

Comprehensive Income and Net Income, Which is more powerful in predicting Future Performance

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Abstract *The aim of this research is to compare the ability of comprehensive income and net income to predict companies' future performance in emerging markets by studying industrial companies in Jordan, and to achieve the purpose of the study a sample of (29) companies listed in Amman Stock Exchange from industrial sector has been selected with (146) observation for the time period of (2011-2015), a multi-regression testing technique has been used using (SPSS), to find out the usefulness of both net income and comprehensive income to the financial information users and to confirm which one of them is more powerful in predicting of the future performance. The results show that the current net income has more predictive power for future income and future comprehensive income than current comprehensive income. Also the results show that even though total comprehensive income possesses more informative content and gives further information, but still the net income is more powerful in predicting future performance.*

Key words Comprehensive income, net income, future net income, future comprehensive income, future performance

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1. Introduction

International Financial Reporting Standards (IFRS) are widely adopted and consider continuous changing needs of information users, it required companies to report certain type of transactions directly into equity instead into the income statement, these transactions are considered as components of income for the period, they mainly represent fair value changes in balance sheet elements, foreign currency translation adjustments, unrealized gains (losses) on re-measurement of available-for-sale investments, and gains and losses on hedging instruments, these components are transitory in their nature, they are called as other comprehensive income (IASB,2009). However the IAS No.1 "Financial Statement Presentation" required for annual periods from 2009 onwards, that the other comprehensive income presentation should be included as part of a new 'bottom line' within the income statement. Thus, the other comprehensive income components are added and subtracted from net income, and then resulting a new income which is called comprehensive income (IAS No. 1).

Many researches have been done regarding the usefulness of presenting comprehensive income instead of net income as the bottom line of the income statement (Hirst and Hopkins 1998, Dhaliwal, Subramanyan, and Trezevant 1999; Maines and McDaniel 2000; Biddle and Choi 2006). Comprehensive income has been defined by Financial Accounting Standard Board (FASB) in concepts statement No.6, "Elements of financial statements", as the changes in equity of a business enterprise during a period for all business's transactions and events except those related to owners transactions. The purpose of this statement is to push companies to disclose information about certain elements that can better explain the financial performance to help information users in understanding the companies' financial performance.

(SFAS No. 130) requires that three different categories of other comprehensive income should be reported separately: (1) Adjustment for unrealized holding gains/losses on available-for-sale marketable securities, (2) Adjustments for minimum pension liability, and (3) Adjustments for foreign currency translations. Chikashi, (2013) claimed that comprehensive income is better in comparison with other earnings or cash flow variables in predicting companies' future stock returns.

Our research is seeking to add empirical evidence to the usefulness of comprehensive income in emerging markets by investigating the predictive power of comprehensive income and net income for future net income and comprehensive income of the listed companies in Amman stock exchange, to achieve this purpose, we will try to answer the following specific questions;

1. Does Comprehensive income have more predictive power for future net income than net income?
2. Does Comprehensive income have more predictive power for future comprehensive income than net income?

The importance of this research laying in its aim to investigate the ability of comprehensive income and net income to predict companies' future performance in emerging markets by studying the companies listed in Amman stock exchange (ASE), ASE is the only official stock exchange in Jordan, and has a diversified business sectors with a (267) companies listed, where a (67) companies is in industrial sector (ASE,2016), and it was rarely to find a previous studies that considered the subject of this research in Jordan, therefore we expect that, this study would added value to the financial information users in Jordan.

2. Literature review

Income reporting is considered as primary source of information to the users to predict the companies' future performance, the issues about income reporting have been characterized broadly in term of a contrast between current operating income which represents accounting net income and all inclusive income which represents comprehensive income (Schroeder, 2011).

Dhaliwal, Subramanyam and Trezevant (1999) examined the relative ability of comprehensive income and net income to explain firm's performance through use of stock price returns. They found that comprehensive income is not associated with stock price returns or firm's market value and is not able to predict future cash flows or income more than net income; while Kanagaretnam, Mathieu and Shehata (2004) examined usefulness of reporting comprehensive income in Canada, they examined the association between market value of equity, stock's return and the components of other comprehensive income. They, also investigate the predictive ability of the aggregate comprehensive income relative to net income. They found that each of the four components of other comprehensive income is value relevant in explaining the stock returns and the market value and they claimed that the net income is a better predictor for future firm's performance than comprehensive income. Chambers *et al.* (2007) suggested that other comprehensive income attract more of investors' attention when reported in the statement of changes in equity rather than when they are reported in a performance statement, Bamber *et al.* (2010) found that US managers with strong equity incentives and less job security are less likely to report comprehensive income in a performance statement.

Cheng *et al.* (1993) examined the relation between abnormal returns and three measures of income; operating income, net income, and comprehensive incomes, they found that there is an evidence that supports two alternative scenarios: (a) net income and/or operating income are superior to comprehensive income as a measure of performance, (b) investors pay more intention to net income, thus ignoring comprehensive income. Wang (2006) and Goncharov and Hodgson (2008) confirmed that the net income has stronger predictive power over comprehensive income. Zülch and Pronobis (2010) we found no evidence that comprehensive income has a superior predictive power for future firm operating performance than net income. Further, we fail to find significant incremental predictive power of aggregated or individual components of other comprehensive income for subsequent period's firm operating performance. Cahan *et al.* (2000) examined the value relevance of comprehensive income in New Island during 1992-1997 and they did not find any evidence that the incremental value relevance of comprehensive income relative to net income increased after the issuance of Financial Reporting Standard 2 in 1994. They also claimed that the there is no evidence that individual components of other comprehensive income are incrementally value relevant over and above comprehensive income.

Dastgir and Velashani (2008) examined the relative ability of comprehensive income and net income to explain the firm's performance as reflected in stock returns, and wither the comprehensive income adjustments improve the ability of income to explain the firm's performance. They found no evidence that support the fact that the comprehensive income is superior to net income for explaining firm's performance based on stock return and stock price, while they confirmed that firm's performance

evaluation on the basis of cash flows prediction using comprehensive income is superior to net income. Choi and Zang (2006) investigated the relationship of comprehensive income with subsequent period net income as well as analysts' earnings forecasts. They found that the comprehensive income is incrementally useful in predicting subsequent period changes in net income. They also claimed that comprehensive income is associated with analysts' earnings forecast revisions and forecast errors.

Kaewprapa and Ussahawanitchakit (2011) investigated the effect of comprehensive income reporting on decision-making quality through accounting information usefulness and examined if voluntary disclosure and environmental dynamism moderate the influence between the comprehensive income reporting-decision making quality relationships, they indicated that when they separate dimensions of comprehensive income reporting, the non-owner changes has a significant positive association with accounting information usefulness while both economic income and realized/unrealized gain or loss have not a potential positive influence on accounting information usefulness. Hirst and Hopkins (1998) stated that comprehensive income in a single statement is more effective in communicating value relevant information than reporting comprehensive income in a statement of change in equity.

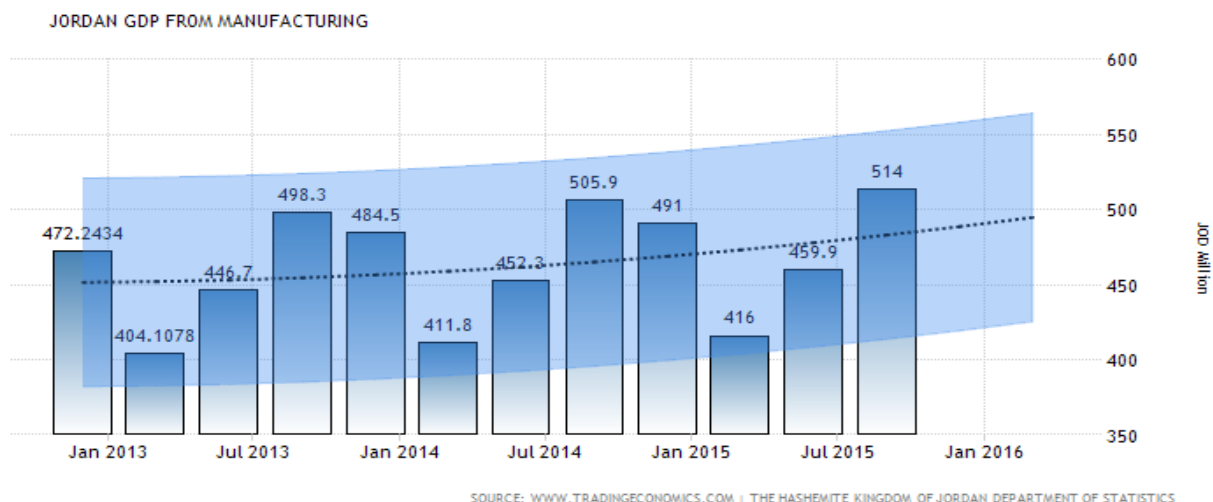
It's clear now that investigating the predictive power of both comprehensive income and net income is needed especially in Jordan as an emerging market, to add value to information users.

3. Industrial sector overview

The industrial sector is one of the most promising sectors in Jordan; this sector contributed 22% to Jordan's GDP in 2014. Examples of industries operating in Jordan in the last few years:

- Extractive industries, including the extraction of calcium carbonate used in producing cement, construction stones (travertine), ornamental stones (marble and granite), shale, basalt, phosphate and silicates used in manufacturing glass amongst other things, in addition to other minerals.
- Mineral processing industries, including fertilizers, chemical acids, cement, ceramics, cosmetics, mineral wool, silica and bricks.
- Pharmaceutical industry sector: Jordanian pharmaceutical products are exported to more than 60 countries around the world.

The Ministry of Industry and Trade is the primary government entity responsible for the regulation of the manufacturing sector in Jordan. In addition to the Ministry of Industry and Trade, the Central Bank of Jordan reports data on Industry within Jordan. Some subsectors of manufacturing are also regulated by different regulatory bodies. For example, the National Resources Authority regulates the manufacturing of mineral byproducts. In addition to governmental regulatory bodies, numerous professional associations have been established within the manufacturing sector. These associations are usually divided by specific subsectors of manufacturing. Associations of particular interest include: The Jordan Garments, Accessories, & Textiles Exporters Association (JGATE), The Jordan Association of Pharmaceutical Manufacturers (JAPM), and the Jordan Furniture Exporters & Manufacturers Association (JFEMA).



Source: www.tradingeconomics.com: The Hashemite kingdom of Jordan Department of State

The main outputs of the Jordanian industrial sector include: clothing, fertilizers, potash (and other minerals), pharmaceuticals, and cement. These outputs also make up most of Jordan's exports, in addition to agricultural goods. Industrial Production in Jordan increased 0.60 percent in December of 2015 over the same month in the previous year. Industrial Production in Jordan averaged 3.20 percent from 1995 until 2015, reaching an all-time high of 34.52 percent in December of 2001 and a record low of -23.13 percent in January of 2003. Industrial Production in Jordan is reported by the Central Bank of Jordan (www.tradingeconomics.com/).

The total number of listed companies in Amman stock exchange is 67 company (ASE,2016).

4. Methodology of research

For the purpose of estimating the research models in hypotheses testing, a sample of (29) companies listed in Amman Stock Exchange from industrial sector has been selected with (146) observation for the time period of (2011-2015). Finally, we estimate the research models using multi-regression analysis.

5. Research Hypotheses

The first hypothesis:

H1: *Comprehensive income has more predictive power for future net income than net income.*

The second hypothesis:

H2: *Comprehensive income has more predictive power for future comprehensive income than net income.*

6. Hypotheses Testing

6.1. Testing the predictive power of current net income and current comprehensive income for future net income (H1)

H1 is tested by regressing future period's net income against current period's net income plus moderating variables (Model 1) and against current period's comprehensive income plus moderating variables (Model 2), respectively. Again, the *adjusted R²*s of the two models are compared, and then the differences in coefficients related to the different regressions will be investigated using (SPSS).

The following two cross-sectional models are estimated as follow:

Model 1 (M1):

$$NI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_NI}) + \alpha_2 * NI_t + \alpha_3 * (D_{Neg_NI} * NI_t) + \epsilon_t \quad (1)$$

Model 2 (M2):

$$NI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_CI}) + \alpha_2 * CI_t + \alpha_3 * (D_{Neg_CI} * CI_t) + \epsilon_t \quad (2)$$

Where:

NI_{t+1} is the net income in the period _{t+1},

NI_t, is the current (period = t) net income as reported in the income statement.

CI_t, is the current net income adjusted for the components referred to as current other comprehensive income and as reported in the statement of changes in equity.

D_{Neg_NI}, **D_{Neg_CI}**, are dummy variables taking the value "1" when NI_t is negative or CI_t is negative, respectively, and "0" otherwise.

6.2. Testing the predictive power of current net income and current comprehensive income for future comprehensive income (H2)

The testing of H2 is conducted correspondingly by estimating the following two cross-sectional models (Model 3 and Model 4):

Model 3 (M3):

$$CI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_NI}) + \alpha_2 * NI_t + \alpha_3 * (D_{Neg_NI} * NI_t) + \epsilon_t \quad (3)$$

Model 4 (M4):

$$CI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_CI}) + \alpha_2 * CI_t + \alpha_3 * (D_{Neg_CI} * CI_t) + \epsilon_t \quad (4)$$

Where:

CI_{t+1} is the comprehensive income in the period t+1

While again: NI_t , CI_t , D_{Neg_NI} , D_{Neg_CI} , are defined as aforementioned. Likewise, all monetary variables are scaled by total assets as of beginning of the year. By the same token, the **adjusted R^2** of the two models are compared and the difference investigated for significance.

7. Analysis results

Table 1. Results Summary of H1

Panel A: Predictive power of net income vs. comprehensive income with future net income

Model	Adj. R^2	F	SIG	N ^e	H1 Results
Model 1	0.208	13.579	0.000	146	Rejected
Model 2	0.160	10.144	0.000	146	

Table 1, panel A reports the results of the estimation of models that test the predictive power of net income vs. comprehensive income with future net income. Both models were significant, but the *adjusted R^2* of 0.208 for the net income model (Model1) with (F) value 13.579, while the *adjusted R^2* of 0.160 for the comprehensive income model (Model2) with F value 10.144, this indicates that the net income has a more predictive power than comprehensive income in predicting future net income because it produces a higher *adjusted R^2* and higher (F) value, therefore we are rejecting the H1 and confirm that the current net income is a better predictor for future net income, this results is identical to the results of previous studies of Wang (2006) and Goncharov and Hodgson (2008) and Kanagaretnam, Mathieu and Shehata (2004) and Zülch and Pronobis(2010).

Table 2. Results Summary of H2

Panel B: Predictive power of net income vs. comprehensive income with future comprehensive income

Model	Adj. R^2	F	SIG	N ^e	H2 Results
Model 3	0.699	16.036	0.000	146	Rejected
Model 4	0.367	28.802	0.000	146	

Table 2, panel B reports the results of the estimation of models that test the predictive power of net income vs. comprehensive income with future comprehensive income. Both models were significant, but the *adjusted R2* of 0.699 for the net income model (Model3) with F value 16.036, while the *adjusted R2* of 0.367 for the comprehensive income model (Model4) with (F) value 28.802, this indicates that the net income has a more predictive power than comprehensive income in predicting future net income because it produces a higher *adjusted R2*, and with relatively high (F) value, therefore we are rejecting the H2 and confirm that the current net income is a better predictor for future comprehensive income, .this results is identical to the results of previous studies of Wang (2006) and Goncharov and Hodgson (2008) and Zülch and Pronobis (2010).

Notes: The panels show the results of the estimation of models that test the predictive power of net income and comprehensive income with future net income (panel A), and with future comprehensive income (panel B).

Model M1: $NI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_NI}) + \alpha_2 * NI_t + \alpha_3 * (D_{Neg_NI} * NI_t) + \epsilon_t$

Model M2: $NI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_CI}) + \alpha_2 * CI_t + \alpha_3 * (D_{Neg_CI} * CI_t) + \epsilon_t$

Model M3: $CI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_CI}) + \alpha_2 * CI_t + \alpha_3 * (D_{Neg_CI} * CI_t) + \epsilon_t$

Model M4: $CI_{t+1} = \alpha_0 + \alpha_1 * (D_{Neg_CI}) + \alpha_2 * CI_t + \alpha_3 * (D_{Neg_CI} * CI_t) + \epsilon_t$

Adj. R^2 reports the estimated adjusted coefficient of determination on the relevant model.

F^2 indicates the two-tailed significance level for the difference in the explanatory power of a model and the explanatory power of the basic model.

N : is the number of companies'-year observations between 2011 and 2015.

8. Conclusions

The current study examines the predictive power of both current net income and current comprehensive income, this study wants to add empirical evidence to the usefulness of both net income and comprehensive income to the financial information users. The study's major finding is as follow: We find that the current net income has more predictive power for future income and future comprehensive income than current comprehensive income for Jordanian industrial listed companies.

9. Recommendations and Suggestions for Future Research

The researchers are recommending devoting research efforts toward studying the predictive power of comprehensive income components in industrial sector and other sectors for listed companies in Amman stock exchange, the continues development in the disclosure requirements, encourage the academic researchers to study in depth the usefulness of these requirements to the financial information users.

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