Concepts of Income and Valuation of Assets: Theoretical Ground for Mark-to-market Accounting and Realization Basis

Shizuki Saito

Faculty of Economics, The University of Tokyo

and Accounting Standards Board of Japan

October, 2002

** Originally written in Japanese and presented at the 3rd Kobe Conference on Accounting in June, 1997*

(collected in I. Nakano and H. Yamaji ed., Accounting Valuation in the21stCentury, Keiso Publishing Co., 1998).

asb.or.jp/cgi-bin

Abstract

This paper reviews the accounting standards concerning asset valuation in light of consistency with the objective of financial statements and the concept of income to be measured. Conceptual analysis of "economic income" and "realized income" leads to the relevance of the latter concept in providing the investors with pertinent information for their valuation of the firm. Conventional concept of realization is then to be modified to meet the pressing needs for mark-to-market accounting.

The result of an investment is regarded as realized to be compared with the ex ante expectations when it has been released from the business risk inherent in the investment. The realized income captures the extent to which the expected results have been achieved. This modified concept is

applied to the valuation of physical business assets and financial assets, classified in accordance with the nature of investment. The paper demonstrates that different measurement attributes are compatible under the concept of realized income and concludes that a consistent application of fundamental concepts is rather important than the uniformity of one particular attribute.

1. Introduction

Asset valuation has always been a major subject of studies on accounting standards, as the issue is closely related to measurement and disclosure of corporate income. The terminologies of "historical cost accounting" and "fair value accounting", derived in the course of such studies, are symbolic of significant focus in asset valuation, in that the doctrines are named after alternatives of measurement bases.

However, the determinant factors in an accounting model should be, among others, its objectives and basic concepts including that of income. A measurement attribute or valuation basis is a means to achieve the given objectives and a mere tool for measuring numerical concepts such as capital and income. If there should be a basic principle in accounting, it is not a valuation basis as a tool but a set of objectives and concepts, which determines the choice of valuation bases 1.From such a viewpoint, this paper will review in detail the concepts of income and the objectives of disclosing income and, based on such reviews, will restudy the basis of asset valuation to meet the emerging needs for financial information. The basic issues here are consistency of objectives and concepts and coherence of the logic used in selecting a valuation basis as a tool.

2. Asset valuation and income recognition

In corporate accounting purposes, assets and liabilities to be carried forward are valued in monetary terms, so as to measure income for the period. In this process, shareholders' equity as a stock variable is measured by deducting liabilities from assets, and income is measured as the increase in this residual amount during the period. If there have been no equity transactions with shareholders, income is net increase in shareholders' equity. Accordingly, equity (stock) and income (flow) are determined simultaneously. This is a basic mechanism in accounting.

However, the income that satisfies this "clean surplus" relationship is often called "comprehensive income" and is distinguished from earnings

2), which is supposed to be equivalent to net income here. It is only recent that great attention is paid to the concept of comprehensive income as well as to the gap between comprehensive income and earnings. Attempts to measure earnings and comprehensive income in two stages (the two stage approach) show increasing difficulties of harmonizing measurement of stock (asset valuation) with measurement of flow (income determination) in disclosing useful accounting information.

Apart from the aforementioned mechanism in accounting, asset valuation and income determination respectively have distinct meanings. Thus, to consistently interlink both of these, there is no other way than to subordinate one of the two or to make it two-tiered. Which of income statement or balance sheet should be attached more importance has always been a major problem in accounting. As far as the clean surplus relationship is maintained, either income or asset (or equity) would be necessarily defined as "residuum" in the calculation of the other.

Needless to say, conventional accounting standards have made allocation of cash flows to accounting periods, from the standpoint of disclosing informative income figures.In this approach,expenditures excluded from income determination decide asset valuation. However, recently the assets as future economic benefits are valued first and it causes a new problem in income determination. Some elements of comprehensive income not included in net income (i.e. other comprehensive income) represent the gap between these two approaches. By virtue of the introduction of the comprehensive income concept, the revaluation of assets can now be considered independently of the information value of net income. In a conventional accounting system, asset revaluation is constrained because it results in the recognition of valuation differences in net income. In order to circumvent this restriction and revalue the assets, the only available way was to exclude such revaluation gain from net income by deeming it as a kind of capital transaction, but this is conceptually unreasonable. Introduction of comprehensive income concept has enabled the method that considers how to value assets and how to measure income independently of each other and deals with the gap between them as "other comprehensive income".This method means creation of reconciling items between equity and income, so to speak, items that are income in one sense but not income in another sense. Gains or losses on revaluation, however, are not always excluded from net income and included in "other comprehensive income". As described below, most of gains and losses on re-measurement of financial instruments can be compatible with the concept of realized income. Yet if there is any element that conflicts with the usual net income, the two-tiered income determination that measures net income by excluding those elements from comprehensive income has enabled a new way to revaluation of assets without distorting income recognition. Nonetheless, the concept of comprehensive income applied in the area of accounting standards does not include all the increases and

decreases in value arising from assets held by the enterprise.Originally, comprehensive income was used in the recognition of taxable income and was called comprehensive in the sense that there is no exemption regarding its source. However, FASB and IASC projects have rarely addressed changes (particularly increases) occurred in the value of non-financial assets. Recognition of gains or losses based on the mark-to-market measurement is limited within the scope of financial assets and financial liabilities. In spite of the name of "comprehensive", in reality its scope is limited. This seems to be closely related to the fundamental characteristics of accounting information.

3. Economic income and determination of asset values

The concept of comprehensive income, used to recognize changes in fair values beyond the scope of net income or earnings does not always reflect all the increments in capital value other than those generated by owners transactions. While asset valuation is expanded to unrealized changes in value, we can say that the traditional concept of income in corporate accounting is inherited with no changes in its substance. To understand this, it is necessary to investigate the characteristics of accounting income in light of the concept of economic income based on changes in asset values, instead of starting from the concepts of net income (earnings) and comprehensive income. In general, income in the economic context is net increase in the value of assets held. Ignoring changes in the value of money, the holder of assets is considered to have earned income in the sense that the wealth under his/her control has increased. The value of assets mentioned here is defined as the present value of the stream of cash flows that it is expected to generate in the future, discounted by the cost of capital. Therefore, if the results vary with the holder of the assets, the value of assets to the holder is not necessarily equal to the market price reflecting the average market expectations.Needless to say, if the value of an asset based on expected results is lower than the market price, that

asset is immediately disposed of, in principle. If we call the excess of the asset value to the holder over the market price "goodwill", only assets with positive (non-negative) goodwill continue to be held 3). Accordingly, all the assets held should have non-negative goodwill at the balance sheet date, i.e., they all have an entity-specific value greater than or equal to the market price. Assets then can be divided into two categories, those with positive goodwill and those with no goodwill, i.e. assets of a

value higher than the market price and assets of a value equal to the market price. Typical examples in the former category are physical assets used in business. For physical assets including capital equipment, different holders expect different future results, because of differences in the holders' accumulated resources such as capability and knowledge. Thus, the value of physical assets varies with the holders. In such situations, it is always expected that result will exceed the average market expectation and the value in use of an asset exceeds the market price (that is, positive goodwill exists). This also means imperfection of the markets for physical assets. On the other hand, the typical assets of the latter category, for which the value is equal to the market price and no goodwill exist, are financial assets. Financial assets generate the same cash flows to everyone, and therefore have the same value no matter who holds them. In the financial market,unlike markets of physical assets, the price of assets based on the average market expectation determines their value and investment results, regardless of who holds them. Financial assets, in the proper sense of the word, can be sold piece by piece at any time without any particular restriction by business objectives, and their expected future cash flows can be exchanged for a price equal to the current fair market value 4).

If we divide corporate assets into these two categories and deem financial liabilities as negative financial assets, the corporate value (capital value of the enterprise) is the total of the market price of net financial assets plus the entity-specific value of the non-financial operating assets. Therefore, the corporate income, as defined as the increment in capital value, is measured by adding up net changes in the value of the assets in each category. Under this concept, income comprises changes in the market price for financial assets and changes in the market price plus goodwill for non-financial assets. This is the concept of economic income based on the value assessment of assets. If the measurement of income for accounting purposes were based on this concept, comprehensive income would include all these elements. However, as noted in the previous section, even in recent accounting standards attempting to expand the scope of recognizable income, little attention is paid to the unrealized appreciation (whether in goodwill or in market price) of non-financial operating assets. Recognition of income based on the changes in fair values is, in fact, limited to financial assets. This implies that corporate accounting is based on an income concept different from the economic income described above. This point is discussed in detail in the next section.

4. Realized income and changes in market price of financial assets

The income measured in accounting (net income or earnings) is not the economic income mentioned above. Instead, measure of income captures the extent to which the results expected at the time of the investment have been achieved (i.e., realized). In other words, the performance of an investment is measured based on the ex post facts that can be compared with the ex ante expectation. Since an investment is made in expectation of cash flows, it is natural that the ex post fact to be compared with the expectation is the actual cash flows. The realized income for accounting purposes is measurement of performance based on the fact of cash flows, adjusted by allocation on the accrual basis. This concept implies that performance of an investment is not measured by changes in the value of

assets held, but measured based on the realization of cash flows that were expected or not expected before the fact. In cases of real investments in business operations, income is measured in terms of cash flows arising from business activities such as sales of products, regardless of changes in the value of operating assets. Conventional accounting standards (so-called historical cost accounting) that avoid value assessment of assets and instead allocate the cost among periods is inextricably linked with such concept of realized income. On the other hand, in cases of investment in financial assets, in general, cash flows as results of the investment are realized without waiting for sales. Changes in the value (equal to market value) of financial assets, unlike cases of physical assets, themselves have the same meaning with realization of cash flows. As already mentioned, future cash flows expected to arise from financial assets can be changed into the present cash flows at any time and at a market price that is equivalent to the future cash flows. When this price is same to anyone, a change in the market price of financial assets is already an achieved result of investment and therefore can be considered as realized income, even if it is not yet converted into cash through sales. However, conventional accounting standards and practices have generally considered a sales transaction as the requisite for realization of the results, in cases of financial investments as well as in cases of real investments. That is, while inflows and outflows of financial assets are included in cash flows as a requisite for realization, changes in their market prices are not. For example, when goods are sold in exchange for some financial assets, the income on the real investment is considered as realized even if it is not cash sales. On the other hand,

when the market price of a financial asset has increased, the result has not been deemed as realized until it is converted into cash. We can say that judgment about whether financial assets are identical to cash has been made differently between in cases of real investments and in cases of financial investments. This is not a matter of the realization basis itself but rather a matter of its interpretation. Such an interpretation about realization of income has been a significant obstacle to recognition of valuation gains or losses of financial assets not bound to business activities. It appears that the FASB
intended to become free from such restriction when it adopted the new criteria of "realizable" instead of "realized"5). However, physical assets used in business also sometimes have markets where they can be converted into cash and therefore they are often "realizable" in that meaning.Unless fair value measurement of physical assets is intended, it would have been enough to make the concept of realization separated from sales transactions and refine it in line with a broader sense of cash flows Anyway, with regards to financial assets that can be sold freely, there is no difference between the change in market price during the holding period and the change in stock through a sale. In this meaning, changes in the market price of financial assets are the same as realization of cash flows. If such a case is required to be backed up with an actual sale, it is a requirement alien to the role of realized income whose aim is to affirm the ex ante expectation by the ex post facts. Considering in this way, valuation gains or losses on financial assets would be, in principle, included in the realized income that excludes valuation gains or losses on physical operating assets. As the discussion above shows, measurement of realized income, which is a traditional business in corporate accounting, does not necessarily preclude valuing financial assets at fair value and recognizing the resultant gains or loss in income statement. If anything, under the concept of economic income, changes in the value should be recognized for not only financial assets but also physical operating assets. If the appreciation concept is adopted, changes in market value cannot be neglected even when goodwill can be neglected. If such revaluation of physical assets is not considered at present, we should give more attention to the concept of realized income and discuss about it in depth. As mentioned below, the largest issue from such viewpoint would be mark-to-market measurement of financial assets that are bound to business activities and therefore cannot be freely sold.

5. Realization of income and separation from capital

The concepts of economic income and realized income as clarified in section 4 and 5 above have been subjects of controversy for a long time in corporate accounting and related areas. Those arguments have been repeated in a variety of forms, not only in attempts to reconsider the concept of income in the light of economic income but also in the related area such as taxation on corporate income and restrictions on dividend for the company law purpose. In this section, take a quick look at an early judicial precedent in US 6), as a clue to a review of the process of interaction of income concept and establishment of realization concepts.

The judicial precedent at issue is the case of Eisner vs. Macomber ruled by the US Federal Supreme Court in 1920. Although this case was originally a dispute over the provision of the Internal Revenue Code that deemed stock dividends as taxable income, it became a leading case that left a significant impact to posterity, in that it established the conceptual norms such as what constitutes income. The court decision set out the interpretation of the realization concept that a mere increase in the value of capital is not enough to constitute income if it is not separated from capital, thereby denied that stock dividend is income. The court decision defined the income generated from capital as an inflow of goods that has been separated from capital and the recipient can independently use or dispose of, not a mere increase in the value of the capital. It pointed out that, whereas in case of cash dividends the shareholders acquire a property with exclusive ownership and can freely decide its disposal, stock dividend provides only an evidence of what the shareholders already holds. It also noted that the increase in the value of capital arising before the dividend should not be deemed as realization of income, as long as the shareholders do not have discretion to reinvest or consume it.

This was an attempt to describe the “inflow of cash or cash equivalent” test for realization of income, which had already been established with regard to taxation on capital gains, using more essential attributes. This rule, which deems the increase of the value realized separately from capital as income, tried to derive the accounting concept of realized income by adding the “availability for consumption” condition, whereas it started from the concept of economic income, that is, value increase arising on capital. However, separation from capital would not be necessary, if satisfaction of the “availability for consumption” condition were just enough. Even before the cash flow is realized, an increment in capital value is consumable through borrowing. Even

though the increment is not separated from capital, capital is maintained as far as the surplus is consumed. It follows that the "availability for consumption" condition can be also met by economic income. Although stock dividend itself has nothing to do with the income of shareholders, the increase in the value of their interest, resulted from accumulation of earnings before that, should have brought consumable income to the shareholders.

Nevertheless, this court decision determined that the shareholders' equity in retained earnings is capital, not income. The basic stance of this decision was that income is cash flow, not the expectation of it. Stock dividend was excluded from the income of the shareholders because it neither makes the company worse off nor the shareholders better off. A transfer of wealth involving cash flows (that is, realized income), not mere appreciation of capital value, was the element of income as defined here. The above discussion reveals that the realized income as an accounting concept should be viewed as a concept conflicting with the economic income concept ab initio, rather than a subordinated concept derived from that. It was not a concept derived from the economic income by imposing an additional condition. Instead, it seems that realization as cash flows was regarded as a necessary condition from the beginning and that condition was explained by the concept of separation from capital. This means that economic income and realized income are independent concepts with different objectives and origins. Although they can be compared with each other, consistency between them cannot be expected.

6. The objective of accounting and the meaning of mark-to-market valuation

Now, let us consider about relationship between the concept of realized income and valuation gains or losses on financial assets. Before going on to the discussion of this issue, it would be helpful to compare the realized income and economic income and reconfirm the relationship between them. As already discussed in detail, with regard to financial assets in the proper sense of the word, the results of investments would be measured at the same amount under both of the two income concepts. In cases of financial assets that are mere investments of surplus money and can always be freely sold by the piece, their values are equal to the market prices no matter who holds them and a change in their market prices is in substance same as realization of cash flow. On the contrary, in cases of physical assets used in business, whereas changes in the market value and the value of goodwill affect the economic income, they will not

affect the realized income until they are realized as cash flows. In this process, goodwill is generated as an expectation of future results of business investments and while it disappears as time passes all or part of it is transformed into the value of tangible assets. This process is irrelevant to realized income, although important to the economic income. Result of investment is realized when it has been released from the business risk, and measurement of realized income does not recognize all value changes of assets, but recognizes a portion that is realized as value of financial assets. Of course, when summing up the entire period of a real investment, there would be no difference between the economic income and the realized income. Unless we regard the goodwill generated by an investment as an element of the capital to be maintained, the amount of income is anyway determined ultimately by the total cash flows of the investment and its results. Therefore, the difference between these two concepts is no more than difference in the period to which income is attributed. Both concepts result in inter-period allocation of net cash flows 7). Then, which will better serve the objectives of accounting information, the allocation of cash flows based on the concept of economic income, or the allocation of cash flows in a systematic manner (independent of the changes in the value of assets) based on the concept of realization? It is a traditional view that financial statements should provide information that is useful for investors to assess the corporate value through their own forecasts of future results 8). When considered based on such usefulness to investors' expectation formation process, the major issue is the meaning each of income information has. Let us first consider about the result of a business investment. As mentioned many times, this forecast varies with the enterprise that makes the investment. Investors by themselves forecast the result and thereby assess the value of assets invested in the business. The value of physical assets, which determines the economic income, is a result of such assessment by the investors and it is not an ex ante information useful to investors' assessment. Although income measured only by changes in market price ignoring the value of goodwill is also a kind of economic income, such information is not useful for investors in forecasts of future cash flows or assessment of the goodwill inherent in the enterprise. As long as cash flows generated from business investments depend on intangible management resources inherent in each enterprise, to be useful to forecast future results, income information should capture the actual cash flow realized by the enterprise, after all. By comparing the result with the ex ante expectation, investors can revise their expectation and

assessment of the value of the investment. Such a meaning, known as feedback value 9), has been attached to the realized income.On the other hand, in cases of financial assets, at least for those which can be sold freely by the pieces, there will be no difference in the valuation of assets, whichever concept of income is applied.Since there is no goodwill value in financial assets, their valuation is completed by identification of their market prices. For such assets, current market value would be the most useful information.However, it is not clear to what extent the income measured on the basis of the changes in market prices is useful to forecasts. The fact that financial assets have no goodwill value is rather consistent with the view that the future results of investments in such assets will have nothing to do with the past results and such income information is not useful to the formation of expectations 10). Considering in this way, whichever the income concept is chosen, information of income from financial investments might not have any more meaning to investors' expectation formation than the market value information of stock variables 11). However, at least, it would be information that is compatible with the forecasts of future cash flows, in that cash flows arising in the period are compared with the expectation at the beginning of the period. Except for the special case where changes in market prices do not mean the realization of cash flows, valuation gains or losses on financial assets may not be irrelevant information to the assessment of corporate value based on the forecasts of future results. In this respect, there is a basic difference from the cases of physical assets.

7.**Liabilities financing non-financial assets**

In this paper, I have so far assumed that the assets of an enterprise can be classified into either physical assets or financial assets: the former is an assets used in business activities, while the latter is investment of surplus fund. Under this premise, changes in the value of financial assets that can be freely sold by the piece at any time, not only inflows and outflows on sales but also unrealized changes in the market value, are regarded as equivalent to cash flows as long as income measurement is concerned. Valuation gain or loss, which is an element of economic income, is also regarded as an element of the realized income in this case. This is based on the premise that there are no restrictions by the business environment on conversion to cash. However, if there are some restrictions on conversion to cash, changes in the market value of financial assets and financial liabilities (collectively referred to as "financial

instruments") are no longer equivalent to realization of cash flows. If the form of an asset or a liability is that of financial instruments but there is restriction on its sale or redemption, the changes of its market value would not meet the condition as the realized income. The most typical example might be the case of hedging cash flow risk by a derivative, which is described in the next section. However, a case that is easier to understand would be the case of fixed interest debt financing real investments in business 12).

In this case, if the market interest rate rises after the borrowing, the market value of the debt securities will decrease by the present value of the saved future interest payments thanks to the lower contract rate. The resulting gain on the debt is opportunities gain for the periods to maturity, that is, the future gain that would not have arisen if the debt had been borrowed at variable rates. Therefore, if such valuation gains is recognized in the year when the decrease of the debt value occurred, interest costs in the future years will be recognized at the new market rate, not at the original contract rate. Valuation gains recognized would be offset by the increased interest costs in the future years. In other words, even when valuation gains or losses arise on debt due to changes in the market interest rate, such gains or losses will be offset by the changes in the expenses incurred for continued use of the funds (interest expenses at the market rate), as long as the position of the debt cannot be closed without affecting the business investment. This is quite similar to the case where appreciation of capital facilities simultaneously raises the cost of continued use of the facilities (i.e., depreciation costs). If that asset is used for operating activities and its disposal is not intended, we do not increase the carrying amount but instead allocate the cash flows over the period of use. It is because it will provide more useful income information for the forecast of future income and cash flows. This also applies to the case of a liability. Certainly, if the borrowed fund is invested in financial assets that can be always available for repayment of the debt, the valuations gain as a net margin would be equivalent to realized income. On the contrary, if the borrowed fund is invested in operating real assets, the fund to repay the debt at the market value must be financed by a new loan. If the debt is simply replaced by a new debt at the market interest rate, gain on redemption of the debt at a lower contract rate will be offset by the increased interest payments after the refinancing.

As clarified in the above discussions, a liability that cannot be repaid without refinancing may be regarded as a part of business investments rather than financial

investments. In this meaning, changes in the market value of such liabilities should be distinguished from realizations of cash flow.

The logic that such gains should be included in realized income because it could be realized by redemption seems essentially unreasonable. Considering the nature of such investments, it seems appropriate to offset such gains by the excess of the future interest expenses over the contract rate. The aforementioned approach of separating comprehensive income and net income is likely to be a convenient tool for income recognition in such special cases. Gains or losses resulted from mark-to-market valuation of financial instruments, if they cannot be regarded as realization of cash flows, can be excluded from net income calculation and recognized as "other comprehensive income", and then transferred to net income as cash flows are actually realized (i.e., so-called recycling). Under this approach, "other comprehensive income" is a reconciling item to satisfy the clean surplus, but not a reconciling item to economic income, of course. This approach of income recognition is consistent with the framework of corporate accounting,which calculates the realized income attributable to shareholders (income after deduction of interest on debt) in measuring the result of business investments. Under this approach, both the results of business investments and the cost of funds financing them are recognized in line with realization of cash flows. If changes in the market value of liabilities financing business investments were included in realized income, future cash flows would be recognized in advance only in cases of the cost of funds. This may be acceptable if economic income is to be measured, but, if so, it would not be consistent unless revaluing business assets to recognize expected future results of business investments.

8. Financial instruments to fix future cash flows

By the way, even when liabilities financing the business investments are subject to a floating rather than a fixed interest rate, a similar accounting issue may eventually emerge if the floating rate is converted to a fixed rate by means of an interest rate swap or other similar contracts. Swap contracts to pay fixed interest in exchange for receiving floating interest, are sometimes called "cash flow hedges", since they hedge the risk of fluctuation of the interest payment against expected future operating revenue. Unlike hedges against changes in the market value, there are many complicated problems about the income recognition of changes in the market price 13).

This kind of hedging transaction increases the risk of changes in the market value of the position, while averting fluctuations in cash flows. In this respect, the same transaction can be regarded either as hedging or as speculation. However, hedging is by nature a transaction intended to avert the risk of fluctuation in the return on investments. Thus, the pattern of hedging depends on whether the relevant return is measured by changes in market value or by cash flows. In this case, since gain or loss to be hedged is the cash flows of interest payments, performance of the interest rate swap contracts can be measured by the swap differentials for each year, instead of measuring changes in the market value.

A floating rate debt combined with an interest rate swap contract is, in effect, exactly the same as a fixed rate debt. Therefore, in cases where the gain or loss on a fixed rate debt is recognized on the basis of cash flows instead of changes in market value, income on the interest rate swaps to avert fluctuation in interest payments would be recognized on the cash flow basis, in line with realization of the swap differentials. Changes in the market value in anticipation of the future cash flows have nothing to do with the performance as a hedging transaction, although it would be regarded as performance if the position is considered to be speculation 14). To assert that an interest rate swap contract is intended to hedge fluctuations in cash flows is to confirm that the debts on which the interest rate is fixed by the swap are restricted to non-financial operating assets and that the interest (and principal) is paid out from cash flowing from the operating activities. In this case, changes in the market value of the debt are not regarded as realization of cash flows. Taking this into account, the gain or loss on mark-to-market measurement of the interest rate swap contract is initially included in comprehensive income and then transferred to net income when realized as a swap differential for the year

15). Anyway, the recognition of income should depend on the nature or substance of the investment, not on the external form of the asset (that is, whether it is a financial instrument or not).Financial instrument of which valuation gain or loss does not meet the condition as realized income is not only the debt bound to the business investments as described above. One of the largest issues in FASB Statement No.115, which addresses measurement of marketable securities, was a treatment of debt securities held to maturity. Even in this statement, which has adopted mark-to-mark valuation to a large extent, it has been decided that debt securities that the enterprise intends to hold to maturity without converting into cash should be measured at

amortized cost, because they are not subject to risk of market value fluctuation due to changes in interest rates.

Of course, in cases of debt securities that the enterprise intends to sell at any time, the performance of the investment entirely depends on the indefinite future market price. In such cases, the current market price is the most updated information for measuring income. However, when the debt security is held to maturity, the performance of the investment is determined by the cash flows of interest payments contracted and redemption. Assuming there would be no default, the performance of the investment is fixed at the moment the debt security is purchased. In this case, income can be determined by allocating the contracted results among periods, regardless of uncertain changes in the market price. Such an allocation provides better information about the cash flows that are fixed over the future periods 16). However, even when a decision of holding to maturity has been made, the investment may be considered still exposed to risk of market value fluctuation, if the sacrificed opportunities of profiting from short-term transactions is seen as a problem. If such a view should be taken, we would have to measure the income for each period by the changes in market value. On the other hand, if we take the fact that the enterprise has averted the risk of fluctuation in market prices and fixed the performance up to maturity as a given condition, the income for each period would be independent of fluctuation in market prices. Earnings information based on the inter-period allocation of fixed cash flows is considered useful to investors in forming expectations, in that the investment policy of the management is communicated to investors 17). As discussed above, even in the case of financial instruments, the fluctuation in market prices sometimes may not be regarded as realization of cash flows. That is also true for the cases of hedges of forecasted transactions for which there is not yet any recognized position on the balance sheet.

Although the market price is indispensable information for those financial instruments, with regard to valuation gains or losses (differences between the market value at beginning and at end of the year), we need to consider an approach of recycling them from comprehensive income to net income

when realized. Again, the critical factor is not the external form of the financial instruments, but the nature of the transactions that have generated the position 18).

9. Conclusion

This paper has reviewed the accounting standards concerning asset valuation in light of consistency with the objective of accounting and concept of income to be measured. I have discussed the issue of selection of standards on asset valuation and income recognition, relying upon consistency of concepts and logic. Therefore, the discussion here is not intended for uniformity of the valuation basis, as seen in so-called historical cost accounting or fair value accounting. Measurement attributes such as market price or historical cost are no more than means for achieving accounting objectives. Uniformity of means makes sense only when the objective requires it. A mere glance at differences in measurement between physical assets and financial assets demonstrates that different attributes are compatible within a single accounting model. The important thing is not the uniformity of one particular measurement attribute but rather a consistent application of fundamental concept of income or earnings.

Notes

1) In recent controversy, a mixed attribute approach has been criticized and it has been asserted that a single accounting model should admit only one measurement attribute. However, such a view does not have a sufficient theoretical ground. This paper is intended to demonstrate that more than one measurement attributes can consistently coexist in a single accounting model.

2) FASB [1978] and FASB [1984].

3) It would be more accurate to say that the goodwill on the present assets is no less than the goodwill on alternative assets. When the rate of return of any alternative

investment opportunity is less than or equal to the cost of capital, the condition for continued use of the present assets is that the goodwill on them be non-negative.

4) Saito [1993] and [1995] for details. Such classification between physical business assets and financial assets is also used as the premise for the EBO (Edwards-Bell-Ohlson) model. See Feltham & Ohlson [1995] and Ohlson [1995].

5) See FASB [1984].

6) See AIA [1952], p. 13 ff.

7) Anchor of income determination is cash flows. Recognition and measurement of assets and liabilities provide a useful, but not necessarily a unique way for inter-period allocation of operating cash flows.

8) See FASB [1978]. This kind of information is useful to an investor as so-called "pre-decision information" that the investor uses in making his/her decision. On the other hand, so-called "post-decision information" is related to ex post measurement of the measures used in a contract between investors and managers, for the purpose of executing the contract. See Beaver & Demski [1979].

9) See FASB [1980].

10) Barth [1994] investigates the value relevance of disclosed fair value estimates of banks' investment securities and securities gains and losses in the light of effects on their share prices. She concluded that fair value estimates provided significant explanatory power while fair value gains and losses did not.

11) If so, there would be an idea that disclosure of income be limited to business investments and as for financial investments only their market value (without gains or losses) be disclosed. If the role of accounting information could be limited to investors' assessment of corporate value, such idea would be sufficiently persuasive. Income recognition of the changes in market value of financial assets may be a byproduct of consistent application of the concept of realized income.

12) The following remarks criticize the gist of IASC[1997].

13) When hedging is intended as protection against changes in market value, the gains and losses both from the hedged item and from the interest rate swap contract (the hedging tool) should be recognized at fair market value. A position to hedge the return of speculation is also a speculation.

14) In this case, the changes in the market value of the interest rate swap contract are basically the same as the fluctuation of the market value of the synthetic position,

including the floating rate debts.When only interest rate risk is considered, the market value of the floating rate debts does not
fluctuate.

15) Focusing on the net income, this can be regarded as a deferral hedge approach. If the fluctuation of cash flows is hedged, instead of the market value, then mark-to-market hedge accounting is not applicable.

16) The holding of fixed rate debts to maturity can be regarded as the prototype of cash flow hedging.Needless to say, default risk (credit risk) should be addressed separately, e.g., by providing for reserves against potential future credit losses.

17) What is important is not whether managers intend to sell or not, but the nature of the investment generating the expected performance. Even in the case of financial instruments, if the annual receipt and payment of accrued interest and differences on swap contracts are expected, fluctuation in market value may not be regarded as realization of cash flow in measuring corporate income.

18) Two different things should never be confused, the valuation of business firm by investors and the balance sheet valuation by managers to provide investors with pertinent information. In the complete markets, there is no difference between them, but in that case accounting information would no longer be needed. See Beaver [1981], Chapters 3 and 4, for a detailed discussion.

List of references

American Institute of Accountants (AIA), Study Group on Business Income, *Changing Concepts of Business Income*, Macmillan,
1952.

Barth M., "Fair Value Accounting: Evidence from Investment Securities and the Market Valuation of Banks", *Accounting Review*,
Vol.69 No.1, 1994.

Beaver, W.H, *Financial Reporting: An Accounting Revolution*, Prentice Hall, 1
st
ed., 1981, 2
nd
ed., 1989.

-------- and J.S. Demski, "The Nature of Income Measurement", *Accounting Review*, Vol.54, No. 1, 1979.

Feltham, G.A and J.A. Ohlson, "Valuation and Clean Surplus Accounting for Operating and Financial Activities", *Contemporary*
Accounting Research, Vol.11, No2, 1995.

Financial Accounting Standards Board (FASB), *Statement of Financial Accounting Concepts No.1: Objectives of Financial*
Reporting by Business Enterprises, FASB, 1978.

-------- (FASB), *Statement of Financial Accounting Concepts No. 2: Qualitative Characteristics of Accounting Information*, FASB,
1980.

-------- (FASB), *Statement of Financial Accounting Concepts No. 5: Recognition and Measurement in Financial Statements of*
Business Enterprises, FASB, 1984.

International Accounting Standards Committee (IASC), *Accounting for Financial Assets and Financial Liabilities*, Discussion
Papers, IASC, 1997.

Ohlson, J.A, "Earnings, Book Values and Dividends in Equity Valuation", *Contemporary Accounting Research*, Vol.11, No.2, 1995.

Saito, S., *Theory of Accounting Measurement*, in Japanese, Moriyama Book Store, 1975.

--------, *Corporate Accounting: Income Determination and Disclosure*, in Japanese, University of Tokyo Press, 1988.