

# The Relationship between other Comprehensive Income Items and Rate of Return of Listed Firms in the Stock Exchange of Thailand

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**Abstract** - The research attempts to study relationship between Other Comprehensive Income Items in accordance with Thai Financial Reporting Standard and Rate of Return of Listed Firms in the Stock Exchange of Thailand for the year ending 2012, 2013, and 2014. The researcher applied Multiple Regression Analysis developed from the model of Dhaliwal et al. (1999); searched secondary data from textbooks, accounting standard, and website of Stock Exchange of Thailand; and use computer program for statistics to analyze the relationship. Other Comprehensive Income Items were set as independent variables and the Rate of Return was dependent variable. Results of the study could be explained that net profit and other comprehensive income items were not found to have relationship with rate of return of listed firms. Detailed analysis of each element of other comprehensive income items consists of capital surplus from asset valuation, profit or loss resulting from estimation according to actuarial science principle, profit or loss from translation of foreign currency financial statement, profit or loss from valuation of investments available for sale, and profit or loss from cash flow hedge. The annual analysis showed no relationship between the other comprehensive income items mentioned and rate of return of listed firms. However, when looking at overall three year period, profit or loss resulting from estimation according to actuarial science principle was proved to have relationship with rate of return of listed firms.

## I. INTRODUCTION

Users of financial statement usually focus on profit of companies as shown in income statement since companies that make high profit will pay dividends preferable to their shareholders. This had made researcher come up with the question that if net profit is an indication of the company's business operating performance to which investors paid their attention, other comprehensive income items should also be a good indicator to support the same purpose. According to concept of profit measurement and capital maintenance, other comprehensive income items are included in shareholder's equity. If users of financial statement focus only on income statement, they may make suboptimal decisions. Other

comprehensive income items originated from the attempts of accountants to keep all elements of rate of return in one place to enable investors to have a complete view [5].

## A. Research Objectives

Objectives of this research are to determine relationship between other comprehensive income items according to Thai Financial Reporting Standard and rate of return of listed firms in the Stock Exchange of Thailand [1-2].

## B. Related Theory

Thai Accounting Standard TAS1 concerns presentation of financial statement. Other comprehensive income items according to TAS1 consist of revenue and expenses (including adjustment and re-categorization) which are not allowed to be realized in income statement. Other financial reporting standard and elements of other comprehensive income items included: capital surplus from asset valuation (accounting standard TAS16 amended 2009) with regards to land, buildings, and equipments; Thai Accounting Standard TAS38 (amended 2009) about intangible assets; profit or loss resulting from estimation according to actuarial science principle in relation to Thai Accounting Standard TAS19 with regards to employees' benefits; profit or loss from translation of foreign currency financial statement according to Thai Accounting Standard TAS21 (amended 2009) about influences of exchange rate; profit or loss from valuation of investments available for sale according to Thai Accounting Standard TAS39 about realization and measurement of financial instrument; and profit or loss from cash flow hedge in reference to Thai Accounting Standard TAS39 relating to realization and measurement of financial instrument [4,6,9].

## C. Benefits from the research

1. Benefits to investors. Investors can use data on other comprehensive income items to help in making investment decisions in the Stock Exchange of Thailand.

2. Benefits to securities analysts. Apart from looking at profit or loss in the period, securities analysts can have a look at other comprehensive income items as other source of relevant data to analyze securities of companies that show these items in their financial statement.
3. Benefits to students and interested people. This research can be utilized as data source or reference for future researches.

## II. RESEARCH METHODOLOGY

Population of the research is listed firms in Stock Exchange of Thailand by looking at their financial statement ending December 31<sup>st</sup> of 2012, 2013, and 2014. Exceptions are on companies in the group of banking, fund and securities, insurances, as well as companies in rehabilitation. From data acquired, it was found that 406 companies can be determined as population of this research.

Multiple Regression Analysis was applied in the study and statistical computer programs were used to analyze the data. Other comprehensive income items were set to be independent variable while rate of return was set as dependent variable [9-10].

**Adjusted R<sup>2</sup>** represents coefficient in decision making. It measures to what extent independent variables can be used to explain changes in dependent variable.

**P-Value** is the value used to make conclusion of hypothesis test. If P-value is shown to be lower than the defined statistical significance, hypothesis would be accepted and vice versa.

Data analysis was first done separately for each year of 2012, 2013, and 2014. Then all three years would be analyzed all together for four times. Each time comprised 2 models which would give results of data analysis in 8 sets of report [3].

### A. Models Applied in the Research

Models used to analyze data in this research were as follows.

#### Model 1

$$R_i = \alpha_0 + (\beta_1 * NI_i) + (\beta_2 * OCI_i) + \epsilon_i$$

This model attempts to analyze relationship between rate of return and net profit or loss for the period together with other comprehensive income items shown in shareholder's equity in financial statement of listed firms [7].

#### Model 2

$$R_i = \alpha_0 + (\beta_1 * NI_i) + (\beta_2 * REV_i) + (\beta_3 * RETIRE_i) + (\beta_4 * FCT_i) + (\beta_5 * MKT_i) + (\beta_6 * CASH_i) + \epsilon_i$$

This model is for determining relationship between rate of return and net profit or loss together with capital surplus from asset valuation, profit or loss resulting from estimation according to actuarial science principle, profit or loss from translation of foreign currency financial statement, profit or loss from valuation of investments available for sale, and profit or loss from cash flow hedge.

$R_i$  represents rate of return of listed companies which is used to measure all kinds of return on investment in securities such as capital gain/loss and dividends with an additional assumption that dividends shall be reinvested.

$\alpha_0$  is static coefficient.

$\beta_1$  is independent variable coefficient

$\epsilon_i$  is variation

MKT is profit or loss from valuation of investments available for sale.

REV is capital surplus from asset valuation.

FCT profit or loss from translation of foreign currency financial statement.

RETIRE profit or loss resulting from estimation according to actuarial science principle.

CASH profit or loss from cash flow hedge [11].

Data was analyzed using multiple regression analysis (Figure 1) an application of computer program for statistics. Other comprehensive income items were set to be independent variable while rate of return was set as dependent variable [8].

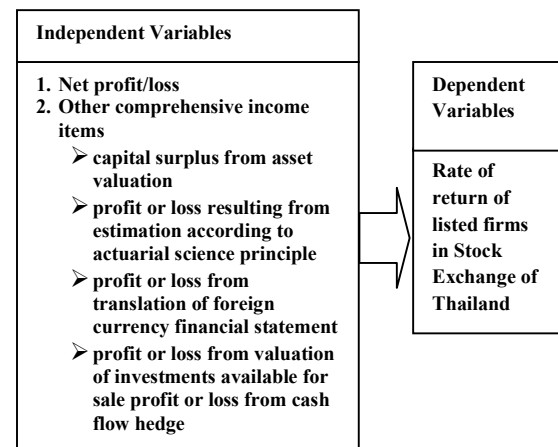


Figure 1. Data Analysis

## III. FINDINGS

Findings could be concluded annually for each model as follows.

### A. Analysis result of year 2012

Data for year 2012 using model 1 showed that the p-value of net profit and other comprehensive income items equal to 0.408 and

0.887 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

Data for year 2012 using model 2 showed that the p-value of net profit and other comprehensive income items equal to 0.760, 0.824, 0.740, 0.928, 0.103, and 0.896 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

#### ***B. Analysis result of year 2013***

Data for year 2013 using model 1 showed that the p-value of net profit and other comprehensive income items equal to 0.551 and 0.726 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

Data for year 2013 using model 2 showed that the p-value of net profit and other comprehensive income items equal to 0.876, 0.833, 0.813, 0.921, 0.201, and 0.483 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

#### ***C. Analysis result of year 2014***

Data for year 2014 using model 1 showed that the p-value of net profit and other comprehensive income items equal to 0.263 and 0.588 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

Data for year 2014 using model 2 showed that the p-value of net profit and other comprehensive income items equal to 0.210, 0.469, 0.590, 0.899, 0.305, and 0.448 respectively which are higher than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms.

#### ***D. Analysis result of all 3 years of 2012-2014***

Overall data for year 2012-2014 using model 1 showed that the p-value of net profit and other comprehensive income items equal to 0.129 and 0.547 respectively which are higher than 0.05. Therefore, it could be concluded that net profit

and other comprehensive income items do not have relationship with rate of return of the listed firms.

Overall data for year 2012-2014 using model 2 showed that the p-value of net profit and other comprehensive income items equal to 0.424, 0.665, 0.048, 0.793, 0.824, and 0.748 respectively which are mostly higher than 0.05 except for profit or loss resulting from estimation according to actuarial science principle with its p-value of 0.048 which is lower than 0.05. Therefore, it could be concluded that net profit and other comprehensive income items do not have relationship with rate of return of the listed firms except profit or loss resulting from estimation according to actuarial science principle which has relationship with rate of return of the listed firms.

From the analysis above, both net profit/loss and other comprehensive income items showed no relationship with rate of return of listed firms except in the case of considering 3 years together where profit/loss from estimation according to actuarial science principle was found to have relationship with rate of return of the listed firms.

### **IV. CONCLUSION AND DISCUSSION**

From the analysis by both method i.e. the first method focused on net profit/loss and other comprehensive income items as a whole, and the second method focused on net profit/loss and each element of other comprehensive income items, the analysis results showed that they all do not have relationship with the rate of return which means the hypothesis is rejected. However, exception is in the case of considering 3 years together where profit/loss from estimation according to actuarial science principle was found to have relationship with rate of return.

### **V. LIMITATIONS**

This research does not consider each part of other comprehensive income items individually which has effect on rate of return of listed firms, and also does not separately analyze according to each group of industry. Further, other comprehensive income items were shown to contain a big gap among each other such as profit/loss from valuation of investments available for sale had 340 items in three years income statement while there were only 25 items in profit/loss from cash flow hedge. Values of the realized amount are also very much different. For each component of other comprehensive income items to yield profit practically, it may require different period of time. As a result, a research with separate analysis for each

component or each industry is supposed to give more precise results than to analyze all together as a whole.

Current economic condition and in the year 2012 until 2014 and 2015 is in downturn. Political instability as well as international and domestic terrorisms has caused increase of decrease in rate of return of the listed firms to be influenced by other factors than normal business operating performance. For example, even though listed firms pay dividends to shareholders at a high rate, once terrorism problem occurs value of the shares would go down.

#### **VI. RECOMMENDATION FOR FUTURE RESEARCH**

1. In this research, the analysis was not done individually on each group of industry. Therefore, future research should be conducted with separate analysis for each group of industry or each component of other comprehensive income items.
2. This research studied other comprehensive income items that appear on profit & loss statement and the values were concluded at the end of period. However, analysis was not conducted on other comprehensive income items that are "other components of shareholders' equity" which is a cumulative value shown in statement of financial position for each accounting period.
3. Results of hypothesis test in this research rejected the hypothesis; however the causes for such outcome have not been identified.

#### **REFERENCES**

- [1] The Stock Exchange of Thailand, "Information for Investment", 2015.
- [2] The Stock Exchange of Thailand, "Information System for Application Development Services", 2015.
- [3] SETSMART, "SET Market Analysis", <http://www.setsmart.com>, 2015
- [4] The Securities and Exchange Commission, <http://market.sec.or.th/public/idisc/th/FinancialReport>.
- [5] Federation of Accounting Professions of Thailand, "The Conceptual Framework for Financial Reporting".
- [6] Federation of Accounting Professions of Thailand, "Presentation of Financial Statements", 2009.
- [7] Federation of Accounting Professions of Thailand, "Presentation of Financial Statements", 2012
- [8] Federation of Accounting Professions of Thailand, "Presentation of Financial Statements", 2014
- [9] Nuchanard Laeidtanakit, "Comparative Value Relevance of Comprehensive Income and Net Income", The Case of the Stock Exchange of Thailand, 2004
- [10] Nantiya Promtong, "Association between Other Comprehensive Income Components and Market Return of Firms", Listed in the Stock Exchange of Thailand, 2007
- [11] Perter D. Easton and Trevor S. Harrist, "Earnings as an Explanatory Variable for Returns", 1991