THE REVALUATION MODEL AND ITS EFFECTS ON FINANCIAL STATEMENTS: AN EXAMINATION ON BIST 100 COMPANIES

Özgür M. ESEN[*]
A. Atilla PEREK[†]

Abstract

International Financial Reporting Standards allows the companies to present their tangible and intangible fixed assets with their current values in the financial statements. This option allows the financial statements to be presented in fair values in terms of these items. The use of this option may have significant effects on the financial statements of the companies. The aim of this study is to examine the impacts of valuation of tangible and intangible assets, which have significant place among total assets, according to various methods on financial statements. In this study, application and accounting treatment for Revaluation Model and its impact on financial statements is examined, and the results of these impacts are discussed together with applications. Additionally, companies that are listed on Borsa İstanbul (BIST) are analyzed with regard to their usage of revaluation model and an assessment is made after analyzing their application.

Key words: Revaluation model, IAS 16, revaluation surplus, tangible assets, property

1. Introduction

Both tangible and intangible fixed assets constitute one of the fundamental elements of assets in balance sheet and one of the most important parts of company asset structure. Although type of tangible and intangible fixed assets and their ratio to total assets varies across companies, they comprise vast majority of most of the manufacturing and service company's total assets. For instance, while an airline company's, which is quoted to Borsa Istanbul (BIST), net tangible fixed assets (tangible fixed assets less accumulated depreciation) constitutes approximately 67% of total assets in balance sheet as of 31 December 2014, net intangible fixed assets of a world-renowned medicine company constitutes approximately 45% of total assets in its balance sheet as of 31 December 2014. Up-to-date presentation of tangible and intangible fixed assets that play an important role in determination of company's financial position has importance for decision makers.

As the accounting treatments converge through a single set of standards the revaluation of fixed assets is one of the most controversial topics since it is allowed under IFRSs and not allowed under some national GAAPs (Lopes et al., 2012).The revaluation issue is closely related to relevance and reliability concepts in that current values of assets are probably relevant to decision makers; however, concerns about the reliability of current values of fixed assets are also present (Aboody et al., 1999).

According to IFRSs tangible and intangible assets can be measured in periods subsequent to initial recognition at cost or at fair value. The valuation model chosen depends on the judgment of the management. The way that a company revalues its assets depends on the decision, timing, direction and magnitude issues. Decision is related to whether the company chose to revalue or not; timing is related to the behavior of the company over a number of years regarding revaluation, direction issue is related to the upward or downward revaluation; and magnitude is related to the impact revaluation has on financial statements (Lin et al., 2000).

[*] Asst. Prof. Dr., İstanbul University, School of Business, ozgures@istanbul.edu.tr
[†] Asst. Prof. Dr., Marmara University, Faculty of Business Administration, atillaperek@gmail.com

The studies regarding these issues include Aboody et al. (1999) where they examine whether revaluations of fixed assets by UK firms are associated with future firm performance. They found that asset revaluations by UK firms are significantly positively associated with future changes in operating performance, over one, two, and three years subsequent to the revaluation. They also found that revaluation balances are significantly positively related to annual returns and prices.

Another study is by Lopes and Walker (2012) where they study Brazil firms and found that upward revaluations of fixed assets are negatively associated with future firm performance, stock prices and returns. Unlike the study conducted by Aboody et al., (1999), they found that revaluations provide a negative signal about future firm performance. The authors state that although the GAAPs of the two countries were very similar regarding the topic, the economic and institutional environments were significantly different.

Barlev et al. (2007) conducted a study including a sample from 35 distinct countries that allow asset revaluations. They found that the results found in previous research are significantly related to specific economic and legal environments. They conclude that when the economic and/or legal infrastructure is different, other factors also affect the results other than the variables used in the literature.

In Turkish literature, Örten and Bayırlı (2007) analyzed current application and tax regulation comparatively in their study. It is concluded that changes should be made in current application and tax regulation on treatment of revaluation increases and revaluation decreases according to IAS 16.

Yükçü and İçerli (2007) examined tangible fixed assets within the context of IAS 16 and explained accounting treatment for tangible fixed assets according to the Standard and revaluation models discussed in the Standard. Study is extended with application examples.

In consequence of literature review for Turkey within the scope of IAS 16, it is determined that academic research is rather comprised of theoretical information and advisory accounting entries devoted to understandability of regulations brought with the Standard.

2. Reporting Tangible and Intangible Fixed Assets in Subsequent Periods

An asset is classified as a tangible fixed asset (TFA) if that asset is a tangible item that is held for use in the production or supply of goods or services, or for administrative purposes and is expected to be used more than one period according to IAS 16 Tangible Fixed Assets.

In IAS 38 Intangible Fixed Assets, intangible fixed assets (IFA) are defined as assets that will be used more than one year, have no physical substance, are identifiable and non-monetary.

Both TFAs and IFAs are reported according to two methods in periods subsequent to initial recognition. In other words, their revaluation can be made according to two separate methods. One of these methods is cost model. Under cost model they are reported with cost until they are derecognized. Asset is presented with its cost less any accumulated depreciation and any impairment losses. Second method is revaluation model. Under revaluation model asset is reported with its fair value at the date of revaluation. The decision to select the method should be made by the management.

2.1. Cost Model

Under cost model TFA/IFA are valued with their cost until they are derecognized and they are represented in the balance sheet with net carrying amount after subtracting any wear and tear (accumulated depreciation). In this method, in accordance with conservatism principle, impairment losses are taken into consideration while updated asset values are ignored.

Consequently assets are represented with its cost less any accumulated depreciation and any impairment losses on the balance sheet under cost model. As revaluation model is emphasized in this study, cost model is not much mentioned.

2.2. Revaluation Model

Revaluation model aims to represent tangible or intangible fixed assets with their updated values in the balance sheet. Under this method, TFA/IFA are brought to their fair value and they arerepresented in the balance sheet with current values as much as possible. In this model assets are presented with the fair value at the date of revaluation less any accumulated depreciation and any impairment losses (IAS 16, p.31)

Fair value is defined as *"the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date"* according to IFRS 13 Fair Value Measurement Standard paragraph 9. Fair value of TFA can be obtained from an active market related with the asset or from active markets for similar assets. Although in IAS 16 there is no requirement for professional external valuation, in practice professional advice is often sought (Ernst&Young, 2015, p. 1303). For instance fair value of TFA such as buildings and lands are determined referring to experts' opinions with professional competence. In case there is no active market for TFA, then fair values of TFA can be calculated using income approach (for example present value of cash flows) or cost approach (for example amortized renewal cost). However, for intangible fixed assets, revaluation model can only be used if there is an active market for the related asset(IAS 38, p.75).

Revaluation should be made with sufficient regularity to ensure that the carrying amount does not differ materially from the value that will be determined using fair value at the end of the reporting period (IAS 16, p.31). There is no exact provision regarding the frequency of revaluation. Revaluation is made in case there is a significant difference between net carrying amount and fair value of the asset. If there is no significant change in fair value, revaluation may be made every three or five years. (IAS 16, p.34).

It is not obligatory to apply revaluation model to all TFAs and IFAs, it may be applied only for selected groups of TFAs and IFAs. Nevertheless, in case revaluation model is chosen, it should be applied for all similar groups of tangible/intangible fixed assets. In other words, if revaluation model is chosen, it should be applied for entire TFA/IFAs within the same class. For example, if a company is valuing one of its lands with revaluation model, then it should value all of the lands that are owned by the company according to the revaluation model.

If revaluation value of an asset is greater than its book value, difference is recognized within other comprehensive income and reported under revaluation surplus in equity. In other words, it is not recognized as part of the period's profit or loss. However, if there is a previous revaluation decrease that is recognized in profit and loss related with the asset, revaluation increase that is found as a result of revaluation is recognized as an income within profit/loss to the extent of previous revaluation loss and exceeding part is reported in equity (IAS 16, p.39).

If revaluation value of an asset is less than its book value, revaluation loss is recognized for that asset. The difference is reported as a loss in profit/loss statement. If revaluation increase occurs in the following year of revaluation loss, initially income is recorded in profit/loss statement to the extent of previous revaluation loss and exceeding part is recognized in other comprehensive income and reported in equity part of balance sheet (IAS 16, p.40). Nevertheless, if a decrease occurs as a result of revaluation in subsequent years to the

recognition of revaluation surplus, the amount may not be recognized as an expense until revaluation surplus in equity is completely used up.

Revaluation surplus is included in equity as a separate item until TFA/IFA is derecognized. A TFA/IFA is derecognized when it is disposed off or when no future economic benefit is expected from its usage or disposal. When derecognized, revaluation surplus that is reported as a separate item under equity can be transferred to retained earnings. Apart from that, revaluation surplus may be transferred to retained earnings to the extent of the difference between original depreciation amount and depreciation amount after revaluation, when the asset is still being used. This transfer should be directly made through retained earnings without any recognition in profit/loss (IAS 16, p.41).

When a TFA/IFA item is revalued, accumulated depreciation at the date of revaluation is treated according to one of the two methods. According to the first method, accumulated depreciation is adjusted proportionately to change in gross carrying amount and thus carrying amount is brought to the carrying amount after revaluation. Under the other method, the accumulated depreciation is eliminated against the gross carrying amount of the asset and this net carrying value is updated to revalued amount (IAS16, p.35).

The most important difference between revaluation model used for TFA and IFA and fair value model used for investment property is in the recognition of value increases. Revaluation increase under revaluation model is recognized in equity as a separate item rather than being recognized in period income/loss. Whereas, revaluation increases and revaluation decreases under fair value model are recognized in period income/loss.

If an asset is derecognized, these differences may not be recognized either in profit/loss statement or as an income item under other comprehensive income. They may be transferred to retained earnings as part of equity. However, part of these revaluation surpluses may be transferred to Retained Earnings before asset is derecognized. This transferrable amount is limited to the difference between depreciation amount if revaluation is not made and depreciation amount after revaluation is made.

3. Illustrative Application

The Impacts of Revaluation on Financial Statements

Balance sheet of PEB Company as of 1 January 2012 is as follows (Example is simplified in order to solely exhibit the impacts of revaluation and tax effect is ignored).

PEB Company Balance Sheet as of 01.01.2012

Assets			
Cash	160.000	***Equity***	
		Capital	60.000
		Retained Earnings	100.000

It is assumed that PEB Company purchased a vehicle in the amount of 50.000 CU (Currency Unit) with cash on 2 January 2012. Useful life of the vehicle is assumed as 5 years and it is assumed that there is no residual value. Straight-line depreciation is selected as the depreciation method.
Company sold the vehicle for36.000 CU on 31 December 2014. It is assumed that no other economic transactions have occurred between the years of 2012 – 2014.

Cost Model

Year 2012

If it is assumed that cost model is used for vehicle, journal entries that should be made according to cost model and the impact of these entries on financial statement will be as follows.

02.01.2012	Vehicles	50.000	
	Cash		50.000

31.12.2012	Depreciation Expense	10.000	
	Accumulated Depreciation		10.000

Profit/Loss Statement will be as follows assuming that no other transaction took place in 2012 except for the depreciation expense.

PEB Company Profit/Loss Statement for the year 2012	
Depreciation Expense	(10.000)
Net Period Loss	(10.000)

As there is no other transaction in 2012, there will be 10.000 CU loss in Profit/Loss Statement due to the depreciation expense and retained earnings will be 90.000 CU (100.000 CU – 10.000 CU) in the balance sheet as of 31.12.2012.

PEB Company Balance Sheet as of31.12.2012

Assets			
Cash	110.000		
Vehicles	50.000	***Equity***	
Accumulated Depreciation	(10.000)	Capital	60.000
Vehicles (Net)	40.000	Retained Earnings	90.000

Year 2013

For 2013, journal entry related with the vehicle and its impact on financial statements will be as follows.

31.12.2013	Depreciation Expense	10.000	
	Accumulated Depreciation		10.000

PEB Company Profit/Loss Statement for the year 2013	
Depreciation Expense	(10.000)
Net Period Loss	(10.000)

As there is no other transaction in 2013, there will be 10.000 CU loss in Profit/Loss Statement due to depreciation expense and retained earnings will be 80.000 CU (90.000 CU – 10.000 CU) in balance sheet as of 31.12.2013.

PEB Company Balance Sheet as of 31.12.2013

Assets			
Cash	110.000		
Vehicles	50.000	***Equity***	
Accumulated Depreciation	(20.000)	Capital	60.000
Vehicles (Net)	30.000	Retained Earnings	80.000

Year 2014

For 2014, journal entries related with the vehicle and their impact on financial statements will be as follows.

31.12.2014	Depreciation Expense	10.000	
	Accumulated Depreciation		10.000

31.12.2014	Cash	36.000	
	Accumulated Depreciation	30.000	
	Vehicles		50.000
	Gain on Sale of TFA		16.000

Company's Profit/Loss Statement for the Year 2014 will be as follows.

PEB Company Profit/Loss Statement for the year 2014	
Depreciation Expense	(10.000)
Gain on Sale of TFA	16.000
Net Period Income	6.000

As it is assumed that there is no other transaction in 2014, 6.000 profit is represented in the Profit/Loss Statement due to depreciation expense and Gain on Sale of TFA and retained

earnings will be 86.000 CU (80.0000 CU + 6.000 CU) in the balance sheet as of 31.12.2014 as a result of these transactions.

PEB Company Balance Sheet as of 31.12.2014

Assets			
Cash	146.000		
		Equity	
		Capital	60.000
		Retained Earnings	86.000

According to Cost Model change in Retained Earnings resulted in a decrease in the amount of 14.000 CU (100.000-86.000) for the period between the purchase and sale of the vehicle.

Revaluation Model

Year 2012

Assume that vehicle is reported according to revaluation model. On 31 December 2012, fair value of the vehicle is 60.000 CU. Journal entries that should be made according to revaluation model and impact of these entries on financial statements for the period between the purchase and sale of the vehicle will be as follows.

02.01.2012	Vehicles	50.000	
	Cash		50.000

31.12.2012	Depreciation Expense	10.000	
	Accumulated Depreciation		10.000

Vehicle will be carried at fair value according to revaluation model as presented below.

(FV= Fair Value; NCA= Net Carrying Amount)

Revaluation Increase Ratio = (FV-NCA) / NCA

Revaluation Increase Ratio = (60.000 – 40.000) / 40.000 = %50

Cost and accumulated depreciation should be adjusted for revaluation increase ratio.

According to this, cost should be increased by 25.000 CU (50.000 CU * 50%) and accumulated depreciation should be increased by 5.000 CU (10.000 CU * 50%). Revaluation surplus should be reported in equity under a separate account rather than being reported in P/L Statement. Appropriate entry is exhibited as follows.

31.12.2012	Vehicles	25.000	
	Accumulated Depreciation		5.000
	TFA Revaluation Surplus		20.000

The impact of these journal entries on financial statements of 2012 will be as follows.

PEB Company Profit/Loss Statement for the Year 2012	
Depreciation Expense	(10.000)
Net Period Loss	(10.000)
Other Comprehensive Income	
TFA Revaluation Surplus	20.000
Total Comprehensive Income	**10.000**

As there is no other transaction, there will be 10.000 CU loss in Profit/Loss Statement for 2012 due to depreciation expense and retained earnings will be represented as 90.000 CU (100.000 CU – 10.000 CU) on the balance sheet as of 31.12.2012. In addition to this, as revaluation increase in comprehensive income at the amount of 20.000 CU is represented in the equity under TFA Revaluation Surplus rather than being represented in the P/L Statement, even period profit/loss is not affected, equity is increased by 20.000 CU as of 31.12.2012.

PEB Company Balance Sheet as of 31.12.2012

Assets			
Cash	110.000	***Equity***	
Vehicles	75.000	Capital	60.000
Accumulated Depreciation	(15.000)	TFA Revaluation Surplus	20.000
Vehicles (Net)	60.000	Retained Earnings	90.000

As it is exhibited above, net carrying amount of vehicles is represented in the amount of 60.000 CU, which is the fair value of the asset in the balance sheet as of 31.12.2012.

Year 2013

Journal entries that should be made in 2013 and their impact on financial statements are as follows:

31.12.2013	Depreciation Expense	15.000	
	Accumulated Depreciation		15.000

The impact of recording depreciation expense in 2013 will be as follows.

PEB Company Profit/Loss Statement for the year 2013	
Depreciation Expense	(15.000)
Net Period Loss	(15.000)

There is a 15.000CU period loss due to journal entry for the depreciation of the vehicle in 2013. As a result of this loss, retained earnings will be represented at 75.000 CU (90.000 CU – 15.000 CU) in the balance sheet as of 31.12.2013. As there is no economic event related with comprehensive income, there will not be any change in other equity items.

PEB Company Balance Sheet as of 31.12.2013

Assets			
Cash	110.000	***Equity***	
Vehicles	75.000	Capital	60.000
Accumulated Depreciation	(30.000)	TFA Revaluation Surplus	20.000
Vehicles (Net)	45.000	Retained Earnings	75.000

Year 2014

Vehicle is sold for 36.000 CU by the end of 2014. Journal entries for depreciation and sale of vehicle are as follows.

31.12.2014	Depreciation Expense	15.000	
	Accumulated Depreciation		15.000

31.12.2014	Cash	36.000	
	Accumulated Depreciation	45.000	
	Vehicles		75.000
	Gain on Sale of TFA		6.000

As a result of these entries, P/L Statement for 2014 will be presented as follows.

PEB Company Profit/Loss Statement for the year 2014	
Depreciation Expense	(15.000)
Gain on Sale of TFA	6.000
Net Period Loss	(9.000)

Balance of retained earnings account will be 66.000 CU (75.000 CU – 9.000 CU) on 31 December 2014.

Under IAS 16, it is stated that in case TFAs are derecognized, TFA Revaluation Surplus in equity may be transferred to retained earnings. Nevertheless this transfer should not be made through P/L. If it is assumed that TFA Revaluation Surplus is transferred to retained earnings when the vehicle is sold, required journal entry will be as follows.

31.12.2014	TFA Revaluation Surplus	20.000	
	Retained Earnings		20.000

Consequent to the journal entry above, retained earnings will be represented at 86.000 CU (66.000 CU + 20.000 CU) in the balance sheet of the company as of 31.12.2014. Additionally, as TFA Revaluation Surplus account is closed against Retained Earnings, TFA Revaluation Surplus account will not take place in the balance sheet as of 31.12.2014. Balance sheet of the company as of 31.12.2014 is as follows.

PEB Company Balance Sheet as of 31.12.2014

Assets			
Cash	146.000	***Equity***	
		Capital	60.000
		Retained Earnings	86.000

According to revaluation model, Retained Earnings is decreased by 14.000 CU (100.000 CU – 86.000 CU) in the period from purchase to sale of the vehicle. Therefore using either cost model or revaluation model does not cause any difference if the 3-year period is assessed in total. Depreciation expense is increased by 10.000 CU (5.000 CU for 2013 and 5.000 CU for 2014) under revaluation model in comparison to depreciation expense under cost model. Additionally Gain on Sale of TFA is decreased by 10.000 CU under revaluation model. In other words, retained earnings are decreased by an additional 20.000 CU due to the increase in depreciation expense and decrease in Gain on Sale of TFA under revaluation model. This difference is removed with the addition of TFA Revaluation Surplus to retained earnings.

In summary, the impact of derecognition of the asset is the same under both revaluation model and cost model. Even though selection of either cost model or revaluation model changes net period income, their impact on comprehensive income is same as long as TFA asset is represented in balance sheet.

Transfer of TFA Revaluation Surplus to Retained Earnings While Asset is in Usage

IAS 16 Plant, Property and Equipment Standard states that TFA Revaluation Surplus in equity may not only be transferred to retained earnings when TFA is derecognized but also it may be transferred when TFA is still in usage. However, when asset is in usage, the amount that may be transferred from TFA Revaluation Surplus to retained earnings is limited to the difference between the depreciation expense calculated for the revalued carrying amount of the asset and depreciation expense calculated for the original cost of the asset.

Year 2012

Assume that the vehicle in the example above is revalued on 31 December 2012 likewise, on 31 December 2013 TFA Revaluation Surplus is transferred to retained earnings while vehicle is not sold and on 31 December 2014 vehicle is sold for 36.000 CU for cash. Additionally assume that the balance of retained earnings is 100.000 CU before 2012.

Journal entries that should be made on 31 December 2012 and their impact on 2012 financial statements will be as follows.

31.12.2012	Depreciation Expense	10.000	
	Accumulated Depreciation		10.000

31.12.2012	Vehicles	25.000	
	Accumulated Depreciation		5.000
	TFA Revaluation Surplus		20.000

PEB Company Profit/Loss Statement for the year 2012	
Depreciation Expense	(10.000)
Net Period Loss	(10.000)
Other Comprehensive Income	
TFA Revaluation Increase	20.000
Total Comprehensive Income	**10.000**

PEB Company Balance Sheet as of 31.12.2012

Assets			
Cash	110.000	***Equity***	
Vehicles	75.000	Capital	60.000
Accumulated Depreciation	(15.000)	TFA Revaluation Surplus	20.000
Vehicles (Net)	60.000	Retained Earnings	90.000

Year 2013

The journal entry for depreciation expense on 31 December 2013 will be as follows.

31.12.2013	Depreciation Expense	15.000	
	Accumulated Depreciation		15.000

Company P/L Statement for 2013 will be as follows after the entry.

PEB Company Profit/Loss Statement for the year 2013	
Depreciation Expense	(15.000)
Net Period Loss	(15.000)

On 31 December 2013 company decides to transfer the difference between depreciation expense calculated for revalued carrying amount (15.000 CU) and depreciation expense calculated for the original cost (10.000 CU) in the amount of 5.000 CU (15.000 CU -10.000 CU) to retained earnings. Accordingly journal entry that should be made will be as follows.

31.12.2013	TFA Revaluation Surplus	5.000	
	Retained Earnings		5.000

After this entry, retained earnings will be represented by 80.000 CU (90.000 – 15.000 + 5.000) on the balance sheet as of 31.12.2014. Company's balance sheet as of 31.12.2013 will be as follows.

PEB Company Balance Sheet as of 31.12.2013

Assets			
Cash	110.000	***Equity***	
Vehicles	75.000	Capital	60.000
Accumulated Depreciation	(30.000)	TFA Revaluation Surplus	15.000
Vehicles (Net)	45.000	Retained Earnings	80.000

As it can be seen, if TFA Revaluation Surplus is not transferred to retained earnings at the amount the difference between depreciation expense calculated for revalued carrying amount of vehicle and the depreciation expense calculated for the original cost, retained earnings will be represented at the amount of 75.000 CU; whereas, in the case of transfer, retained earnings will be represented at the amount of 80.000 CU.

There is no clear requirement in the International Financial Reporting Standards as to whether revaluation surpluses can be distributed to the stockholders or not. However, it is emphasized in IAS 16's disclosures section that any restrictions on the distribution of revaluation surpluses to stockholders must be disclosed in the notes to the financial statements. The distribution of the revaluation surpluses to the stockholders while the asset is still in use is controversial. However, in case of a restriction on the distribution of the revaluation surpluses to the stockholders, the distributable dividend amount will change. This situation is further explained below.

In our example if the company does not revalue its vehicles on 31.12.2013, its retained earnings would be 80.000 CU as a result of the deduction of 20.000 CU depreciation expense from retained earnings, which is carried at the amount of 100.000 CU before 2012 (it is assumed that company distributes dividends according to IFRS). In other words, dividend at an amount of 80.000 CU will be distributed to shareholders.

Retained earnings on 31.12.2013 are decreased to 75.000 CU as a result of the increase in depreciation expense due to revaluation of vehicles. If the company does not transfer revaluation surplus at the amount of the difference between the depreciation expense calculated for revalued carrying amount of the vehicle and the depreciation expense calculated for the original cost to retained earnings, the balance of retained earnings will be 75.000 CU as of 31.12.2013 and therefore dividends at an amount of 75.000 CU will be distributed to shareholders. Actually there is no increase in the expenses of the company; however depreciation expense has increased as a result of revaluation of TFA and therefore the amount of retained earnings has decreased. It is apparent that none of the shareholders would accept such a situation. Thus shareholders would oppose to revaluation of TFA. Concordantly company managers would avoid using the revaluation model. In order to hinder this effect and to ensure that dividends deserved by shareholders are distributed, it is

permitted in IAS 16 to transfer TFA Revaluation Surplus to retained earnings at the amount of the difference between the depreciation expense calculated for revalued carrying amount and the depreciation expense calculated over the original cost, even when the asset is still in use. However, it should be kept in mind that this transfer from TFA Revaluation Surplus to retained earnings should not be made through Profit/Loss.

Year 2014

At the end of 2014 vehicle is sold for 36.000 CU. Journal entries related with depreciation expense and sale of the vehicle are as follows.

31.12.2014	Depreciation Expense	15.000	
	Accumulated Depreciation		15.000

31.12.2014	Cash	36.000	
	Accumulated Depreciation	45.000	
	Vehicles		75.000
	Gain on Sale of TFA		6.000

After journal entries, company's P/L Statement for 2014 will be as follows.

PEB Company Profit/Loss Statement for the year 2014	
Depreciation Expense	(15.000)
Gain on Sale of TFA	6.000
Net Period Loss	(9.000)

The balance of retained earnings account will be 71.000 CU (80.000 CU – 9.000 CU) as of 31 December 2014.

The journal entry for transfer of TFA Revaluation Surplus to retained earnings will be as follows.

31.12.2014	TFA Revaluation Surplus	15.000	
	Retained Earnings		15.000

As a result of the transfer of TFA Revaluation Surplus to retained earnings, the balance of retained earnings account as of 31.12.2014 will increase by 15.000 CU and will be represented at the amount of 86.000 CU (71.000 CU + 15.000 CU). Accordingly company's balance sheet as of 31.12.2014 will be presented as follows.

PEB Company Balance Sheet as of 31.12.2014

Assets			
Cash	146.000	***Equity***	
		Capital	60.000
		Retained Earnings	86.000

As it is seen, the transfer of the difference between original depreciation expense and revalued depreciation expense from TFA Revaluation Surplus to retained earnings does not change the general result.

The impacts of three different assumptions, which are discussed above, on financial statements are summarized in Table 1 and Table 2 below.

Table 1: Impacts of Assumptions on Profit/Loss Statement

	Year 2012			Year 2013			Year 2014		
Profit/Loss Statement	**CM**	**RM 1**	**RV 2**	**CM**	**RM 1**	**RV 2**	**CM**	**RM 1**	**RV 2**
Depreciation Expense	(10.000)	(10.000)	(10.000)	(10.000)	(15.000)	(15.000)	(10.000)	(15.000)	(15.000)
Gain on Sale of TFA							16.000	6.000	6.000
Net Period Income (Loss)	(10.000)	(10.000)	(10.000)	(10.000)	(15.000)	(15.000)	6.000	(9.000)	(9.000)
Other Comprehensive Income		20.000	20.000						
Total Comprehensive Income	(10.000)	10.000	10.000	(10.000)	(15.000)	(15.000)	6.000	(9.000)	(9.000)

Table 2: Impacts of Assumptions on Balance Sheet

	As of 31.12.2012			As of 31.12.2013			As of 31.12.2014		
Balance sheet	**CM**	**RM 1**	**RV 2**	**CM**	**RM 1**	**RV 2**	**CM**	**RM 1**	**RV 2**
Cash	110.000	110.000	110.000	110.000	110.000	110.000	146.000	146.000	146.000
Vehicles	50.000	75.000	75.000	50.000	75.000	75.000			
Accumulated Depreciation	(10.000)	(15.000)	(15.000)	(20.000)	(30.000)	(30.000)			
Equity	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000
TFA Revaluation Fund		20.000	20.000		20.000	15.000			
Retained Earnings	90.000	90.000	90.000	80.000	75.000	80.000	86.000	86.000	86.000

CM : Cost Model
RV 1 : Revaluation Model in which revaluation surplus is transferred to retained earnings when asset is derecognized
RV 2 : Revaluation Model in which revaluation surplus is transferred to retained earnings when asset is in use

4. Research on Companies Listed in BIST 100

In this study, companies in BIST 100 are examined by the end of 2014 regarding revaluation model (List of companies in BIST 100 are given in the appendix). As a result of the research on the aforementioned companies, it is identified that 18 companies in BIST 100 are using revaluation model for some of their tangible fixed assets. Companies that use revaluation model for some of their tangible assets are listed below.

	COMPANIES
1	ALBARAKA TÜRK
2	ASELSAN
3	BİM MAĞAZALAR
4	BORUSAN MANNESMANN
5	ENKA İNŞAAT
6	ERBOSAN
7	EREĞLİ DEMİR ÇELİK
8	GSD HOLDİNG
9	GÜBRE FABRİKALARI
10	İHLAS HOLDİNG
11	KARSAN OTOMOTİV
12	NET HOLDİNG
13	NET TURİZM
14	PARK ELEKEKTRİK MADENCİLİK
15	TÜMOSAN MOTOR VE TRAKTÖR
16	VESTEL
17	YAPI VE KREDİ BANKASI
18	ZORLU ENERJİ

Revaluation model is used by

- 2 companies only for land
- 9 companies for property
- 1 company for property and arrangement of underground surface
- 1 company for land and machinery
- 2 companies for property and machinery and equipment
- 2 companies for property, land improvements; machinery and equipment
- 1 company for paintings and rare artworks.

Two of these companies do not mention how they determine fair value for assets that are subject to revaluation. Remaining 16 companies state that they determine fair value with experts. Only two of these companies make an explanation regarding frequency of revaluation. One states that revaluation is made on a yearly basis and the other one states that revaluation is made once in three years.

11 of these 18 companies using revaluation model give information on which method is used in determination of fair value. According to that, it is found that

- 3 companies use only imputed value
- 1 company uses only market value
- 2 companies use imputed value and discounted cash flows
- 1 company use market approach and cost approach
- 1 company use imputed value, market value and cost approach
- 1 company use imputed value, cost approach and discounted cash flows.
- Remaining two companies do not directly indicate any method; however they state that level 2 inputs mentioned in IFRS 13 for measurement of fair value is used.

It is observed that 5 companies do not make any explanation regarding transfer of revaluation surplus to retained earnings and that 13 companies explain it in footnotes. 8 of these companies that explain in footnotes state that revaluation surplus is transferred to retained earnings when revalued asset is derecognized (when sold or not used). Five companies state that revaluation surplus is transferred to retained earnings at the amount limited to the difference between the depreciation expense for initial cost value and depreciation expense for the revalued amount when the related assets are still in use.

5. Conclusion

The revaluation model, which allows the presentation of tangible and intangible fixed assets with their current values, provides the companies with a more realistic presentation of the financial statements. Since the aim of the revaluation is to present the balance sheet with current values, the increases in value are not regarded as income but included in equity without being associated with profit and loss and considered a part of other comprehensive income. However, due to the conservatism concept the decreases in value that are a result of the revaluation process are regarded as expenses in the profit and loss statement of the related period.

The revaluation surpluses can be added to retained earnings when the related asset is derecognized. Besides, the difference between the original depreciation amount and the depreciation amount calculated on the revalued amount can be transferred to retained earnings while the asset is still in use. IAS 16 does not clearly state if these revaluation surpluses can be distributed to stockholders or not. However, IAS 16 states in its disclosures section that any restrictions on the distribution of revaluation surpluses to stockholders must be disclosed in the notes to the financial statements. It is understood from this statement that the companies can impose restrictions on the distribution of revaluation surpluses to its stockholders. Our opinion is that since the tangible and intangible fixed assets are acquired to be used in the operations rather than to earn a gain on their values, distribution of the unrealized revaluation surpluses to stockholders would have a negative impact on the company according to capital maintenance concept. Therefore, companies should impose restrictions on the distribution of the revaluation surpluses as dividends. However, because of the fact that the depreciation amounts will be higher in the future periods as a result of the revaluation surplus and this will increase the depreciation expenses therefore the stockholders will not favor the use of revaluation model. In order to solve this conflict, according to our opinion it would be appropriate to transfer the difference between the original depreciation amount and the depreciation calculated on the revalued amount to retained earnings in each period while the asset is still in use.

As a result of the research on the companies listed in BIST 100, it is observed that only 5 out of 18 companies that choose the revaluation model have transferred the revaluation surpluses to retained earnings each period while the asset is still in use. Among these 18 companies only two of them disclosed information about restrictions on the distribution of revaluation surpluses to stockholders in the notes to the financial statements.

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