

## Is Net Income after Tax a Better Measure of Firm Performance than Taxable Income?

Bassam Mahmoud Abu-Abbas

Department of Accounting, College of Business, University of Bahrain, Bahrain

**Abstract:** Jordan Securities Commission Disclosure Directives requires that listed corporations in Amman Stock Exchange to report both taxable income and income after tax in their financial statements. This study examines which components of income statement, taxable income or net income after tax, is a better measure of firm performance. In addition, the study tests the association between stock returns and taxable income and net income after tax. The study uses the Vuong's likelihood ratio test to determine whether or not there are significant differences in the adjusted  $R^2$  between taxable income's model and net income after tax' model. Data from Amman Stock Exchange during the period 1999-2008 are used. Consistent with prior literature, the results show that taxable income and net income after tax are value relevant in determining stock returns. In addition, the findings indicate that taxable income and net income after tax each has the same ability to measure firm performance. These results provide a useful contribution to the literature because it strengthens the evidence that both taxable income and net income after tax have same ability to measure firm performance. In other words, each can substitute the other.

**Key words:** Firm performance, net income after tax, stock returns, taxable income

### INTRODUCTION

In June 1997, Jordan Securities Commission (JSC) issued new Disclosure Directives that requires listed corporations in Amman Stock Exchange to report both taxable income and income after tax in their financial statements. Recent debates on disclosures of both taxable income and net income after tax may impair or enhance the information content in financial statements. The argument is that the mandatory of the dual system of reporting is considered important because it provides the users with the information that reflect the firm's actual performance.

For many companies, taxable income differs substantially from net income after tax and income-based ratios or performance measures based thereon may vary dramatically as well. Net income after tax is considered, for most investors, more important concepts than taxable income because it excludes the taxes that are paid to government and includes the major changes in equity during the year. Financial accounting texts and extant literature suggest that taxable income may be important in assessing firm performance. Revsine *et al.* (2002) state that "an increase in a deferred tax liability might be an indication of deteriorating earnings quality". They also state that "analysts can use tax footnotes to glean information not provided elsewhere in the financial statements to better understand a firm's performance and future prospects". Consistent with this view, Lev and Nissim (2004) and Hanlon (2005) find that large book-tax

differences, on average, are systematically associated with the persistence and growth of firm earnings. Ayers *et al.* (2009) find that there is little evidence regarding taxable income as an alternative performance measure and, in particular, cross-sectional differences in firms that mitigates or enhances the ability of taxable income to inform investors regarding firm performance. Shevlin (2002) and Hanlon *et al.* (2005) find that estimated taxable income, on average, has incremental explanatory power for book income (i.e., estimated taxable income summarizes information reflected in stock returns that is not captured by book income). Beyond these studies, there is little evidence regarding taxable income as an alternative performance measure. Thus, the question remains whether taxable income may be a useful alternative measure of firm performance.

This study examines which components of income statement, taxable income or net income after tax, is a better measure of firm performance. This analysis allows us to draw inferences about the appropriateness of the most important items that must disclose and include in the financial statements analyses. In addition, this study examines whether there is any need for mandating uniform income statement disclosures to clarify taxable income and net income after tax. Examining the relative superiority of alternate income measures is important because income is used as a summary measure of firm performance in many contracting and valuation context (Dhaliwal *et al.*, 1999). For example, Dechow *et al.* (1998) note that earnings occupy a central

position in accounting. It is accounting's summary measure of a firm's performance. Further, Dechow (1994) observes that earnings are important since it is used as a summary measure of firm performance by a wide range of users. Also, Black (1993) notes that users of financial statements are interested in summary figures like earnings and book value. Summary figures are useful because they convey a lot of information without requiring much of the user, and because they can incorporate details that the firm chooses not to disclose separately.

The study looks to the recent debates that enhance the information content of taxable income relative to net income after tax. Questions of relative information content arise when make mutually exclusive choices among alternative accounting methods and disclosures for reporting the results of their firms' operations. Relative comparisons could be used to assess the information content of different levels of aggregation, such as the relative information content of aggregate earnings versus earnings components (Biddle *et al.*, 1995).

To evaluate which components, taxable income or net income after tax has better ability to summarize firm performance, the study compares the association between taxable income and net income after tax with stock returns. It tests the relation between taxable income or net income after tax with stock returns to reflect firm performance. In addition, it examines which components of income statements, taxable income or net income after tax, is a better measure of firm performance.

The study presents evidence about appropriateness of the most important items that must disclose and include in the financial statements analyses. It investigates the value relevance of net income after tax versus taxable income in measuring firm performance in the Amman Stock Exchange. For disclosure purposes and for financial statements analyses, it is important to know which component is superior to measure firm performance.

This study makes several contributions. First, the findings indicate that taxable income and net income after tax each has the same ability to measure firm performance. These results provide a useful contribution to the literature because it strengthens the evidence that both taxable income and net income after tax have same ability to measure firm performance. In other words, each can substitute the other. Second, results suggest that both taxable income and net income after tax explain well annual stock returns.

This study is subject to certain limitations. First, it estimates taxable income from publicly available financial statement, Amman Stock Exchange. This calculation is expected to be bias and have measurement errors because companies, most likely, do not disclose the real taxable income. Second, the only differences between taxable income and net income after tax in data available in Amman Stock Exchange are the income taxes and the

minority interest. Because testing the effect of minority interest is not an objective of this study, I exclude this effect in this study. Third, the study is unable to eliminate the possibility that any other events may influence the relative information content between taxable income and net income after tax.

## PRIOR RESEARCH AND HYPOTHESES

**The relation between accounting income and stock returns:** Prior research has indicated that there is strong relation between earnings and stock returns (Ball and Brown, 1968; Beaver and Dukes, 1972; Beaver *et al.*, 1982; Board and Day, 1989; Easton and Harris, 1991). Chia *et al.* (1997) compares aggregate earnings and disaggregated earnings (cash from operations, current accruals, and non-current accruals) in terms of their associations with stock returns. They find that disaggregated earnings provides richer information about firm performance and discontinued operations.

Ayers *et al.* (2009) provide evidence that the association between taxable income and market returns is a function of the level of "noise"<sup>1</sup>. Nechols and Wahlen (2004) summarize the theory and evidence on how accounting earnings information relates to firm's stock returns. Earnings represents the bottom-line accounting measure of firm performance. A firm's earnings number represents an accounting measure of the change in the value of the firm to common equity shareholders during a period. A firm's stock returns, which equals the change in the firm's market value over a period of time plus any dividends paid, represents the capital market's measure of the firm's bottom line performance over a period of time.

Ohlson (1991) establishes the idea that prices are based on expected future earnings. Price is discounted expected future dividends, and future dividends are paid out of future book value. This result suggests the way for constructing fundamental analysis to predict future earnings. Ohlson (1995) develops and analyzes a model of a firm's market value related to contemporaneous and future earnings, book value, and dividends.

Bernard (1995) explains the relation between stock prices and either forecasts of accounting numbers or dividends. The results indicate that, on average, the forecasted accounting variables explain 68% of the variation in price per share.

Ohlson and Zhang (1998) present a model used to study the issue of how one values assets using accrual accounting. It deals with how accounting rules affect the relation between market value and accounting data.

Pfeiffer *et al.* (1998) examine the relation between security returns and funds-based earnings components. The authors' empirical tests address two related issues. First, they assess the extent of auto-and cross-correlations

among earnings components. Second, they employ the predicted values of the earnings components to represent security market expectations in assessing the market's valuation of unexpected changes in the components.

Dechow (1994) regresses returns on earnings and cash flows and compares adjusted  $R^2$ s to test whether accruals improve the ability of earnings to reflect the firm's performance. She finds that over short measurement intervals earnings are more strongly associated with stock returns than are cash flows. The ability of cash flows to measure firm performance improves relative to earnings as the measurement interval is lengthened. Earnings have a higher association with stock returns than do cash flows in firms experiencing large changes in their working capital requirements and their investment and financing activities. Under these conditions, cash flows have more severe timing and matching problems and are less able to reflect firm performance. In addition, accruals play an important role in improving the ability of earnings to reflect firm performance.

Graham and King (2000) examine the relation between stock prices, accounting earnings, and book values in six Asian countries: Indonesia, South Korea, Malaysia, the Philippines, Taiwan, and Thailand. The analysis follows the residual earnings model formalized by Ohlson (1991, 1995) and Feltham and Ohlson (1995). The results indicate that accounting book value and residual earnings are positively and significantly related to current stock prices across all six countries consistent with King and Langli's (1998) findings for European countries and Bernard's (1995) results for U.S. firms.

Cheung *et al.* (1999) investigate the association between market returns and accounting earnings for a sample of Japanese firms, using the long-window approach developed by Easton *et al.* (1992). The analyses focus on the extent to which the return-earnings association in Japan is differentially affected by several institutional characteristics that are deemed to be important in Japan. The results of various tests indicate that the strength of return-earnings associations, measured by the  $R^2$  and the magnitude and significance of Earnings Response Coefficient (ERC), are inversely affected by the level of cross corporate ownership, the degree of a firm's real estate holding, the level of a firm's investment in equities of other firms, and financial leverage, while it is positively affected by the level of foreign ownership.

King and Langli (1998) examine accounting numbers and stock prices across three European countries: Germany, Norway, and the United Kingdom, to assess whether they differ in their value-relevance using Ohlson's 1990, 1991, and 1995 residual earnings model. The authors find significant differences in the relation between accounting numbers and stock prices across the three countries. Lin and Chen (2005) examine the

usefulness of accounting numbers (earnings and book values) and their value relevance to the share markets in China. The study finds that earnings and book values of owners' equity are relevant accounting information for the purpose of determining the prices of shares.

Recent literature suggests that taxable income is an informative measure of firm performance for financial statement users. Hanlon (2005) and Lev and Nissim (2004) find that book-tax differences are systematically related to earnings growth, future stock returns, and earnings persistence suggesting that book-tax differences are useful measures in evaluating firm performance.

In the Arabian environment, Alfadel (2003) examines the relation between accounting earnings and stock returns. He finds that the stock returns is sensitive for general investment and economic situations more than that for accounting earnings. Abu-Hashish (2003) studies the variables that affect the company shares' prices. He finds that the most important variable that affects company shares' prices is earnings per share. Al-Kalayleh (1999) tests the relation between market stock returns and accounting earnings in the long-run. He assumes that the relation is positive and increasing as the stock returns interval is lengthened. The results show a weak and insignificant relation between accounting earnings and market stock returns in the short-run and this relation is improved in the long-run. Al-Rajabi and Al-Hares (1998) investigate the characteristics of the profit variables by studying the variance of earnings per share, dividends per share, and market rate of return. They find that there is statistical positive relation between market rate of return and earnings per share. Debey and Abu-Nassar (1999) show that the changes in stock returns are affected by the changes in earnings per share. Finally, Alsa'aydeh (1996) finds positive relation between returns on equity and stock returns.

In summary, most prior research has indicated that there is a strong relation between earnings and stock returns. This relation is not just for U.S. firms. Different studies has indicated that this relation is strong in different stock exchange markets' data in different countries in the world.

The first objective of this study is to test the relation between taxable income or net income after tax with stock returns to reflect firm performance. Depending on prior literature, accounting income is expected to be useful measure of firm performance. Thus, the following hypotheses for the relation between taxable income or net income after tax with stock returns can be stated as follows:

- $H_{1A}$ : There is a strong association between stock returns and taxable income.
- $H_{1B}$ : There is a strong association between stock returns and net income after tax.

The study tests whether taxable income and net income after tax better summarizes firm performance as reflected in stock returns. Ayers *et al.* (2009) provide evidence that there are associations between taxable income and pretax book income and market returns. Using similar models, I examine the ratio of the information content of taxable income to net income after tax. I measure the information content of taxable income and net income after tax separately using the adjusted R<sup>2</sup> in regression of stock returns on each measure. To implement this test, I estimate the following two equations for hypotheses H<sub>1A</sub> and H<sub>1B</sub>:

$$R_{jt} = \alpha_1 + \beta_1 \Delta TI_{jt} + \epsilon_{jt} \quad (1)$$

$$R_{jt} = \alpha_2 + \beta_2 \Delta NIAT_{jt} + \epsilon_{jt} \quad (2)$$

where R<sub>jt</sub> is stock returns for firm j over the financial year ending at t, calculated as the price per share at the year-end plus dividends per share during the year minus the price per share at the beginning of the year, divided by the price per share at the beginning of the year, ΔTI<sub>jt</sub> is the change in taxable income which equals to the difference in each measure for firm j from year t-1 to year t (TI<sub>jt</sub> - TI<sub>jt-1</sub>) deflated by price per share at the beginning of the year, and ΔNIAT<sub>jt</sub> is the change in net income after tax which equals to the difference in each measure for firm j from year t-1 to year t (NIAT<sub>jt</sub> - NIAT<sub>jt-1</sub>) deflated by price per share at the beginning of the year. Following prior literature (Ayers *et al.* (2009), I used changes specification (i.e., returns and changes in estimated taxable income and net income after tax) to mitigate concerns associated with levels regressions such as correlated omitted variables and heteroscedasticity (Kothari, 2001).

**The relative information content comparisons between taxable income and net income after tax:** Studies that have made relative information content comparisons include Ball and Brown (1968), Beaver and Dukes (1972), Harris and Ohlson (1987). Ball and Brown (1968) compare abnormal performance indexes for net income and operating cash flows, but do not provide statistical tests. Beaver and Dukes (1972) assess the relative information content of earnings with and without deferred taxes using binomial comparisons of abnormal performance indexes. Harris and Ohlson (1987) draw inferences regarding the relative information content of full cost and successful statistical efforts methods for oil and gas accounting by comparing R<sup>2</sup>s, but no tests for statistical significance are provided.

Ayers *et al.* (2009) examine the ratio of the information content of estimated taxable income to book income for high tax-planning firms versus all other firms by comparing the ratio of the adjusted R<sup>2</sup> for the separate tax and book regressions for the comparisons group.

Biddle *et al.* (1995) clarify the distinction between relative and incremental information content by examining how relative and incremental information content relate. They introduce a new regression-based test for relative information content. Relative information content comparisons ask whether one measure provides greater information content than another.

Dhaliwal *et al.* (1999) examine the claim that income measured on a comprehensive basis is a better measure of firm performance than other summary income measures. They test whether comprehensive or net income better summarizes firm performance as reflected in stock returns. They find no evidence that comprehensive income is more strongly associated with returns than net income.

Chen and Wang (2004) investigate the value relevance of operating income versus below-the-line items in the Chinese stock market. By linking valuation analysis with earnings time-series properties, they present additional evidence to support value relevance in China: An earnings component is impounded in stock prices as long as it is persistent and nonpersistent; below-the-line items are value irrelevant.

The second objective of this study is to examine which components of income statements, taxable income or net income after tax, is a better measure of firm performance. The most two important items that are required to disclose according to Disclosure Directives in Amman Stock Exchange are taxable income and net income after tax. Net income after tax is used as a summary measure of firm performance by a wide range of users. In addition, most financial statements analysts use net income after tax in calculating different ratios because they believe that it is superior in measuring firm performance compared with taxable income. Thus, the following hypothesis for the relative information content comparisons between taxable income and net income after tax to measure firm performance can be stated as follows:

H<sub>2</sub>: Net income after tax is a better measure of firm performance than taxable income.

Ayers *et al.* (2009) examine the ratio of the information content of estimated taxable income to book income. They compares the relative information content of estimated taxable income to book income for groups of firms segregated on tax-planning and earnings-quality. To test H<sub>2</sub>, and following Ayers *et al.* (2009), I calculate the ratio of the adjusted R<sup>2</sup> from Eq. (1) to the adjusted R<sup>2</sup> from Eq. (2) for each year of firms over my sample period, as follows:

$$RIC = \frac{\text{Adjusted } R^2_{\text{taxable income}}}{\text{Adjusted } R^2_{\text{net income after tax}}} \quad (3)$$

Table 1: Descriptive data to estimate models of the association of taxable income (TI) and net income after tax (NIAT) with stock returns (RET)

Panel A: Distributional statistics								
Variable	Mean	S.D.	Minimum	1 <sup>st</sup> percentile	Median	99 <sup>th</sup> percentile	Maximum	N
TI	0.092	0.183	-1.38	-0.42	0.05	1.42	1.81	434
NIAT	0.068	0.172	-2.36	-0.56	0.04	1.24	1.62	434
RET	0.044	0.305	-1.35	-0.89	0.01	2.56	3.42	1434

Panel B: Pearson (Spearman) correlations above (below) the diagonal

Variable	TI	NIAT	RET
TI		0.865	0.212
NIAT	0.891		0.227
RET	0.298	0.324	

The sample consists of all 2000 to 2008 firm-years that have data needed to calculate the variables included in the regressions. Observations that fall above the 99<sup>th</sup> percentile and observations that fall under the 1<sup>st</sup> percentile are eliminated from the sample. TI is taxable income per share. NIAT is net income after tax per share. RET is stock returns per share calculated as  $(P_t - P_{t-1} + D_t) / P_{t-1}$ , where P is price per share and D is dividends per share. TI and NIAT are deflated by  $P_{t-1}$ . N is number of observations

where RIC is relative information content comparisons between taxable income and net income after tax. An advantage of this statistic is that it allows to compare the information content of two performance measures (taxable income and net income after tax), holding stock returns for the firm constant. This measure does not simply compare the adjusted  $R^2$  of estimated taxable income across samples, which would be susceptible to a variety of alternative explanations. Instead, this measure compares the relative information content of taxable income to net income after tax. For Hypothesis 2, I predict that the ratio represented by Eq. (3) will be less than 1 because the relative information content of taxable income is expected to be less the relative information content of net income after tax.

Testing Hypothesis 2 using Eq. (3) determine the relative information content of taxable income compared with the relative information content of net income after tax but does not determine whether the difference in adjusted  $R^2$  is significant. To test for that, the study uses comparative adjusted  $R^2$  in Eq. (1) and (2). It uses the likelihood ratio test described in Vuong (1989). Vuong's test compares the sum of squared residuals from two alternative nonnested regressions that have the same total sum of squares. This test statistic has a unit normal distribution under the null hypotheses of equal explanatory power and will be positive if the adjusted  $R^2$ s from regressions in Eq. (2) exceed that for Eq. (1).

**Data and descriptive statistics:** The sample used to estimate stock returns model consists of 1999-2008 firm-years that have data needed to calculate stock returns and 2000-2008 firm-years that have data available about taxable income and net income after tax. The study uses the 1999 prices to calculate the 2000 stock returns. The firm-years that have missing data are excluded. The firm-

years for the firms that are exempted from income taxes are excluded too<sup>2</sup>. All variables are measured at fiscal year-end. For consistency, taxable income and net income after tax are deflated by year beginning prices. To avoid problems with outliers, firm-years for which the absolute value of the test variable related to taxable income and net income after tax falls in the 1<sup>st</sup> percentile and 99<sup>th</sup> percentile are eliminated from the sample.

The study uses per share values of prices and earnings to reduce the presence of heteroscedastic disturbances (Kothari and Zimmerman, 1995). The final sample consists of 1434 firm-years.

Table 1 reports descriptive data for the sample used to estimate stock returns model used in the estimated equations. Panel A of Table 1 reports distributional statistics, panel B contains Pearson and Spearman correlations. Panel A reveals that, on average, the mean taxable income (0.092). About 25% of net income before tax is paid as income tax. The mean stock returns are less than 50% of the mean taxable income. Panel B reveals that, as expected, taxable income and net income after tax, are highly correlated with each other. On the other hand, the correlations between stock returns and taxable income or net income after tax are low.

## REGRESSION RESULTS

**The association between income and stock returns:** Table 2 presents regression results of the estimation of models that test the association of Taxable Income (TI) and Net Income after Tax (NIAT) with stock returns (RET). Pooled cross-sectional coefficient estimates and  $t$ -statistics values are summarized at the bottom of each panel. Panel A of Table 2 shows that the estimated coefficient (t-statistics) of the estimation of the association of taxable income with stock returns. The estimated coefficient is positive and significant for all years and for pooled cross-sectional as well. This indicates that taxable income is value-relevant in determining stock returns. The mean coefficient is 0.576 and the coefficient is 0.596 for pooled. These results indicate that more than 57% of stock returns is determined by taxable income. The results indicate that taxable income is positively and significantly related to stock prices. This means that taxable income is informative measure for stock prices.

Panel B of Table 2 shows that the estimated coefficient (t-statistics) of the estimation of the association of net income after tax with stock returns. The

Table 2: Results of the estimation of models that test the association of change in taxable income, ( TI) and change in net income after tax (NIAT) with stock returns (RET)

Panel A: Results of the estimation of the association of change in taxable income, ( TI), with stock returns, (RET)

$$RET_{it} = \alpha_1 + \beta_1 TI_{it} + \epsilon_{it} \quad (1)$$

$\Delta TI, \text{ year}$	$\beta_1$					
	coef	t-stat	N	Adj R <sup>2</sup>	D-W	White $\chi^2$
2008	0.619	4.24***	206	0.122	1.956	0.668
2007	0.587	3.96***	189	0.098	2.018	0.735
2006	0.537	3.35***	177	0.102	2.075	0.894
2005	0.655	4.15***	168	0.111	1.982	0.625
2004	0.725	4.78***	150	0.083	1.882	0.712
2003	0.645	2.63***	137	0.042	1.743	0.123
2002	0.353	3.25***	139	0.065	1.734	0.517
2001	0.820	5.43***	143	0.167	2.179	19.16
2000	0.245	3.24***	125	0.071	1.906	0.276
Pooled 2000-2008	0.596	8.14***	1434	0.073	1.624	7.302

Panel B: Results of the estimation of the association of change in net income after tax, ( NIAT), with stock returns, (RET)

$$RET_{it} = \alpha_2 + \beta_2 NIAT_{it} + \epsilon_{it} \quad (2)$$

NIAT, year	$\beta_2$					
	coef	t-stat	N	Adj R <sup>2</sup>	D-W	White $\chi^2$
2008	.612	4.02***	206	.116	1.886	0.629
2007	.599	4.14***	189	.105	2.132	0.763
2006	.567	3.56***	177	.097	2.023	0.724
2005	.615	3.99***	168	.108	1.925	0.593
2004	.815	4.92***	150	.091	1.881	0.692
2003	.488	2.03**	137	.022	1.741	0.066
2002	.337	3.24***	139	.065	1.740	0.662
2001	.887	5.72***	143	.183	2.175	17.32
2000	.204	3.13***	125	.066	1.947	0.231
Pooled 2000-2008	.545	7.89***	1434	.070	1.643	6.524

All variables are as defined in Table 1; For all regressions, the Durbin-Watson test does not reject the null hypothesis of zero autocorrelation, and the White  $\chi^2$  statistics does not reject the null of homoscedasticity; \*\*: Significant at 5% level; \*\*\*: Significant at 1%

estimated coefficient is positive and significant for all years and for pooled cross-sectional as well. This indicates that net income after tax is value-relevant in determining stock returns. The mean coefficient is 0.569 and the coefficient is 0.545 for pooled. These results indicate that more than 56% of stock returns are determined by net income after tax. The results indicate that net income after tax is positively and significantly related to stock prices. This means that net income after tax is informative measure for stock prices.

In summary, consistent with prior literature, the results in Table 2 support the hypothesis that taxable income and net income after tax are value relevant in determining stock returns.

**Relative information content results:** Ayers *et al.* (2009) examine the ratio of the information content of estimated taxable income to book income for high tax-planning firms versus all other firms by comparing the ratio of the adjusted R<sup>2</sup> for the separate tax and book regressions for the comparisons group. Biddle *et al.* (1995) defines relative information content comparisons as whether one measure provides greater information content than another. Relative comparisons ask whether the information content of X alone is greater than, equal to, or less than the information content of Y

alone. To test for relative information content comparisons, this study uses Vuong's likelihood ratio test to determine whether or not there are significant differences in the adjusted R<sup>2</sup> between different models.

Table 3 presents' relative information content comparisons between adjusted R<sup>2</sup> in Eq. (1) and adjusted R<sup>2</sup> in Eq. (2). Panel A of Table 3 shows The ratio of Adjusted R<sup>2</sup> using Eq. (3). Hypothesis 2 assumes that the ratio represented by Eq. (3) will be less than 1 because the relative information content of taxable income is expected to be less than the relative information content of net income after tax. The results show that for six years out of nine, the ratio is greater than 1. Primarily, this means that taxable income has more information content for stock prices than net income after tax.

Equation (3) determine the relative information content between taxable income and net income after tax but does not determine whether the difference in adjusted R<sup>2</sup> is significant. Panel B of Table 3 uses the likelihood ratio test described in Vuong (1989). Vuong's test compares the sum of squared residuals from two alternative nonnested regressions that have the same total sum of squares. This test statistic has a unit normal distribution under the null hypotheses of equal explanatory power and will be positive if the adjusted R<sup>2</sup>s from regressions in Eq. (2) exceed that for Eq. (1). The z-

Table 3: Relative Information Content (RIC) comparisons between adjusted R<sup>2</sup> in regressing change in taxable income's (TI) model (Eq. 1) and change in Net Income after Tax' (NIAT) model (Eq. 2)

Panel A: The ratio of Adjusted R<sup>2</sup> using Eq. (3)  
 $RIC = \text{Adjusted } R^2_{\text{taxable income}} / \text{Adjusted } R^2_{\text{net income after tax}}$  (3)

year	Equation (1) Adj R <sup>2</sup>	Equation (2) Adj R <sup>2</sup>	Equation (3) RIC
2008	0.122	0.116	1.052
2007	0.098	0.105	0.933
2006	0.102	0.097	1.052
2005	0.111	0.108	1.028
2004	0.083	0.091	0.912
2003	0.042	0.022	1.909
2002	0.065	0.065	1.000
2001	0.167	0.183	0.913
2000	0.071	0.066	1.076
Pooled 2000-2008	0.073	0.070	1.043

Panel B: Relative Information Content (RIC) using Vuong's test to test the significant differences in Adjusted R<sup>2</sup> between the results in Eq. (1) and the results in Eq. (2).

year	Eq. (1) Adj R <sup>2</sup>	Eq. (2) Adj R <sup>2</sup>	N	Z-statistics
2008	0.122	0.116	206	0.46
2007	0.098	0.105	189	-0.62
2006	0.102	0.097	177	0.42
2005	0.111	0.108	168	0.34
2004	0.083	0.091	150	-0.58
2003	0.042	0.022	137	0.85
2002	0.065	0.065	139	0.11
2001	0.167	0.183	143	-1.37
2000	0.071	0.066	125	0.41
Pooled 2000-2008	0.073	0.070	1734	0.28

where RIC is relative information content comparisons between taxable income and net income after tax. all other variables are as defined in Table 1; Z-statistics measures the significant differences between adjusted R<sup>2</sup>s in Eq. (1) and (2)

statistics values are summarized in panel B of Table 3. The results reveal that z-statistics values are insignificant for all years and for pooled cross-sectional as well which means that the differences between adjusted R<sup>2</sup> in Eq. (1) and adjusted R<sup>2</sup> in Eq. (2) are insignificant. These results suggest that taxable income and net income after tax have the same effect on stock returns. On other words, taxable income and net income after tax have the same measure of firm performance. These results do not support the hypothesis that net income after tax is a better measure of firm performance than taxable income.

### SUMMARY AND CONCLUSION

For many companies, taxable income differs substantially from net income after tax and income-based ratios or performance measures based thereon may vary dramatically as well. Net income after tax is considered, for most investors, more important concepts than taxable income because it excludes the taxes that are paid to government and includes the major changes in equity during the year. This study examines which components of income statement, taxable income or net income after tax, is a better measure of firm performance. This analysis

allows us to draw inferences about the appropriateness of the most important items that must disclose and include in the financial statements analyses. In addition, this study examines whether there is any need for mandating uniform income statement disclosures to clarify taxable income and net income after tax. Most prior research has indicated that there is strong relation between earnings and stock returns. The study tests the association between stock returns and taxable income and net income after tax. Consistent with prior literature, the results show that taxable income and net income after tax are value relevant in determining stock returns. The study uses the Vuong's likelihood ratio test to determine whether or not there are significant differences in the adjusted R<sup>2</sup> between taxable income's model and net income after tax' model. The results show that taxable income and net income after tax each has the same ability to measure firm performance. These results do not support the hypothesis that net income after tax is a better measure of firm performance than taxable income. This means that there is no need for mandating uniform income statement disclosures to clarify both taxable income and net income after tax and each can substitute the other.

### CONTRIBUTION TO THE LITERATURE

In June 1997, Jordan Securities Commission (JSC) issued new Disclosure Directives that requires listed corporations in Amman Stock Exchange to report both taxable income and income after tax in their financial statements. Recent debates on disclosures of both taxable income and net income after tax may impair or enhance the information content in financial statements. The results show that taxable income and net income after tax each has the same ability to measure firm performance. The results of this research recommend decreasing the disclosures of both taxable income and income after tax. This means that there is no need for mandating uniform income statement disclosures to clarify both taxable income and net income after tax because each can substitute the other.

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**Endnotes:**

<sup>1</sup>Raedy (2009) use the term "noise" to mean the firm has engaged in an activity that moves the income measure away from economic income.

<sup>2</sup>These companies are excluded because the only differences between taxable income and net income after tax, for my sample, are the income tax and the minority interest. It is not one of the objectives of this study to test the effect of minority interest.