



## **Measurement bases for financial reporting**

Background paper for roundtable on 24 April 2006

*The ASB has long advocated that wider use should be made of current values where it would constitute an improvement in financial reporting. It has prepared this paper to provide a background to the roundtable which it is hosting. The aim is to suggest some of the issues that require consideration in the context of a debate on accounting measurement. The views expressed do not represent official positions of the ASB.*

### **1 Introduction**

1.1 The traditional basis of accounting has, for a long time, been historical cost, although it has been modified in various ways—for example, in the United Kingdom, properties have frequently been revalued for many years.

1.2 Increasingly historical cost is being supplanted in accounting practice as recent accounting standards frequently permit or require assets to be stated at fair value. The current position is somewhat confused as some assets are stated at a cost-based amount, whilst others are at fair value. A further source of confusion is that it is not always clear or uncontroversial exactly what ‘fair value’ means or ought to mean.

1.3 Interest in the issue of accounting measurement has been stimulated by recent developments. The IASB have published a Discussion Paper ‘Measurement Bases for Financial Accounting—Measurement on Initial Recognition’ which was prepared by staff of the Canadian Accounting Standards Board (referred to in this paper as ‘the Canadian paper’). The US Financial Accounting Standards Board are expected to publish shortly a standard on ‘Fair Value Measurements’<sup>1</sup>, which will address how fair value is to be derived where accounting standards permit or require it to be used, and it is understood that the IASB is minded to issue an exposure draft of its own based on that standard. In a recent speech, the Chairman of the IASB said that IASB and FASB have work in hand “to enable a public debate on the benefits of the range of measurement attributes (in particular, cost and fair

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<sup>1</sup> The FASB’s approach has been welcomed by the CFA Institute in its paper ‘A Comprehensive Business Reporting Model: Financial Reporting for Investors’.

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value) and when each should be used to take place later this year.”<sup>2</sup> It is worth emphasising, however, that there are no specific proposals for the general use of fair value in accounting at this time.

1.4 The Canadian paper, as implied by its title, focuses on initial recognition—in other words it seeks to address only the issue of the amount at which an asset should be stated when it is first incorporated into financial statements. But it is difficult to isolate this question from the wider issue of how an asset should be stated at any later stage.

1.5 The aim of this paper is to provide a concise discussion of some of the issues that arise in connection with accounting measurement in order to assist those who are interested in commenting on the Canadian paper and in participating in the debate on these issues. Brevity precludes discussion of many other relevant issues<sup>3</sup>. There are also wider questions in financial reporting that are closely related to measurement that are not addressed here. For example, if the amount at which assets are stated is to reflect changes in prices it would often be important that such changes were reported separately from gains and losses arising from transactions in assets.

1.6 Much of the discussion in this paper may be applicable to liabilities as well as assets. However, as the issues are more concrete in the case of assets, this paper focuses on them<sup>4</sup>.

1.7 Perhaps the most notable use of ‘fair value’ under current accounting standards is in connection with certain classes of financial instruments, and its more widespread use for financial instruments is often suggested. It is not clear that there are conceptual (as opposed to practical) reasons why the measurement basis for financial instruments should be different from that for

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<sup>2</sup> Prepared statement of Sir David Tweedie, Chairman of the International Accounting Standards Board, before the Economic and Monetary Affairs Committee of the European Parliament, 31 January 2006.

<sup>3</sup> For example, we do not address the issue of ‘information asymmetry’ (the fact that a seller in many common situations knows more about the asset than any potential buyer) which sometimes has a significant effect on the pricing of assets, especially second hand assets.

<sup>4</sup> If an entity’s liabilities are to be remeasured, the question of dealing with changes in the entity’s own credit risk arises.

any other class of assets. It seems that some of the advantages (and problems) of fair value accounting may apply to financial instruments just as much as to other assets.

## **2 What qualities improve financial reporting?**

2.1 The ASB's 'Statement of Principles for Financial Reporting' and IASB's counterpart 'The Framework for the Preparation and Presentation of Financial Statements' discuss the objectives of financial statements, and the 'qualitative characteristics' that information needs to have if it is to fulfil those objectives. The main points are similar in both documents.

2.2 The following is a distillation of the main points that are relevant to the issues addressed here:

- (i) Financial statements should provide information that assists users in making economic decisions. Such decisions will include making investment and credit decisions.
- (ii) Reporting on stewardship forms part of the aims of financial statements: this seems to require information that not only deals with the reported amount of assets, but also provides an insight into how they have changed. Most importantly, it suggests that there is a distinction to be made between changes resulting from transactions and those resulting from value changes.
- (iii) Financial statements should include only information that is reliable, relevant to users, understandable by them and is comparable.

2.3 The Frameworks also deny that financial statements aspire directly to place a value on the entity that they deal with.

## **3 Historical cost**

3.1 Historical cost has many advantages. It is familiar and in many circumstances has a high degree of objectivity. It also reflects the transactions actually engaged in by the entity, rather than hypothetical alternatives.

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3.2 One suggested disadvantage of historical cost is that the historical cost of an asset does not necessarily represent its value. However, it may be argued, if certain reasonable assumptions are made, that the value of a recently-acquired asset is likely to be no less than its cost and no greater than that amount. If the decision to acquire the asset is assumed to be rational, then it must be on the basis that the asset brings at least as much value to the entity as the cost incurred to acquire it. Rational decision making would also suggest that the asset has been acquired by the most economic means possible: there seems no reason for any higher value to be reflected in the carrying amount of the asset especially if, as may generally be assumed to be the case, an equivalent asset could be obtained for the same cost.

3.3 There are, however, circumstances when these assumptions will not hold, and in these cases historical cost will not be justified. Where an entity constructs a building for its own use and there are cost inefficiencies (for example if construction has been delayed by exceptional weather or a strike) then not all the costs incurred may be capitalised without running the risk of stating the asset above its recoverable amount. Or the decision to buy the asset may turn out to be a bad one, in which case it needs to be written down to recoverable amount. It may also be the case that the acquisition represented a bargain, and some would suggest that in such case it is right to record the asset at a higher amount than that paid to acquire it.<sup>5</sup>

3.4 Historical cost may also not be appropriate where the asset is not acquired on arms' length terms. For example, where a charity receives donated assets, these are generally not reported at historical cost (which in this case would be nil) but rather at an estimate of the value of the asset to the entity.

3.5 The most notable drawback of historical cost, however, arises not on initial recognition but at later times. Historical cost does not reflect price changes, and hence will not necessarily reflect the value of the asset at any time after initial recognition. General price inflation has in recent years been low: however, specific price changes continue, with some goods falling in

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<sup>5</sup> Of course, as long as accounting practice is influenced by prudence—and not all are agreed that it should be—it is to be expected that assets will more often be written down rather than up.

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price whilst others—notably in recent months that of oil and gas—have increased sharply.

3.6 In summary, at least on initial recognition, historical cost may be reasoned to reflect the value of an asset. In addition, the advantages of historical cost summarised in paragraph 3.1 above, and the absence in many cases of feasible alternatives, suggest that historical cost is likely to remain a central element of financial reporting for the foreseeable future. However, it seems difficult to sustain the position that historical cost is an adequate basis for financial reporting in all circumstances: it is doubtful whether it should be used on initial recognition where it clearly does not represent the value of an asset, and, at least in some circumstances, there may be a case, on grounds of relevance, for using a basis that reflects price changes at later stages.

#### **4 Fair values**

4.1 The case for fair value is most plausibly explained in the context of an ‘efficient market’<sup>6</sup>. The idea of an efficient market can provide powerful insights, although it remains controversial to what extent any market fully reflects the ideal of ‘efficiency’. Some of the characteristics of an efficient market are that the price reflects all publicly available information, there are no transaction costs<sup>7</sup>, and it is driven by rational profit-maximising buyers and sellers. In such a market, all investments have a single market value, and will yield a normal return for the risk involved.

4.2 Where assets are traded on an efficient market, there seems to be no reason why the value of the asset should differ between entities that have access to that market. The asset will be expected to yield the market rate of return for the risk involved: if it does not match the entity’s appetite for risk

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<sup>6</sup> In this paper, the term ‘efficient market’ is used to reflect its usage in the Canadian paper. However, some would take the view that the market conditions envisaged in that paper sometimes assume that the market is, in the terminology of economists, not only ‘efficient’ but ‘perfect’—the latter term implying that the equilibrium market price is unaffected by individual transactions.

<sup>7</sup> ‘Transaction costs’ may be explicit—for example in the form of a broker’s commission, but the term may also include other costs such as those of finding buyers or sellers, drawing up contracts, and a difference between buying and selling prices.

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then it can quickly and easily be sold and the proceeds reinvested without gain or loss into another asset whose risks reflect more closely those desired by the entity. In an efficient market, there can be only one market value for an asset at any given time. A consequence of this is that the sale or purchase of an asset on an efficient market will never give rise to a gain or loss.

4.3 If it is concluded that a market is efficient, it seems that the market price of an asset traded on that market will reflect the value to any entity and that the conclusion that the market price should be used for accounting purposes seems secure.

*Inefficient markets*

4.4 However efficient some markets may be, there is little doubt that markets for many assets are not. Some assets are not traded at all, and some bear large transactions costs, or differences between buying and selling prices.

4.5 A fair value approach to accounting could be extended to cater for these circumstances if the measurement objective were specified as estimating what an efficient market value would be, **on the assumption that such a market existed**. However, this is open to the objection that the assumptions are known to be false: there is no buyer and no market and the relevance and representational faithfulness of the reported amount is open to question. A sounder approach might be to use an actual buying or selling price for financial reporting. It may be that one of these is more relevant than the other in certain circumstances.

4.6 This leads to the question of so-called 'entity specific values'. It is often argued in support of fair value that two entities that own identical assets should report them at the same amount in their financial statements. If this were not the case, the financial statements would seem to lack comparability. In contrast, the use of entity specific values would sometimes result in similar assets being reported at different amounts by different entities.

4.7 However, the term 'entity-specific' conceals an important ambiguity. It has been defined in the Canadian paper as "a measurement of an asset or liability that that is based on the expectations of management of an entity". On that definition it is difficult to defend 'entity-specific' measurement bases, since financial reporting should reflect the economic resources controlled by

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an entity and the claims on those resources: mere expectations do not affect these. However, if it is acknowledged that economic constraints and opportunities differ between entities, the case that similar assets might be reported at different amounts is much more plausible. For example, a business that buys assets in sufficient quantity that it regularly obtains a large discount might report those assets at a lesser amount than a business that has no alternative but to pay the full price.

4.8 An entity often cannot buy and sell an asset at the same price and different entities may have different buying and selling opportunities. For example, a retailer will buy goods in a wholesale market and sell them to the customer in the retail market, usually at a higher price. The retailer's customer will typically not be able to resell the goods except at a significantly lower price than he has just paid.

4.9 A customer purchases goods from a retailer generally because it is the cheapest source available to him of acquiring the asset he requires. The seller is willing to sell because he has is able to acquire or manufacture the goods at a lower price than he can obtain from sale. As noted in the IASB's Exposure Draft on Amendments to IFRS 3 'Business Combinations', a business can be characterised as having inputs, processes and outputs. A business can only be profitable in the long term if the price it obtains for its outputs is greater than the cost of its inputs and processing (in other words, it adds value): this will only be the case where there are customers who are willing to pay for the value added rather than obtain the inputs and perform the processing themselves. This gives rise to the thought that it may be reasonable that the same asset is reported at different amounts by different entities, for example a customer and a supplier.

*Net realisable value*

4.10 A selling price view most obviously corresponds to the concept of 'net realisable value', or the amount that the entity would obtain by realisation.

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Some have favoured the general use of net realisable value for financial reporting.<sup>8</sup>

4.11 There are several advantages to the use of net realisable value: it is easy to understand, and indicates the amount of cash resources at the entity's command. Selling prices are relevant to management decision making: a decision to continue holding an asset (presumably for its service potential) entails a decision to forego the receipts from its sale. In determining the ability of an entity to borrow on the security of its assets, it is the selling price rather than any other attribute that is relevant. Capital investment is less risky where the assets are expected to have high selling prices: a proposal to invest in such a project would be favoured over an alternative that promised identical cash flows but where, in the event of the project being abandoned, the sale price of the assets would be low.

4.12 However, general adoption of a net realisable valuation basis would be open to some objections:

- For assets held for use in the business, (fixed assets, specialised plant) where there is no necessity (or intention) to sell them in the short term, it is arguable that the relevance of net realisable value is peripheral—what is most relevant is the value of the asset to the business which might be reasoned to approximate to a recent cost.
- In the case of such assets it would result in the difference between buying and selling price being recorded immediately as a loss. For example if a business purchases a new van (and perhaps has, for valid business reasons, its business details painted on it) it would report a loss. It may be argued that losses do not arise simply from investment (unless it is clear that it is unwise). It may also be suggested that the return reported in periods after the acquisition of an asset should be assessed against the investment actually made, rather than against the net realisable value.

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<sup>8</sup> For example, 'Making Corporate Reports Valuable', published by The Institute of Chartered Accountants of Scotland, 1988.



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- Other assets are purchased or manufactured for sale. The general use of net realisable value would suggest that these are valued by reference to selling price. Although some amount might be deducted for the cost (and risks) of completion and selling, some would consider that a valuation which looks to selling prices for unsold goods would run the risk of anticipating profits that have not yet been made.

4.13 Despite the above objections, there seems to be a strong case that net realisable value is the most relevant and useful basis for assets where sale is the most profitable opportunity practicably open to the entity—for example for assets that are surplus to the requirements of the business. It may also be suitable in cases such as those of broker traders who have the ability to sell at the earliest opportunity. Its more general use, however, is questionable.

*Replacement cost*

4.14 Replacement cost provides an alternative current value measure, which contrasts with net realisable value as it is an entry rather than an exit measure.

4.15 Because it is based on an entry perspective, use of replacement cost does not give rise to the problem of recognising selling gains on the sale of assets before they are sold. It does, of course, result in reporting of **holding** gains where input prices rise (but these should be clearly distinguished). When trading stock is sold, the financial statements would report the difference between the amount received or receivable and an up-to-date measure of the goods and services sacrificed to make the sale.

4.16 As with all bases of measurement, the proposition that replacement cost might be used for financial reporting gives rise to issues of implementation. Those who have advocated it often emphasise that it is the service potential of the asset that is relevant: this distinguishes replacement cost from reproduction cost.<sup>9</sup> However, a consequence of this emphasis is

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<sup>9</sup> Reproduction cost is the cost of an asset that is *identical* to that actually owned. If the same service potential could be derived from a cheaper asset, replacement cost will be less than reproduction cost. If a business owns an antique valve radio which it uses to obtain news of the financial markets, and is now highly collectible, its reproduction cost will be much higher than the replacement cost as a modern radio would receive the same financial news, and thus provide the same service potential.

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that it seems to neglect the net proceeds from the ultimate sale or disposal of the asset.<sup>10</sup> However, in many circumstances replacement cost and reproduction cost will not differ materially and—except perhaps in the case of very long-lived assets such as land and buildings—sale proceeds may not be significant.

4.17 The theoretical case for replacement cost is based on the premise that the value to an entity of an asset cannot be greater than the amount for which a similar asset could be purchased. If a business were offered a higher amount for an asset, it would sell it and immediately replace it, thus realising a gain. Thus replacement cost (like historical cost on initial recognition as mentioned in paragraph 3.2 above) indicates the maximum amount at which an asset should be stated. However, recording an increase in replacement cost in financial statements would incur the risk that the asset were stated at an amount in excess of its recoverable amount. Thus, widespread use of replacement cost might require stringent requirements for impairment tests.

4.18 Replacement cost has been criticised as requiring excessively subjective judgements to be made. It is certainly easy to think of circumstances where its use would be difficult, for example where technological advances have the result that no similar asset to the existing one is readily available. But perhaps these difficulties are sometimes overstated—and indeed there seems to be no measurement basis that can be applied without difficulty in a number of fairly common circumstances. On the other hand, replacement cost is often straightforward: it simply requires a consideration of the assets used by the business, the means by which it acquires them and the costs that would be incurred in acquiring them by that means at the balance sheet date. Thus, for example, it answers the unit of account problem.

4.19 Provided the risk of stating assets at an amount in excess of their recoverable amount can be addressed, replacement cost seems to provide a relevant measure for those assets—which would be expected to be the majority in most cases that are acquired for use in a business and for sale in the course of business activities.

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<sup>10</sup> A point usefully made in 'Measurement in Financial Accounting', Accounting Theory Monograph No 10, Australian Accounting Research Foundation 1998.

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*Value in use*

4.20 The value in use of an asset may be characterised as the value of the returns expected from the asset, reduced to present value using a discount rate that is appropriate to the risks involved. Some would argue that, based on the theory of capital budgeting, this is the most relevant value of an asset.

4.21 As was noted in paragraph 3.2 above, it may be reasoned that, on acquisition, the returns expected from an asset will be greater than its cost. Therefore, if value in use were to be generally used for financial reporting, it might be expected that the acquisition of an asset would often lead to reported gains.

4.22 Given that future returns must be based on forecasts, the proposition of the use of 'value in use' gives rise to the question of whether the forecasts used should be those of existing management or those of 'the market': that is those who might be expected to bid for the asset in the event of its sale. Existing accounting standards generally permit the use of management estimates—but it is not clear whether this is based on an underlying concept, or is a pragmatic concession.

4.23 Many assets used in a business do not produce discrete cash flows, but rather contribute, in combination with other assets, to the total cash flows produced by the business. This restricts the realistic use of value in use to the cash generating units that comprise the business (and, in some cases, to that of the business as a whole). Unless the resulting value is arbitrarily allocated to individual assets, financial reporting would be restricted to listing the amounts and values of cash generating units.

4.24 In the light of these problems, it appears that 'value in use' does not provide a suitable basis for general use in financial reporting. There may however be certain restricted circumstances—such as those of impaired assets—where it would provide the most practicable means of incorporating relevant information into financial statements.

## **5 Relevance and reliability**

### *Relevance*

5.1 In accordance with the conceptual frameworks used by many standard-setters, it is customary to evaluate accounting alternatives in terms of the qualities of relevance and reliability.

5.2 Relevance is usually explained in terms of the economic decisions made by users of the financial statements: these decisions are often characterised by whether to buy or sell securities of the entity. This in turn implies that financial statements should assist in making an assessment of the value of the entity. Some would suggest that fair value measures are superior to other measures for this purpose.

5.3 However, it is not generally the case that valuation of an entity proceeds only, or even mainly, by valuing the entity's assets (and in any event unrecorded intangibles would have to be allowed for). What seems to be most relevant to the user of financial statements is a value that is relevant to the entity. Where the entity has little or no interest in selling an asset the value that would be received from such a sale is of little relevance.

5.4 It is often suggested that, where there is little or no market-based evidence for the value of an asset, then accounting measurement should be on the basis of an estimate of what such a value would be if such a market did exist. This seems to result in financial reporting based on values of transactions that will not take place, on markets (or to purchasers) that do not exist.

5.5 One of the most common objections to fair value accounting is the fear that it will increase the volatility of reported results. Inevitably, any accounting approach that reflects price changes will tend to lead to more volatile reported results than one that does not. However, if the measurement basis is sound, that volatility should correspond to economic reality. It is, however, important that changes in the measurement of assets are reported in a way that clearly distinguishes them from changes in assets resulting from transactions—and that transactions continue to be reported transparently.

*Reliability*

5.6 Another common criticism of fair value accounting is that it is sometimes unreliable. The degree of variation arising will depend on the measurement basis and the nature and extent of market-based information used. Given the variety of circumstances that arise it is difficult to make judgements of general validity on reliability which is, perhaps more appropriately considered in the development of specific accounting standards.

**6 Possible questions for discussion**

Some of the issues that have been raised above, on which comments would be welcome, are set out below:

- (i) Do you agree that, in many common circumstances, historical cost may be presumed to reflect the value of an asset at the time of its acquisition?
- (ii) Do you agree that, where an entity has access to an efficient market, the value of the asset traded on that market may be used for accounting purposes?
- (iii) What current measures would you propose should be used where assets are not traded on an efficient market? Available choices seem to include an estimate single fair value, an entry value such as replacement cost and an exit value such as net realisable value.
- (iv) What are your views on the use of net realisable value for assets that are surplus to the requirements of a business? Are there other circumstances in which you would favour its use?