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CONCEPTS OF CAPITAL MAINTENANCE IN FAIR VALUE ACCOUNTING

Abstract

One of the most important information given by accounting is the one concerning company value and the value of its assets, liabilities and equity. The concept of capital maintenance is concerned with how an enterprise defines the capital that it seeks to maintain in profit determination. The concept of fair value accounting is concerned with the valuation of assets, liabilities, and equity based on market values or its closest substitutes. As only inflows in excess of the amounts needed to preserve the capital may be regarded as profit, the choice of the capital maintenance measurement basis influences the residual amount, i.e. the profit, and consequently, the decision-making process. Currently, there are two basic capital maintenance concepts: financial capital maintenance concept and physical capital maintenance concept, each with many variants. Different valuation concepts are not commensurate with any of the theoretical variants of capital maintenance.

Keywords: Capital maintenance concepts, fair value accounting, company value, valuation methods, measurement basis.

1. Introduction

Modern accounting recognizes several valuation methods and basis of measurement, other than historical cost, that are more closely related to the acceptable economic value at the time of valuation. Currently, there are some nine different valuation methods across the IASs and IFRSs derived from the four basic measurement basis employed in the IASs and IFRSs: historical cost, current cost, realisable (settlement) value, and present value. Almost all of the IASs and IFRSs introduce the possibility of valuation according to the fair value method in the financial reports either as a compulsory method or as an alternative. The definition of the fair value method is presently scattered all over the IFRSs and IASs. Many problems appear in the implementation of the measurement basis and methodologies such as: different definitions of fair value; scattering of fair value requests; inconsistent requests towards fair value definition; complexity of valuation, valuation methods and valuation bases.[1] There is a clear need for standardisation. The problem starts already when the choice of the measurement basis has to be made. The problem is additionally exacerbated when the measurement basis has to be combined

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[1] According to IASB, 2006, Discussion paper, Fair Value Measurements, Part 2: SFAS 157 Fair Value Measurements, November, p. 4.

with one of the capital maintenance concepts. None of the valuation methods are fully commensurate with the two concepts of capital maintenance.

2. Concepts of Capital and Capital Maintenance and the determination of profit

There are two concepts of capital: a financial concept of capital and a physical concept of capital. Under the financial concept, capital is defined as the net assets or equity of the enterprise, while under the physical concept, capital is defined as the productive capacity of the enterprise expressed in some physical units of measurement, as for example units of output per day.

The selection of the appropriate concept of capital by an enterprise should be based on the needs of the users of its financial statements. So, the financial concept of capital should be and mostly is used by the financial statement users who are primarily concerned with the maintenance of nominal invested capital or the purchasing power of invested capital expressed in monetary units of measurement.[2] The physical capital concept is on the other hand used when the maintenance of the physical productive capacity is the main concern.

The choice of capital maintenance concept has following consequences:[3]

a) The physical capital maintenance concept requires the adoption of the current cost basis of measurement.

b) The financial capital maintenance concept does not require the use of a particular basis of measurement, and is dependent solely on the type of the underlying financial capital seeking to be maintained.

The main difference between the two lies in the treatment of the effects of changes in the prices of assets and liabilities of the enterprise. The main problem of capital maintenance in accounting lies in the determination of the difference in value between the invested resources at the beginning of the accounting period and their value stated in the balance sheet at the end of the accounting period, i.e. profit or loss. The main requirement for the profit or loss to be calculated as a difference between the available resources and the resources at the beginning of the accounting period is that they have the same unit of measurement, i.e. numéraire. If the available resources are not measured according to the same fair value valuation bases, the profit or loss resulting from their difference is

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[2] ANNEX of the Comments concerning certain Articles of the Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards and the Fourth Council Directive 78/660/EEC of 25 July 1978 and the Seventh Council Directive 83/349/EEC of June 1983 on accounting: Framework for the Preparation and Presentation of Financial Statements, Concepts of Capital, 2007, International Financial Reporting Standards, IASB, Paragraphs 102 and 103.

[3] Framework for the Preparation and Presentation of Financial Statements, 2007, International Financial Reporting Standards, IASB, p. 53, paragraph 106.

expressed in different units of measurement (as for example if the inputs were valued in USD and the outputs in EUR).

The following table illustrates the current complexity of valuation bases:

Table 1   Statement of Financial Position[4]

ASSETS	EQUITY AND LIABILITIES
Non-current assets	**Equity attributable to equity holders[5]**
Property, plant and equipment	**Share capital**
Investment property	**Other reserves**
Goodwill	**Retained earnings**
Other intangible assets	**Minority interest**
Available-for-sale investments	**TOTAL EQUITY**
Held to maturity investments	**Non-current liabilities**
Deferred tax assets	**Long-term borrowings**
	Obligations under finance leases
Current assets	**Liabilities for share-based payments**
Inventories - stock	**Retirement compensation plans**
Inventories – commodities for trading	**Deferred tax liabilities**
Trade receivables	**Long-term provisions**
Other current assets	**Total non-current liabilities**
Assets held for sale	**Current liabilities**
Assets at fair value through profit or loss	**Trade and other payables**
Cash and cash equivalents	**Liabilities at fair value through profit or loss**
TOTAL ASSETS	**Short-term bank borrowings**
	Current portion of long-term borrowings
	Current tax payable
	Short-term provisions
	Total current liabilities
	TOTAL LIABILITIES
	TOTAL EQUITY AND LIABILITIES

Legend of Bases:

Past entry price (cost)
Accumulated past entry price
Allocated past entry price
Amortised past price
Combined past prices
Current exit price
Value in use
Future net exit price
Most likely future amount

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[4] IASB, 2007, *INSIGHT - The Journal of the IASB and the IASC foundation*, Q3, p. 7.

[5] Components of equity do not currently have a specified measurement basis.

3. Fair Value Accounting

IFRSs require, in some circumstances, some assets, liabilities and equity instruments to be measured at fair value. However, guidance on measuring fair value is dispersed throughout IFRSs and is not always consistent. The current definition of fair value in the IFRSs is referred to as "the amount for which an asset could be exchanged, a liability settled, or an equity instrument granted could be exchanged, between knowledgeable, willing parties in an arm's length transaction".[6]

The fair value is a market value, and not a specific value for the enterprise, so the fair value has to be constructed under the assumption that it is a price which market participants would accept. On that basis, criteria in a hierarchical order have been determined:

1) Quoted prices from an active market (level 1 inputs).

2) If there is no active market, a valuation technique has to be used according to the following data if available:

   (a) Recent market transactions and references to the current fair value of another instrument that is substantially the same (level 2 inputs).

   (b) Discounted cash flow analysis (present value), and option pricing models.

   (c) Reporting entity's own assumptions about the markets pricing of its own assets and liabilities (unobservable inputs). In this respect "if there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, the entity uses that technique."[7]

Valuation is not a straightforward but a rather complex procedure, including estimates and assumptions, which make it rather subjective and obviously not immune to managerial interpretations. The main advantage of the above valuation model/technique is its usability, and its main disadvantage is the lack of objectivity inherent to the entity's own assumptions about the unobservable inputs.[8]

4. Concepts of Capital Maintenance in Fair Value Accounting

The choice of the concept of capital maintenance influences the financial positions in the balance sheets in many ways. In its simplest form it influences the treatment of the effects of price changes on assets' and liabilities' values. The asset value is also influenced by the depreciation policies and methods. On this regard it is important to mention that

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[6] The most comprehensive definition of this concept is contained in the Paragraphs 42-44 of IAS 40 Investment Property.

[7] IASB, 2007, IAS 39, Appendix A, Application Guidance AG74, p. 1779.

[8] Lambert, R.A., 1999, Discussion of Asset Valuation and Performance Measurement in a Dynamic Agency Setting, Review of Accounting Studies, 4 (3-4), pp. 259-264.

depreciation is not a process of asset valuation but a process of cost allocation, based mostly on historical costs whose informational obsolescence increases with time. As a result of this, the book value of assets is a poor measure of assets' value. On the other hand, fair value measurement is a market based measurement, so it should rely as much as possible on market specific information and as least as possible on the entity specific information. Quoted prices in an active market is the best evidence of fair value.[9]

Problems arise when assets not held for sale or assets without quoted prices on an active market are being valued (assets other than non-current assets and disposal groups of an entity classified under IFRS 5). With the suggested fair value measurement standard,[10] it is emphasized in IAS 39, paragraph AG75 that when an entity uses a valuation model because a quoted price in an active market is not available, "the objective of using a valuation technique is to establish what the transaction price would have been on the measurement date in an arm's length exchange motivated by normal business considerations."[11] The concept of capital maintenance requires a certain portion of capital enlargement (or depletion) to be recognised as profit (or loss). The financial capital maintenance concept defines as profit every increase of capital over and above the nominal invested value. Contrary to that, the fair value system is sensitive to market price changes, except those which are a result of inflation, or price changes of specific groups of assets. Some standards (IAS 16 and IAS 40) require the effects of asset revaluation to be recognised directly in equity instead of being recognised in the profit or loss account. The depreciation of the revalued assets results in the decreased amount of reported profit.

This is a feeble attempt to separate the financial result due to business activity from the one due to external circumstances such as: inflation, relative sector price changes, etc. It is questionable whether such a separation is ultimately possible and appropriate as these sectoral disequilibria are one of the main forces of economic development. They may for example be expressed as differences between the book value of an asset (however it may be measured) and its market price. The relationship between the book value of an asset and its market price is important for the investment decisions but also for the decisions on takeovers and company valuations. These relationships have been discussed in great detail and at great extent in macroeconomic theory following the work of James Tobin and its coefficient "q" representing the value of capital relative to its replacement cost.[12]

5. Conclusion

Fair value is today either compulsory or an alternative valuation method in the IASs. At present, the valuation according to the fair value method as regulated in the IAS 39 – financial instruments, is currently the most precisely defined valuation technique. It is

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[9] IASB, 2007, IAS 39, paragraphs 48 - 49 and AG71 - AG72, p. 1731 and p. 1778.

[10] According to IASB Discussion paper: Fair Value Measurements, Part 2: SFAS 157 Fair Value Measurements, November 2006, p. 10.

[11] Ibid., p. 14.

[12] Tobin, James, 1969, A General Equilibrium Approach To Monetary Theory, in: Journal of Money, Credit and Banking, Vol. 1., No. 1. (February), pp. 15-29.

also the closest one to the concept of economic value. According to the IAS 39, the fair value is determined primarily according to the market inputs if available or according to the estimate of the present value of future economic benefits included in the contracts, as also the risks of the cash flow amounts and maturities being different from expected. Nevertheless, such valuation techniques still do not take into account the change of the unit of measurement from the beginning till the end of the accounting period because of the change in external circumstances. This can cause unwanted and unexpected changes in the financial statements of the enterprise.

The present proposals for fair value measurement of the elements of financial statements include several valuation techniques/methods that are not commensurate with neither of the two concepts of capital. The two concepts of capital are basically a mix of in-use and in-exchange values. When combined with the valuation techniques used to measure the elements of the financial statements, which are a rather "colourful" combination of market, income, and cost approaches, the problem of objective profit or loss determination still remains an open issue.

References

Comments concerning certain Articles of the Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards and the Fourth Council Directive 78/660/EEC of 25 July 1978 and the Seventh Council Directive 83/349/EEC of June 1983 on accounting.

IASB, 2007, Framework for the Preparation and Presentation of Financial Statements, International Financial Reporting Standards.

IASB, 2006, Discussion paper, Fair Value Measurements, Part 2: SFAS 157 Fair Value Measurements, November.

IASB, 2007, INSIGHT - The Journal of the IASB and the IASC foundation, Q3.

Lambert, R.A., 1999, Discussion of Asset Valuation and Performance Measurement in a Dynamic Agency Setting, Review of Accounting Studies, 4 (3-4), pp. 259-264.

Tobin, James, 1969, A General Equilibrium Approach To Monetary Theory, in: Journal of Money, Credit and Banking, Vol. 1., No. 1. (February).