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THE VALUE RELEVANCE OF COMPREHENSIVE INCOME: AN APPLICATION AT ISTANBUL STOCK EXCHANGE (ISE)

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Danışman
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FOREWORD

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ABSTRACT

Master with Thesis

The Value Relevance of Comprehensive Income: An Application at Istanbul Stock Exchange (ISE)

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In globalizing environment, markets need integrated accounting systems, global standards and statements. These global standards and statements help investors to make decisions in an international basis. As a result of globalization, traditional concepts have changed and new concepts have emerged. One of these new concepts is "comprehensive income".

The main purpose of this study is to analyze the empirical and the theoretical studies on comprehensive income, then define comprehensive income in a general perspective and finally investigate the value relevance of comprehensive income for firms listed in ISE. While performing these analyses, it is aimed to find an answer to the questions about the superiority of comprehensive income over net income.

The first chapter defines comprehensive income concept under alternative measures of income. The basics and other components of comprehensive income are explained in the second chapter. In the third chapter, reporting comprehensive income and its alternative formats are discussed. The value relevance of comprehensive income and its components are discussed in the fourth chapter. Finally, in the fifth chapter, empirical analyses are conducted to test the value relevance of comprehensive income.

The data is obtained from ISE for the period 2004-2005 and analyses are conducted for 141 firm-years for non-financial firms.

The results show that there is a relationship between change in stock price and comprehensive income, and net income. However, net income has greater explanatory power on stock price changes than comprehensive income.

Key Words: 1) Comprehensive Income **2)** Income **3)** Value Relevance **4)** ISE **5)** Stock Price

ÖZET

Yüksek Lisans Tezi

Geniş Kampsamlı Karın Değer İle İlişkisi: İstanbul Menkul Kıymetler Borsası (IMKB) Uygulaması

Evrim CIHANGIR

Dokuz Eylül Üniversitesi
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Globalleşen çevrede, piyasalar bütünleşik muhasebe sistemlerine, global standartlara ve tablolara ihtiyaç duyarlar. Bu global standartlar ve tablolar yatırımcıların uluslararası esaslarda karar vermelerine yardımcı olur. Globalleşmenin bir sonucu olarak, geleneksel kavramlar değişmiş ve yeni kavramlar ortaya çıkmıstır. Bu kavramlardan bir tanesi "geniş kampsamlı kar" dır.

Bu çalışmanın temel amacı, geniş kampsamlı kar ile ilgili teorik ve ampirik çalışmaları analiz etmek, daha sonra geniş kampsamlı karı genel bir görüş çerçevesinde tanımlamak ve son olarak da İMKB'ye kote olmuş firmalar için geniş kampsamlı karın değer ile ilişkisini incelemektir. Bu analizler yapılırken geniş kampsamlı karın net kar üzerindeki üstünlüğüne ilişkin sorulara yanıt bulmak amaçlanmıştır.

Birinci bölüm, geniş kampsamlı kar kavramını karın alternatif ölçüleri altında tanımlamaktadır. Geniş kampsamlı karın diğer bileşenleri ve temelleri ikinci bölümde açıklanmaktadır. Üçüncü bölümde geniş kampsamlı karın raporlanması ve alternatif şekilleri tartışılmaktadır. Geniş kampsamlı karın ve bileşenlerinin değer ile ilişkisi dörüdüncü bölümde tartışılmaktadır. Son olarak beşinci bölümde, geniş kampsamlı karın değer ile ilişkisini test etmek için ampirik analizler yapılmaktadır.

Veriler 2004-2005 dönemi için İMKB'den toplanmakta ve analizler finansal olmayan 141 firma-yılı için yapılmaktadır.

Sonuçlar, hisse senedi fiyat değişikliği ile geniş kampsamlı kar ve net karın bir ilişkisi olduğunu göstermektedir. Fakat, net kar hisse senedi fiyat değişikliği üzerinde geniş kampsamlı kara göre daha açıklayıcı bir güce sahiptir.

Anahtar Kelimeler: 1) Geniş Kampsamlı Kar **2)** Net Kar **3)** Değer ile İlişki **4)** IMKB **5)** Hisse Senedi Fiyatı

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LIST OF ABBREVATIONS

AASB	Australian Accounting Standards Board
AICPA	American Institute of Certificated Public Accountants
CFO	Chief Financial Officer
CI	Comprehensive Income
FASB	Financial Accounting Standard Boards
FRS	Financial Reporting Standards
GAAP	Generally Accepted Accounting Principles
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standard Committee
IFRS	International Financial Reporting Standards
ISE	Istanbul Stock Exchange
MBA	Mater of Business Administration
NI	Net Income
N#A	Not Available
No.	Number
NYSE	New York Stock Exchange
OPEB	Other Postretirement Obligations
para.	Paragraph
PRC	Change in Prices
S&P	Standard and Poors
SAC	Standards Advisory Council
SEC	Securities and Exchange Commission
SFAC	Statement of Financial Accounting Concepts
SFAS	Statement of Financial Accounting Standards
TAS	Turkish Accounting Standards
UK	United Kingdom
US	United States

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INTRODUCTION

The decision makers act according to the financial indicators of the company, therefore financial statements are of great importance for them. The importance of financial statements comes from the information they include. Besides that, financial statements are the only source of information available to the public and the tools for international accounting systems.

In global markets, decision makers make investments in different countries, consequently, they need to use integrated accounting systems in all around the world. Global standards and statements will be required to standardize the financial statements, as an obligatory result of markets globalization. The shift towards global standards introduces a new concept in the preparation of financial statements and, more in general, in defining and reporting financial performance. As Association for Investment Management and Research (AIMR) (1993), Beresford, Johnson and Reither (1996), Johnson and Swieringa (1996), Johnson, Reither, and Swieringa, (1995) state that there is a shift from current concept of performance (dirty surplus) income concept to all-inclusive (clean surplus) income concept which is also named as “comprehensive income”.

Financial Accounting Standard Boards (FASB) defines comprehensive income as “the change in equity (net assets) of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners” (Statement of Financial Accounting Concepts No.6, 1985; para. 70). Additionally, De la Rosa and Franz (2005) define comprehensive income as the result of the sum of net income which is reported in the income statement and other comprehensive income which is reported in the equity section of the balance sheet and detailed in the changes in equity.

In order to standardize this concept, FASB issues a standard for reporting comprehensive income, Statement of Financial Accounting Standards (SFAS) No.

130, Reporting Comprehensive Income. With the implementation of SFAS No. 130, the accounting profession has made a major shift towards the idea of global standards, and investors can make informed decisions on an international basis (Keating, 1999; 337-338).

Comprehensive income includes net income and the other components of comprehensive income (SFAS No. 130, 1997; para. 10). The other components of comprehensive income are unrealized gains and losses, foreign currency translational gains and losses, minimum pension liability, unrealized gains and losses on debt and equity securities, unrealized gains and losses on cash flow hedges and derivatives, and revaluation funds.

In the literature, the value relevance of income measures is analyzed as reflected in stock price changes and/or stock returns. In this study, Dhaliwal, Subramanyam, and Trezevant (1999) model is adopted.

The purpose of this study is to analyze the empirical and theoretical studies on comprehensive income in detail and to test whether comprehensive income or net income is better proxy of firm performance as reflected in stock price changes for firms listed in ISE. It is aimed to test the effects of value relevance of summary of income measures to price stocks in the frame of previous studies.

In this study, comprehensive income is defined in a broad sense, generally, under the FASB in the United States (US). Then, the relationship between the changes in stock prices and net income, and comprehensive income are analyzed for firms listed in ISE.

The data for financial statements are obtained from Istanbul Stock Exchange (ISE) for the dates 31 December 2004 and 2005, besides, the data for price changes are gathered from ISE for the dates 31 March 2004-2006. The change in stock prices is regressed with net income and comprehensive income separately; afterwards the regression results are compared and interpreted. First, the analyses are conducted for

full sample. Second, the analyses are performed for separate years, and finally the analyses are conducted within-industries.

Due to comprehensive income being a new area for literature, there is little empirical research examining the claim that income measured on comprehensive basis is a better measure of firm performance than the other summary of income measures. Even, there is no empirical research in this area in Turkey.

The contribution of this study is being the pioneering empirical research in Turkey in examining the claim whether the net income or comprehensive income is a better measure of firm performance as reflected in stock price changes. Another contribution of this study is that, it analyzes the income measurements and comprehensive income in a broad sense and combines several prior studies on comprehensive income, the other components of comprehensive income and their value relevance under one study.

Income measurements are the indicators of corporate performance. Therefore defining income measurements is of great importance in accounting. In this study, Chapter I defines income measurements broadly. The concept of income, measuring income, its alternative classifications and measurements are discussed. Then, comprehensive income is placed in the alternative classification of income.

In Chapter II, the basics of comprehensive income are defined. The definitions of comprehensive income and other components of comprehensive income are explained in accordance with SFAS.

Reporting comprehensive income is given in Chapter III. The purposes of reporting it, the financial statements in where comprehensive income should be displayed are discussed in this chapter. Prior studies are figured out in order to provide broad perspective and alternative formats.

In Chapter IV, value relevance is discussed. Both the value relevance of comprehensive income and its components are given in the frame of prior studies. Then, theoretical and empirical studies on comprehensive income are discussed.

The last chapter designs the research of the value relevance of comprehensive income for firms listed in ISE. The sample is defined and then the methodology and the hypothesis of the analyses are conducted. The relationships between changes in stock prices and net income, and the relationships between changes in stock prices and comprehensive income are analyzed. Finally, their results are compared and interpreted in order to find evidence whether comprehensive income or net income is strongly associated with stock price changes.

CHAPTER I

INCOME MEASUREMENT

Income is an increase in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases in liabilities that result in increase in equity, other than those relating contributions from equity participants (International Accounting Standard Committee, Framework, 1989; 70). Income is the net of revenues and gains minus expenses and losses. Income is determined by using the accrual basis accounting which measures the profitability of the economic activities conducted during the accounting period. It is one measure of operating activities. The income statement reports net income for a period of time along with income components: revenues, expenses, gains, and losses (Wild, Subramanyam and Halsey, 2004; 309). Net income is the principle indicator of corporate performance in accounting history and is recognized as the core information in the present accounting regulation (Obinata, 2002; 2). Therefore, in order to asses company performance and risk exposures, and predict the amounts, timing, and uncertainty of future cash flows; income and its components are analyzed in this chapter.

1.1 Concept of Income

Penman (2003) and Bernstein (1989) state that income which is also mentioned as earnings or profit, summarizes in financial terms the operating activities of a business. Income is the most demanded information in the financial statements. The main purpose of income statement is to determine and explain a business's income for a period. Income has dual role in analyzing the financial statements. One of its roles is to measure the changes in shareholders wealth, and the other is to estimate the future earning power of a company. Understanding this dual role of income is important for analysis of financial statements.

The concept of income can be discussed in two sections. The first is accounting income and the second is economic income. Accounting, or reported income, is different from economic income and also both of them differ from cash flow measures. Economic income is less useful for forecasting future earnings and accounting income is closer to permanent income (Wild et al, 2004; 310).

1.1.1 Accounting Concept of Income

Accounting income is based on the concept of accrual accounting. Statement of Financial Accounting Concepts (SFAC) states that " the goal of accrual accounting is to account in the periods in which they occur for the effects on an entity of transactions and other events and circumstances, to the extent that those financial effects are recognizable and measurable" (SFAC No. 6,1985; para. 145).

From an accounting income point of view, profit or net income can be defined as the net change in stockholder's equity that arises from operations during a specified period of time. Under this definition it includes all changes in equity except those resulting from new investments by or distributions to equity participants. Also, net income is arising from revenues which are the increases in assets or decreases in liabilities and expenses which result from the decreases in assets or increases in liabilities. Because of the nature of profit, its measure depends on the monetary amounts assigned to single equity components: assets and liabilities (Bertoni and Rosa, 2005; 8).

Therefore, Johnson (2004) states that this can be called as "assets and liabilities view". Accordingly increases in economic resources and obligations increase the entity's wealth, and as opposed to this losses result from changes in resources and obligations decrease its wealth. The cash basis evaluation of shareholders equity (both at the beginning and at the end of period) and profit resulting in financial statements, are therefore , dependent on the measurement attributes used for assessing assets and liabilities (Bertoni and Rosa, 2005; 9).

Accounting income contains the aspects of both economic and permanent income; however it does not directly measure either income concept. Also due to the nature of accrual accounting which includes standards, estimation errors, the trade off between relevance and reliability, and the latitude in application; accounting income is less useful for reflecting economic reality (Zhang, 2003; 16).

According to Lever (2006), there is a need for single global accounting language. In order to generate sustainable cash flows; accounting standards and framework for financial reporting which is based on economic reality are needed. This idea can be based on Luca Pacioli's model. He states that cash is the king. According to Pacioli, value creation depends on the generation of cash and the concept of profit is used as mechanism to smooth the inevitable volatility of cash flows (Lever, 2006; 1).

In Pacioli's model, the increases in the book value of assets during the period are represented as growth (G) which comprises retained profit and new investments by way of additional equity or borrowings. Its algebraic demonstration can be shown as follows (Lever, 2006; 1):

B = Borrowings
D = Dividends
E = Equity
FA = Fixed Assets
G = Growth
I = Interest
OP = Operating Profit
T = Tax
WC = Working Capital

$G = \Delta FA + \Delta WC$

So,

Retained profit = OP – T – (D + I)

New Investment = Δ E + Δ B

Growth = Retained profit + New Investment

Δ FA + Δ WC = [OP – T – (D + I)] + [Δ E + Δ B]

By rearranging the algebra, it can be seen that value creation is driven by operating cash flows:

(D + I) – (Δ E + Δ B) = OP – T – (Δ FA + Δ WC)

Cash flow from financing = Operating cash flow, post tax

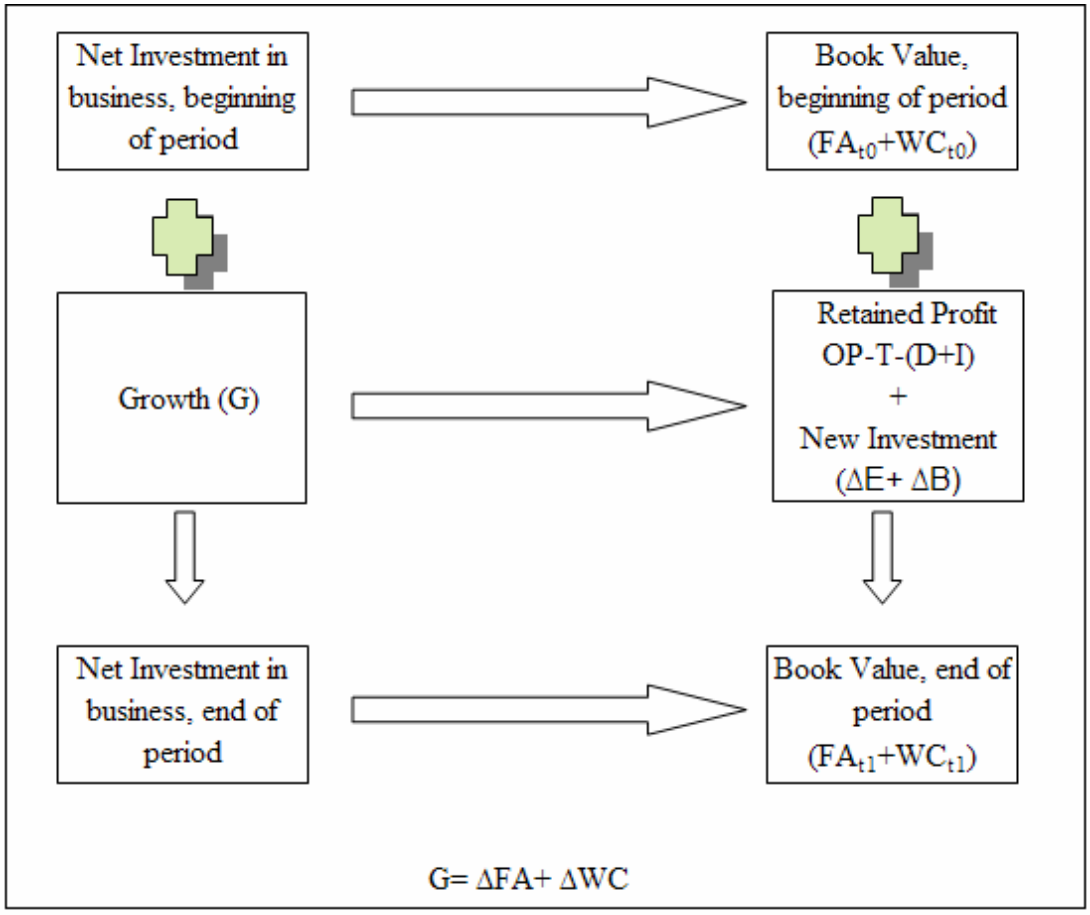
Cash flow from financing includes borrowing money from creditors and repaying debt, as well as obtaining funds from stockholders, paying dividends to stockholders, and repurchasing shares from stockholders (Soffer and Soffer, 2002; 77).

Operating activities includes the net inflows and outflows of cash, resulting from related operating activities such as extension of credit to customers, investing in inventories, and obtaining credit from related suppliers. Operating activities are related with income statement items and balance sheet items which are related to operations such as working capital accounts and accrued expenses. Changes in operating assets and liabilities are analyzed in cash flow from operations calculation to adjust income statement items (Wild et al. , 2004; 383-395) Therefore the operating cash flow post tax can be calculated as above.

The differences between the beginning and ending book values can be calculated as growth. Growth is also equal to the operating cash flows post tax.

Lever (2006) states that Pacioli's model measured performance based on period cash flows, furthermore modern cash-based performance measurement techniques are based on forward looking estimates of sustainable cash flows and will be discussed in Economic Income section.

Figure 1 summarizes the formulations given above.



(**Source:** Lever, 2006; 2)

Figure 1: Pacioli's Model (Accounting Income)

1.1.1.1 Revenue Recognition and Matching

The main purpose of accrual accounting is income measurement. The primary issues in accounting for revenue are revenue recognition and expense matching which are also the two main processes in income measurement. Revenue is recognized when it is probable that future economic benefit is gained and these benefits can be measured reliably. Revenues are recognized and then their related

costs are matched with recognized revenues to yield income. (International Accounting Standards [IAS] 18, 1993; 401)

The starting point of income measurement is revenue recognition. Accrual accounting defines revenue recognition as revenues are recognized when both earned and either realized or realizable. In order to recognize revenue, these two conditions should be matched (SFAC No. 5, 1984; para. 83):

- **Realized or Realizable**

In order to recognize revenue, a company should have received cash or a reliable commitment to remit cash. Revenues are realized when cash is acquired for products and services delivered. Revenues are realizable when an asset acquired for products or services delivered (often receivables) is convertible to cash or cash equivalents (SFAC No. 5, 1984; 7).

- **Earned**

Revenues are earned when the products and services are delivered. When the company fulfills all of its obligations to the buyer; the earning process must be completed (SFAC No. 5, 1984; 7-8).

The other main processes in income measurement is expense matching. In accrual accounting, expense matching is stated as the expenses are matched with their corresponding revenues. Expenses are defined in two types. One of these types is product costs which arise in production of a product or service. Cost of sales lump all product costs together but remain as inventory until matched with revenues. The other type of expense is period costs which are usually matched with revenues of the period. Period costs such as marketing, administrative, and financial expenses do not directly relate to production or sale of product and services. They are expensed in the period they occur. An expense is incurred when the related economic event occurs,

not the cash outflow occurs (Meigs, Williams, Haka and Bettner, 1999; 54 and 96 and Penman, 2003, 123).

1.1.1.2 Permanent, Transitory, and Value Irrelevant Components

Accounting income tries to combine elements of both permanent and economic income; however it consists of measurement errors. Accounting income has three components. One of them is the permanent component, also named as recurring components of accounting income, which is expected to persist indefinitely. It consists of the characteristics identical to the economic concept of permanent income. The other component is transitory component, also named as non-recurring component of accounting income, which is not expected to recur. It has dollar-for-dollar effect on company value. The concept of economic income includes both permanent and transitory components. The last one is value irrelevant component. It has no economic content, it is accounting distortion. It has zero effect on company value (Wild et al. , 2004; 313).

1.1.1.3 Analysis Implications

Accounting income and permanent income have different nature and purpose, therefore determining the objectives of financial analysis can be different.

Determining a company's permanent income (sustainable earning power) is a major quest in analysis therefore an analyst needs to determine the permanent components of current period income by identifying recurring (permanent) and non-recurring (transitory) components of accounting income and making appropriate adjustments. Permanent income focuses on both stable and non-recurring elements and by this way it aims to arrive at the best possible estimate of repeatable average earnings over a span of future years (Bernstein, 1989; 732).

Besides that, determining a company's economic income needs to adjust accounting income. Economic income includes everything that changes the net wealth of shareholders. From the point of this view economic income is the net change in shareholders' wealth that arises from non-owner sources. The change in the fair value of fixed assets can not be determined because they are recorded at their historical costs therefore making adjustment to determine economic income needs to realize the adjusted numbers are not faithful representation of economic income. It is also difficult to justify the need for making adjustments to determine economic income than for determining the permanent income. However, economic income is useful as the bottom line indicator of income for the period so it serves as a comprehensive measure of change in shareholder wealth (Skinner, 1998; 93-104).

1.1.2 Economic Concept of Income

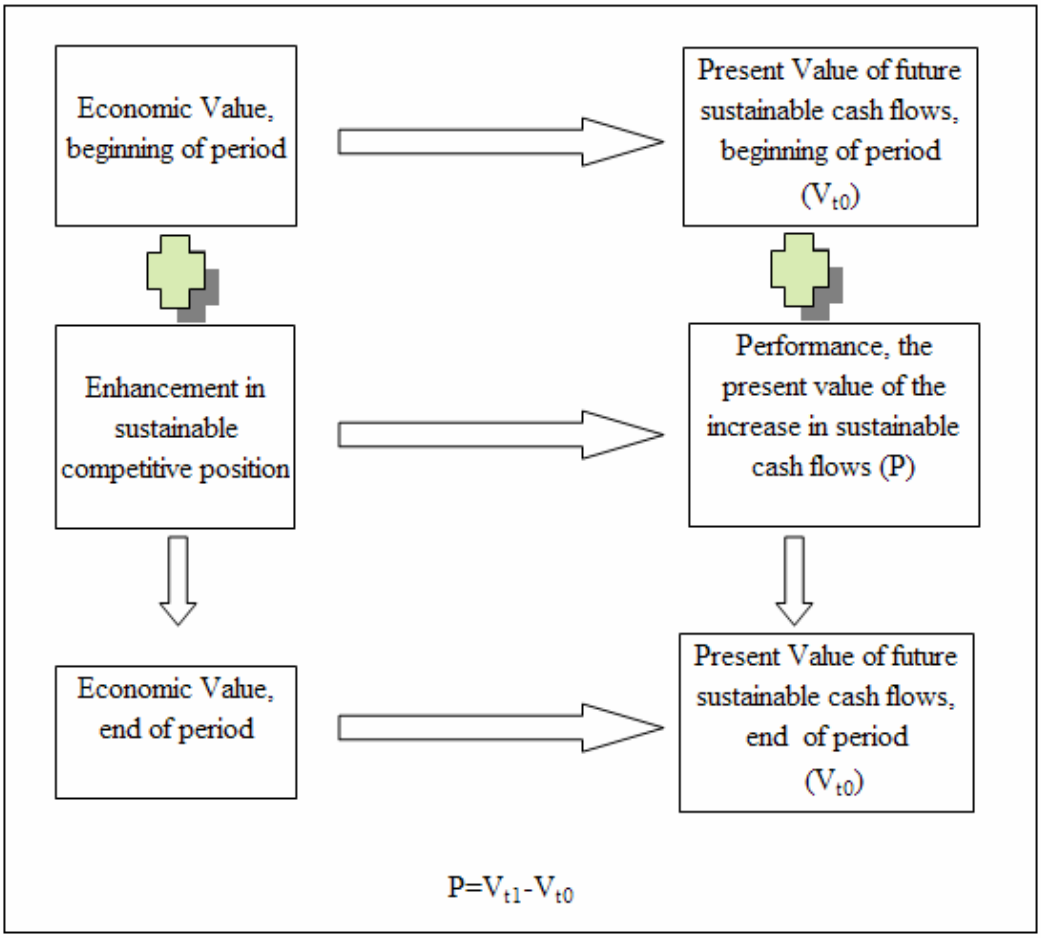
In the scope of economic concept of income, two important economic measures can be described as economic and permanent income.

1.1.2.1 Economic Income

Economic income is measured as cash flow plus the change in fair value of net assets, therefore economic income includes both realized (cash flow) and unrealized (holding gain or loss) components. This concept of income is similar to how we measure the return on a security which includes both dividends and capital appreciation or a portfolio of securities. Economic income measures change in shareholder value. In order to determine the exact return to shareholders for the period (without recourse to market price), economic income is useful. From the point of that view economic income is the bottom line indicator of company performance and reflects the financial effects of all events for the period in a comprehensive manner. Because of its comprehensive nature, economic income includes both

recurring and non-recurring components and therefore it is less useful for forecasting future earnings potential (Wild et al,. 2004; 311)

On the other hand, economic income is the bottom line indicator of company performance and performance represents the change in the present value of the sustainable future cash flows of the business (or change in its economic value). Growth, cash margin, investment, taxation and competitive position are the drivers of economic value therefore, in Figure 2; strategic position is directly reflected as financial performance (Lever, 2006; 3).



(Source: Lever, 2006; 3)

Figure 2: Economic Value Model

In light of Lever's (2006) suggestion, the difference between the economic value at the end of the period and in the beginning of the period represents the enhancement sustainable competitive position which can be assumed as performance. Consequently the difference between the present value of future sustainable cash flows at the end of period and in the beginning of period represents the present value of the increase in sustainable cash flows (performance).

1.1.2.2 Permanent Income

Permanent income, which is named as sustainable or normalized income, is the stable average income that a company is expected to earn over its life. It is assumed to be constant over a determined period. In reality permanent income can change when the earnings prospects of a company are changed. Permanent income focuses on the long term period and it is often referred as sustainable earning power which is an important concept for both equity valuation and credit analysis. Sustainable earning power is the most important indicator of a company's value. Due to its direct relation to this concept and company value, permanent income's importance and usefulness arises. Economic income measures change in company value however permanent income is directly proportional to company value. The cost of capital and permanent income are related to each other, for a going concern, company value can be expressed by dividing permanent income by cost of capital. Therefore permanent income plays an important role in financial analysis (Wild et al,. 2004; 311).

1.1.2.3 Accounting versus Economic Income

According to their definitions, accounting income may seem similar to economic income. However, accounting income is a product of the financial reporting environment that involves accounting standards, enforcement mechanisms, and managers' incentives and also accounting income is surrounded and governed by accounting rules, many of which are economically appealing and some of which are not. These accounting rules require estimates, giving rise to differential treatment of

similar economic transactions and allowing opportunities for managers to window-dress numbers for personal gain. This means accounting income can diverge from economic income. The reasons why the accounting income differs from economic income are as follows (Wild et al., 2004; 312):

- **Alternative Income Concepts**

There are many differences between economic income and permanent income concepts. Accounting standard setters are faced with a dilemma involving which concept to emphasize. While this problem is partially resolved by reporting alternative measures of income, this dilemma sometimes results in inconsistent measurement of accounting income. Some standards, for example SFAS 87, "Employers' Accounting for Pensions" adopt the permanent income concepts, for example SFAS 115, "Accounting for Certain Investments in Debt and Equity Securities" adopt the economic income concept (Wild et al., 2004; 313).

- **Historical Cost**

Historical cost generally does not reflect current values. In order to balance the objectively determined values and estimates of current values of assets and liabilities, historical cost is adjusted and historical cost values are a compromise between reliability and relevance. Therefore maintaining historical cost measures in financial statements is not entirely satisfactory, because many instruments are obtained without explicit cost and hence are off balance sheet (Beresford et al, 1996; page 69). Bertoni, and Rosa, (2005) states that fair value overcomes the shortcomings of historical cost, in which reported values are often seen as not representative of economic reality. Therefore fair value becomes a fundamental means for assessing financial performance.

The divergence between accounting and economic income is introduced by the historical cost basis of income measurement. The use of historical cost affects income in two ways (Wild et al., 2004; 313):

1) The current cost of sales is not reflected in the income statement, such as under the first in first out inventory method.

2) Unrealized gains and losses on fixed assets are not recognized.

- **Transaction Basis**

The effects of transactions are usually reflected in accounting income. Economic effects unaccompanied by a confident transaction often are not considered. Transactions are not recognized in financial statements until the transactions occur.

- **Conservatism**

Conservatism reports the least optimistic view when faced with uncertainty in measurements. The reliability and relevance of accounting information is reduced by conservatism in at least two ways. First conservatism understates the net assets and net income. It recognizes income decreasing events immediately even if there is no transaction to back it up. A second point is that conservatism delays recognition of good news in financial statements when it recognizes the bad news immediately. The effects of income increasing events are delayed until realized. Therefore recognizing bad and good news creates a conservative bias in accounting income (Holthausen and Watts, 2001; 35).

- **Earnings Management**

Earnings management causes distortions in accounting income which are derivations of accounting information from the underlying economics and has little to do with economic reality. However income smoothing can sometimes improve the ability of accounting income to reflect permanent income (Bernstein, 1989; 723-725).

Earnings management has three types. One of these types is increasing income which is a strategy to increase a period's income to present a company more favorably. The other type is big bath which is reducing current period income by poor performance, management change, merger or restructuring. Due to the unusual and non-recurring nature of big bath, users tend to discount its financial effects. This provides an opportunity to write off all past sins and also clears the deck for future earnings increases. Big bath helps companies to clean up their balance sheets, companies record one-time loss and focus only on future earnings (Levitt, 1998; 6). The last type of earnings management is income smoothing. Managers decrease or increase the reported income so as to reduce its volatility.

1.2 Measuring Accounting Income

Revenues (and gains) and expenses (and losses) are the components of accounting income. Revenues, expenses, gains and losses recognized in a period are presented in the income statement unless a primary source of GAAP (Generally Accepted Accounting Principles) requires otherwise. It is important to understand the nature and amounts of different types of revenue, expense, gains and losses (Canadian Accounting Standards Board, 2003; 2).

1.2.1 Revenues and Gains

Revenue is defined as the gross inflow of economic benefits during the period arising in the course of the ordinary ongoing business activities of an enterprise when those inflows result in increases in equity, other than increases relating to contributions from equity participants. Revenue should be measured at the fair value of the consideration received or receivable (IAS 18, 1993; para. 7-9). Revenue is stated in SFAC No. 3 as "inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) during a period from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations" (SFAC No. 3, 1980; para. 63) and

also it is stated that assets increased by revenues have various kinds for example, cash, claims against customers or clients, other goods or services received, or increased value of a product resulting from production. Similarly, the transactions and events from which revenues arise and the revenues various names and forms -for example, output, deliveries, sales, fees, interest, dividends, royalties, and rent- depending on the kinds of operations involved and the way revenues are recognized (SFAC No. 3, 1980; para. 67).

Revenues include increases in net assets that result from selling goods and services in normal courses of business. Revenues also include other income that is not result of selling a security or other asset. Gains represent increase in net assets and like revenues (Soffer and Soffer, 2002; 74). Gains are also earned cash inflows or prospective earned inflows of cash from transactions and events that are unrelated to a company's ongoing business activities. Revenue is emerged from ongoing activities but gains are not. Gains are emerged from non-recurring activities (Wild et al., 2004; 315). Gains have various kinds which are aroused from sales of investments in marketable securities, from dispositions of used equipment, or from settlements of liabilities at other than their carrying amounts, from gifts or donations, from winning a lawsuit, from thefts, and from assessments of fines or damages by courts, from price changes that cause inventory items to be written down from cost to market, from changes in market prices of investments in marketable equity securities accounted for at market values, and from changes in foreign exchange rates, or damage to or destruction of property by earthquake or flood (SFAC No.3, 1980; para. 70).

1.2.2 Expenses and Losses

Expenses are stated in SFAC No.3 "Elements of Financial Statements of Business Enterprise" as "outflows or other using up of assets or incurrence of liabilities (or combination of both) during a period from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations" (SFAC No. 3, 1980; para. 65) and also it is

stated that "The assets that flow out or are used or the liabilities that are incurred may have various kinds-for example, units of product delivered or produced, kilowatt hours of electricity used to light an office building, or taxes on current income. Similarly, the transactions and events from which expenses arise and the expenses themselves are in many forms and are called by various names-for example, cost of goods sold, cost of services provided, depreciation, interest, rent, and salaries and wages-depending on the kinds of operations involved and the way expenses are recognized" (SFAC No. 3, 1980; para. 66).

Expenses are incurred outflows, prospective outflows, or allocations of past outflows of cash that arise from a company's ongoing activities however losses are decreases in a company's net assets arising from peripheral or incidental operations of a company. The timing of these expenses and losses are important because it is a matter of when they are incurred and, often based on matching them with revenues generated (Wild et al., 2004; 315 and Soffer and Soffer, 2002; 74). Expenses and losses are outflows while revenues and gains are inflows. Therefore the outflows of the events and transactions that cause gains can be as losses.

1.3 Alternative Income Classifications and Measures

American Institute of Certificated Public Accountants (AICPA) Special Committee recommended that the financial statements "report separately the effects of core and non-core activities and events, measure at fair value non-core assets and liabilities" and it said that "the goal of distinguishing between the effects of core (recurring) and non-core (nonrecurring) activities is to present the best possible information with which discern trends in a company's business" (FASB, 2002; 79-81). These terms can be used to display the items in an income statement. Accordingly income can be classified in two major dimensions. These are operating (core) versus non-operating (non-core) activities. These two classifications are different both in their nature and purposes. The operating versus non-operating classification depends primarily on the source of revenue and expense whether it arises from ongoing operations of the company or from its investing or financing

activities. The recurring versus non-recurring classification depends on the behavior of the revenue or expense whether it is expected to persist or it is a one time event (Wild et al., 2004; 315).

1.3.1 Recurring and Non-recurring Income

In order to determine the permanent and transitory components of income, classifying income components as recurring or non-recurring is of great importance. Revenues and expenses are discussed as recurring items, beside gains and losses which are already discussed as non-recurring items, which is already discussed in Measuring Accounting Income section. In this section non-recurring items will be discussed. Categorizing items as recurring and non-recurring can develop better assessments of future profitability. Bernstein (1989) states that managements are almost always concerned with the manner in which the periodic results are reported. To that extent, most investors and traders accept the reported net income figures, as well as modifying explanations that accompany them. Thus non-recurring items often become the means by which management attempt to modify the reported operating results and the means by which they try to explain their results.

1.3.1.1 Non-recurring Items

Non recurring items are extraordinary items, discontinued segments, accounting changes, and special items (restructuring charges and asset impairments) (Wild et al., 2004; 319).

1.3.1.1.1 Extraordinary Items

Extraordinary items are unusual and have infrequent occurrence. They are classified separately in income statements. In order to classify the items as extraordinary, an item must be both unusual in nature and infrequent in occurrence.

Any item that is either unusual or infrequent (not both) can not be classified as an extraordinary item. Unusual nature can be stated as an event or transaction that has degree of abnormality. It is random, nonrecurring and erratic and also is unrelated to, or only incidentally related to, the ordinary and typical activities of the company. Infrequent occurrence can be stated as an event or transaction that is not reasonably expected to recur in the foreseeable future (Bernstein, 1989; 726).

Wild et al. (2004) state that extraordinary items are non-recurring in nature. Therefore they are excluded when computing permanent income. Also they are excluded from income when making comparisons over time or across companies. While extraordinary items are transitory, they yield a cost (or benefit) on the company. Therefore extraordinary items are included when computing economic income.

Wild et al. (2004) also state that extraordinary items are operating in nature. However, they differ from normal operating revenues and expenses since they are non-recurring. Thus, extraordinary items that arise from a company's operations are included when computing operating income but excluded when computing permanent income. Extraordinary items also reveal risk exposures of a company. In some cases, extraordinary items may recur, although infrequently. Therefore these items can be considered when evaluating sustainable earning power.

Additionally, it is also stated in International Accounting Standards (IAS) 8 (2003) that the 2003 improvements of IAS excluded "extraordinary items" from the face of financial statements.

1.3.1.1.2 Discontinued Operations

Discontinued operations include all the items of income, expense, gain, and loss related to the operations of the firm's business that it intends to sell or dispose of it (Soffer and Soffer., 2002; 74). In order to qualify an operation as discontinued operation, the assets and business activities of the divested segment must be clearly

distinguishable (both physically and operationally) from the assets and business activities of the remaining entity.

Accounting and reporting for discontinued operations is twofold. The first one is excluding the effects of discontinued operations for the current and prior two years from continuing income which is called as an income before discontinued operations when discontinued operations are reported. Second, gains and losses related to the discontinued operations are reported separately, net of their related tax effects and are excluded from continuing income (Wild et al., 2004; 322 and Meigs et al., 1999; 515-516).

Wild et al. (2004) states that analysis of discontinued operations is futuristic and decision oriented. Therefore, all effects of discontinued operations must be removed from current and past income. This rule is workable whether the objective is determining operating or non-operating or in determining economic or permanent income.

1.3.1.1.3 Accounting Changes

Consistency is one of the accounting principles and means that a business should continue to use the same accounting principles and methods from one period to the next. Consistent use of accounting principles from one period to another enhances the utility of financial statements for users by facilitating analysis and understanding of comparative accounting data. However this does not mean that a company can never change its accounting methods. Companies can change their accounting principles for some reasons. They are changed because of a new accounting standard, or to better reflect changing business activities or conditions, or managers decision to window-dress financial statements. While reporting the changes in accounting principles, the cumulative effect of the change on the income statements of prior years is shown in the income statement of the year in which the change is made (Meigs et al., 1999; 519 and Bernstein, 1989; 372-373). IAS 8 states that these US oriented statements are consistent with their IAS counterparts.

Wild et al. (2004) and Bernstein (1989) state that if the new principle is preferable, the manager can switch from one accounting standard to another. Otherwise they can not switch the current standard. By this way managers are discouraged from unjustified switching among current and new standards. Accounting standards distinguish among four types of accounting changes. These are:

- Change in accounting principle

Generally the cumulative effect of the change in principle (net of tax) on the amount of retained earnings at the beginning of the period in which the change is made should be included in net income. In order to compute the one time catch-up adjustments, the income of prior years are recomputed as if the new accounting method had always been in use. The difference between the recomputed net income and the net income actually reported in these periods is the cumulative effects of the accounting changes. This cumulative effect is reported in income statement after extraordinary items, but before net income. The nature of and justification for change in principle, effects of the new principle on both net income and income before extraordinary items for the period of change including the effects of earning and pro forma effects of retroactive application of the accounting change on income before extraordinary items and net income (and related earnings per share data) are shown on the face of the income statement for all periods presented or are disclosed in notes of financial statements. When pro forma effects are not determinable, the company discloses the reasons (Bernstein, 1989; 373).

- Change in accounting estimate

Accrual accounting requires the estimation of future events such as inventory obsolescence, useful lives of property, warranty costs, or uncollectible receivables. These are known as accounting estimates and based on unknown future conditions

and also these accounting estimates can change. When the change occurs in accounting estimates, the followings are required (SFAS No. 154, 2005; 25);

1) Retroactive restatement is prohibited.
2) The change should be accounted for in the period of change and, if applicable, future periods.

3) A change in accounting estimate that is recognized by a change in accounting principle should be reported as a change in estimates.

4) Disclosure is required of the effects of the change on both net income and income before extraordinary items (including earnings per share) for the current period only, even when a change affects future periods.

- Change in reporting entity

A change in the reporting entity can arise from initial presentation of consolidated financial statements and changes in consolidation policy regarding subsidiaries and a pooling of interest (Wild et al., 2004; 324 and Bernstein, 1989; 375).

- Correction of an error

SFAS No. 154 (2005) states that errors can arise from arithmetic mistakes in application of accounting principles, or mistakes of information disclosure in financial statements. The correction of an error is not considered as the nature of an accounting change; instead the correction of an error should be treated as prior period adjustment to the beginning balance of retained earnings for the period when it is discovered. Disclosure includes the effect on previously reported income before extraordinary items and net income (and related earnings per share data).

Accounting changes affect both economic and permanent income. In order to estimate permanent income, the numbers under the new method are used and cumulative effect is ignored. To estimate economic income of the current period, both the current and cumulative effects are included (Wild et al., 2004; 324 and Bernstein, 1989; 375).

1.3.1.1.4 Special Items

Special items are transactions or events which are unusual or infrequent, but special items are not both unusual and infrequent. They are reported on income statements before continuing income. Special items are often non-routine items that do not meet the criteria for classification as extraordinary. Asset impairments and restructuring charges are types of special items. There are two differences between these types. First, reconstruction charges are associated with major reorganization of a company as a whole or within a division however, asset impairments are narrower. It involves the write-down or write-off of a class of assets. Second, the asset impairments are accrual accounting adjustments, while restructuring charges often involve substantial cash flow commitments either contemporaneously or in the future (Wild et al., 2004; 326).

Assets are impaired when its fair value is below its carrying value (the book value in the balance sheet). They are also different from disposals of segments. In a disposal, a company sells one or more assets or a business segment, and ceases to operate the disposed assets; on the other hand, an impaired asset when it can be sold or disposed, is often retained in the company and operated at a reduced level (SFAS 121, 1995; para.2). Therefore asset impairments are special items but disposals are discontinued operations.

Reconstructing charges are different from asset impairments. They are usually associated with major changes in a company's business and strategy. It includes divestment of business units, termination of contractual agreements, discontinuation of product lines, worker retrenchments, change in management, and writing off of

assets often combined with new investments in plant, technology and manpower (Wild et al., 2004; 329).

These one time charges seriously affect earnings patterns and trends. Therefore it is important to make adjustments for determining the effects of special charges on permanent income which reflects the profitability of a company under normal circumstances. For example, restructuring charges usually impact several different years, therefore prior years' reports are needed to estimate the impact of allocating past restructuring charges in determining permanent income. On the other hand, the determination of economic income involves measuring the effects on equity of all events that occur in the period so entire amount of any special charges is included when determining economic income.

1.3.1.2 Alternative Measures of Accounting Income

Income statements report three alternative income measures (Wild et al., 2004; 316). These are:

1) Net Income, is the bottom line measure of income. GAAP allows a number of direct adjustments to equity, called as dirty surplus items, that by-pass the income statement. An alternative measure of net income is defined as comprehensive income.

2) Comprehensive Income consists of all changes to equity, other than those from owner activities. Thus comprehensive income is bottom line measure of income and is the accountant's proxy for economic income. Comprehensive income reflects certain unrealized holding gains and losses therefore it is different from the net income.

3) Continuing Income is an intermediate measure of income. It is a measure that excludes extraordinary items, cumulative effects of accounting changes, and the effects of discontinued operations. Because of this, continuing income is often

called as income before extraordinary items, income before discontinued operations, or income before cumulative effect of accounting change.

Beside these measures, many analysts compute another income measure which is named as core income. This is a measure that excludes all non-recurring items that are reported as separate line items on the income statement.

1.3.2 Operating and Non-operating Income

Operating income is a measure of company income which arises from ongoing activities. Operating income has three important aspects. First, it arises from income generated transactions from ongoing operating activities. Therefore, any revenue (and expense) not related to operations is not part of operating income. Second, financing revenues and expenses are excluded when measuring operating income. Operating income focuses on whole picture of income rather than equity holders. Operating income is a comprehensive measure of company income that is independent from a company's financing decisions. It is useful to separate investing and operating decisions. Operating income before taxes is similar to earnings before interest and taxes, while operating income after taxes is similar to net operating profit after taxes. On the other hand non-operating income includes all components of income which are not included in operating income (Wild et al., 2004; 317).

1.3.3 Comprehensive Income

Comprehensive income includes all the changes in equity during a period except resulting from investments by owners and distributions to owners (Beresford et al., 1996; 69). GAAP has long espoused the comprehensive income or all-inclusive concept of income where the bottom-line income number reflects all changes in shareholders' equity arising from other than owner transactions. The Canadian Accounting Standards Board (2005) states in its Handbook Section 3251, that equity would be named as surplus which requires a company to present changes separately

in equity arising from different sources, and the components of equity. The bottom-line income numbers articulate with equity and this articulation is named as clean surplus. Nevertheless, certain components of comprehensive income are bypassed the income statement as direct adjustment to equity. These adjustments are named as dirty surplus, and have increased in importance and magnitude in recent years.

Kanagaretnam, Mathieu and Shehata (2004) states that the dirty surplus motivation results from concerns about excessive income volatility if all changes to equity flow through the income statement. Many users are concerned with the fact that allowing changes to equity bypass the income statement will reduce the reliability of accounting income. To address these concerns, companies are required to report a measure of comprehensive income in addition to net income. Comprehensive income is computed by adjusting net income for dirty surplus items, collectively called other comprehensive income. The accountants' proxy for economic income attaches importance to comprehensive income for financial statement analysis.

It is believed that comprehensive income is more preferable than net income, where net income measure purports to estimate neither economic nor sustainable income. Comprehensive income is used in determining economic income and the components of other comprehensive income such as unrealized holding gains (losses) on marketable securities and derivative instruments, foreign currency translation and additional minimum pension liability adjustments are also used. Unrealized gains and losses arising from investment and/or derivative securities are the legitimate part of economic income. However unrealized holding gains on investment securities, reported as part of other comprehensive income, excludes holding gains on held to maturity securities. Similarly foreign currency translation adjustments must be included however the additional minimum pension liability adjustment must be excluded when determining economic income because it arises from an artificial accounting distinction that has little effect on economic meaning (Wild et al. 2004; 318).

According to some analysts, all components of comprehensive income are irrelevant however, Dhaliwal et al (1999) state that the only component of comprehensive income that improves the association between income and return is marketable securities adjustment which is also relevant for equity valuation. This implies the components of comprehensive income are irrelevant for determining permanent income, which is probably a more important measure for equity valuation than is economic income.

Standards Advisory Council (SAC) states, in its Project Update entitled as Reporting Comprehensive Income in 2003, that in order to provide some indication of underlying business performance; there is a need to develop income statement in which fair value movements are shown separately. According to Bertoni and Rosa (2005) fair value can be obtained by the intricate merge of different lower level measurement attributes such as market values, discounted future cash flows, replacement costs and etc. some of these values are obtained from sale markets while others result from purchasing markets. However all these attributes have, nonetheless, something in common: they are all characterized by their plain orientation to present or future values.

Problems arouses from the measurement of fair value of assets and liabilities in measuring profit and loss (Bertoni and Rosa, 2005; 11). In IAS 39 (1998) in paragraph 55, it is stated that "a gain or loss on available for sale financial assets shall be recognized directly in equity, through the statement of changes in equity, except for impairment losses and foreign exchange gains and losses, until the financial asset is derecognized, at which time the cumulative gain or loss previously recognized in equity shall be recognized in profit or loss".

In IAS 16 (2003) in paragraph 39, it is stated as "if an assets' carrying amount is increased as a result of a revaluation, the increase shall be credited directly to equity under the heading of revaluation surplus. However, the increase shall be recognized in profit or loss to the extent it reserves a revaluation decrease of same assets previously recognized in profit or loss". Therefore an increase in an asset's carrying

amount due to a revaluation to fair value shall be credited directly to shareholders' equity and its value does not sum up in the determination of net income (Bertoni and Rosa, 2005; 13).

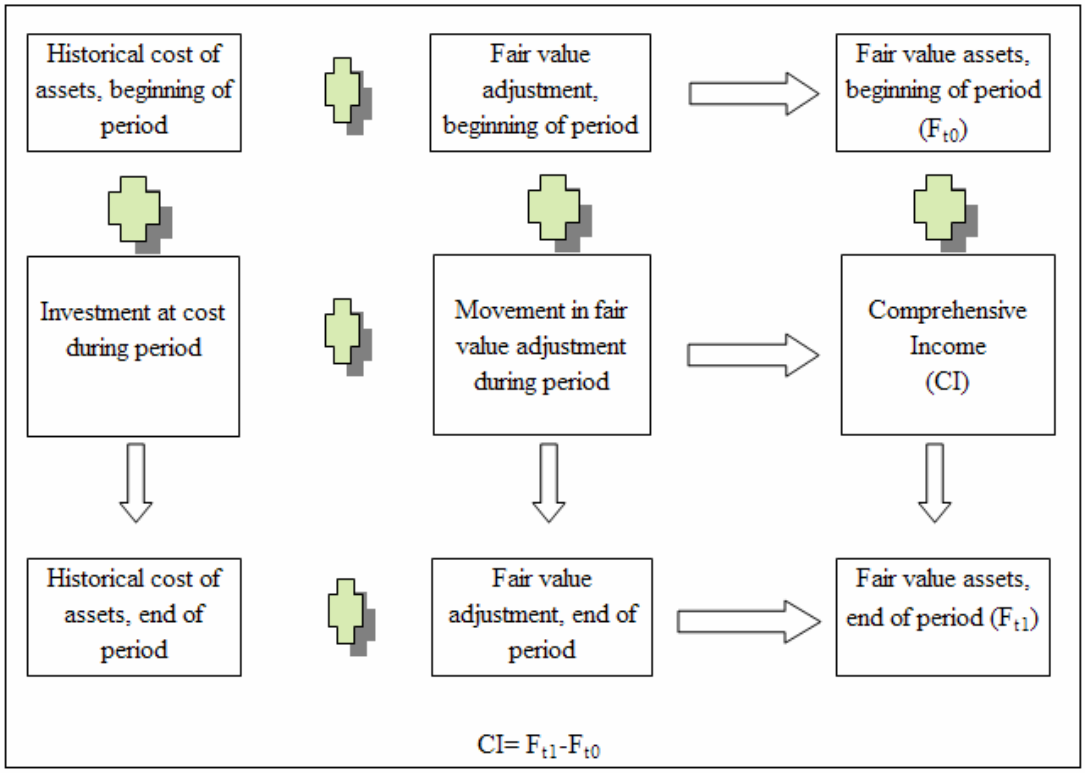
A fair determination of income is of great importance since at least the 1930s. It is a reasonable to connect a change in reporting emphasis from the balance sheet to the income statement with the change in the primary user group: there is a shift to investors and stockholders from managers and creditors for providing information (Robinson, 1991; 107). Therefore fair value adjustments are included in the calculation of comprehensive income and this is why comprehensive income becomes more important.

In both Luca Pacioli's (accounting income) model and economic value model, increases or decreases in profit that result from upward and downward movements in asset values do not affect cash flow and do not have any bearing on the measured business performance. However in the figure for comprehensive income model, the movements in assets value are demonstrated and affect the measured performance in comprehensive income model. As a result, comprehensive income model does not represent the combination of accounting income model and economic value model. It is another approach (Lever, 2006; 4).

The differences between the fair values of assets at the beginning and end period have been calculated as comprehensive income. Also it can be recalculated as investment at cost during the period sum up with movement in fair value adjustment during the period. By this way while calculating the net income, the changes in assets and liabilities values are credited directly to shareholder equity and causes dirty surplus; it is different in calculating comprehensive income. These changes are calculated in comprehensive income measurement and causes clean surplus. These calculations are summarized in Figure 3.

Lever (2006) also states that some fair value adjustments may indicate future cash flows; they take no account of the intangible drivers of long term economic

value. As it is mentioned before comprehensive income model is same as neither economic value model nor Luca Pacioli's model. It is also different in cash flow side. Comprehensive income model does provide users of financial statements with the basic measurement of performance based on cash flows in the period as provided by Luca Pacioli, and the forward looking assessment of future cash flows provided by economic value model. It is between these two approaches. However, Lever (2006) believes that it actually makes more difficult for users of financial statements to assess underlying business performance.



(**Source:** Lever, 2006; 4)

Figure 3: Comprehensive Income Model

Comprehensive income will be discussed in the following chapters in detail.

CHAPTER II

BASICS OF COMPREHENSIVE INCOME

In this chapter comprehensive income and its components will be discussed. The different definitions of comprehensive income are given in frame of FASB. Then, the components of comprehensive income are discussed in detail, additionally revaluation funds are presented as an alternative component of comprehensive income.

2.1 Definitions and Components of Comprehensive Income

"Comprehensive income is a broad measure of the effects of transactions and other events on an entity, comprising all recognized changes in equity (net assets) of the entity during a period from transactions and other events and circumstances except those resulting from investments by owners and distributions to owners" (SFAC No.5, 1984; 6).

Comprehensive income consists of two related but distinguishable types of components. It consists of not only basic income components such as revenues, expenses, gains and losses -which can be combined in various ways to measure the performance of enterprises; but also various intermediate components. Some of these intermediate components are gross margin, income from continuing operations before tax, income from continuing operations, and operating income. Those intermediate components are also subtotals of comprehensive income and they can be combined with each other or with the basic components of intermediate measures of comprehensive income. Financial statement users' desire to obtain information that reflects the differences between basic components of income as well as other components of comprehensive income that result from combining basic components in various ways (SFAC No.6, 1985; para. 77).

Therefore information about intermediate components is of great importance as well as information about basic components. These two different components show the whole picture of an entity in detail. Additionally, “information about various components of comprehensive income is usually more useful than merely its aggregate amount to investors, creditors, managers, and others who are interested in knowing not only that an entity's net assets have increased (or decreased) but also how and why” (SFAC No.6, 1985; para. 219) .

2.1.1 Definitions of Comprehensive Income

The term comprehensive income was first introduced in Concept Statement No. 3, “Elements of Financial Statements of Business Enterprises which was issued in December 1980. However until the issuance of this statement, the term comprehensive income was used to communicate the same notion as earnings in FASB Concepts Statement No. 1, “Objectives of Financial Reporting by Business Enterprises”, which was issued in November 1978. In Concept Statement 3, FASB decided to use comprehensive income rather than earnings, because it wanted to reserve earnings for possible use to designate a different concept that was narrower than comprehensive income.

In Concept Statement No. 1 (1978), it is stated that “over the life of business enterprise, its comprehensive income equals the net of its cash receipts and cash outlays, excluding cash (and cash equivalent of non-cash assets) invested by owners and distributed to owners” (SFAC, 1978; para. 46). Recognition criteria and choice of attributes to be measured also do not affect the amounts of comprehensive income and net cash receipts over the life of an enterprise but do not affect the time and way parts of the total are identified with periods that constitute the entire life. The major difference between accounting based on cash receipts and outlays and accrual accounting is the timing of recognition of revenues, expenses, gains, and losses. (SFAC No. 6, 1985; para. 73)

Comprehensive income is defined in Concept Statement No. 6, "Elements of Financial Statements" as "the change in equity [net assets] of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners" (SFAC No.6, 1985; para. 70). Comprehensive income sources are therefore significant to those attempting to use financial statements to help them with investment, credit, and similar decisions about the enterprise, especially since various sources may differ from each other in stability, risk, and predictability. Users' desire for information about those sources underlies the distinctions between revenues, expenses, gains, and losses as well as other components of comprehensive income that emerge from combining revenues, expenses, gains, and losses in various ways (SFAC No.6, 1985; para. 73-77).

Comprehensive income is defined as a return on financial capital. SFAC No.6 states that comprehensive income of a business enterprise emerges from (SFAC No.6, 1985; para. 70):

(a) Exchange transactions and other transfers between the enterprise and other entities that are not its owners,

(b) The enterprise's productive efforts,

(c) Price changes, casualties, and other effects of interactions between the enterprise and the economic, legal, social, political, and physical environment of it is part.

The ongoing major activities of an enterprise are its productive efforts and most of its exchange transactions with other entities. They constitute the enterprise's central operations by which it attempts to fulfill its basic function in the economy of producing and distributing goods and services at prices that are sufficient to enable it

to pay for the goods and services it uses and to provide a satisfactory return on owners. (SFAC No. 6, 1985; para. 74)

In Concept Statement No. 5 (1984) , "Recognition and Measurement in Financial Statements of Business Enterprises", it is stated that "comprehensive income is a broad measure of the effects of transactions and other events on an equity, comprising all recognized changes in equity (net assets) of the equity during a period from transactions and other events and circumstances except those resulting from investments by owners and distributions to owners" and also "statement of earnings and of comprehensive income together reflect the extent to which and the ways in which the equity increased or decreased from all sources other than transactions with owners during a period". FASB concluded that comprehensive income and its components should be reported as part of a full set of financial statements for a period and also possible differences between earnings and comprehensive income are illustrated.

In Statement of Financial Accounting Standard (SFAS) No.130, "Reporting Comprehensive Income", the term comprehensive income is used to describe the total of all components of comprehensive income, including net income. The term used for comprehensive income refers to revenues, expenses, gains, and losses that under generally accepted accounting principles are included in comprehensive income but excluded from net income (SFAS No. 130, 1997; para. 10).

2.1.2 Components of Other Comprehensive Income

In order to implement the concept of comprehensive income, SFAS No. 130 (1997) presents that all the items that meet the definition of component of comprehensive income be reported in financial statements for the period in which they are recognized. In order to realize it, Statements No.s 52, 80, 87 and 115 are required to define the component of comprehensive income items. Prior to the issuance of SFAS No. 130, FASB had not required that comprehensive income and its components be reported as a part of full set of financial statements. However,

several accounting standards required that certain items that qualify as components of comprehensive income bypass a statement of income and be reported in a balance within a separate component of equity in a statement of financial position (SFAS No. 130, 1997; para. 5 and 39). Those items are:

a) Foreign currency translation adjustments (Statement 52, paragraph 13)

b) Gains and losses on foreign currency transactions that are designated as, and are effective as, economic hedges of a net investment in a foreign entity, commencing as of the designation date (Statement 52, para. 20 (a))

c) Gains and losses on intercompany foreign currency transactions that are of a long-term-investment nature (that is, settlement is not planned or anticipated in the foreseeable future), when the entities to the transaction are consolidated, combined, or accounted for by the equity method in the reporting enterprise's financial statements (Statement 52, para. 20 (b))

d) A change in the market value of a futures contract that qualifies as a hedge of an asset reported at fair value pursuant to Statement 115 (Statement 80, para. 5)

e) A net loss recognized pursuant to Statement 87 as an additional pension liability not yet recognized a net periodic pension cost (Statement 87, para. 37)

f) Unrealized holding gains and losses on available for sale securities (Statement 115, para. 13)

g) Unrealized holding gains and losses that result from a debt security being transferred into the available for sale category from the held to maturity category (Statement 115, para. 15 (c))

h) Subsequent decreases (if not an other than temporary impairment) or increases in the fair value of available for sale securities previously written down as impaired (Statement 115, para. 16)

Some of the items given above are interrelated. These items and also the others will be discussed in the following sections in detail.

Items required by accounting standards to be reported as direct adjustments to paid-in capital, retained earnings, or other non-income equity accounts are not included as components of comprehensive income (SFAS No. 130, 1997; para. 108-119)

Maines and McDaniel (2000) state that some of other comprehensive income items are related with core-business activities; therefore they are relevant for making judgments of firms' corporate and management performance and valuation. Also, the components of other comprehensive income emerge from economic and market forces that affect the value of assets and liabilities of the entity (Carlson, Mooney, and Schwieger, 1999; 50)

2.1.2.1 Foreign Currency Items

The foreign currency translation adjustment is one of the major components of comprehensive income. In order to incorporate foreign currency transactions and foreign currency financial statements in its financial statements, an enterprise must translate its all assets, liabilities, revenue or expenses which are measured in foreign currency and denominated in foreign currency. This can arise in either of two ways. One of them is foreign currency transactions which contain four subtitles which are- an enterprise buys or sells on credit goods or services whose prices are stated in foreign currency, it borrows or lends funds and amounts payable or receivable are denominated in foreign currency, it is a party to an unperformed forward exchange contract, or for other reasons it acquires assets or incurs liabilities denominated in foreign currency. The other is foreign operations such as an enterprise conducts

activities through a foreign operation whose assets, liabilities, revenue, and expenses are measured in foreign currency (SFAS No. 8, 1975; para. 3).

SFAS No. 8, Accounting for the "Translation of Foreign Currency Transactions and Foreign Currency Financial Statements" (1975), has been issued after the collapse of the fixed rate regime. This statement prescribes the temporal rate method. Under the temporal rate method monetary items are measured at the current exchange and non-monetary items such as amortization of intangibles, cost of goods sold, deferred charges and depreciation are remeasured at historical exchange rate. Generally other expenses and revenues are remeasured at the average exchange rate, because of the remeasurement of the accounts at different rates. In general the basic accounting identity no longer holds and a transaction adjustment gain or loss account is designed to reestablish the identity. Any adjustment gain or loss is placed to net income.

SFAS No. 8 has also been criticized, according to criticizers treating the foreign exchange gain or loss as a component of net income distorted operating results. The short term fluctuations in exchange rates caused increases in volatility of the earnings, because the foreign exchange gain and losses are posted to net income. In order to review this issue, SFAS No. 52, "Accounting for Foreign Currency Translation", has been issued in 1981. The new statement uses the current rate method. Under the current rate model, all assets and liabilities are translated at the current rate and owners' equity at historical rates. However income statement items are translated at the rate in effect at the time the item is recognized. The basic accounting equation can not be hold because the balance sheet items are translated at different rates. In order to reestablish the equilibrium, a transaction adjustment is made to owners' equity (Louis, 2001; 9).

Foreign currency translation adjustments and foreign currency transactions are different and under the SFAS No. 52 and they are stated as follows (SFAS No. 52, 1981; 5):

- Translation adjustments arise from the process of the foreign entity's financial statements from functional currency, which is the currency of the primary economic environment in which that entity operates, to foreign currency. "Translation adjustments are not included in determining net income for the period but they are disclosed and accumulated in a separate component of consolidated equity until sale or until complete or substantially complete liquidation of the net investment in the foreign entity takes place".

- Transaction gains and losses arise from the effect of exchange rate changes on transactions denominated in currencies other than the functional currency. Generally gains and losses on those foreign currency transactions are included in determining net income unless the transaction hedges a foreign currency commitment or a net investment in a foreign entity.

SFAS No. 52 states that "translation adjustments arise from either consolidation or equity method accounting or a net investment in another entity having a different functional currency from that of the investor" (SFAS No.5, 1981; para. 110) and "translation adjustments shall not be included in determining net income but shall be reported separately and accumulated in a separate component of equity" foreign currency transactions are in the same manner as translation adjustments for- Gains and losses on foreign currency transactions that are designated as, and are effective as, economic hedges of a net investment in a foreign entity, commencing as of the designation date and gains and losses on intercompany foreign currency transactions that are of a long-term-investment nature when the entities to the transaction are consolidated, combined, or accounted for by the equity method in the reporting enterprise's financial statements" (SFAS No.5, 1981; para. 13 and 20).

Translation adjustments have no direct effect on reporting currency cash flows. Exchange rate changes have an indirect effect on the net investment that may be realized upon sale or liquidation however that effect is related to net investment and not to the operations of the investee. FASB members study on the nature of translation adjustments and they consider two views and both views exclude the

adjustments from net income and include them in equity (SFAS No. 52, 1981; para. 111-117):

The first view is described in terms of an investor currency with the dollar as the reporting and functional currency and in investment position in another entity with a functional currency than the dollar. The change in exchange rates cause differences in the dollar equivalent of net investment although there is no change in the net assets of the other entity measured in functional currency. A favorable exchange rate changes enhances the dollar equivalent however unfavorable change reduces it. This change in the dollar equivalents of the net investment is an unrealized enhancement or reduction.

Therefore, they have no effect on functional currency net cash flows generated by the foreign entity which may be currently reinvested or distributed to the parent. Because of that reason the translation adjustment is reported separately from net income and is accumulated separately as part of equity. As it is mentioned above comprehensive income is the change in equity (net assets) of an entity during a period from transactions from non-owner sources. Therefore according to first view the translation adjustment is an unrealized component of comprehensive income and should be reported separately from net income.

Beside that the second view states that the translation adjustment for a period should be excluded from the determination of net income, reported separately, and included as a separate component of equity. In this respect, it represents a restatement of previously reported equity.

Concepts Statement No.3, in paragraph 58, anticipates that such restatements would be made to equity without being included in current-period comprehensive income. FASB considers whether at some time the separately reported component of equity should be included in net income. Under the first view, the adjustments have already been included in comprehensive income and should not be included again. Any elimination of the separate component of equity should be accomplished by

combining the different classes of items in equity. Under the second view, the translation adjustments are a direct restatement of equity, a form of capital adjustment.

2.1.2.2 Minimum Pension Liability Adjustments

Pensions are a major employee benefit cost designed to contribute to security after retirement. The formulations of pension commitments are different in one company to another. They use a variety of ways by means of pension plans. A pension plan is an agreement by the employer to provide pension benefits to the employee, and it consists of three entities. These are employer who contributes to the plan, the employee who derives benefits, and pension fund. Among these entities pension fund is independent of the employer and is administered by trustees. The flows between these entities can be summarized as the pension fund receives contributions, invest them in an appropriate manner, and disburses pension benefits to employees (Wild et al, 2004; 137).

Pension plans specify the benefits and the rights and responsibilities of the employer and employees. Pension plans can be divided into two categories. Defined benefit plans specify the amount of pension benefits that the employer promises to provide to retirees usually as a function of one or more factors such as age, years of service, or compensation. Under defined benefit plans, the risk of pension fund performance is born by employer. The other category is defined contribution plans which specify the amount of pension contributions that the employer makes the pension plan while the amount of the employee's pension depends on the performance of the pension fund so the employee bears the risk (SFAS No. 87, 1985; 98-99). In both employee benefits are usually determined through a formula linked to employee wages. Defined contribution plans immediately obligate the employer to pay some fixed proportion of the employees' current compensation, whereas defined benefit plans require the employer to periodically pay the employee a predetermined sum of money after retirement until the employee's death.

Pension payments are also affected by vesting provisions where vesting is an employee's right to pension benefits regardless of whether the employee remains with the company or not (SFAS No. 87, 1985; 106).

The amount of the pension expenses has been determined by reference to the plan provisions and the relevant actuarial assumptions. Funding expenses become a managerial decision plan that is influenced by legal and tax considerations. Tax law specifies minimum funding requirements to ensure the security of retirees' benefits and also it has tax deductibility limitations for overfunded pension plans. Pension plans can be underfund by retaining a liability for accrued pension cost or it can be overfund by preparing future pension cost (Bernstein, 1989; 330).

SFAS No. 87 defines the concept of pension obligations as accumulated benefit obligation which is the actuarial present value of the future pension benefits payable to employees at retirement based on their current compensation and service date (SFAS No. 87, 1985; para. 18) and projected benefit obligation which is the actuarial estimate of future pension benefits payable to employees on retirement based on expected future compensation and service to date and vested benefit obligation which is the employer's obligation for a pension which is not contingent on the beneficiary remaining an employee(SFAS No. 87, 1985; para. 17).

According to Obinata (2002), minimum pension liability is a balance by subtracting the fair value of pension assets from accumulated benefit obligation; therefore it is recorded as pension liability on the balance sheet. The off-balanced pension obligation can not exceed the difference between projected benefit obligation and accumulated benefit obligation. Consequently, minimum pension liability is booked as negative other comprehensive income. It is not charged to net income; it is directly deducted from net stockholder's equity.

Similar to Obinata (2002), SFAS No. 87 specifies that if the accumulated benefit obligation exceeds the fair value of plan assets, an additional balance sheet liability for pension must be recognized. Hence, an unfunded benefit obligation is recognized.

The recording minimum pension liability as a credit to an appropriately designated liability account requires an offsetting debit which will be to an intangible asset and be a future economic benefit as well. However, if intangible asset exceeds the company's unrecognized prior service cost, a different accounting is required.

Therefore, unrecognized net cost must be recognized in that the debit is charged to a separate component of equity and must be included in comprehensive income, net of any tax benefits that result from considering such losses as timing differences for tax accounting purposes. As a result of them, the entry record an additional minimum pension liability may create both an intangible pension asset and a contra shareholders' equity account and separate component of equity shall be adjusted necessary (SFAS No. 87, 1985; para. 36-38 and 155-159).

2.1.2.3 Unrealized Gains and Losses on Certain Investment in Debt and Equity Securities

Companies invest assets in investment securities which are also named as marketable securities. Investment securities can be in the form of debt and equity securities. The purpose of the investments and the type of securities that a company invest are determined the form of securities. If securities represent a creditor relationship with other entities such as corporate bonds, government bonds, notes, municipal securities, and convertible debt, these securities are named as debt securities. On the other hand if securities represent ownership interest in another entity such as common stock and non-redeemable preferred stock, these securities are named as equity securities. Generally investment securities are parts of financial activities rather than operating, assets. However, in financial institutions and insurance companies such investments are parts of operating assets (Wild et al., 2004; 213).

SFAS No. 115 (1993) also addresses the accounting and reporting for investments in equity securities and debt securities.

The equity and debt securities bear both realized and unrealized gains and losses. To the extent that Barth, Landsman and Wahlen (1995) state that unrealized gains and losses that are accounted from investment securities are the most important and volatile component of comprehensive income.

AIMR (1993) also states that the clear disclosure of marketable securities gains and losses in a statement of performance should make "gains trading … evident to an astute analysts who looks closely … at an institution's sources of earnings". Therefore these gains and losses have been evaluating under the lens of the components of other comprehensive income.

2.1.2.3.1 Debt Securities

Debt securities represent a creditor relation with an enterprise and they are classified in three categories. This classification is based on the intent (purpose) of the investments. The types of debt securities are held-to- maturity securities, trading securities, and available for sale securities (SFAS No. 115, 1993; para. 137). SFAS No. 115 "requires companies to classify investments not accounted for under the equity method nor in consolidated subsidiaries into one of these three categories" (Rambo and Lousteau, 2003; 128).

SFAS No. 115 also expands the use of fair value accounting for these three types of securities. However it retains the use of amortized cost method for investments in debt securities (SFAS No. 115, 1993; para. 1).

These three types have different accounting. Reporting them in financial statements is generally different. Therefore Figure 4 shows the accounting for each class of debt securities.

	ACCOUNTING		
		Income Statement	
Category	**Balance Sheet**	**Unrealized Gains/Losses**	**Other**
Held-to-Maturity	Amortized Cost	Not recognized in either net income or comprehensive income	Recognize realized gains/losses and interest income in net income
Trading	Fair value	Recognized in net income	Recognize realized gains/losses and interest income in net income
Available-for-Sale	Fair value	Not recognized in net income, but recognized in comprehensive income	Recognize realized gains/losses and interest income in net income

(**Source:** Wild et al.; 2004; 215)

Figure 4 : Accounting of Debt Securities

2.1.2.3.1.1 Held-to-Maturity Securities

If an enterprise has the positive intent and ability to hold the debt security to maturity, this debt security is called as held-to-maturity securities, and they are reported at amortized costs SFAS No. 115, 1993; para. 7). If an enterprise has not the positive intent and ability to hold the debt security to maturity, this debt security can not be called as held-to maturity securities. Held-to-maturity securities can be current and non-current which also means that they can be classified as long-term or short-term assets (SFAS No. 115, 1993; para.17). No matter they are short or long, these debt securities are reported on balance sheet at amortized cost. Due to reporting them at amortized cost, unrealized gains or losses from these securities are not recognized in income, their interest income, their realized gains and losses are also recognized in income (SFAS No. 115, 1993; para. 31).

Consequently, their gains and losses are directly assigned to income statement. They have not unrealized gains and losses, therefore they are not one of the other components of comprehensive income. They are reported at amortized cost and there is no need to make adjustments. If they are reported at fair value as other debt securities do, unrealized gains and losses can be reported. In that case there are no unrealized gains and losses, so they are not evaluated in comprehensive income reporting.

2.1.2.3.1.2 Trading Securities

Trading securities are debt securities that are bought and held for the purpose of selling them for profit in the near future. Trading securities are generally used to generate profit on short term differences in price and they reflect active frequent selling and buying. They are hold for a short term; therefore they are current assets (SFAS No. 115, 1993, para. 12). In SFAS No. 115 (1993), it is stated that unrealized gains and losses for trading securities shall be included in earnings. However Wild et al. (2004) and Rambo and Lousteau (2003) state that investment in trading securities are reported on balance sheet at fair value and changes in the market value of these securities during a period are recognized as holding gains and losses in net income. Therefore, unrealized gains or losses and realized gains or losses are recognized in net income. Besides, interest income and dividend income are recorded as they are earned.

2.1.2.3.1.3 Available-for-Sale Securities

Available-for-sale securities are investments which are not classified as either held to maturity or trading securities. They can be either current or non-current assets, classifying them as current or non-current assets depends on their maturity and/or management's intent regarding their sale (SFAS No. 115, 1993; para. 12 and 17). These securities are reported on balance sheet at fair value. However, changes in fair value are not included in net income; instead, they are included in

comprehensive income (Wild et al., 2004; 214). In SFAS No. 115 (1993), it is stated that unrealized holding gains and losses for available-for-sale securities are excluded from earnings and reported as a net amount in a separate component of shareholders' equity until realized.

Hirst and Hopkins (1998) also state that unrealized gains and losses are reported in stockholders' equity until they are realized through the sale. Timing of the sale of these securities is important. By this way, managers have the ability to manage reported income. Similarly, Rambo and Lousteau (2003) state that "current period holding gains and losses for available for sale securities are reported as a component of other comprehensive income in either a comprehensive income statement or in a statement of changes in equity". They also state that when available-for-sale securities are sold, the holding gains or losses are reclassified out of comprehensive income and into net income.

Dividend and interest income, including amortization of the premium and discount arising at acquisition are recorded when earned and realized gains and losses on available for sale securities are included in income (SFAS No. 115, 1993; para. 14).

2.1.2.3.1.4 Transfer Between Categories

In some cases management intent or ability to carry out the purpose of investment can change, therefore securities are needed to be reclassified. Changes in management intent or ability change the categorization of investments. Under normal conditions, held-to-maturity securities can not be transferred to another class. FASB restricts this category, because the use of amortized cost must be justified for each investment in a debt security. In order to support this, FASB states that, if managers do not intent to hold a debt security to maturity and this is uncertain, it is not appropriate to carry that investment at amortized cost. Because amortized cost is relevant only if a security is actually held for maturity. However, there are some exceptional circumstances that held-to-maturity securities can be transferred to

another class. These circumstances are merger, acquisition, divestiture, a major deterioration in credit rating, or some other extraordinary events (SFAS No. 115, 1993; para. 59).

Transfers from available for sale securities to trading securities are also restricted. However, when transfers between classes occur, an entity must adjust the securities fair values. These transfers cause changes in fair value and these changes should be recognized in income statements (Wild et al., 2004; 215).

Wild et al. (2004) explain the transfer between security categories. They state the effects of these transfers on asset values in balance sheets and on income statements:

According to them trading securities can be transferred to available-for-sale securities. This has no effect on asset value in balance sheet; however it affects the income statement as unrealized gain or loss on transfer date included on net income.

Available-for-sale securities can be transferred to both trading and held to maturity securities. Transfer to trading securities has no effect in balance sheet. Transfer to held-to maturity has no effect on asset value in balance sheet on transfer date, however it affects asset reporting. While available-for-sale securities are reporting at fair value, held-to-maturity securities are reporting at amortized cost. Therefore if there is a transfer, asset reporting will be changed at future dates. Assets should be reported according to the specification of held-to-maturity securities and should be reported at amortized cost.

Besides that, in transfers to trading securities; unrealized gain or loss on transfer date included in net income, however in transfer to held-to-maturity unrealized gain and loss on transfer date included in comprehensive income. Because there is a difference between asset valuing strategies, and this difference is shown as a component of other comprehensive income.

The similar effect can be followed up in transfer to available-for-sale securities from held-to-maturity securities. In that transfer there is also an effect on asset value in balance sheet. Assets are reported at fair value instead of amortized cost. These transfers and their effects on asset value in balance sheet and in income statement can be summarized in Figure 5.

TRANSFER			
From	**To**	**Effect on Asset Value in Balance Sheet**	**Effect on Income Statement**
Trading	Available-for-Sale	No effect	Unrealized gain or loss on date of transfer included in net income
Available-for-Sale	Trading	No effect	Unrealized gain and loss on date of transfer included in net income
Available-for-Sale	Held-to-Maturity	No effect at transfer; however, asset reported at amortized cost instead of fair value at future dates	Unrealized gain and loss on date of transfer included in comprehensive income
Held-to-Maturity	Available-for-Sale	Asset reported at fair value instead of amortized cost	Unrealized gain and loss on date of transfer included in comprehensive income

(**Source:** Wild et al., 2004; 215)

Figure 5 : Accounting for Transfer between Security Classes

On the other hand, SFAS No.115 (1993) states that "the transfer of a security between categories of investments shall be accounted at fair value". Unrealized holding gain or loss at the date of transfer will have already been recognized in earnings for the transfers from trading securities. For transfer into trading securities, unrealized holding gain and loss the date of transfer shall be recognized in earnings immediately. It is different for transfer from held-to-maturity securities. The transfers from held-to maturity securities to available-for-sale securities, the unrealized gain or loss at the date of the transfer shall be recognized in a separate component of shareholders' equity. It can be reflected in the components of other comprehensive

income. In transfers from available-for-sale securities into held-to-maturity securities, the unrealized gain or loss shall be recognized in a separate component of shareholders' equity; however this gain or loss should be amortized over the remaining life of the security. This will work as an adjustment of yield in a manner consistent with the amortization of any premium or discount. The amortization of unrealized gain or loss will offset the effect on interest income of the amortization of the premium or discount for held to maturity security (SFAS No. 115, 1993; para. 15).

2.1.2.3.2 Equity Securities

Equity securities are the other types of investment securities. They represent an ownership interest in an enterprise. Common, preferred, or other capital stocks are some of its examples. Besides representing ownership, equity securities represent the right to acquire or dispose of an ownership interest in an enterprise at fixed or determinable prices. Warrants, rights, and call options or put options are examples for acquiring or disposing an ownership interest. Convertible debts or preferred stocks are not included in equity securities. They are considered as debt securities (SFAS No.115, 1993; 40).

There are two main motivations for a company to invest in equity securities. To exert influence over the directors and management of another entity is one of the main motivations. The other is to receive dividend and stock price appreciation income. The ability to influence or control the investee's activities are of great importance for companies. According to the ability to influence or control the investee's activities, companies report their investments in equity securities. This ability is based on the percentage of voting securities and the investor company controls the percentage of voting securities (Wild et al., 2004; 216).

Wild et al (2004) states that as debt securities, equity securities contain trading and available for sale securities. If equity securities have ownership less than 20 %, they can be classified as available for sale securities. They are long- or intermediate

term investments. Their valuation is based on fair value and the asset values of these securities are reported at fair value on balance sheet. Unrealized gains and losses that emerged from holding these securities are reported in comprehensive income. Besides, recognized dividends and realized gains and losses are reported in net income. On the other hand if equity securities have ownership less than 20 % and short-term investment or trading purpose, these equity securities can be classified as trading securities. Similar to available-for-sale securities, these securities are reported at fair value, however the unrealized gains and losses are reported in net income. The recognized gains and losses and dividends are recognized in net income.

Equity securities are considered non-influential, when equity securities are non-voting preferred or less than 20 % of an investee's voting stock. If equity securities are non-influential, investors possess minimal influence over the investee's activities. They have no effect on the investee's activities. They can be classified either trading or available-for-sale securities. This classification is based on the intent and the ability of management (Wild et al., 2004; 216). Their accounting strategy is similar to debt securities' accounting strategy and this is already described in debt securities section.

If equity securities have an ownership between 20% and 50%, security holdings can provide an investor the ability to exercise significant influence over an investee's business activities. "Evidence of an investor's ability to exert significant influence over an investee's business activities is revealed in several ways, including management representation and participation" (Wild et al., 2004; 216). The investor possess significant influence over the investee's activities, if an investment have 20% or more but less than 50% of voting stock. In that case equity securities are accounted by using equity method (Wild et al., 2004; 217). Figure 6 summarized the classification and accounting for equity securities.

	NO INFLUENCE			
Attribute	**Available-for-Sale**	**Trading**	**Significant Influence**	**Controlling Interest**
Ownership	Less than 20%	Less than 20%	Between 20% and 50%	Above 50%
Purpose	Long-or intermediate-term investment	Short-term investment or trading	Considerable business control	Full business control
Valuation Basis	Fair value	Fair value	Equity method	Consolidation
Balance Sheet Asset Value	Fair value	Fair value	Acquisition cost adjusted for proportionate share of investee's retained earnings and appropriate amortization	Consolidated balance sheet
Income Statement: Unrealized gains	In comprehensive income	In net income	Not recognized	Not recognized
Income Statement: Other income affects	Recognize dividends and realized gains and losses in net income	Recognize dividends and realized gains and losses in net income	Recognize proportionate share of investee's net income less appropriate amortization in net income	Consolidated income statement

(**Source:** Wild et al., 2004; 216)

Figure 6: Classification and Accounting for Equity Securities

Equity method reports the parent's share of the subsidiary results in income statement as a line item, and this is also referred to as one line consolidation (Bernstein, 1989; 242).

Equity method requires investors to record investments at cost and then adjusts the account for the investor's proportionate share in both the investee's income (or loss) since acquisition and decreases from any dividends received from the investee (Wild et al., 2004; 217). Equity method is used in common stock that represent interest 20% and over in voting stock of a company's equity securities (Bernstein, 1989; 242).

If equity securities have an ownership more than 50%, they are referred to as controlling interests. In that case investors are known as holding company and the investee as subsidiary (Wild et al., 2004; 217).

When the fair value of the investments is different than the balance sheet value, unrealized gains and losses on available-for-sale securities arise. The entity adjusts the asset value at balance sheet date and the change is reflected in comprehensive income. Therefore the unrealized gains and losses on available-for-sale securities represent the change in fair value and are reported as the component of comprehensive income (Carlson et al., 1999; 50)

2.1.2.4 Gains and Losses on Cash Flow Hedges and Derivatives

Changes in global financial markets have transformed financial activities of not just financial institutions, but also all business entities. The increased volatility in foreign exchange rates, interest rates, and in other market prices has greatly increased market, credit and liquidity risks. This enforces the entities to manage those financial risks that are emerged from financial innovations. These innovations represent new financial instruments, or need modifications on existing instruments. Derivatives are among the one of the most important of those instruments. They facilitate to manage and transfer risks and widely used as hedging instruments in recent years.

Many derivatives are off-balance sheet and are called as stealth instruments since they are not visible. Therefore, FASB improves SFAS No. 133, "Accounting for Derivative Instruments for Hedging Activities" (1998) for derivatives (Johnson and Swieringa, 1996; 110).

A derivative is defined under SFAS No. 133 (1998) as a financial instrument or other contract with one or more underlyings and one or more notional amounts. An underlying is an interest rate, a per-share price, a commodity price, a foreign exchange rate, an index of prices, or another variable that is applied to the notional amount to determine the cash flows or other exchanges specified in the contract. A notional amount is an amount of currency, a number of shares, or a number of bushels, pounds, or other units specified in the contract. A derivative requires no initial net investments. It requires or permits net settlement, it can be settled net by a means of outside the contract, or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement (SFAS No. 133, 1998; para. 6-9).

Jones and Wilson (2000) states that derivatives is measured at fair value and reported in statement of financial position as assets or liabilities. Therefore, accounting for the change in fair value will depend upon the reason for holding the derivative and whether it has been designated and qualifies for hedge accounting. Either all or a proportion of the derivative may be designated as a hedging instrument under SFAS No. 133 and also according to SFAS No. 133 an entity may designate hedging instruments as hedges against variability of future cash flows if all of the following criteria are met (SFAS No. 122, 1998; para.28-29):

a) At the inception of the hedge, there is a formal documentation of the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge, including the identification of the hedging instrument, the related hedged forecasted transaction, the nature of the risk being hedged, and how the hedging instrument's effectiveness in hedging the exposure to the hedged transaction's variability in cash flows that is attributable to the hedged

risk will be assessed. There must be reasonable basis for how the entity plans to assess the hedging instrument's effectiveness (para. 28(a)).

b) Both at the inception of the hedge and on an ongoing basis, the hedging relationship is expected to be highly effective in achieving offsetting cash flows attributable to the hedged risk, consistent with the originally documented risk management strategy for that particular hedging relationship, during the period that the hedge is designated. An assessment of effectiveness is required whenever financial statements or earnings are reported, and at least every three months. If the hedging instrument (such as an at-the-money option contract) provides only one-sided offset against the hedged risk, the cash inflows (outflows) from the hedging instrument are expected to be highly effective in offsetting the corresponding change in the cash outflows or inflows of the hedged transaction, consistent with the originally documented risk management strategy (para. 28(b)).

c) If a net written option is designated as hedging a recognized asset or liability, the combination of the hedged item and the written option provides at least as much potential for favorable cash flows as exposure to unfavorable cash flows so that a percentage favorable change in the price of the underlying would provide at least as much favorable cash flows as the unfavorable cash flows that would be incurred from an unfavorable change in the price of the underlying of the same percentage (para. 28(c)).

d) If a hedging instrument is used to modify the interest receipts or payments associated with a recognized financial asset or liability from one variable rate to another variable rate, the hedging instrument must be a link between a designated asset with variable cash flows and a designated liability with variable cash flows and be highly effective at achieving offsetting cash flows. For example, a link exists when the basis of one leg of an interest rate swap is the same as the basis of the designated asset, and the basis of the other leg of the swap is the same as the basis of the designated liability(para. 28(d))

e) The forecasted transaction is a single transaction or a series of individual transactions. If individual forecasted transactions are aggregated and hedged as a group, either (1) the individual transactions must be projected to occur within a short period of time from a single identified date for the group or (2) the date at which the variability of the cash flows of each of the individual transactions is projected to cease must be within a short period of time from a single identified date for the group. Additionally, the individual transactions must share the same risk exposure for which they are designated as being hedged (e.g., foreign currency exchange rate risk or interest rate risk) (para. 29(a)).

f) The forecasted transaction is probable and there is a positive expectation that the forecasted transaction will occur within an insignificant variance from the initially projected date of the forecasted transaction relative to the original length of time from the inception of the hedge to that projected date (para. 29(b)).

g) The forecasted transaction is a transaction with a third party external to the reporting entity and presents an exposure to variations in cash flows for the hedged risk that could affect reported earnings(para. 29(c)).

h) The forecasted transaction is not the acquisition of an asset or incurrence of a liability that, subsequent to acquisition or incurrence, will be remeasured with changes in fair value attributable to the hedged risk reported in earnings. If the forecasted transaction relates to a recognized asset or liability, the asset or liability is not remeasured with changes in fair value attributable to the hedged risk reported currently in earnings (para. 29(d)).

In order to qualify a cash flow hedge, it is really important that entity identify the nature of risk, determine the anticipated amount and timing of the cash flow, and determine, on an ongoing basis, the effectiveness of the derivative in mitigating the risk. If these conditions are met, the derivatives can be treated as cash flow hedge. Moreover, if these conditions are not met throughout the hedging period, the entity

must discontinue the use of hedge accounting and then the gain or loss which is currently deferred must be immediately recognized in income (Munter, 1998; 29).

Therefore, if an entity satisfies the criteria for the hedging then the derivative can be accounted as a hedge. However the gains or losses that occur in the period of derivative hedging can not be included in income immediately. They are deferred to equity as an element of comprehensive income (outside earnings) and subsequently reclassified into earnings when forecasted transactions affect earnings. Amounts in accumulated other comprehensive income shall be reclassified into earnings in the same period or periods during which the hedged forecasted transaction affects earnings. The ineffective portion of the gain or loss is reported in earnings immediately; and also the deferred gain or loss is amortized to income as the related cash flows are recognized in income (SFAS 133, 1998; para. 18-30-31).

Trading and risk management can be referred to comprehensive income as a hedge accounting approach. Gains and losses on derivatives classified as trading would be recognized in earnings in the period in which they incur. Unrealized gains and losses on risk management derivatives would be reported as a component of other comprehensive income until they are realized. Realized gains and losses on risk management derivatives would be reported in earnings. However FASB also rejected the comprehensive income approach for three reasons (SFAS No. 133, 1998; para. 338-342):

The first reason is that FASB does not support that the distinction between realized and unrealized gains and losses that is the basis for comprehensive income approach is relevant for financial instruments. However they believe that this distinction is inappropriate for financial instrument. The occurrence of gains and losses on financial instruments affects an entity's economic position and thus should affect its reported financial performance. FASB is concerned that the comprehensive income approach would provide an opportunity for an entity to manage its reported earnings, per-share amounts, and other comprehensive income. Financial instruments are liquid and can easily be sold and settled and its gain and loss can be realized and

an entity can maintain the same position as before the sale by reacquiring the same or a similar instrument.

The second reason is that offsetting gains and losses often would not have been reported in earnings at the same time. However, offsetting gains and losses on a derivative and a non-financial asset or liability would have been recognized together in earnings only if both transactions were determined to be realized in the same period. Then after FASB decided on this approach, in part, because offsetting gains and losses on fair value hedges would be recognized in earnings in the same period.

The third reason is that FASB did not adopt the comprehensive income approach is that all unrealized gains and losses on derivatives classified as risk management would have been reported in other comprehensive income without offsetting losses or gains. Hence, even there is no change in net assets; other comprehensive income would have implied an increase in net assets.

Besides that, in developing a hedge accounting approach for hedges of cash flow exposures, four objectives have been defined as (SFAS No. 133, 1998; para. 372-73):

(a) to avoid the recognition of the gain or loss on a derivative hedging instrument as a liability or an asset,

(b) to make gains and losses not yet recognized in earnings visible,

(c) to reflect hedge ineffectiveness,

(d) to limit the use of hedge accounting for cash flow hedges,

Finally, SFAS No. 133 (1998) states that comprehensive income is the best way to meet the first two objectives.

2.1.2.5 Revaluation Fund as an Alternative Component of Other Comprehensive Income

Addition to the components of other comprehensive income that are discussed in previous sections, revaluation funds can be assumed as an alternative component of other comprehensive income.

Revaluation is recognized as value amounts associated with assets that have been revalued (Barth and Clinch, 1998; 199) and revaluation occurred when the marginal benefit exceeded cost (Holthausen and Watts, 2001; 30).

According to Barth and Clinch (1998), Australian Accounting Standard Board has a broad scope than US Financial Accounting Standard Board for examining the revaluation of tangible and intangible assets. Because Australian standards permit revaluing all long-lived assets at fair value and also permit revaluations based on independent appraisers' or directors' value estimates. Besides, there is no US proposal to disclose or recognize non-financial assets at fair value. Australian standards afford an opportunity to provide evidence on the fair value accounting debate where US standards recognize the assets at amounts in excess of depreciated historical cost.

In the case of depreciable assets revaluation, AASB (1993) states that any balances in accumulated depreciation are credited to the asset account to which they relate and subsequent depreciation is based on the revalued amount. When revalued assets are depreciated, depreciation of the revalued amount is considered realized. Any gain or loss on revalued assets is the difference between the carrying amount of the asset at disposition and the proceeds. Therefore, the gain or loss included in earnings does not include any unrealized revaluation increment that previously was recognized directly in the equity revaluation fund.

According to Obinata (2002), gains and losses from revaluation of tangible fixed assets have no primary relation with corporate performance. Firms expect to generate

future cash flows by investing in assets. They expect that their asset values will exceed the market average and this excess value is named as goodwill. "When goodwill exists, the summation of market values of individual assets and liabilities is not equal to the value of a firm or owners wealth, and then the increase or decrease measured by periodical revaluation is not the same as economic income" (Obinata, 2002; 20).

Obinata (2002), O'Hanlon and Pope (1999) and Cahan, Courtenay, Gronewoller and Upton (2000) provide some collaborative evidence that revaluation is a component of other comprehensive income. Because "asset revaluation involves unrealized gains on fixed assets being recognized in the balance sheet but not in the profit and loss account. The only profit and loss account effect is higher future depreciation charges associated with the revalued assets" (O'Hanlon and Pope, 1999; 463). Defining the revaluation account in comprehensive income can increase the transparency of financial statements.

2.1.3 Reclassification Adjustments

"Adjustments shall be made to avoid double counting in comprehensive income items that are displayed as part of net income for a period that also has been displayed as part of other comprehensive income in that period or earlier periods" (SFAS No. 130, 1997; para. 18). For example, gains realized during the current period and included in net income for that period may have been included in other comprehensive income as unrealized holding gains in the period in which they arouse. If they are accounted like this, they would have been included in comprehensive income in the period in which they were displayed in other comprehensive income and must be offset in the period in which they are displayed in net income to avoid including them in comprehensive income twice. Those adjustments are called as reclassification adjustments in SFAS No. 130.

Ketz (1999) also states that in order to avoid double counting; entities should make reclassification adjustments. An entity might double-count transactions in

comprehensive income, when an entity places an item into comprehensive income one year and then the same item recognized in the income statement in a later year. By the help of reclassification adjustments, comprehensive income does not count the gain from the first year in the second year as well.

Reclassification adjustments can be determined by an enterprise for each classification of other comprehensive income except minimum pension liability adjustments. Reclassification adjustments can not be applied to minimum pension liability adjustments, because these items are measured by netting or plugging (Ketz, 1999; 84). The reclassification adjustment calculation for minimum pension liability is impractical; however the reclassification adjustment for available-for-sale securities can be easily obtained (Wilson and Waters, 1998; 44). Besides that the requirement for a reclassification adjustment for foreign currency translation adjustments is limited to translation gains and losses realized upon sale or upon complete or substantially complete liquidation of an investment in a foreign entity (SFAS No. 130, 1997; para. 19 and 21).

Reclassification adjustments can be displayed on the face of financial statements or in the notes to financial statements. Therefore, an enterprise may use (a) a gross display on the face of the financial statement or (b) a net display on the face of the financial statements and disclose the gross change in the notes to the financial statements for all classifications of other comprehensive income except minimum pension liability adjustments. If it is displayed gross, reclassification adjustments are reported separately from other changes in the respective balances; hence, the total change is reported as two amounts. On the other hand if it is displayed net, reclassification adjustments are combined with other changes in the balances; hence, the total change is reported as a single amount (SFAS No. 130, 1997; para. 20 and 90).

According to FASB, under gross display an enterprise could display reclassification adjustments either as a single section within other comprehensive income or as part of the classification of other comprehensive income to which those

adjustments relate such as foreign currency items of gains and losses on available-for-sale securities. However reclassification adjustments should be labeled as relating to available-for-sale securities or foreign currency items, and they should not be displayed in a single section, otherwise reclassification adjustments can not be traced to their related classifications (SFAS No. 130, 1997; para. 92).

CHAPTER III

REPORTING COMPREHENSIVE INCOME

In this chapter, the need and purpose of comprehensive income will be discussed. The alternative formats for reporting comprehensive income are discussed. Finally, prior studies on reporting comprehensive income are figured out.

3.1.1 The Need of Reporting Comprehensive Income

In light of growth in the magnitude and importance of financial instruments and the need to use fair values to measure these statements, reporting comprehensive income becomes more important. In changing environment, international trade has became increasingly important and by the help of modern technology capabilities of foreign trade; it has became more accessible for corporations.

In the view of these developments global markets emerged, and global markets need global standards, statements. Because of the establishment of global markets, FASB had to issue several statements which are related with the treatment of foreign trade. These new statements introduce new items such as unrealized gains and losses, foreign currency translation gains and losses, minimum pension liability adjustments, and unrealized gains and losses on certain debt and equity securities which are also related with comprehensive income. With the implementation of SFAS No. 130, the accounting profession has made a major shift towards the idea of global standards, and investors can make informed decisions on an international basis (Keating, 1999; 337-338).

Historically, issues about income reporting were characterized broadly in terms of contrast between the so-called current operating performance which is also named as dirty surplus and all inclusive which is also named as clean surplus income concepts. Under the dirty surplus (current operating performance) income concept, extraordinary and non-recurring gains and losses are excluded from income.

Under the clean surplus (all inclusive) income concept, all revenues, expenses, gains, and loses recognized during the period are included in income, regardless of whether they are considered to be results of operations of the period (SFAS No.130, 1997, para. 2). There is international precedent for moving toward an all-inclusive income concept. In the report of AIMR in 1993, it is argued that comprehensive income is needed for better and more useful financial reporting in several areas and it is urged that there are several reasons for implementing the concept of comprehensive income. Two of those reasons were to discontinue the practice of taking certain items of comprehensive income directly to equity and to provide a vehicle for addressing future accounting issues, such as the display of unrealized gains and losses associated with financial instruments. In that report, the AIMR noted that it has supported the all-inclusive income concept which is also known as clean surplus. "AIMR urged the FASB to construct the bridge from concept to standard for comprehensive income (Beresford et al., 1996; 70). Based on these considerations, as well as others, the FASB decided to add a project to address reporting comprehensive income (Johnson, Reither, and Swieringa, 1995; 129).

Smith and Reither (1996a) state that reporting other comprehensive income item by combining them with each other or with stock holders' equity categories causes conflicts for companies. In response to these problems, AIMR states that desegregation of these items and display of comprehensive income provides users to see and evaluate the components of different characters separately; also it facilitates financial analysis and provides visibility.

AIMR (1993) also states, "Financial statement users need in one place all the data reporting an enterprise's economic activity, which they then may sort out to suit their own purposes" and "much effort is required of analysts to locate and evaluate all of the income statement items can have a bearing on their forecasts of the future and the valuation of the firm."

The income statement is the most important accounting report for users. Therefore, all important financial data as pertain to profit and loss should be reflected on the income statement. SFAS No. 130 enhances the understandability of financial statements for investors, creditors, and other users because income items are presented in a formal and more organized statement of comprehensive income (Beresford et al., 1996; 73).

However reporting comprehensive income causes confusions. Much of that confusion would emerge from reporting two financial performance measures (net income and comprehensive income) and users' inability to determine which measure was appropriate one for investment decisions, credit decisions, or capital resource allocation. It is argued that the items identified as other comprehensive income were not performance related and that it would be not only confusing but also misleading to require that those items be included in a performance stated. It is also indicated that comprehensive income would be volatile from period to period and that that volatility would be related to market forces beyond the control of management. According to these indications it would be appropriate to highlight that volatility in a statement of financial performance. In the point of other indications comprehensive income was more a measure of entity performance than it was of management performance and it was therefore incorrect to argue that it should not be characterized as a performance because of management's inability to control the market forces that could result in that measure being volatile from period to period (SFAS 130, 1997; para. 60).

SFAS No. 130 deals only with the reporting and display of comprehensive income components. It does not address issues of when the reporting and display of comprehensive income components should be recognized or how they should be measured (Wilson and Waters, 1998; 43). However it directs the organizations whether they can report comprehensive income or not. FASB considers whether not-for-profit organizations should be permitted to follow the provisions of Statement 130 and decides that those organizations should continue to follow the requirements of Statement 117, "Financial Statement of Not-for-Profit Organizations" (SFAS 130,

1997; para. 55). Because SFAS No. 117 (1993) requires that those organizations report the change in net assets for a period in a statement of activities, those organizations are displaying the equivalent of comprehensive income. As a conclusion, organizations that are not-for-profit are excluded from reporting comprehensive income (Schmidt, 1999; 50). In light of FASB explanation, Stevens (1997) states that not-for-profit organizations have to follow SFAS No. 117 and SFAS No. 130 can not be applied to them.

Consequently, SFAS No.130 (1997), states that the provisions of reporting comprehensive income shall be effective for fiscal years beginning after December 15, 1997. If there is a need for comparative financial statements for earlier periods, previous statements shall be reclassified to reflect the application of reporting comprehensive income (SFAS No. 130, 1997; para. 34).

3.1.2 The Purpose of Reporting Comprehensive Income

As globalization of business become widespread, it is necessary to use integrated accounting system in all around the world. Regardless of what and how income is reported in different countries, it is beleived that the comprehensive income approach is perfect to help users to clarify changes in net assets. If it is harmonized truly, the users can broaden their vision. Reporting comprehensive income emphasizes that a company's performance should be viewed as a continuum, with transactions and events occurring both regularly or irregularly throughout the company's existence (Robinson, 1991; 112).

The purpose of reporting comprehensive income is stated in SFAS No. 130 as to report a measure of all changes in equity of an enterprise that result from recognized transactions and other economic events of the period other than transactions with owners in their capacity as owners. Prior to SFAS No. 130, some of those changes in equity were displayed in a statement that reports the results of operations, while others were included in directly in balances within a separate component of equity in a statement of financial position. In this standard, it is stated that if used with related

disclosers and other information in the financial statements, the information provided by reporting comprehensive income should assist investors, creditors, and others in assessing an enterprise's activities and timing and magnitude of an enterprise's cash flows (SFAS No. 130, 1997; para. 11 and 12).

Focusing only on total comprehensive income directs users in a limited understanding of an enterprise's activities. Therefore not only total comprehensive income is a useful measure but also the information about the components of comprehensive income is needed. Even the information about the components of comprehensive income often may be more important than the total amount of comprehensive income. However if an enterprise has no items of other comprehensive income, there is no need to report comprehensive income (SFAS No. 130, 1997; para. 13). Therefore, Schmidt (1999) and Stevens (1997) state that organizations that have no comprehensive income than net income are excluded from reporting comprehensive income.

By the help of the disclosure of comprehensive income, the users assess possible future cash flows of a company. Unrealized gains and losses may become realized and, therefore; increase or decrease the future cash flow of a company. With SFAS No. 130 users would have this information readily accessible (Keating, 1999; 336).

Moreover, before reporting comprehensive income in a statement of financial performance, the information on the economic results of real events was hidden in the equity and not bypassing to income statement. Therefore the international comparison of financial performance was difficult (Epping, Carpenter, and Buttars, 2004; 139). Reporting comprehensive income as a statement of financial performance helps financial statement users to make entities easier to compare. Because, information about components of other comprehensive income is displayed in a statement of financial performance and it represents transparency and clarity to users, enhances comparability between enterprises and provides consistency in presentation (Smith and Reither, 1996b; 30).

Reporting comprehensive income bridges the gap between traditional measure of income and the need to report financial instruments at fair value. It is a part of natural evaluation of income statement, meets the demand of financial statement users, and harmonizes with international standards. Reporting comprehensive income increase the visibility of items of other comprehensive income and encourage users of financial statements to focus on the components that constitute comprehensive income rather than limiting their analyses by focusing only net income or earnings per share. To fully understand and appropriately analyze the economic and financial performance of an enterprise, all items of other comprehensive income must be reported in a statement of financial performance. Also, by the help of reporting comprehensive income, the transparency in financial statements can be achieved and users able to make an informed decision.

3.1.3 Alternative Formats for Reporting Comprehensive Income

As it is mentioned in the previous section, there are many discussions about reporting comprehensive income. Some respondents state that information about the components of other comprehensive income already is available elsewhere in financial statements and that it is unnecessary to require another separate report and aggregation into a measure of comprehensive income. On the other hand, other respondents state that the components of other comprehensive income should be displayed in a more transparent manner and they suggest that the desired transparency for the components of other comprehensive income can be achieved by requiring that they be displayed in an expanded statement of changes in equity or in a note to the financial statements. According to respondents either of these types would be acceptable than display in a performance statement because the components of other comprehensive income would not be characterized as being performance related (SFAS No.130; 1997; para. 61).

Under SFAS No. 130 (1997), it is stated that an enterprise shall display comprehensive income and its components in a statement of financial performance. Until the issuance of SFAS No. 130, there is no need to present comprehensive

income as a measure of financial performance. However this statement decides to report comprehensive income in a financial statement that is displayed with the same prominence as other financial statements that constitute a full set of financial statements that report financial position, results of operations, and cash flows (SFAS No.130; para. 22 and 66).

Total comprehensive income and components of other comprehensive income can be displayed in below the total for net income in a financial statement, in a separate statement of comprehensive income that begins with net income, in a statement of changes in equity and in the notes to financial statements. However the most preferable approaches are reporting comprehensive income in either a combined statement of net income and comprehensive income or in a separate statement of comprehensive income (SFAS No.130, 1997; para 26, and 62). As a result, traditional financial statements have been expanded.

There are many researches on where to display comprehensive income. King, Ortegren and Reed (1999) study to determine which of the reporting formats is useful to financial statement users. They survey chief financial officers (CFOs) of publicly traded companies prior to the effective date of SFAS No 130. Approximately 67% of the CFOs preferred to report comprehensive income in a statement of changes in equity, while 33% preferred to use a combined statement of net income and comprehensive income or separate statement of comprehensive income. 35, 90 % of CFOs indicates that reporting comprehensive income is not useful and 38, 46% of them indicate that it is actually misleading to users. They find a strong correlation between the respondents' preferred reporting format and their views toward the usefulness of reporting comprehensive income. Generally the respondents who are interested in the usefulness of comprehensive income preferred to report comprehensive income in a statement of changes in equity.

Besides that, King et al (1999) examine the relationship between the CFOs preferred reporting format and the direction (positive/negative) of the other comprehensive income items and find no relation between them. Therefore the

choice of reporting format is unrelated to the effect the items of other comprehensive income have on comprehensive income.

King et al. (1999) broaden their study and survey users, contrary to CFOs, 82 % of the users prefer to report comprehensive income in combined or separate statement of comprehensive income. The rest (18 %) prefer to report comprehensive income in a statement of changes in equity. Hirst and Hopkins (1998) reach a similar conclusion in their experiment which conducted with professional security analysts and portfolio managers. According to these studies, displaying comprehensive income in a statement of changes in equity is not effective.

King et al. (1999) and Hirst and Hopkins (1998) studies which both examined on professional investors. On the other hand Maines and McDaniel (2000) study this issue on non-professional investors who use comprehensive income information in evaluating management performance only if it is presented in a separate statement of comprehensive income. They have similar conclusions as the first two studies; placement of comprehensive income in statements shows the importance of comprehensive income information to users and impacts their use of this information. These three studies state that reporting comprehensive income in a combined or separate statement related with performance based financial statements where reporting it in equity is related with non-performance based financial statements. Therefore reporting comprehensive income information in a statement of changes in equity conveys to users that this information is unrelated to corporate performance.

Campbell, Crawford and Franz (1999) examine 73 companies that adopted the SFAS No. 130 early and found that 53% of early adopters, which elected early compliance with the provisions of SFAS No. 130 and have disclosed comprehensive income in their 1997 financial statements, examine reported comprehensive income in a statement of changes in equity; 47% reported comprehensive income in one of the two performance based financial statements. According to their studies the firms choosing a performance based reporting option tends to have items of other

comprehensive income that are material and positive. On the other hand, firms choosing to report comprehensive income in a statement of changes in equity generally have items of other comprehensive income that are material but negative. This result is contrast to findings of King et al. (1999) that CFOs' decisions regarding reporting format would be unrelated to the direction of the other comprehensive income items. However Campbell et al. select their samples from early SFAS No. 130 adopters and the firms are disposed to comprehensive income. This difference can emerge from the sample of the firms that did not adopt the standard early.

Also, Ketz (1999) studies on 90 firms in different industries for the period 1996-1998. He find that the majority of those firms reported comprehensive income in a statement of changes in equity and several firms reported comprehensive income in a separate statement of comprehensive income. However he does not give the exact numbers of his study. He shows the percentage of items in net income.

Jordan and Clark (2002) narrow their study according to industry and study on 100 financial service firms for 1998. They focus on financial service firms for two reasons. One is the study of Dhaliwal et al. (1999), because they find that comprehensive income is more strongly related with market value and return than net income for financial firms. Second is in financial sector, most of the firms would have to report comprehensive income, because they are holding available-for sale securities. 12 of them use combined statement of net and comprehensive income. 25 of them use separate statement of comprehensive income and 63 of them use the statement of changes in stockholders equity. 29 of 63 companies have negative other comprehensive income and 7 of 37 companies which use combined statement of net and comprehensive income and separate statement of comprehensive income have negative other comprehensive income.

The majority of firms in the sample report comprehensive income in a statement of changes in stockholders' equity. According to them this result can be concluded

that comprehensive income plays less weighty role for users when compare to reporting it in separate or combined statement of net income.

Bhamornsiri and Wiggins (2001) study on 100 companies listed on Standard and Poors (S&P) for 1997-1999. 76 companies use to report other comprehensive income in statement of changes in stockholder's equity and of the 76 companies, 49 companies have negative and 27 companies have positive other comprehensive income. 15 companies of total use to report other comprehensive income in a separate statement and 10 of them have negative, 5 of them have positive other comprehensive income. Four of all use to report it in a combined statement of net income and comprehensive income. 3 of them have positive and one of them had negative other comprehensive income.

According to Bhamornsiri and Wiggins (2001), investors and creditors shift their focus toward comprehensive income and after the issuance of SFAS No. 130 comprehensive income play an expanding role in future financial decision. However there is still need enough evidence to indicate whether financial statement users would consider other comprehensive income in making investment and credit decisions.

Finally, Pandit and Phillips (2004) studies on sample of 100 companies listed on New York Stock Exchange (NYSE). The analyze period contains 2000-2002. They find that 89 of the 100 companies reported their comprehensive income in a statement of changes in stockholder's equity. Only 9 of them chose to report their comprehensive income in a separate statement and the remaining 2 companies select to report their comprehensive income in a combined statement of net and comprehensive income. Of the 89 companies that use to report other comprehensive income in the statement of changes in equity, only 31 companies report positive other comprehensive income items, while 58 companies report negative other comprehensive income items. Two companies that use separate statements for reporting comprehensive income have negative other comprehensive income, whereas, nine companies that use combined statement, six of them have negative

other comprehensive income and three of them have positive. They state that there is not sufficient evidence to indicate that comprehensive income is a better predictor of future cash flows or has correlation with stock prices.

These studies on reporting comprehensive income are summarized in Table 1. The some of studies that are mentioned above can not be figured out.

Because King et al (1999) do not define the percentage of reporting combined statement of net income and comprehensive income or separate statement of comprehensive income separately. They group these two statements under one percentage.

On the other hand, Hirst and Hopkins (1998) study on 96 buy-side equity analysts and portfolio managers. They categorize their study differently. They have three formats. These financial reporting formats are (1) the format where comprehensive income is not explicitly disclosed (2) the format where comprehensive income is disclosed in the statement of changes in equity (3) the format where comprehensive income is disclosed in a statement following the income statement.

Additionally, Ketz (1999) studies on 90 firms, however he does not give the exact number of participants that select one of these presenting formats. He only gives the percentage of items in net income.

Finally, Maines and McDaniel (2000) study on 95 evening Mater of Business Administration (MBA) students. Their analysis is on non-professional investors. However they do not give the exact number of participants that select one of these presenting formats

Table 1: The summary of studies on alternative formats of reporting comprehensive income

		In a Separate Statement of Comprehensive Income			In a Combined Statement of Net Income and Comprehensive Income			In a Statement of Changes in Stockholder's Equity		
Author(s)	Sample Size	Firms with negative Other Comprehensive Income	Firms with positive Other Comprehensive Income	**Total**	Firms with negative Other Comprehensive Income	Firms with positive Other Comprehensive Income	**Total**	Firms with negative Other Comprehensive Income	Firms with positive Other Comprehensive Income	**Total**
Campbell et al (1999)	73	N#A*	N#A	**22**	N#A	N#A	**12**	N#A	N#A	**39**
				30%			16%			53%
Jordan and Clark (1999)	100		**	**25**		**	**12**	29	34	**63**
		0%	0%	25%	0%	0%	12%	29%	34%	63%
Bhamornsiri and Wiggins (2001)***	100	3	1	**4**	10	5	**15**	49	27	**76**
		3%	1%	4%	10%	5%	15%	49%	27%	76%
Pandit and Phillips (2004)	100	6	3	**9**	2	0	**2**	58	31	**89**
		6%	3%	9%	2%	0%	2%	58%	31%	89%

* These values are N#A (not available) because the authors did not give the exact numbers of samples for these areas. They calculate the amounts of negative or positive other comprehensive income percentages by averaging them to net income amounts.

** 7 of 37 companies which use separate or combined statements has negative other comprehensive income, blanked cells are not mentioned in their study

***Five of the firms in the sample did not report other comprehensive income.

These studies show that reporting comprehensive income in a statement of changes in stockholder's equity is still predominant presentation approach. This may be possible, because it is closer to what companies were accustomed to using before the issuance of SFAS No. 130. This format needs little change from the former practice of presenting the other comprehensive income under stockholder's equity.

"If investors place more emphasis on other comprehensive income and total comprehensive income in the future, companies should be required to uniformly present details of comprehensive income. If comprehensive income becomes an important input for financial statement users, more FASB guidance may be needed about the format for its presentation" (Pandit and Phillips, 2004; 41).

3.1.3.1 In A Combined Statement of Net Income and Comprehensive Income

A specific format is not required displaying comprehensive income and its components; therefore FASB encourages an enterprise to report comprehensive income and its components in an income statement below the total for net income. An enterprise can display the components of other comprehensive income and total comprehensive income below the total for net income in a statement (SFAS No.130, 1997; para. 23). Even some enterprises have only one item of other comprehensive income and that these enterprises might prefer to report that item below net income in a single statement instead of creating a separate statement (SFAS No. 130, 1997; para. 64). By displaying comprehensive income in a combined statement of net income and comprehensive income, transparency can be achieved

The advantage of this approach is that both measures of the entity's performance, net income and comprehensive income, are disclosed in a single statement, on the other hand reporting them in a single statement has disadvantages. The most important disadvantage is that net income becomes a subtotal in the statement and comprehensive income becomes the new bottom line. Therefore this will reduce the prominence of net income as the principle measure of a company's performance.

Also it may cause confusion among some financial statement users (Campbell et al., 1999; 16)

The items of other comprehensive income may be reported on either a before tax or after tax bases (net of tax) (Schreiber, 1998; 85). Therefore if it is reported at before tax amounts, the tax effects must be disclosed in the footnotes (Jordan and Clark, 2002; 2), if it is reported at net of tax basis, the tax effect of each item can be displayed either on the face of the statement or in the notes (Munter, 1998; 32).

The illustrative example on reporting comprehensive income in a combined statement of net income and comprehensive income is given in Appendix 2 in Format A.

3.1.3.2 In A Separate Statement of Comprehensive Income

FASB also encourages an enterprise to report comprehensive income and its components in separate statement of comprehensive income that begins with net income. There is no exact compelling reason to eliminate either one-statement (combined statement of net income and comprehensive income) or two-statement approach (separate statement of comprehensive income) for the enterprise that choose to display comprehensive income in an income statement type format.

The advantage of this approach is that the net income is kept free of potentially distracting disclosures about comprehensive income. Companies that view net income as the more meaningful performance measure may select this approach because it does not change the income statement. Its disadvantage is to adding one more financial statement to four traditional statements (Campbell et al., 1999; 16).

According to FASB, displaying comprehensive income in an income statement type format either in a combined or separate statement is more consistent with the Concept Statements and superior to displaying in a statement of changes in equity. That type of display is also consistent with all inclusive income concepts. Moreover

displaying comprehensive income in an income statement type format provides the most transparency for its components and also it may be more practical for an enterprise that has several items of other comprehensive income to display them outside a statement of changes in equity (SFAS No.130, 1997; para. 67).

Consequently, display in an income statement type format is consistent with FASB's desire to implement a broader scope project on comprehensive income that ultimately shift toward reporting comprehensive income and its components in a statement of financial performance , also due to the reconciliation characteristics of the components of other comprehensive income between net income and comprehensive income, the relationship between these incomes become more apparent and might better facilitate the transition to reporting comprehensive income(SFAS No.130, 1997; para. 98).

The illustrative example on reporting comprehensive income in a separate statement of comprehensive income is given in Appendix 2 in Format B.

3.1.3.3 In A Statement of Changes in Stockholders' Equity

FASB decides against requiring that an enterprise display comprehensive income and its components in a statement of changes in equity, however in that case it is required that all enterprises should provide a statement of changes in equity. Therefore if an enterprise reports changes in equity in a note should revise its financial statements. FASB decides that if an enterprise prefers to display comprehensive income in a statement of changes in equity that statement must be presented as part of a full set of financial statements and not in the notes to the financial statements (SFAS No. 130, 1997; para. 64-65).

Total of other comprehensive income for a period shall be transferred to a component of equity that is displayed separately from retained earnings and additional paid in capital in a statement of financial position at the end of an accounting period. In that case a descriptive title such as accumulated other

comprehensive income shall be used for component of equity. Accumulated balances can be disclosed in separate component of equity on the face of a statement of financial position, in a statement of changes in equity, or in notes to the financial statements (SFAS No. 130, 1997; para. 26 and De la Rosa and Franz, 1997; 12). By the help of this discrimination the users of financial statements are able to trace the component of other comprehensive income displayed in a financial statement and also transparency in financial statements can be achieved.

Companies may also select reporting comprehensive income in a statement of changes in stockholders' equity to soften the appearance of comprehensive income as a performance measure. For some companies this brings the greatest advantage to the company. The disadvantage exists for companies that have previously relegated the statement of stockholders' equity to the footnotes. Because the FASB requires that the statement disclosing comprehensive income be given the same prominence as the other financial statements, companies that choose to disclose comprehensive income in the statement of stockholders' equity will no longer be able to put the statement in footnotes (Campbell et al., 1999; 16).

The illustrative example on reporting comprehensive income in a statement of changes in stockholder's equity is given in Appendix 2 in Format C.

3.1.3.4 In A Note to Financial Statements

FASB decides against permitting an enterprise to disclose its comprehensive income and its components in a note to financial statements and they acknowledge that it can justify note disclosure because it would provide important information in the interim period and comprehensive income reporting is studied in more depth. Also displaying comprehensive income in a note to financial statement is inconsistent with reporting it as a part of full set financial statements and it is inconsistent with one of the objective of reporting comprehensive income which was to take first step toward the implementation of the concept of comprehensive income by requiring that its components be displayed in a financial statements (SFAS No.

130, 1997; para. 63). Although Keating (1999) states that disclosing in the notes can be rather time consuming to locate and analyze. Therefore in prior studies reporting comprehensive income in a note to financial statements is not mentioned and analyzed in detail.

CHAPTER IV

THE VALUE RELEVANCE OF COMPREHENSIVE INCOME

Comprehensive income is newly adopted area in literature. In this chapter the studies on the value relevance of comprehensive income will be discussed. The value relevance, the value relevance of the components of other comprehensive income and then the value relevance of comprehensive income will be discussed.

4.1 Value Relevance

"Value relevant means the accounting information is associated with some measure of value, for example, share prices" (Barth, 2000; 16). If an accounting amount has a predicted association with equity market values, it is defined as value relevant. If an accounting amount is not relevant, there would be no relation with equity value (Barth, Beaver, and Landsman; 2001; 79).

4.1.1 Relevance and Reliability

Equity values reflect an accounting amount if the relevance and reliability are correlated (Barth et al., 2001; 80). In SFAC No. 2 reliability and relevance are discussed as two criteria for choosing among accounting alternatives and making accounting information for useful decision making. If either of those criteria is completely missing, the information will not be useful. Therefore the accounting alternative should be more reliable and more relevant. If an attribute indicates something which is important for decision making, it can be relevant. If information is relevant, it must be timely and have predictive value or feedback value or both. If information is reliable, it must have representational faithfulness and it must be verifiable and neutral. These terms can be defined in detail. Relevant information makes difference in a decision by helping users to form predictions about outcomes of past, present, and future events or to confirm correct prior expectations. Its

timeliness is important, if information is not available on time; it lacks relevance and is of little or no use. Relevant information can reduce the uncertainty, the information about past can help users to foresee the future and confirm or correct earlier predictions (SFAS No. 2, 1980; 5, para. 46-52)

An accounting amount is reliable if it represents what it purports. Information must be reliable as well as relevant. If the accounting description or measurement is verifiable and representationally faithful and also is reasonably free from error and bias, the information is reliable (SFAS No. 2, 1980; para. 58-59). When something can be determined accurately, then reliability focuses on it (Ketz, 1999; 80).

Barth et al. (2001) state that value relevance and decision relevance are different. Particularly if accounting information is superseded more timely information, it can be value relevant but not decision relevant. According to them value relevance tests are joint tests of relevance and reliability so it is difficult to test separately relevance and reliability of an accounting amount.

4.1.2 Relevance and Market Efficiency

Barth et al. (2001) state that value relevance research is of potential interest of not only academic researchers, but also standard setters such as FASB, and IASB (International Accounting Standard Board), other policy makers and regulators such as the Securities and Exchange Commission (SEC) and the Federal Reserve Board, firm managers, and financial statement users.

Value relevance as defined in the academic literature is not a stated criterion of the FASB and it is not stated as it is mentioned in its conceptual statements. Rather, test of value relevance represent one approach to operationalizing the FASB's stated criteria of relevance and reliability. "Value relevance is an empirical operationalization of these criteria because an accounting amount will be value relevant, i.e.; have a predicted significant relation with share prices, only if the amount reflects information relevant to investors in valuing the firm and is measured

reliably enough to be reflected in share prices" (Barth et al, 2001; 80) . Also, Aboody, Hughes and Lui (2002) define value relevance as "the mapping from accounting information to intrinsic value, for example, the present value of expected future dividends conditional on all available information".

Similar to them, Lev (1989) states that the information which is conveyed by earnings is consistent with that reflected in security returns. Such information triggers stock prices and is considered as useful. If new information becomes available, security prices are adjusted according to this information, and then changes in security prices will reflect the flow of information to the market. "An observed revision of stock prices associated with the release of income report would thus provide evidence that the information reflected in income numbers is useful" (Ball and Brown, 1968; 160 and 161). When it is needed to quantify future outcomes of securities, it can be in the form of earnings forecasts (Lev, 1989; 155). Therefore, Lev (1989) asserts that the relevance of accounting value is characterized by the quality of accounting information. According to Lev, earnings quality is measured by the coefficient of determination in a regression of market returns on earnings. Markets absorb the information and interpret them and when they are reflected to income numbers, they become useful and return on earnings. Thus, the strength of association between market returns and earnings is the basis of most measures of value relevance.

The numbers of studies related with value relevance are arising to meet the need for testing value relevance of information, because increasingly, information that is not recognized in the financial statements is being tested for its value relevance. For example macroeconomic information which is based on tests of market efficiency can also be assessed for its value relevance. Consequently, this shows that there is some convergence between market efficiency, as a theory of information, and value relevance, as a theory of information. However in value relevance studies, information is filtered from financial statements and this information is conditional on the accounts. Due to they are filtered from financial statements, the information is conditioned by the principles of accounting used, whether unbiased, conservative or

aggressive, and by the rules invoked. The rules and standards change the conditioning of the information, therefore; this conditioning distinguishes the value relevance studies from market efficiency studies (Goodwin, Sawyer, and Ahmed, 2002; 2). Goodwin et al (2002) state that market efficiency studies test how prices impound information and value relevance studies test how prices impound information through the filter of the financial statements.

Also both market efficiency and value relevance tests are dependent on classification of information. Fama (1991) supports the classification of information and asserts in his theory that prices reflect information. He states that the tests of market efficiency test the dependence of prices on types of information; in that case the heterogeneity of information is of great importance. He classifies information in three forms. The weak form efficiency corresponds to an information set consisting of historical prices, semi- strong form efficiency to an information set of all publicly available information, and strong form efficiency to an information set of both public and private information. His classification of weak, semi-strong and strong form based on price history, public and private information, is inappropriate. Therefore Goodwin et al (2002) refine the classification and incorporate the conditioning of information by the accounts.

They categorize information as either recognized in the financial statements, disclosed in the notes of the financial statements but nor recognized, public information not in the financial statements, and private information. There are two reasons to adopt this classification. First, when information is publicly available, it provides important signals to all market participants. Therefore it reflects the importance of the public disclosure of information, just as in the efficient market hypothesis (theory). As a result they expect some differences between value relevance of public and private information. Secondly, recognition of information has some differences in terms of reliability. As Fama, they formalize the heterogeneity of information and its effects and then they formalize the efficient accounting hypothesis. This hypothesis is established in order to test the value relevance. Value relevance has been explained under three forms:

1) Weak form value relevance which tests the price-relevance of recognized information.

2) Semi-strong form value relevance which test the price relevance of public information, either recognized, disclosed or neither recognized nor disclosed.

3) Strong form value relevance which tests the price relevance of both public and private information.

These three forms are in order and strong form value relevance implies semi-strong form which implies weak form.

By aligning value relevance with the efficient market hypothesis, Goodwin et al. (2002) emphasize the testing of coefficients of expected and unexpected information. They state that expected information does not explain market returns, but unexpected information is a significant explanator. They assume that the markets are efficient and the market prices are determined by accounting information. They focus on testing P-value as the empirical significance level instead of R-squares. Because the significance of the coefficients of expected and unexpected information is tested, the goodness of fit of the pricing process is not tested.

Contrary to the efficient market assumption of Goodwin et. al (2002), markets may not be completely efficient in its processing of public information. Markets can be assumed as inefficient, if the stock price measures the intrinsic value with error. If markets are inefficient, the interpretation of the results of value relevance on stock prices or returns is difficult. Therefore in order to predict future price changes, stock prices need to be adjusted. After the adjustment, they can reflect the future changes (Aboody et al., 2002, 967 and 984).

4.2 The Value Relevance of Components of Comprehensive Income

Stock prices incorporate more information than that is available to investor; no investor has all the information that is incorporated in prices. Therefore the analysis of the information and its effect on stock prices is of great importance. In order to support this, many researchers express the relation between value relevance and stock prices in their studies. For example, Fama (1991) states that in order to test value relevance, a price or returns process must be specified. Wallace (2000) assess that the value relevance of accounting regresses stock prices on per share values of accounting earnings and book value of equity. Aboody et al (2002) state that value relevance studies focus on regressions of stock prices and returns on accounting variables to evaluate how accounting information maps into the measures. Naceur and Goaied (2004) state that accounting information is relevant for valuing stocks.

Consequently, in this section the value relevance of components of comprehensive income will be discussed in terms of stock price and stock return information.

4.2.1 Foreign Currency Items

Obinata (2002) states that it is difficult to find the differences between the translation differences displayed in net income and foreign currency translation adjustment that is excluded from net income. According to him, foreign currency translation adjustments contain transitory earnings instead of permanent earnings, and transitory earnings are less value relevant than permanent earnings. Therefore, the relevance of foreign currency translation adjustments is doubtful. Besides that, Pinto (2005) states that foreign currency translation adjustments are more bookkeeping entries and thus do not affect valuation until some unspecified future date when net foreign assets are disposed of and converted into dollars. Therefore as other component of comprehensive income, foreign translation adjustments are the largest element for most firms and are a significant source of value relevant

information for investors. Finally, foreign currency exposure could potentially be examined in a simultaneous equations framework. Macro economic events jointly influence stock prices and exchange rates. Therefore, exchange rates influence earnings while earnings in turn influence stock prices.

Addition to these studies, Louis (2003) finds an inverse relation between foreign translation adjustment and change in firm value, conditional on the levels of net income, the transaction gain or loss, and foreign exposure. He finds a negative association between the foreign translation adjustment and change in firm value which is due to the opposite effects of exchange rate on the adjustment and future profitability. A positive adjustment is associated with loss of value instead of a creation of value (Louis, 2001; 5). "This prediction is based on the premise that depreciation of a local currency entails (1) a negative translation adjustment (the accounting effect) and (2) an increase in the value of foreign operation (economic effect)" (Louis, 2003; 1031). Louis (2001) finds that "the association between return and net income is significantly stronger than the association between return and net income adjusted for foreign translation gains and losses. The association between return and net income is much stronger when compared with the association between return and comprehensive income" (Louis, 2001; 7). According to Skinner (1999), it is even normal to find that the net income dominates the comprehensive income. Because, there is no significant evidence in the definition of comprehensive income that it is more highly associated with stock returns than net income.

4.2.2 Minimum Pension Liability Adjustments

Landsman (1986) states that the important issue in this area is whether pension assets and liabilities and other postretirement obligations (OPEB) liabilities are perceived by investor as assets and liabilities of the firm. The researches that deal on these issues find that they are the assets and liabilities of the firm. However, the pricing of these assets and liabilities are different from other recognized assets and liabilities, their pricing multiples tend to be smaller. Therefore pension assets and liabilities and OPEB liabilities are less reliable than other assets and liabilities.

Obinata (2002) states that projected benefit obligation is also displayed in the notes of financial statements, so there is no need to disclose for minimum pension liability adjustments on the balance sheet. Moreover, projected benefit obligation is more relevant than accumulated benefit obligation to estimate future. Therefore, the negative other comprehensive income recognized in recording minimum pension liability is not useful but it is also redundant.

Barth (1991) compares the relevance and reliability of the fair value of pension assets and book value of pension assets which are calculated under SFAS No. 87. She finds that the fair value of pension assets measures is more reliable than the book value pension assets in share prices implication. In addition to this, Barth (1991) studies on pension liabilities. She finds that the accumulated and projected benefit obligations measure the pension liability implicit in share prices less reliably than the vested benefit obligation and the book value of pension liability under SFAS No. 87. On the other hand Choi, Collins and Johnson (1997) study on other postretirement obligations and finds that the accumulated post retirement benefit obligation is value relevant and pension obligations that are disclosed under SFAS No. 87 implicit in share prices more reliably than the other postretirement benefit obligations.

4.2.3 Debt and Equity Securities

Barth (1994) compares the effect of the fair estimates of bank's investment securities gains and losses with the effect of historical costs on share prices. She classifies her sample by bank industry because previous researches do not provide strong evidence on value relevance of asset fair value estimates and there is cross sectional differences in sample firms. By selecting bank industry, both cross sectional differences are diminished and data gathering for asset fair value estimates are standardized. Then "by examining how prices reflect historical costs and fair values, evidence is provided on the measures' relevance and reliability" (Barth, 1994; 1). Consequently she finds that fair value estimates for debt and equity securities are more value relevant than historical cost amounts. This also means that fair values have explanatory power beyond historical costs.

Nevertheless, Obinata (2002) states that the current level of market value of securities is value relevant. Because it's current level is related with the present level of firm value. However, he states that there is no reason that information on gains and losses from past changes in market value in the year is useful to investors. Therefore, gains and losses from securities can not provide any valuable information for investors to estimate firm value.

4.2.4 Derivatives

Another set of value relevance studies are related to fair value estimates of derivatives. These studies investigate whether financial instruments are value relevant and reliable. However, estimation technology and markets for financial instruments are newly developing therefore the reliability of derivatives' fair value estimates are questionable (Barth et al., 2001; 84).

4.2.5 Revaluation of Tangible and Intangible Assets

Barth and Clinch (1998) studies on the relevance, reliability, and timeliness of Australian asset revaluations. Selecting Australian firms as a sample has some reasons. Australian GAAP permits revaluing all long lived assets at fair value, and also permits revaluations based on independent appraisers' or directors' value estimates. This revaluation may differ in reliability, and does not require revaluations every year, also affect the relevance and timeliness (Barth and Clinch, 1998; 200). Their investigation is based on whether revalued amounts in excess of historical cost are value relevant and the relation between share returns and revaluations. They find a significant association between the level of revaluation funds and share prices, however a weak association between the level of change in the valuation reserves and returns.

Similarly, Easton, Eddey and Harris (1993) find that revaluation increments have weak explanatory power on returns over income and changes in income for

Australian firms. Obinata (2002) express the same results and states that it is wrong to assume that investors regard market value fluctuation in the year as corporate performance and reflect it in stock prices or returns. However Amir, Harris and Venuti (1993) find that the revaluation reserve balance which means the movement in the reserve has incremental explanatory power for prices or returns.

4.3 The Value Relevance of Comprehensive Income

In this section theoretical and empirical studies on the value relevance of comprehensive income are discussed separately. The prior studies are given in detail and then their findings are figured out.

4.3.1 Theoretical Studies on the Value Relevance of Comprehensive Income

Cheng, Cheung and Gopalakrishnan (1993) evaluate the usefulness of operating income, net income and comprehensive income in explaining security returns. They define operating income as operating revenues net of operating expenses, and net income as bottom line; on the other hand comprehensive income as net change in equity which investments and distributions to stockholders have been excluded. The usefulness of these income types in explaining security returns is measured by comparing their adjusted R^2s. Among these incomes, operating income has the greatest explanatory power on security returns. Net income follows operating income and both operating and net income dominate comprehensive income. According to them comprehensive income has little explanatory power therefore, comprehensive income is relatively less useful in explaining stock returns and it has little relevance for investors.

Hirst and Hopkins (1998) analyze the effects of disclosure of comprehensive income and its components on common-stock price judgments. They investigate whether the transparency of financial disclosure has a predictable, measurable effect on analysts' stock price judgments. They state that clear disclosure of comprehensive

income and its components in a statement of performance results has higher transparency than the disclosure of the same information in the statement of changes in equity. According to their experimental results, reporting comprehensive income in a separate statement of performance is effective in reducing analysts' valuation judgments in the presence of strategic timing of the sale of marketable securities. Moreover, when strategic timing of securities sales has not been interested by management, the disclosure of comprehensive income has no effect on analysts' valuation judgment. Further, they find that comprehensive income disclosure has no effect on analysts' stock price judgments in the absence of earnings management.

Ketz (1999) states that comprehensive income is relevant statement when the users inspect firms from particular industries; however disappears as users consider a random group of companies. For example, minimum pension liability adjustments is relevant for manufacturers, foreign currency translation adjustments is relevant for many of industries but is relatively slight for financial services, on the other hand large unrealized gains and losses is relevant for financial service industry.

O'Hanlon and Pope (1999) analyze the stock return and accounting flow measures for accumulation intervals up to 20 years for United Kingdom (UK) firms. They report their results for 20 years interval. Because they aim to compare their results with prior US long interval return-earning studies. Also, it allows for the possibility that changes of accounting regime over the 20 year interval may have caused patterns of association between stock returns and accounting flows to change over that period. According to their test results, the ordinary profit reported under dirty surplus UK accounting standards explains returns over short, medium and long intervals. They find very weak evidence that the aggregate UK dirty surplus flows are value-relevant. When compared to US results, UK long-interval response coefficients are similar to US results, however UK short interval coefficient is larger than US short interval coefficient. Dirty surplus accounting practices are intended to produce annual reported earnings which better reflect firms' sustainable earning power, it might be expected that UK earnings are less transitory than US earnings.

O'Hanlon and Pope (1999) state that short interval regression tests have not prove the US dirty surplus are value-relevant, except in gains and losses on marketable securities for financial firms. According to them tests using intervals of 10 years and more can provide some evidence of value relevance of aggregate US dirty-surplus flows.

Obinata (2002) expresses that comprehensive income adds an incremental information value to net income, and this value is equal to the information value of other comprehensive income. Therefore, he focuses on the relevance of other comprehensive income. He analyzes the studies about comprehensive income and its components, and then he states that comprehensive income does not have any more information than net income.

Additional to these findings, Holthausen and Watts (2001) states that if a research focuses only on value relevance, it will ignore the fact that the financial statements have multiple purposes. According to them, valuation research might be more useful, if a research explain when the valuation input role is likely to be operating without inference from other forces and when it is likely to be affected by other factors. In that case, research would require an explicit understanding of the other factors and forces that shape accounting standards and some predictive ability of their strength in varying circumstances. Therefore, understanding the nature and strength of other forces that shape accounting would lead to an improved understanding of financial reporting and making appropriate financial and business decisions.

4.3.2 Empirical Studies on the Value Relevance of Comprehensive Income

The first mixed study on examining the other components of comprehensive income together in the context of evaluating the effectiveness of comprehensive income as a summary of performance measure is prepared by Dhaliwal et al in 1999. Dhaliwal et al (1999) test whether comprehensive income or net income better summarizes firm performance as reflected in stock returns and they examine which components of other comprehensive income improve incomes' ability to summarize

firm performance. To perform these analyses, they adjust net income individually for each component of other comprehensive income and then compare the association between each of the resulting measures of adjusted income and returns with the association between net income and returns.(Dhaliwal et al, 1999; 48). They formalize their equations as follows:

$$R_t = \alpha_0 + \beta_1 NI_t + \varepsilon_t$$

$$R_t = \alpha_0 + \beta_1 COMP_{broad,t} + \varepsilon_t$$

$$R_t = \alpha_0 + \beta_1 COMP_{130,t} + \varepsilon_t$$

where R is raw daily percentage returns compounded over the fiscal year; NI is net income after extraordinary items and discontinued operations; $COMP_{130}$ is as if SFAS No. 130 comprehensive income; $COMP_{broad}$ is change in a firm's comprehensive retained earnings, adjusted retained earnings, plus common stock dividends.

They find that the adjusted R^2 using $COMP_{broad}$ is smaller than the adjusted R^2 using net income. On the other hand, the adjusted R^2 using $COMP_{130}$ is larger than the adjusted R^2 using net income, and the differences in adjusted R^2 , although small in economic terms is significant at the 0,01 two-tailed level. Therefore this conflicting nature of these results offers no clear evidence on whether comprehensive income or net income better summarizes the firm performance (Dhaliwal et al, 1999; 52).

Additionally, they analyze which components of other comprehensive income have the greatest ability to summarize firm performance as reflected in stock returns. In order to test it, they formalize new equations for each component of other comprehensive income:

$$R_t = \alpha_0 + \beta_1 COMP_{MKT\text{-}ADJ,t} + \varepsilon_t$$

$$R_t = \alpha_0 + \beta_1 COMP_{FCT\text{-}ADJ,t} + \varepsilon_t$$

$$R_t = \alpha_0 + \beta_1 COMP_{PEN\text{-}ADJ,t} + \varepsilon_t$$

Where MKT-ADJ is the change in the balance of unrealized gains and losses on marketable securities and $COMP_{MKT\text{-}ADJ}$ is net income adjusted for MKT-ADJ; FCT-ADJ is the change in the cumulative foreign currency translation adjustment and $COMP_{FCT\text{-}ADJ}$ is net income adjusted for FCT-ADJ; and PEN-ADJ is the change in additional minimum pension liability in excess of unrecognized prior service cost and $COMP_{PEN\text{-}ADJ}$ is net income adjusted for PEN-ADJ. $COMP_{MKT\text{-}ADJ}$, $COMP_{FCT\text{-}ADJ}$,and $COMP_{PEN\text{-}ADJ}$ are deflated by market value of common stock equity at previous fiscal year end.

They find that the adjusted R^2 using $COMP_{MKT\text{-}ADJ}$ is greater than the adjusted R^2 using net income and the difference in adjusted R^2 is significant at 0, 01 two tailed level, while the adjusted R^2 using $COMP_{FCT\text{-}ADJ}$,and $COMP_{PEN\text{-}ADJ}$ do not differ from the adjusted R^2 using net income at conventional significance levels. This shows that marketable security adjustment is the only component of other comprehensive income that significantly associated with stock returns. If marketable security adjustment is deducted from other comprehensive income, other components of comprehensive income merely add noise to comprehensive income. In light of this result, Dhaliwal et al (1999) state that the foreign currency translation and minimum pension liability adjustments may involve more subjective estimates than the marketable securities adjustments and hence may be noisy than the marketable securities adjustment.

Then they analyze the measure of income, comprehensive income or net income in different industries. They group the sample firms under the industries such as financial, manufacturing, merchandising, utilities and others. They find $COMP_{130}$ is significant at 0,01 two tailed level for only financial sector firms, while the other

sectors adjusted R^2 using $COMP_{130}$ does not differ from the adjusted R^2 using net income at conventional levels of significance.

Among the components of other comprehensive income, only marketable securities adjustment has significant relation with returns only for financial sector firms. According to Dhaliwal et al (1999), this appears reasonable, because among industries, only financial sector firms are primarily in business of managing financial assets. Therefore in order to improve the ability of comprehensive income to summarize firm performance, it is better to focus on items that are closely related to a firm's performance. As a result marketable securities adjustment is the only component of comprehensive income that improves the association between income and return; the other components of other comprehensive income are immaterial in explaining the association between income and returns.

In broad perspective, Dhaliwal et al (1999) results do not support that comprehensive income is a better performance than other summary income measures. Also hey suggest that foreign currency transaction and minimum pension liability adjustments merely add noise to comprehensive income. Further, comprehensive income is relative only for financial sectors, and this direct them to evaluate whether uniform comprehensive income is appropriate for all industries.

Cahan et al (2000) analyze the value relevance of comprehensive income in New Zealand firms. UK first required reporting of comprehensive income in 1992 by issuing UK Financial Reporting Standards (FRS) 3. In New Zealand the disclosure of reporting comprehensive income is issued in 1994. In New Zealand, firms started to report comprehensive income in the beginning of the year 1995 or after. By this way New Zealand firms have been reporting comprehensive income at least three years longer than US firms. This period helps researchers to use time-series analysis. They compare R^2 and find that comprehensive income is more value relevant than net income. Their analysis will be discussed in detail later in this study. On the other hand, O'Hanlon (2000) states that there is no need to add anything to net income in explaining stock market prices. He criticizes Cahan et al. (2000)'s study.

According to O'Hanlon (2000), if researchers study on the value relevance of other comprehensive income items in explaining stock prices, they need to conduct t-statistics on the partial regression coefficients of the other comprehensive income items. On the other hand, if researchers deal on the valuation weights on components of total comprehensive income, they need to use the statistical significance of the difference between the partial regression slope coefficients on net income and on the other comprehensive income items.

Besides these, he states that in testing whether an accounting disclosure is relatively useful over and above an alternative disclosure in a regression based value relevance tests, there are two issues that should be clarified. First, it is important whether the object of interest of alternative can be different from the disclosure. Secondly it is important whether the difference between the two disclosures can be associated with stock prices or returns. The first issue can easily be determined. However the second issue has some difficulties. According to O'Hanlon (2000), determining the relationship between accounting items and stock returns and prices; and also aligning them together are difficult. In that case he advises that there is need to seek supplementary evidence from procedures that do not require the use of stock market prices.

Cahan et. al (2000) study on 48 firms in 1992-1997 period. They analyze the effect of book value of equity (BVE), dividends (DIV), earnings (E), net income (NI) and comprehensive income (CI) on the value of firm. They broaden their analysis by analyzing the components of other comprehensive income. So they analyze the effect of revaluations of fixed assets (RFA) and foreign currency translational adjustments related to independent foreign subsidiaries (CUR). They assume that earning is equal to clean surplus earnings or comprehensive income, and comprehensive income is equal to the sum of net income and other comprehensive income items for firm *i* during year *t*. One of their models is as follows:

$$P_{it} = \beta_1 BVE_{it} + \beta_2 DIV_{it} + \beta_3 NI_{it} + \beta_4 OCI_{it}$$

Then they decompose other comprehensive income into its individual components and express their new equation as follows:

$$P_{it} = \beta_1 BVE_{it} + \beta_2 DIV_{it} + \beta_3 NI_{it} + \beta_4 RFA_{it} + \beta_5 CUR_{it}$$

They restrict the reporting of test results to test value relevance with price levels instead of returns. One of its reasons is connected to the study of Barth and Clinch (1998). As per their study, not all companies revalue their fixed assets each year. Consequently in the revaluation year change in RFA equals RFA and that in the following year ($\Delta RFA = RFA_{t-1}$). In their sample, only 4 of 48 firms revalued fixed assets in each of the five years of sample period, hence using return approach is a problem to analyze the results (Cahan et. al, 2000; 1287).

Cahan et al (2000) test that the disclosure of comprehensive income in a single statement will affect investor behavior and firm value. Therefore, they develop their equation as follows:

$$P_{it} = \beta_1 BVE_{it} + \beta_2 DIV_{it} + \beta_3 NI_{it} + \beta_4 RFA_{it} + \beta_5 CUR_{it} + \beta_6 RFA\_SCE_{it} + \beta_5 CUR\_SCE_{it}$$

SCE is the statement of changes in equity and equal 1 if the firm provided a SCE in year *t* and 0 otherwise where RFA_SCE_{it} equals RFA_{it} multiplied by SCE_{it} and so on. They expect β_6 and β_7 is significant where the value relevance of the other comprehensive income items was different after the SCE was required (Cahan et. al, 2000; 1288).

Then they deflate their equation by the opening market value of equity (P_{it-1}) by this way they aim that their equation contains a constant or error term. They diminish the severe scale effects. They find that NI and RFA are both positive and significantly related to P at the 0,10 and 0,05 levels respectively. They test the relevance of individual items on aggregate amount. They find that comprehensive income is more value relevant than net income. However their results are different

from Dhaliwal et al's(1999) results based on US data and O'Hanlon and Pope's (1999) results based on UK data, for example, revaluation of fixed assets provides information that is incrementally value relevant above or beyond net income. This difference deserves further comments as it does not imply that the SCE is useful because the fixed asset revaluation increment can be determined by reconciling balance sheet amounts or through footnote disclosures.

On the other hand Cahan et al (2000) study in a different country, therefore the generalizability and comparability of their results would be limited. Additionally, they find that asset revaluation increments and foreign currency translation adjustments do not have incremental value relevance beyond comprehensive income. This shows that investors value comprehensive income, however reporting the components of other comprehensive income separately as RFA and CUR is not beneficial for investors. Moreover, they find that SCE does not make a difference in the incremental value relevance of fixed asset revaluations of foreign currency translation adjustments relative to net income. Hence, SCE does not provide additional information that is useful to investors.

Choi and Das (2003) examine the predictive content of comprehensive income disclosures under SFAS No. 130 for subsequent earning periods. They suggest that the predictive ability of future net income would be improved by incorporating information contained in current period comprehensive income disclosures; therefore they examine the association between current period comprehensive income and subsequent period earnings. They measure comprehensive income as the change in comprehensive retained earnings plus common stock dividends then comprehensive income scaled by the market value of equity at the beginning of the fiscal year. Their observations are for the period of 1994-1998. They sort their sample as all the necessary data are not missing, the fiscal year beginning price is greater than or equal to $5, and net income should not be equal to comprehensive income. After these eliminations they study on 7421 firm-years. They analyze the forecast revisions to determine whether the analysis view the information in comprehensive income as informative or uninformative. Forecast revisions can be measured as consensus

forecast in period one is deducted from the consensus forecast in period two, and the result is divided by price.

Choi and Das (2003) hypothesize that the firm is in a financially good situation, if managers do not recognize unrecognized gains (COMP [comprehensive income] > NI). Because the firm may not need additional gains to boost earnings and thus they may save it and refrain from recording it. Similarly, managers do not recognize unrecognized losses (COMP < NI) but recognize gains if they are in financial trouble. It can be summarized as unrecognized gains (losses) reveal the economic situation of the company and firms perform better (worse) in subsequent periods, than what is predicted. This supports that there is an association between current year comprehensive income and subsequent period net income. They find that next year's earnings increases are greater whenever there is unrecognized gains in current year (COMP>NI), than when there are unrecognized losses (COMP<NI) in the current year. They formalize their regression as follows:

$$NIC_{t+1} = a + b_1 NI_t + b_2 COMP_t + b_3 DIF_t + b_4 (DIF_t \times DP) + b_5 (DIF_t \times DN) + b_6 ROE_t$$

where the dependent variable NIC_{t+1} is the difference between next period and current period net income (NI_{t+1}- NI_t) scaled by beginning market value of equity, with NI_t being the net income at year t scaled by beginning market value of equity. DIF_t is the difference in net income and comprehensive income at year t scaled by beginning market value of equity, ROE is the fiscal year's beginning return on book equity, and COMP is the comprehensive income at year t scaled by beginning market value of equity, and DP is dummy variable that takes on a value of 1 if COMP>NI and zero otherwise, DN is dummy variable that takes on a value of 1 if COMP<NI and zero otherwise.

Choi and Das (2003) find that COMP and NI is highly correlated. Then they focus on the difference between COMP and NI, so they analyze the DIF. They state that if it is assumed that the components of comprehensive income are conditioned to

the economic performance of firm, it is expected that DIF will be inversely related to next period changes in income. Consequently, if managers recognize the components of comprehensive income, then subsequent period income change would be larger (smaller) depending upon whether there are unrecognized gains (losses) in current period comprehensive income. They find that comprehensive income is useful in predicting subsequent period changes in net income.

Then they analyze the association between components of comprehensive income and analysts' forecast revisions and they formalize their equation as follows:

$FREV_i = a + b_1UE + b_2\ SEC + b_3\ L\_SEC + b_4\ FCT + b_5\ L\_FCT + b_6\ PEN + b_7\ OTH + b_8\ L\_OTH + b_5\ SIZE + b_{10}\ BM + b_{11}\ LOSS + b_{12}\ ANA_i$ + (Fixed Effects – Year)

The L- prefix associated with the components is intended to capture the differential effect of unrecognized losses separate from unrecognized gains. Since PEN has either negative or zero value, it has not associated with L- prefix. Moreover, since analysts' forecast revisions incorporate their prior errors, they use current period forecast errors (UE) as an additional control variable in examining forecast errors.

They find that for unrecognized gains (DIF> 0), none of the components of comprehensive income is statistically significant. For unrecognized losses (DIF<0), L_FCT and PEN are statistically significant; addition to these two variables SEC and OTH are significant for unrecognized losses. It means that in full sample, the significance of SEC and OTH is driven by observations with unrecognized losses. This is consistent with the notion that analysts' perhaps pay more attention to comprehensive income when there are unrealized losses than when there are unrealized gains.

Finally, their results show that analysts revise their year t+1's forecast downward when net income is greater than comprehensive income, however they do not revise

their forecast upward when comprehensive income is greater than net income. They also find that several of components of comprehensive income are significant in determining subsequent period's forecast revision and forecast errors. Besides that, they state that when net income is greater then comprehensive income, predicting future earnings becomes difficult. According to them, there is an asymmetry in the use of comprehensive income; analysts use it to a larger degree in the presence of unrecognized losses and to a lesser degree in the presence of unrecognized gains. As a result, comprehensive income is significant to predict subsequent period income.

Biddle and Choi (2003) study on 23,539 firm year observation in the period 1994-1998. They test whether "the different definitions of income provide different decision relevance for equity valuation" and "individual comprehensive income components disclosures are incrementally relevant for equity valuation". Additionally, they test the relevance of them for compensation contracting. Finally, they test the different definitions of income dominate in decision relevance for valuation and executive compensation contracting. Their complicated equation for returns is as follows:

$$CRR_t \text{ or } CAR_t = a + b_1 NI_t + b_2 NI_{t-1} + b_3 SEC_t + b_4 SEC_{t-1} + b_5 FCT_t + b_6 FCT_{t-1} + b_7 PEN_t + b_8 PEN_{t-1} + b_9 OTH_t + b_{10} OTH_{t-1} + e_t$$

They test the significance of the levels and lagged levels of comprehensive income components. Their significance level will be discussed in Appendix 1.

As Dhaliwal et al (1999), Biddle and Choi (2003) use the same definitions while conducting their hypothesis. All variables except cumulative raw return (CRR) and cumulative abnormal return (CAR) are scaled by beginning-of-period market value of equity. CRR is equity return which is cumulated for 12 months, from 8 months prior through 3 months after the fiscal year end. CAR is measured as the difference raw equity return and expected return.

Contrary to Dhaliwal et al (1999) the definition of comprehensive income chosen by FASB in SFAS No. 130 (NI_{130}) is more value relevant for equity returns than net income (NI) for both CCR and CAR in Biddle and Choi's (2003) study. According to their results, NI and comprehensive income defined broadly (NI_{broad}), and NI_{130} and NI_{broad} are not distinguishable in value relevance (at conventional levels of statistical significance for either CRR or CAR). Similar to Dhaliwal et. al (1999) they find that SEC has the greatest value relevance than FCT, PEN and OTH.

Contrary to Dhaliwal et al (1999) each of the SFAS No.130 comprehensive income components is value relevant for both financial and non-financial firms. The addition of SEC to NI has greater value relevance than NI but not NI_{broad} and NI_{130}. Besides, addition of FCT and PEN to NI has smaller value relevance than NI_{130} and the addition of OTH to NI yields value relevance smaller than NI_{broad}. The additions of SEC and PEN provide the greatest value relevance than the additions of FCT and PEN, however indistinguishable from the additions of other components. The additions of SEC and FCT, and SEC and PEN, provide income definitions with value relevance greater than NI_{130}. The additions of FCT and OTH, and PEN and OTH yield value-relevance smaller than NI_{broad}. The addition of SEC, FCT, and PEN= NI_{130} provides the greatest value relevance, but it does not differ statistically at conventional levels from the other three component combinations. The addition of FCT, PEN, and OTH yields an income definition with value relevance smaller than NI_{broad}. All results are qualitatively similar for CRR and CAR.

Dechning and Ratliff (2004) study on the period 1998 and 1999. Their sample consists of 673 observations (560 in 1998 and 113 in 1999) They remove observations missing market value of equity, stock price, number of shares outstanding, and net income for the current and previous year. Also observations with a value of $0 for market value of equity, stock price, number of shares outstanding, and stock price are not included in the study. If other comprehensive income items are not available, not calculable, combined with another item, and not meaningful, these are omitted from the sample. Then the largest one percent absolute change in net income and change in other comprehensive income are deleted. As a

result they have 659 observations (365 in Pre-FAS 130 and 294 in the Post-FAS 130). They regress returns on changes in net income (CHNI), discontinued operations, extraordinary items and the cumulative effect of accounting changes (DEC), and other comprehensive income adjustments (CIADJ) for periods before and after the effective date of SFAS No. 130. By this way, they investigate the usefulness of reported comprehensive income. Return is one-year buy and hold return and the independent variables are scaled by beginning of year market value of equity. Their regression is as follows:

$$RETURN_t = a_0 + a_1 CHNI_t + a_2 DEC_t + a_3 CIADJ_t + e_t$$

In the pre-FAS 130 period, only CHNI is significant, CIADJ are not significantly different from zero. In the post-FAS 130 period, the results are similar.

The other comprehensive income adjustments are insignificant, and it is possibly emerged from relatively small amount of other comprehensive income items for many firms. To eliminate this reason from the study, the coefficient of CIADJ has been added to regression and it is aimed to analyze the firms with relatively largest comprehensive income adjustments. This coefficient is an indicator variable (D) where D=1 if CIADJ is in the top of 10% of all CIADJ for the sample, otherwise it is equal to zero. The new regression is formalized as follows (Dechning and Ratliff, 2004; 231):

$$RETURN_t = b_0 + b_1 CHNI_t + b_2 DEC_t + b_3 CIADJ_t + b_4 D_t + b_4 D_t x CIADJ_t + e_t$$

Dechning and Ratliff (2004) find qualitatively same results, only CHNI is significant. The other variables are insignificant for firms on average or for the 10% of firms with the highest relative CIADJ in the sample. According to them as the components of other comprehensive income have already been disclosed in various parts of financial statements, listing and evaluating them in a statement form does not provide information that is not already available. Essentially, this information is available and disclosed in financial statements and its placement has no effect on

firm value. This is consistent with efficient markets hypothesis. If the markets are efficient, the disclosure of other comprehensive income should not affect firm value. However if "investors find that recognition of comprehensive income items reduces their cost to forecast earnings, cash flows, or otherwise assist in valuing the firm then the information is value relevant" (Dechning and Ratliff, 2004; 228). They conclude that there is also a learning-curve and their time-period is too soon after SFAS No. 130 for the markets to absorb this information and have taken full advantage of the additional information; however besides that, there is no response to available information.

These empirical studies are summarized in Appendix 1.

CHAPTER V

AN APPLICATION OF THE VALUE RELEVANCE OF COMPREHENSIVE INCOME AT ISE

Comprehensive income is a new research area for literature, therefore there has been little empirical research examining the claim that income measured on comprehensive basis is a better measure of firm performance than the other summary of income measures. Summary figures are believed to be useful and relevant for financial statement users, since they convey information and incorporate with stock prices and stock returns. While examining the value relevance, it is aimed to test the effects of value relevance of summary of income measures to make useful business and economic decisions.

The major purpose of this study is to test whether comprehensive income or net income is better proxy of firm performance as reflected in stock price changes. Hypothesis testing is used to analyze the association between the changes in stock prices and comprehensive income, and net income. In other words, it is aimed to test whether net income or comprehensive income is more relevant in determining firm performance as reflected in stock price changes.

The study setting is non-contrived. Because, the research is designed in natural environment; none of the variables are manipulated. While obtaining the analysis, secondary data is used. The data are gathered from ISE.

The unit of analysis of this study is individual firm. The data are gathered for each firm and then the analyses are adopted.

The time horizon of the study is cross-sectional. The data are gathered just once, over a period of years between 2004- 2005.

5.1 Sample Selection

The population of this study is all companies quoted at ISE. The financial statements of firms are analyzed for the periods 2004 and 2005, December 31. In order to analyze the relation between the summary of income measures and the changes in stock prices, the price data for the periods March 31, 2004, 2005 and 2006 are gathered from ISE.

In Turkey, there are many changes in accounting regulations through years. Therefore data sets are not consistent and analyses require adjustments. Such adjustments may not be enough to reach consistent data for many cases in accounting research. In 2005 International Accounting Standards became effective and 2004-2005 financial data based on International Financial Reporting Standards (IFRS) are available. Consequently, 2004 and 2005 financial statements are examined in this study.

The financial statements are analyzed and the association between changes in current and previous year prices; and summary of income measures are tested.

However, the initial sample comprises of all observations in ISE for the determined period that satisfied the following requirements:

1. All necessary data are not missing.

2. Non-financial firms are selected for analyses.

3. Net income ≠ comprehensive income.

The first requirement eliminates observations that have missing data for any of the variables used in the analyses. For example;

- If a firm has missing price information for the years which the analyses are conducted, it is not included in analyses.

- For some of the firms, financial statements can not be accessible from ISE. In order to provide the reliability of the study, financial statements that are not already issued in ISE or can not be accessible from ISE[1] due to various reasons are not included in the study. The sample consists of firms whose financial statements are available for the year 2004 and 2005.

- If a firm has missing data for any of the variables in its financial statements, it is not included in analyses.

The second requirement is met by deducting financials, banks, insurance, leasing, factoring, holding and investment, real estate investment trusts, and investment trust companies from analyses. The study focuses on non-financial companies.

The third restriction eliminating firms where net income is same as comprehensive income is required as the analyses focus on the difference between net income and comprehensive income.

For the year 2004, there are 291 firms in ISE. However, after eliminating these restrictions, there are only 34 firms met the requirements.

For the year 2005, there are 305 firms in ISE. However, after eliminating these restrictions, there are only 107 firms met the requirements.

Finally, the total sample size for the analyses is 141 firm-years. 30 of them has negative net income, namely they record loss. 22 of 30 firm-years have negative comprehensive income. Additionally, 7 of full sample have negative comprehensive income with positive net income.

[1] www.imkb.gov.tr (periodically visited on 06-07-12-14-25 and 28 June 2006)

Table 2: The distribution of firms in sample by industries

Industry	2004	Percentage for 2004	2005	Percentage for 2005	Grand Total	Percentage for Grand Total
Basic Metal	2	5.9%	9	8.4%	11	7.8%
Chemical, Petroleum, Plastic	5	14.7%	14	13.1%	19	13.5%
Food, Beverage	7	20.6%	12	11.2%	19	13.5%
Industrials	0	0.0%	2	1.9%	2	1.4%
Information Technology And Technology	0	0.0%	4	3.7%	4	2.8%
Metal Products, Machinery	7	20.6%	13	12.1%	20	14.2%
Non-Metal Mineral Products	4	11.8%	12	11.2%	16	11.3%
Service	4	11.8%	14	13.1%	18	12.8%
Textile, Leather	2	5.9%	18	16.8%	20	14.2%
Wood, Paper, Printing	3	8.8%	9	8.4%	12	8.5%
Grand Total	**34**	**100.0%**	**107**	**100.0%**	**141**	**100.0%**

Regarding to the data for the year 2004, food, beverage and metal products and machinery industries have the greatest percentage as 20.6%. Then chemical, petroleum and plastic industry has 14.7 % where both non-metal mineral products and service industries have 11.8 %.

Regarding to the data for the year 2005, textile and leather industry has the greatest percentage as 16.8 %. Then service and chemical, petroleum and plastic industries follow textile and leather with 13.1 %. Metal products and machinery industry follows them with 12.1 %.

Regarding to the full sample size, metal products, machinery and textile, leather industries have the greatest percentage as 14.2 %. Chemical, petroleum, plastic and food, beverage industries follow them with 13.5 %. Then service industry follows them with 12.8 %.

5.2 Methodology and Hypothesis

As it is discussed in the previous chapters, the comprehensive income (all-inclusive concept of income) can be discussed where the bottom-line income number reflects all changes in shareholders' equity arising from transactions and other events and circumstances except those resulting from investments by owners and distributions to owners. In this study, comprehensive income is analyzed according to De la Rosa and Franz's (2005) definition. De la Rosa and Franz (2005) define comprehensive income as the result of the sum of net income which is reported in the income statement and other comprehensive income which is reported in the equity section of the balance sheet and detailed in the changes in equity.

Net income numbers are obtained from income statements covering the period December 31, 2004 and December 31, 2005. Comprehensive income numbers are obtained from statement of changes in equity covering the period December 31, 2004 and December 31, 2005. Since comprehensive income is the change in equity other than owners' transactions, comprehensive income numbers are found by calculating the difference between the current year and previous year stockholder's equity. However, investments by owners and distributions to owners have been eliminated from the equity amounts.

As it is discussed in the Value Relevance of Comprehensive Income Section, Cahan et al (2000) restrict the reporting of test results to test value relevance with price levels instead of returns. Similar to them, Rees (1997) criticizes return approach and represents the problems of using return approach. First, comparing the data on a year-to-year basis may not be possible. Second, the return models are sensitive to specification of the period in which the returns are collected. Third,

return models represent short-run trend, they are not proper for longer period. As a conclusion, because of timing differences between the recognition of events in stock returns and their recognition by the accounting system, test based on annual stock returns and accounting flows have lower power in detecting value relevance (O'Hanlon and Pope, 1999, 461). Because of these reasons changes in stock price is used instead of returns and this study is confined the reporting of test results to test value relevance with price levels not returns.

Under these assumptions, the hypotheses are formulated as follows:

$H_{0,1}$ = There is no relationship between net income and changes in stock prices

$H_{1,1}$ = There is a relationship between net income and changes in stock prices

and

$H_{0,2}$ = There is no relationship between comprehensive income and changes in stock prices

$H_{1,2}$ = There is a relationship between comprehensive income and changes in stock prices

In order to test these hypotheses, Dhaliwal et al (1999) model is adopted to this study. They test the firm performance as reflected in stock returns; however in this study, firm performance is tested as reflected changes in stock prices. The reasons for this modification are already indicated as above.

The regression models are formulated as follows:

$$PRC_t = \alpha_0 + \beta_1 * NI_t + \varepsilon_t$$

$PRC_t = \alpha_0 + \beta_2 * CI_t + \varepsilon_t$

where,

PRC_t is the change in prices which is found by deducting previous year stock price from current year stock price.

α_0 is constant term

β_1 measures the sensitivity of changes in stock prices to net income

NI_t is the reported net income

β_2 measures the sensitivity of changes in stock prices to comprehensive income

CI_t is comprehensive income which is found by calculating the difference between the previous year and current year stockholders' equity

ε_t is error term

The price changes between the dates March 31, 2006 and 2005, and March, 31 2005 and 2004 have been calculated. Firms submit their 31 December dated financial statements to ISE in eight weeks after 31 December. For some special conditions, ISE permits firms to submit their financial statements in more than eight weeks. Therefore, financial statement users can obtain the statements from ISE merely in March, and the users' reaction to these statements can be seen on March stock prices. Thus, while analyzing the reaction of users to financial statements dated as 31 December, it is assumed that their reaction will be reflected in March prices.

While finding the comprehensive income numbers, distributions to owners and investments by owners are eliminated from the accounts. Then the differences

between the previous year and current year stockholder's equity numbers are equal to comprehensive income amounts.

The prices which is gathered from ISE reflect the per share prices. In order to balance the equation, income numbers are divided by outstanding number of shares. By this way, all the accounting variables are measured per share. Then both side of the equation are deflated by the previous year stock price to control for heteroscedasticity.

First, the regression model is analyzed for the whole sample. Then the analysis is conducted for each year. Finally, the sample is grouped according to the industries and then the regression model is analyzed for different industries.

In order to explain the value relevance of income numbers, their R^2 are compared in this study. The greater R^2 is described as being more value relevant. Consequently, the results are interpreted in light of these inputs.

5.3 Empirical Findings

This section is discussed under five sections. In the first section, the descriptive statistics of the sample is indicated. In the second section, the full sample is analyzed. In the third section, the analysis is conducted for the years 2004 and 2005. In the last section, differences between service and production industries are examined.

5.3.1 Descriptive Statistics

For the full sample, Table 3 reports the descriptive statistics for the variables. The mean price change for the sample is 68 percent, and the mean net income is 4.46 percent. The mean comprehensive income is 10 percent.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PRC	141	-0.4265	5.0488	0.683496	0.801257
NI	141	-1.7785	2.4406	0.0446	0.336648
CI	141	-2.1266	6.9077	0.102665	0.683315
Valid N (listwise)	141				

Notes for Table 3:

PRC is calculated by finding differences between current and previous years' prices and then deflated by previous year price.

Both NI and CI are divided by outstanding number of shares then deflated by previous year price.

5.3.2 Analyses for Full Sample

The empirical findings for the regression analysis of changes in prices and net income and comprehensive income for full sample are given on Table 4 and Table 5.

Table 4 summarizes the models. For the full sample, the adjusted R^2 for NI model is 5% and the adjusted R^2 for comprehensive income model is 2.8%. When the adjusted R^2 are compared, it is seen that net income has greater adjusted R^2 than comprehensive income. It means that net income has the greatest explanatory power on changes in prices than comprehensive income. On the other hand, the greater adjusted R^2 for net income than comprehensive income shows that the relationship between change in prices and net income is greater than the relationship between change in price and comprehensive income. Net income explains the price changes better than comprehensive income.

5% variability of change in prices is explained by the regression model of net income and 2.8% variability of change in prices is explained by the regression model of comprehensive income. Net income and comprehensive income have explanatory power on changes in prices. Nevertheless, they are not enough to explain the changes in prices. They should be placed in the regression model while explaining the changes in prices; however other variables should be placed to regression. Since, the values of the adjusted R^2 for these regression models are very small.

Table 4: The summary of NI and PRC for full sample

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
PRC& NI	0.239[a]	0.057	0.05	0.780823
PRC&CI	0.186[b]	0.035	0.028	0.790032

[a] Predictors: (Constant), NI

[b] Predictors: (Constant), CI

Table 5 reports the coefficients of models.

For the first model where;

$$PRC_t = \alpha_0 + \beta_1 * NI_t + \varepsilon_t$$

NI and PRC have positive relation. When NI increases, PRC increases. The standardized coefficient of the model is 23.9% which means that every 1% increase in net income is associated with 23.9 % increase in changes in prices. The model can be rewritten as,

$$PRC_t = 0.658 + 0.569 * NI_t + \varepsilon_t$$

Or,

$PRC_t = 0.239* NI_t + \varepsilon_t$

The p-value of the regression is 0.004. It is smaller than 0.05 confidence interval. Therefore, null hypothesis, there is no relationship between net income and changes in stock prices, is rejected. Consequently, alternative hypothesis, there is a relationship between net income and changes in stock prices, is accepted.

For the second model where;

$PRC_t = \alpha_0 + \beta_2* CI_t + \varepsilon_t$

CI and PRC have positive relation. When CI increases, PRC increases. The standardized coefficient of the model is 18.6% which means that every 1% increase in comprehensive income is associated with 18.6 % increase in the changes in prices. The model can be rewritten as,

$PRC_t = 0.661 + 0.219* CI_t + \varepsilon_t$

Or,

$PRC_t = 0.186* CI_t + \varepsilon_t$

The p-value of the regression is 0.027. It is smaller than 0.05 confidence interval. Therefore, null hypothesis, there is no relationship between comprehensive income and changes in stock prices, is rejected. Consequently, alternative hypothesis, there is a relationship between comprehensive income and changes in stock prices, is accepted.

When the results for models are compared, it is seen that NI has the greater coefficient than CI, which means that it has greater percentage while explaining the changes in prices. The effect of NI on changes in prices is greater than the effect of

CI on changes in prices. Besides that the p-value of NI is smaller than the p-value of CI and the explanatory power of NI is greater than CI.

Table 5: The coefficients of models

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		**B**	**Std. Error**	**Beta**		
PRC&NI	(Constant)	0.658	0.066	0.239	9.921	0.000
	NI	0.569	0.196		2.902	0.004
PRC&CI	(Constant)	0.661	0.067	0.186	9.825	0.000
	CI	0.219	0.098		2.238	0.027

[a] Dependent Variable: PRC

Finally, investors use NI data in pricing stocks superior to CI data. NI is a better proxy of firm performance as reflected in stock price changes. On the other hand, NI is more relevant than CI.

5.3.3 Within-year Analysis

After examining full sample results, the analyses are conducted for each year. It is aimed to find the difference between the years. Therefore, the data for 2004 and 2005 are analyzed separately.

There are 34 firm-years for year 2004 and 107 firm-years for 2005. Table 6 reports their results. Due to small sample size of year 2004 the regression results are not meaningful. The adjusted R^2 for both CI and NI is very small in 2004, even, it is negative for CI.

For 2005, the results are similar to full sample. The adjusted R^2s are near to the adjusted R^2s of full sample.

Table 6: The summary of NI and PRC for years 2004 and 2005

Year	Sample Size	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2004	34 firm-years	PRC& NI	0.256[a]	0.065	0.036	0.373536
		PRC&CI	0.029[b]	0.001	-0.03	0.386203
2005	107 firm-years	PRC& NI	0.262[a]	0.069	0.06	0.812778
		PRC&CI	0.177[b]	0.031	0.022	0.828895

[a] Predictors: (Constant), NI

[b] Predictors: (Constant), CI

Besides that, their coefficients are reported on Table 7. The disadvantage of small sample size for year 2004 is seen on coefficient results. Therefore, the results are not meaningful and similar to the results of full sample. The results for year 2005 are similar to full sample. However, their p-values are greater than the p-value of full sample. This decrease can be associated with sample size.

Table 7: The coefficients of model for years 2004 and 2005

Coefficients[a]

				Unstandardized Coefficients		**Standardized Coefficients**		
Year	**Sample Size**	**Model**		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
2004	**34 firm-years**	PRC&NI	(Constant)	0.142	0.074	0.256	1.919	0.064
			NI	1.019	0.682		1.496	0.145
		PRC&CI	(Constant)	0.197	0.66	0.029	2.968	0.006
			CI	0.029	0.171		0.166	0.869
2005	**107 firm-years**	PRC&NI	(Constant)	0.814	0.079	0.262	10.302	0.000
			NI	0.573	0.206		2.782	0.006
		PRC&CI	(Constant)	0.811	0.081	0.177	9.959	0.000
			CI	0.198	0.107		1.844	0.068

[a] Dependent Variable: PRC

5.3.4 Within-industry Analysis

By the help of within-industry analysis, it is aimed to examine whether the full sample results differ between major industry groups. It is believed that income is used as a summary of firm performance in many contracting and valuation contexts. An examination of inter-industry differences can be used to draw inferences regarding which measure of income, comprehensive income or net income, is more appropriate and relevant for determining the better income summary for different industries. The industries are grouped as service and production industries.

Service and information technology industries are combined under service industry. The other industries- basic metal, chemical, petroleum and plastic, food and beverage, industrials, metal products and machinery, non-metal mineral products, textile and leather, and wood, paper and printing industries- are combined under production industry.

Then the analyses are conducted for these two industries and the results are compared. Due to small sample size, the analyses can not be conducted for each industry group.

The sample size for production industry is 119 firm-years. Only 30 of them are coming from year 2004 and the rest of them are coming from year 2005. The sample size for service industry is 22 firm-years. Only 4 of them are coming from year 2004 and the rest is coming from year 2005.

However, small sample size is still a constraint for analyses. For service industry, there is not enough sample size for probability sampling designs. The sample size is smaller than 30, therefore its results can not be confidentially generalized to the population (Sekaran, 2000; 277).

Table 8 summarizes the models within industries. For the service industry, the adjusted R^2 for NI model is 12.7% and the adjusted R^2 for comprehensive income model is 11.5%. When the adjusted R^2 are compared, it is seen that net income has

greater adjusted R^2 than comprehensive income. It means that net income has the greatest explanatory power on changes in prices than comprehensive income for service industry. Additionally, production industry has similar results with smaller adjusted R^2 than service industry.

Table 8: The summary of NI, CI and PRC within industries

Year	Sample	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
SERVICE	22 firm-years	PRC& NI	0.410[a]	0.168	0.127	0.660524
		PRC&CI	0.397[b]	0.157	0.115	0.664781
PRODUCTION	119 firm-years	PRC& NI	0.207[a]	0.043	0.035	0.805917
		PRC&CI	0.162[b]	0.026	0.018	0.812827

[a] Predictors: (Constant), NI

[b] Predictors: (Constant), CI

When the results are compared with the results of full sample, it is seen that the adjusted R^2 for service industry is greater than the adjusted R^2 for full sample, and the adjusted R^2 for production industry is smaller than adjusted R^2 for full sample.

However the difference between the adjusted R^2s of production industry and full sample is not as big as the difference between service industry and full sample. In order to interpret the difference between service industry and full sample, absolute values of descriptive statistics are analyzed for each industry and full sample.

Table 9: The absolute value of descriptive statistics

		N	Minimum	Maximum	Mean	Std. Deviation
FULL SAMPLE	PRC	141	0.0084	5.0488	0.719600	0.768761
	NI	141	0.0000	2.4406	0.148061	0.305385
	CI	141	0.0000	6.9077	0.222384	0.654008
	Valid N (listwise)	141				
PRODUCTION	PRC	119	0.0084	5.0488	0.720990	0.78432
	NI	119	0.0000	1.7785	0.141003	0.252987
	CI	119	0.0000	6.9077	0.222109	0.678968
	Valid N (listwise)	119				
SERVICE	PRC	22	0.0171	2.2051	0.712084	0.695186
	NI	22	0.0007	2.4406	0.186241	0.510187
	CI	22	0.0000	2.4292	0.223872	0.511017
	Valid N (listwise)	22				

As a result, there is not a big difference between mean absolute values. Only mean absolute value of net income for service industry is a bit different from the others. However it is not enough to interpret the differences between the adjusted R^2s. In that case, the results concern with small sample size and can not be generalized to full sample.

The p-value of NI for service industry and production industry are greater than full sample. For full sample, rejecting the null hypothesis- there is no relationship between NI and PRC- has smallest significance level than the others that results from observed sample statistics.

The p-value of CI for both industries is greater than the p-value of full sample. Therefore the significance level at which a null hypothesis can be rejected is small in full sample. It is more meaningful in full sample instead of within industries.

Table 10: The coefficients of model within industries

Coefficients[a]

				Unstandardized Coefficients		Standardized Coefficients		
Year	**Sample**	**Model**		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
SERVICE	**22 firm-years**	PRC&NI	(Constant)	0.631	0.145		4.354	0.000
			NI	0.548	0.273	0.41	2.011	0.058
		PRC&CI	(Constant)	0.618	0.148		4.17	0.000
			CI	0.523	0.271	0.397	1.933	0.068
PRODUCTION	**119 firm-years**	PRC&NI	(Constant)	0.663	0.074		8.927	0.000
			NI	0.588	0.257	0.207	2.285	0.024
		PRC&CI	(Constant)	0.663	0.075		8.822	0.000
			CI	0.188	0.106	0.162	1.776	0.078

[a] Dependent Variable: PRC

5.3.5 Results

Overall, the empirical findings of this study do not support the claim that income measured on a comprehensive basis is a better measure of firm performance than net income as reflected in stock price changes. Net income is more strongly associated with stock price changes than comprehensive income. Namely, comprehensive income is dominated by net income. Comprehensive income has little relevance for investors compared to net income. On the other hand both NI and CI have positive relationship with PRC. When CI and NI increase, PRC increases.

The yearly and within industry analyses are not meaningful as full sample. If the sample size meets the requirements of statistical observations, the research findings

are parallel to full sample. Otherwise the results are not meaningful for small sample sized analyses. Therefore small sample size is a constraint of this study.

For further studies, if enough sample size is obtained, the results may be more meaningful and relevant. In order to analyze whether comprehensive income or net income is a better measure of firm performance, data should be gathered throughout many years. After that, the analyses can be conducted for the other components of comprehensive income. The other components of comprehensive income can be tested separately and their effects on stock price can be examined. Then, the effects of positive or negative comprehensive income on stock price changes can be analyzed for further studies.

Additionally, for the coming years, the standard for reporting comprehensive income becomes well known and applicable, and also the presentation format of comprehensive income can be changed and/or broadened.

CONCLUSION

The shift towards global standards introduces a new concept in the preparation of financial statements and, more in general, in defining and reporting financial performance. It is believed that this new concept changes the perspectives of financial statement preparers and users. As a result, the new concept of income adopted is named as “comprehensive income” and it conveys a broader income view than traditional income concepts.

The purpose of this study is to analyze the empirical and theoretical studies on comprehensive income and to test whether comprehensive income is superior to net income as a measure of firm performance as reflected in stock price changes for firms listed in ISE. It is aimed to test the effects of value relevance of summary of income measures on stock prices in the frame of prior studies.

Since comprehensive income is in alternative classification of income, Chapter I positions comprehensive income under the general framework of income measurements and introduces comprehensive income.

The second chapter explains the basics of comprehensive income. The various definitions of comprehensive income and its components are given in detail. First, the components such as foreign currency items, minimum pension liabilities and unrealized gains and losses from certain investment in debt and equity securities are discussed in light of SFAS No. 130 framework. However, by the help of other literature, gains and losses on cash flow hedges and derivatives, and revaluation funds are discussed as other components of comprehensive income.

In Chapter III, reporting comprehensive income is discussed. The purpose of reporting comprehensive income and the financial statements in where comprehensive income should be displayed are explained. Then the prior studies on reporting comprehensive income in financial statements are compared and figured out.

Additionally, the value relevance is explained in Chapter IV. The value relevance of the components of comprehensive income and comprehensive income are discussed. Theoretical and empirical studies are explained and finally, different approaches about explaining the value relevance of comprehensive income are given in a detailed perspective.

The empirical analysis in the fifth chapter investigates whether comprehensive income or net income is better proxy of firm performance as reflected in stock price changes. Dhaliwal et al (1999) model is adapted to the analyses. The net income and comprehensive income data are gathered from ISE covering the period 31 December of 2004 and 2005. The price data is gathered from ISE for the period 2004-2006 dated as 31 March. 141 firm-years are analyzed for the research.

The regression analysis is conducted and the explanatory power of net income and comprehensive income are discussed. Then their adjusted R^2 are compared and the value relevance of these income measures is explained.

The results of these analyses show that there is a relation between changes in stock prices and net income, and comprehensive income. Comparisons between comprehensive income and net income show that net income has the greater explanatory power on stock price changes than comprehensive income. The coefficient of net income and adjusted R^2 for its regression analyses are greater than comprehensive income measures.

Additionally, the same analyses are conducted for each year and within industries. Due to sample size constraint within year and industry analyses do not reflect the general perspective of full sample size.

The results of this study is consistent with Dhaliwal et al (1999)'s results. Because they find no clear evidence on whether comprehensive income or net income better summarizes firm performance. It shows that net income dominates

comprehensive income by the market in setting security prices. Also other components of comprehensive income are not currently used for pricing securities (Smith and Tse, 1998; 86).

The possible reason for these results is that comprehensive income is a newly adopted concept. It is difficult to be accustomed to a new concept; therefore users of financial statements still focus on net income rather than comprehensive income. Consequently, its effects can be seen in the following years by the help of analyses conducted throughout many years with greater sample sizes.

For further studies,

- It can be better to conduct the analyses with greater sample sizes which are gathered throughout many years.

- The effect of negative and positive comprehensive income on stock price changes can be analyzed.

- The analyses can be conducted within several industries and their results can be interpreted by the help of industrial differences.

- The effects of different comprehensive income reporting formats on decision makers evaluation can be analyzed. These analyses can manipulate aspects of the different formats.

- The effects of comprehensive income on future operating cash flows can be analyzed.

- The association between comprehensive income and firm value can be analyzed.

- The effect of firm size on comprehensive income can be analyzed

Additionally, FASB standard about comprehensive income exists since 1997. In Turkey, IAS became effective since 1 January 2005 for listed firms at ISE, and there is no IASB standard that yet exists on comprehensive income (Celik, 2006; 84).

Also comprehensive income does not exist in Turkish Accounting Standards (TAS). However, it is mentioned in TAS No.1 as the components of comprehensive income are placed in the statement of changes in equity (Sensoy, 2002; 11).

Finally, as FASB (2004) states that comprehensive income is also the object of a joint IASB-FASB project. Thus, it is believe that their joint project will establish standards for presenting information that is useful in assessing the financial performance of a business enterprise in financial statements.

In light of these projects, it is believed that the importance of comprehensive income will increase in coming years.

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APPENDIXES

APPENDIX 1
THE SUMMARY OF EMPIRICAL STUDIES

Author	Years	Sample Size	Test	Dependent Variable	Independent Variable(s)	Results
Dhaliwal et al (1999)	1994-1995	11,425 firm years	R^2	Raw daily percentage returns compounded over the fiscal year (R)	Net income after extraordinary items and discontinued operations (NI)	the association of returns is smaller than the association of returns with ($COMP_{130}$)
					SFAS No. 130 comprehensive income ($COMP_{130}$)	significant at 0,01 level (two tailed test)
					the change in a firm's comprehensive retained earnings, adjusted retained earnings, plus common stock dividends ($COMP_{broad}$)	the association of returns is smaller than both the association of returns with NI and $COMP_{130}$
					net income adjusted for unrealized gains and losses on marketable securities ($COMP_{MKT-ADJ}$)	significant at 0,01 level (two tailed test)
					the net income adjusted for foreign currency translation adjustment ($COM_{FCT-ADJ}$)	insignificant
					the net income adjusted for minimum pension liability ($COM_{PEN-ADJ}$)	insignificant

Author	Years	Sample Size	Test	Dependent Variable	Independent Variable(s)	Results
Cahan, Courtenay, Gronewolwer and Upton (2000)	1992-1997	237 firm years	R^2 and F test	The value of firm (P)	book value of equity (BVE)	significant at 0,05 level (one tailed test)
					dividend paid by firm (DIV)	significant at 0,05 level (one tailed test)
					earnings (E) which is equals to comprehensive income (CI) also equals to net income and other comprehensive income items	its components NI and OCI items are tested separately
					sum of other comprehensive income items (OCI)	items of OCI are tested separately
					net income (NI)	significant at 0,1 level (one tailed test)
					the revaluation increment due to revaluation of fixed assets (RFA)	significant at 0,05 level (one tailed test)
					the increment or decrement due to foreign currency translation adjustments (CUR)	insignificant
					disclosure in a single statement of changes in equity (SEC)	insignificant

Author	Years	Sample Size	Test	Dependent Variable	Independent Variable(s)	Results
Biddle and Choi (2003)	1994-1998	23,539 firm years	R^2 and The Pearson Correlation	cumulative raw return (CRR) and cumulative abnormal return (CAR)	net income (NI)	significant at 0,01 level
					lagged level of NI	Insignificant
					comprehensive income defined by SFAS 130 (NI_{130}) =NI+SEC+FCT+PEN	items of N130 are tested separately
					change in the balance of unrealized gains and losses on marketable securities (SEC)	significant at 0,01 level
					lagged level of SEC	Insignificant
					change in the cumulative foreign currency translation adjustment (FCT)	Insignificant
					lagged level of FCT	significant at 0,01 level
					change in additional minimum pension liability in excess of unrecognized prior service cost (PEN)	significant at 0,01 level
					lagged level of PEN	Insignificant
					other components of comprehensive income NI_{broad} but not to NI_{130} (OTH)	significant at 0,01 level
					lagged level of OTH	Insignificant

Author	Years	Sample Size	Test	Dependent Variable	Independent Variable(s)	Results
Choi and Das (2003)	1994-1998	7,421 firm years	R^2 and F test	Forecast Revisions (FREV)	the unexpected portion of earnings announcement at year t (UE)	significant at 0,01 level
					the unrealized holding gain (loss) of marketable securities scaled by year t's beginning market value of equity (SEC)	significant at 0,1 level
					unrealized loss of marketable securities(=SEC if SEC<0); 0 otherwise (L_SEC)	significant at 0,01 level
					the change in foreign currency translation adjustments scaled by year t's beginning market value of equity (FCT)	Insignificant
					foreign currency translation loss (=FCT if FCT<0); 0 otherwise (L_FCT)	significant at 0,05 level
					the unrecognized minimum pension liability scaled by year t's beginning market value of equity (PEN)	significant at 0,01 level
					the other components of comprehensive income(CI-NI-SEC-FCT-PEN) scaled by year t's beginning market value of equity (OTH)	Insignificant
					other loss (=OTH if OTH<0); 0 otherwise	Insignificant
					the natural logarithm of the fiscal year's beginning total assets (SIZE)	significant at 0,01 level
					the fiscal year's beginning book to market ratio (BM)	significant at 0,01 level
					the natural logarithm of 1 plus the number of analysts following the firm for year t+I's earnings (ANA_i)	significant at 0,01 level
					if actual earnings reported for the year t+i below 0, the variable is 1; 0 otherwise ($LOSS_i$)	significant at 0,01 level

Author	Years	Sample Size	Test	Dependent Variable	Independent Variable(s)	Results
Dechning and Ratliff (2004)	1998-1999	659 firm years	R^2	one-year buy and hold RETURN	changes in net income (CHNI)	significant p< 0,001
					discontinued operations, extraordinary items and the cumulative effect of accounting changes (DEC),	insignificant
					other comprehensive income adjustments (CIADJ)	insignificant

APPENDIX 2

ILLUSTRATIVE EXAMPLES ON REPORTING COMPREHENSIVE INCOME

Format A: Combined statement of comprehensive income and net income approach

Enterprise Statement of Income and Comprehensive Income Year Ended December 31,200X		
Revenues		150.000
Expenses		30.000
Other gains and losses		9.000
Gain on sale of securities		2.500
Income from operations before tax		131.500
Income tax expenses		32.875
Income before extraordinary item and cumulative effect of accounting change		98.625
Extraordinary item, net of tax		30.000
Income before cumulative effect of accounting change		68.625
Cumulative effect of accounting change, net of tax		3.000
Net Income		68.625
Other comprehensive income (OCI), net of tax:		
Foreign currency adjustments		10.000
Unrealized gains on securities	15000	
Unrealized holding gains arising during period	1750	
Less: Reclassification adjustment for gains included in net income		13.250
Minimum pension liability adjustment		-3.000
Other comprehensive income		20.250
Comprehensive Income		88.875

(Source: Adapted from SFAS No.130, 1997; 37)

Alternatively, components of other comprehensive income can be displayed before tax with one amount shown for the aggregate income tax expense or benefit:

Other comprehensive income, before tax		
Foreign currency transilation adjustment		13.300
Unrealized gains on securities		
Unrealized holdung gains arising during period	19.950	

Less:reclassification adjustment for gains included in net income	-2.327	17.623
Minimum pension liability adjustment		-3.990
Other comprehensive income, before tax		26.933
Income tax expense related to items of other comprehensive income		-6.683
Other comprehensive income, net of tax		20.250

(Source: Adapted from SFAS No.130, 1997; 37)

Format B: Separate statement of comprehensive income approach

Enterprise Statement of Net Income (in USD) Year Ended December 31, 200X		
Revenues		150.000
Expenses		30.000
Other gains and losses		9.000
Gain on sale of securities		2.500
Income from operations before tax		131.500
Income tax expenses		32.875
Income before extraordinary item and cumulative effect of accounting change		98.625
Extraordinary item, net of tax		30.000
Income before cumulative effect of accounting change		68.625
Cumulative effect of accounting change, net of tax		3.000
Net Income		68.625

Enterprise Statement of Comprehensive Income (in USD) Year Ended December 31, 200X		
Net Income		68.625
Other comprehensive income, net of tax:		
Foreign currency translation adjustments		10.000
Unrealized gains on securities		
Unrealized holding gains arising during period	15.000	
Less:Reclassification adjustment for gains included in net income	1.750	13.250
Minimum pension liability adjustment		3.000
Other comprehensive income		20.250
Comprehensive Income		88.875

(Source: Adapted from SFAS No. 130, 1997; 39)

Format C: Statement of changes in equity approach (Alternative 1)

Enterprise
Statement of Changes in Equity (in USD)
Year Ended December 31, 200X

	Total	Comprehensive Income	Retained Earnings	Accumulated OCI	Common Stock	Paid-in Capital
Beginning Balance	615,000		90,000	30,000	165,000	330,000
Comprehensive income						
Net income	68,625	68,625	68,625			
OCI, net of tax						
Unrealized gains on securities, net of reclassification adjustment	13,250	13,250				
Foreign currency translation adjustments	10,000	10,000				
Minimum pension liability adjustment	-3,000	3,000				
OCI		20,250		20,250		
Comprehensive income		88,875				
Common stock issued	160,000				55,000	110,000
Dividend declared on common stock	-11,000		-11,000			
Ending balance	857,875		147,625	50,250	220,000	440,000
Disclosure of reclassification amount[a]						
Unrealized holding gains arising during period		15,000				
Less: reclassification adjustment for gains included in net income		-1,750				
Net unrealized gains on securities		13,250				

[a]It is assumed that there was no sale or liquidation of an investment in a foreign equity. Therefore there is no reclassification adjustment.

(Source: Adapted from SFAS No. 130, 1997; 40)

Format D: Statement of changes in equity approach (Alternative 2)

Enterprise Statement of Changes in Equity (in USD) Year Ended December 31, 200X		
Retained Earnings		
Balance at January 1	90,000	
Net income	68,625	68,625
Dividends declared on common stock	-11,000	
Balanace at December 31	147,625	
Accumulated other comprehensive income[a]		
Balance at January 1	30,000	
Unrealized gains on securities, net of reclassification adjustment (see disclosure)		13,250
Foreign currency translition adjustments		10,000
Minimum pension liability adjustment		-3,000
Other comprehensive income	20,250	20,250
Comprehensive income		88,875
Balance at December 31	50,250	
Common stock		
Balance at January 1	165,000	
Shares issued	55,000	
Balance at December 31	220,000	
Paid-in capital		
Balance at January 1	330,000	
Common stock issued	110,000	
Balance at December 31	440,000	
Total Equity	857,875	

Disclosure of reclassification amount[b]	
Unrealized holding gains arising during period	15,000
Less: reclassification adjustment for gains included in net income	-1,750
Net unrealized gains on securities	13,250

[a]All items of other comprehensive income are displayed net of tax
[b]It is assumed that there was no sale or liquidation of an investment in a foreign equity. Therefore there is no reclassification adjustment for this period

(Source: Adapted from SFAS No. 130, 1997; 41)

Format E: Required disclosures of all formats

1) Disclosure of Related Tax Effects Allocated to Each Component of Other Comprehensive Income

Enterprise
Notes to Financial statements (in USD)
Year Ended December 31, 200X

	Before-Tax Amount	Tax (Expense) or Benefit	Net of Tax Amount
Foreign currency translation adjustments	13,300	-3,300	10,000
Unrealized gains on securities:			
Unrealized holding gains arising during period	19,950	-4,950	15,000
Less: reclassification adjustment for gains realized in net income	-2,328	578	-1,750
Net realized gains	17,623	-4,373	13,250
Minimum pension liability adjustment	-3,990	990	-3,000
Other comprehensive income	26,933	-6,683	20,250

(Source: Adapted from SFAS No. 130, 1997; 42)

2) Disclosure of Accumulated Other Comprehensive Income Balances

Enterprise
Notes to Financial statements (in USD)
Year Ended December 31, 200X

	Foreign Currency Items	Unrealized Gains on Securities	Minimum Pension Liability Adjustments	Accumulated Other Comprehensive Income
Beginning balance	-625	30625	0	30000
Current-period change	10000	13250	-3000	20250
Ending balance	9375	43875	-3000	50250

(Source: Adapted from SFAS No. 130, 1997; 42)

3) Accompanying Statements of Financial Position

Enterprise Statement of Financial Position (in USD) Year Ended December 31, 200X	
Assets:	
Cash	253,000
Account receivables	305,000
Available for sale securities	129,500
Plant and equipment	1,000,000
Total Assets	1,687,500
Liabilities:	
Accounts payable	140,625
Accured liabilities	99,000
Pension Liability	192,000
Notes payable	398,000
Total Liabilities	829,625
Equity:	
Common stock	220,000
Paid-in capital	440,000
Retained earnings	147,625
Accumulated other comprehensive income	50,250
Total Equity	857,875
Total Liabilities and equity	1,687,500

(Source: Adapted from SFAS No. 130, 1997; 43)