stock price
BV_{it} = Book value of equity per share
NI_{it} = Net income
ε_{it} = Error term

Model (1) is developed to investigate the relationship between stock prices levels and net income based on Olson's approach (Hypothesis 1). To examine the value relevance of comprehensive income, aggregate other comprehensive income and the components of comprehensive income (covered in this study), model 2, 3 and 4 are developed. The objective of Model 2 is to investigate the incremental value relevance of comprehensive (Hypothesis 2). Model 3 is utilized to whether aggregated other comprehensive income has a significant association with stock prices beyond net income and comprehensive income (Hypothesis 3). In the last model, the components of other comprehensive income, namely gains or losses resulting from financial instruments through other comprehensive income, revaluation surplus, changes in foreign currency translation adjustment and actuarial gains and losses on defined benefit plans are included to test whether these components convey information content beyond net income, comprehensive income and aggregated other comprehensive income (Hypothesis 4). Accordingly, model 2, 3 and 4 are specified as below. Components of other comprehensive income has a significant positive relationship with the stock price beyond net income, comprehensive income and book value of equity.

$$P_{it} = \beta o + B_1 BVE_{it} + B_2 NI_{it} + B_3 CI_{it} + \varepsilon_{it} \tag{2}$$

$$P_{it} = \beta o + B_1 BVE_{it} + B_2 NI_{it} + B_3 CI_{it} + B_4 OCI_{it} + \varepsilon_{it} \tag{3}$$

$$P_{it} = \beta o + B_1 BVE_{it} + B_2 NI_{it} + B_3 CI_{it} + B_4 OCI_{it} + B_5 FITCI_{it} + B_6 FCT_{it} + B_7 REV_{it} + B_8 ACT_{it} + \varepsilon_{it} \tag{4}$$

Where

P $_{it}$ =   Stock price for company $_{I,}$ three years after the end of the financial year $_t$
BVE$_{it}$ =   Book value of ordinary shares equity for company $_i$ and year $_t$
NI $_{it}$ =   Annual net income as reported for company $_i$ and year $_t$
CI $_{it}$ =   Comprehensive income as reported for company $_i$ and year $_t$
OCI $_{it}$ =   Aggregated other comprehensive income as reported for company $_i$ and year $_t$
FITCI$_{it}$ =   financial instruments through other comprehensive income as reported for company $_i$ and year $_t$
FCT $_{it}$ =   changes in foreign currency translation adjustment as reported for company $_i$ and year $_t$
REV $_{it}$ =   Revaluation surplus as reported for company $_i$ and year $_t$
ACT $_{it}$ =   actuarial gains and losses on defined benefit plans for company $_i$ and year $_t$
ε $_{it}$ =   Error term

To test a panel data model, three estimation techniques can be utilized, namely pooled OLS, Fixed Effects and Random Effects. To select the most appropriate technique, a number of statistical tests are employed. Wald test and Redundant Fixed Effects test are used to investigate whether there are fixed effects in the study models and to choose between pooled OLS and fixed effects (Table 1). The results revealed that there are significant fixed effects in the four models. The null hypothesis which states that parameters for explanatory variables are zero is rejected (significant at < 1%). Thus, fixed effects model is considered more appropriate than pooled OLS.

Table 1. Results of Redundant Fixed Effects Test and Wald test

Model	Redundant Fixed Effects Test (Cross-section Chi-square)	Wald Test (Chi-square)
	Statistic	Statistic
Model 1	120.576579*	107.7076*
Model 2	142.021944*	100.2237*
Model 3	169.913361*	138.9635*
Model 4	205.004490*	146.2532*
Note: * denote significant at the 0.01 level.		

Source: calculations made by the author

Then, Breusch and Pagan's Lagrange Multiplier (LM) test is performed to choose between random effects and pooled OLS and the results are displayed in Table 2. As can be observed from Table 2, the null hypothesis (variances across entities is zero) is rejected for the four models (at < 1%). Accordingly, it can be concluded that there are significant random effects there is no need to use a Pooled OLS.

Table 2. Results of Redundant Fixed Effects Test and Wald test

Model	Statistic	Probability
Model 1	108.2769	0.0008*
Model 2	104.3755	0.0018*
Model 3	115.8890	0.0001*
Model 4	106.7868	0.0011*
Note: * denote significant at the 0.01 level.		

Source: calculations made by the author

Finally, Hausman test is conducted to decide between fixed effects and random effects (Table 3). The objective of Hausman test is to investigate whether there are differences between the coefficient estimators of the fixed and random effects models (Cameron and Trivedi, 2009). The results show that the fixed effects model is more appropriate than random effects as the null hypothesis is rejected for the four models (at <1% and <5%).

Table 3. Results of Hausman test

Variable	Fixed Effects	Random Effects	Difference	Probability
		Model 1		
TOA	-0.166976	-0.123634	0.000567	0.0687
ROA	0.141583	0.239885	0.010786	0.3439
CAP	-0.461910	-0.406487	0.001242	0.1158
FC	8.309820	5.409475	2.703491	0.0777
Z score	-0.000060	-0.000306	0.000000	0.5834
GDP	0.523681	0.521723	0.000659	0.9392
UNE	-0.185812	-0.164749	0.003877	0.7352
INF	1.018614	1.425609	0.046733	0.0597
		Model 2		
TOA	-0.211019	-0.185049	0.001019	0.4160
ROA	0.458885	0.513616	0.017394	0.6782
CAP	0.010507	0.081819	0.002025	0.1130
FC	12.297889	10.802652	4.759878	0.4931
Z score	0.001236	0.001102	0.000000	0.8200
GDP	1.130974	1.112873	0.001112	0.5872
UNE	0.189666	0.203910	0.006369	0.8583
INF	1.364761	1.588547	0.083274	0.4380
		Model 3		
TOA	0.105791	0.087057	0.000161	0.1395
ROA	0.597751	0.562715	0.002321	0.4671
CAP	0.166676	0.164472	0.000275	0.8943
FC	1.868285	2.950494	0.729662	0.2052
Z score	-0.002943	-0.002642	0.000000	0.1881
GDP	-0.353975	-0.361300	0.000160	0.5623
UNE	-0.527592	-0.506137	0.000879	0.4692
INF	-1.400918	-1.555752	0.012971	0.1740
		Model 4		
TOA	0.164062	0.126145	0.000238	0.0141
ROA	1.169239	1.026219	0.003336	0.0133
CAP	0.096318	0.100097	0.000397	0.8496
FC	-1.091723	1.157361	1.077264	0.0302
Z score	0.000370	0.000525	0.000000	0.5769
GDP	-0.502358	-0.530316	0.000233	0.0671
UNE	-0.511747	-0.490001	0.001272	0.5421
INF	-1.448335	-1.792727	0.019202	0.0129
Note: Significance level at 0.01				

Source: calculations made by the author

3. RESULTS AND DISCUSSIONS

3.1 Preliminary Analysis

The summary descriptive statistics for study variables are displayed in table 4. To examine the relationship between stock prices and different explanatory variables, this study utilized 288 firm-year observations. The mean for stock prices (p) is (1.869) and the standard deviation (1.351) which indicates relatively small variations of stock prices across firms. A similar pattern can be noticed in relation to book value of equity (BVE) where the mean is approximately (1.70) and standard deviation (1.25). The mean of the net income (NI) is positive (4897012.7) and the standard deviation is (13656251.2) implying high dispersion in the net income of the companies in the sample. Comprehensive income (CI) has a similar pattern since it is derived from the net income. The standard deviation for aggregated other comprehensive income (OCI) is high (1765818.5) and this can be attributed to different components for other comprehensive income across firms and big variations in the amounts. This is supported by positive means and high standard deviations values for financial instruments through other comprehensive income (FITCI) and revaluation surplus explanatory variables. However, the mean for foreign currency translation

is found to be negative while standard deviation is high which enforces high value of standard deviation for other comprehensive income.

Table 4. Descriptive Statistics for Dependent and Independent Variables

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
P	288	1.869281	1.3509780	.0700	6.5000
BVE	288	1.697635	1.2499083	.1892	8.8449
NI	288	4897012.7	13656251.2	-21324882	91827000
CI	288	5004902.3	13694744.4	-21324882	103345000
OCI	288	83122.055	1765818.5	-12482000	11518000
FITCI	288	111248.5	1462237.9	-9168000	12038000
FCT	288	-5357.8	840127.2	-3977000	5440000
REV	288	60964.2	445452.5	-4018832	4355085

Source: calculations made by the author

Correlation matrix for the study variables is employed. Correlation coefficients using Spearman's rank are presented in Table 5. The correlation coefficients among the study variables are not considered problematic until they exceed 0.80 or 0.90. The correlation coefficient between net income and aggregated comprehensive income is (0.950). This high correlation is expected as net income is a main component of comprehensive income. However, this is not regarded harmful as the two variables are not included jointly in one model in this study. Furthermore, the correlation between stock prices and book value of equity is found to be high (0.718). However, this high correlation is related to the construction of the price estimation regression model. The correlation coefficients among the other variables are not considered high. Consequently, it can be concluded that multicollinearity among the variables is not found.

Table 5. Correlation Coefficients among the Independent Variables

	P	BVE	NI	CI	OCI	FITCI	FCT	REV
P	1							
BVE	0.718**	1						
NI	0.539**	0.491**	1					
CI	0.519**	0.481**	0.950**	1				
OCI	0.024	0.053	0.016	0.190**	1			
FITCI	-0.035	0.045	-0.066	0.070	0.626**	1		
FCT	0.073	0.034	0.064	0.137*	0.442**	-0.011	1	
REV	0.098	0.058	0.166**	0.222**	0.230**	-0.084	-0.005	1
* correlation significant at p<0.01								

Source: calculations made by the author

Unit root test is performed to check for stationarity for the panel regression data. Stationarity test for all variables is an essential preliminary test before estimating the econometric model to make sure that variables included in the study models have unit root and non-stationary (Gujarati & Porter, 2009). The present study employed Levin, Lin & Chu in addition to Fisher Chi-square - PP test. The unit root test is utilized based on individual data with intercept only and with time trend component. The results are shown in Table 6. The null hypotheses of the two tests state the presence of a unit root (non - stationary). The results show that all variables are stationary in level using the two tests of unit root as the null hypothesis was rejected at 1%.

Table 6. Unit Root Test using Levin, Lin & Chu and PP - Fisher Chi-square

Variable	The equation contains an intercept only		The equation contains intercept and trend	
	Levin, Lin & Chu	PP - Fisher Chi-square	Levin, Lin & Chu	PP - Fisher Chi-square
P	-4.15277*	116.938*	-16.4728*	150.440*
BVE	-2.73482*	123.599	-8.29908*	153.925*
NI	-44.8513*	116.111*	-26.6873*	176.272*
CI	-30.0616*	174.069*	-23.0560*	210.683*
OCI	-2072.30*	212.592*	-936.196*	256.726*
FITCI	-49.1557*	207.167	-41.0205*	277.479*
FCT	-60.6000*	118.500*	-13.6972*	108.920*
REV	-5.44984*	30.8401*	-12.3219*	53.5174*
Note: Levin, Lin & Chu and PP - Fisher Chi-square H0. *indicate significance at 1%				

Source: calculations made by the author

3.2 Regression Results

Based on the results of the Hausman test, the current study employed fixed effects panel regression model as explained in section 3. The regression results for the four models are shown in Table 7. In model (1), both net income (NI) and book value of equity (BVE) have positive and statistically significant association with stock prices. The model is significant at 1% level (p-value < 0.01). The value of adjusted R Square is (0.928), and F-statistic is (76.679) which is significant at 1% level. Accordingly, Hypothesis 1 (H1) is supported. The results enforce the significance of net income and book value of equity in explaining stock prices. These findings support Ohlson price valuation model (1995) and come in line with several prior studies such as Yousefinejad et al. (2017), Badu & Appiah (2018) and El Shamy & Kayed (2005).

To investigate the value relevance of comprehensive income, model (2) is used. The results reveal that book value of equity (BE) is positively and significantly related to stock prices at 1% level. Total comprehensive income (CI) is also found to have positive and significant association with stock prices at 5% significance level. The values of adjusted R square and F-statistic are (0.928) and (76.039). Thus, Hypothesis 2 (H2) is supported and it can be concluded that total comprehensive income has value relevance and explains changes in security prices. The results emphasis the usefulness of the statement of comprehensive income for different users of financial statements, mainly investors, in predicting changes in security prices as it provides value relevant information for making important financial decisions. The results are consistent with Kanagaretnam et al. (2009). However, the findings contradict Jahmani et al. (2017) who pointed out that comprehensive income information did not convey value relevant information.

Model (3) examines the information content of aggregated other comprehensive income (OCI) beyond comprehensive income (CI) and book value of equity (BVE). Based on Table 7, it can be observed that aggregated other comprehensive income has negative and statistically insignificant relationship with stock prices at 1% and 5%. The book value of equity is positively related to security prices; however, it is not statistically significant. The aggregated comprehensive income is still value relevant in this model and has positive and significant association with stock prices (p-value < 0.01). Accordingly, hypothesis 3 (H3) is rejected. The negative sign of OCI coefficient indicate that investors are not likely consider this information useful for their economic decisions as stock prices inversely react to this information.

Table 7. Regression Results for Models of the Study

Variable	Model 1	Model 2	Model 3	Model 4
Constant	21.32190** (1.584690)	22.10057** (1.608154)	21.20514** (1.583987)	21.01631** (1.588736)
BVE	2.616985** (0.103933)	2.833469** (0.111951)	2.592370 (0.103460)	2.385665 (0.097011)
NI	2.762393** (2.21008)			

		2.388106*	2.673380**	2.515716
CI		(5.955009)	(2.2308)	(2.2108)
OCI			-1.383161	-0.734112
			(-2.544008)	(-1.888008)
FITCI				-0.841727
				(-1.899008)
FCT				0.278899
				(8.988009)
REV				0.776406
				(4.555008)
R Square	0.940430	0.939959	0.940439	0.940753
Adjusted R Square	0.928165	0.927597	0.927874	0.927276
F-statistic	76.67924**	76.03933	74.84271	69.80519
Prob. (F-statistic)	0.000000	0.000000	0.000000	0.000000
Durbin-Watson	2.230908	2.207005	2.227170	2.275465
Observations	288	288	288	288
Note: ** denote significant at the 0.01 level. * denote significant at the 0.05 level.				

Source: calculations made by the author

The last model investigates the information content of other comprehensive income components beyond comprehensive income and aggregated other comprehensive income. The results indicate that book value of equity (BVE) and comprehensive income are positively related to stock prices. However, the relationship is not statistically significant which is contrary to the results of model (1) and model (2). The aggregated other comprehensive income has negative and insignificant relationship with security prices similar to model (3). Coming to the components of other comprehensive income, the gains or losses from financial instruments through other comprehensive income (FITCI) are found to have negative and statistically insignificant association with stock prices. Furthermore, revaluation surplus and foreign currency translation adjustments are positively related to stock prices. However, they are not statistically significant. The adjusted R square in this model is (0.927) and F-statistics is (69.805). Based on these findings, the components of other comprehensive income included in this model are not value relevant and do not explain changes in stock prices. Thus, hypothesis 4 (H 4) is rejected.

CONCLUSION

The present study investigates the value relevance of earnings, comprehensive income, aggregated comprehensive income and components of other comprehensive income individually. To the best of author's knowledge, this is the first study to investigate the value relevance of comprehensive income in Palestine. The present study develops 4 models to test the hypotheses. Based on the empirical findings, the book value of equity, net income and comprehensive income have positive and significant association with security prices. The aggregated other comprehensive income has negative and insignificant relationship with stock prices. Furthermore, the gains or losses from financial instruments through other comprehensive income are negatively and insignificantly related to stock prices, while revaluation surplus and foreign currency translation adjustments are positively (but not statistically significant) related to stock prices. The study is useful to the financial statements users, particularly investors, to consider comprehensive income information in conjunction with earnings in their financial decisions. This paper is subject to common limitation of empirical studies. However, there are specific limitation in this study related the small observation period. The study considers all of the listed companies in Palestine Exchange (48 firms) covering the periods from 2013 to 2018.

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